Expanded Disposal Cell Design

Mt. Taylor Mine

Existing Mine Permit No. CI002RE

Prepared for:

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ABBREVIATIONS

ASTM	American Society for Testing and Materials
bgs	Below Ground Surface
CCD	Counter-current Decantation
cy	Cubic Yards
DBS&A	Daniel B. Stephens & Associates, Inc.
DQO	Data Quality Objectives
EA	Engineering Analytics, Inc.
EPA	Environmental Protection Agency
g	The unit for peak ground acceleration, the acceleration due to Earth's gravity
IPCC	Intergovernmental Panel on Climate Change
HDPE	High Density Polyethylene
K	Hydraulic Conductivity
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MSL	Mean Sea Level
NOAA	National Oceanic and Atmospheric Administration
NRC	Nuclear Regulatory Commission
pcf	Pounds per Cubic Foot
pCi	picoCuries
PI	Plasticity Index
QAPP	Quality Assurance Project Plan
SWCC	Soil Water Characteristic Curves
SOPs	Standard Operating Procedures
TEDE	Total Effective Dose Equivalent
UMTRCA	Uranium Mill Tailings Radiation Control Act
USCS	Unified Soil Classification System
USGS	United States Geological Survey
UDEQ/DWMRC	Utah Department of Environmental Quality, Division of Waste Management and Radiation Control
DRC	Division of Radiation Control

1.0 INTRODUCTION

This report outlines the planned expansion of the disposal cell at the Mt. Taylor Uranium Mine facility in Cibola County, New Mexico. The primary aim of this project is to ensure the safe and efficient accommodation of additional volume of radioactive and contaminated waste arising from the mining activities at the site. The proposed design adheres to relevant state and federal regulations, including those issued by the U.S. Nuclear Regulatory Commission (NRC), along with guidelines provided by the New Mexico Environment Department (NMEND) and the Energy, Minerals, and Natural Resources Department. Such regulatory compliance is essential to protect human health and the environment.

The technical foundation for disposal cell expansion incorporates several fundamental components. Earthwork and grading activities will reshape the site to optimize drainage, limit water infiltration, and establish a stable base for the expanded disposal cell. The cover system will utilize locally sourced clay borrow materials, as characterized during the January 2025 field investigation, to form a low-permeability barrier designed to prevent water ingress and reduce the potential for contaminant migration. Additional engineered layers, such as protective topsoil and vegetation, will be integrated to bolster erosion resistance, and support the structure's long-term stability.

Erosion control strategies are embedded within the expansion plan to shield the disposal cell from degradation caused by wind and water. These measures may include installing riprap or geotextile armor in vulnerable areas, constructing stormwater retention ponds, and developing diversion channels. The design considers the site's complex stratigraphy, drawing on recent geotechnical data to confirm the appropriateness of selected construction materials and containment approaches. The choice of cover systems and engineering methods is informed by the unique geological and hydrological conditions present at Mt. Taylor, including clay-rich sequences in the Menefee Formation and the natural containment properties of the Mancos Shale.

Prepared for Rio Grande Resources (RGR) by Engineering Analytics, Inc. (EA), this report reflects a comprehensive assessment of site conditions, regulatory mandates, and findings from recent field and laboratory studies. The following sections present detailed engineering analyses, modeling outcomes, and implementation recommendations to guide the execution of the proposed expansion, while maintaining ongoing compliance and safeguarding local communities and environmental resources.

2.0 CURRENT SITE CONDITIONS

2.1 Location and Land Use

The Mt. Taylor uranium mine is approximately 25 miles northeast of Grants, New Mexico. The mine was initially developed by Gulf Mineral Resources (Gulf) in 1971. Figure 2-1 shows the site location plan. Following surface drilling, several ore bodies were identified across a span of over seven miles, with estimated reserves totaling 120 million pounds of uranium oxide (Alief and Kern, 1989). Two shafts, measuring 24 feet and 14 feet in diameter were constructed to access ore deposits located 3,100 to 3,200 feet beneath the surface within the Westwater Canyon Member of the Morrison Formation. Figure 2-2 shows the detailed site plan. These shafts employed drill-and-blast excavation methods and were reinforced with concrete for enhanced safety. In the 1970s, wells were installed to extract groundwater for mining operations.

Mining activities commenced in 1980 but ceased in September 1982 due to unfavorable market conditions. Ownership transferred to Chevron Resources Company following a merger with Gulf in 1985, leading to the resumption of mining from 1986 to 1990 utilizing standard underground room-and-pillar techniques. During this period, approximately 675,000 tons of uranium ore and about 698,000 tons of waste rock were extracted.

In 1991, Rio Grande Resources Corporation (RGR) acquired the site but did not resume mining operations owing to unfavorable market conditions. Beginning in 2019, RGR initiated mine closure and land reclamation efforts under the oversight of the New Mexico Environment Department (NMEND) and the Energy, Minerals, and Natural Resources Department. Prior to closure, surface infrastructure at the site included two shafts, an ore stockpile, a waste rock pile, stormwater retention ponds, a sewage treatment plant, an ion exchange facility, eight clay-lined treatment ponds, and various ancillary support structures.

2.2 Geology

The geologic setting of the mine has been described in detail in the Baseline Study prepared by New Mexico Environmental Institute (NMEI) in 1974 (NMEI, 1974) and the Site Assessment submitted in 1994 (RGR, 1994a). Deposits of Quaternary age rock and soil exposed in the area consist of unconsolidated talus, alluvial, and eolian sediments. Extensive areas on the slopes adjacent to the high basalt-covered mesas to the south, southwest, and east of the mine are covered by talus, landslides, and black lava blocks. Beneath the valleys and lower topographic slopes, clay, silt, sand, and gravel alluvial lenses are present (NMEI, 1974).

The deepest geologic formation encountered in the Mount Taylor mine shaft is the Jurassic-age Morrison Formation. This formation consists, in ascending order, of the Recapture Creek, Westwater Canyon, and Brushy Basin members. The Recapture Creek member occurs at a depth between 3,240 and 3,300 feet below ground surface (ft bgs) in the mine shaft pilot well. This member grades vertically into the overlying Westwater Canyon member. The transition to the Westwater Canyon member marks a change in lithology, and its thickness varies due to lensing and vertical gradations into both the Brushy Basin and Recapture Creek members. At the mine site, the Westwater Canyon member is divided into Upper and Lower units by a persistent shale layer. The lower sandstone unit is 60 to 70 feet thick, while the upper sandstone unit measures about 100 feet thick in the mine shaft area. These sandstone units contain most of the uranium ore

reserves of mine. Above the Westwater Canyon member, the Brushy Basin member conformably overlies and interfingers with it. The Brushy Basin is approximately 80 feet thick and consists of shales and claystones at the mine shaft.

Above the ore-bearing Morrison Formation is a sequence of sedimentary units approximately 2,950 feet thick. The first of these is the Dakota Sandstone, which unconformably overlies the Brushy Basin member. The Dakota Sandstone is 50 to 60 feet thick and is only slightly mineralized, thus not mined at Mt. Taylor Mine. The Dakota Sandstone conformably intertongues with the overlying Mancos Shale.

Next in the stratigraphic sequence is the Mancos Shale, which is 900 feet thick and composed chiefly of dark-gray, calcareous, marine clay shale. This unit also contains interspersed sandstone beds. The lowermost portion of the Mancos Shale includes three sandstone units known as the Upper, Middle, and Lower Tres Hermanos Sandstones, which are 72 feet, 45 feet, and 118 feet thick, respectively, at the mine shaft pilot well (McGlothin, 1972).

Continuing upward, the Mancos Shale extends to the base of the Gallup Sandstone at approximately 2,050 feet bgs. The Gallup Sandstone consists of two separate sandstone units divided by 130 feet of dark gray shale. Overlying the Gallup Sandstone is the Crevasse Canyon Formation, which includes, in ascending order, the Dilco Coal, the Stray Sand, the Mulatto Tongue of the Mancos Shale, the Dalton Sandstone, and the Gibson Coal. The Point Lookout Formation conformably overlies the Crevasse Canyon Formation.

Above the Crevasse Canyon Formation lies the Point Lookout Formation, which is the basal unit of the Mesa Verde Group. This formation is typically encountered between 700 and 850 feet bgs at the mine site. Near the mine, it is separated into two units by the Satan Tongue of the Mancos Shale. The upper unit, referred to as the Point Lookout Sandstone, is the main body and is typically 110 to 130 feet thick. The lower unit is the Lower Hosta Tongue, a transgressive marine beach sandstone that is between 80 and 100 feet thick. Along the southern margin of the basin, both units merge into a combined unit approximately 250 feet thick. The Lower Hosta Tongue is of limited areal extent, pinching out 30 miles northeast of its outcrop. The Point Lookout Sandstone comprises thick- to very thick-bedded, very fine- to medium-grained, locally cross-bedded sandstones. Notably, the Point Lookout aquifer provides the domestic water supply for both the mine and the Village of San Mateo.

The uppermost geological unit present at the mine is the Menefee Formation. It forms uneven slopes around the mine and near the Village of San Mateo. The Menefee Formation is composed of interbedded pale yellowish-brown siltstone, fine to medium-grained sandstone, gray shale, carbonaceous shale, and thin coal beds. Its thickness in the mine shaft is approximately 767 feet (NMEI, 1974). Mine water treatment pond basins were excavated into the Menefee Formation, and both the manway/vent and production shafts are collared in this unit.

The stratigraphic complexity at the site affects groundwater flow, material properties, and mine closure planning. Aquifers like the Point Lookout Sandstone supply water to the area and are separated from deeper systems by low-permeability units such as Crevasse Canyon and Mancos Shale, which function as natural barriers against contamination. The Menefee Formation,

containing various sediments and coal beds, impacts surface facility stability and provides material for disposal cell expansion, with its clay-rich layers important for cover design to limit infiltration and erosion.

Accurate geological profiling is vital for selecting construction materials, designing effective waste containment strategies, and ensuring regulatory compliance. Upcoming sections will detail recent field studies and lab tests that further inform expansion plans.

2.3 Results of January 2025 Field Investigation

Engineering Analytics excavated 24 test pits and collected samples from three proposed borrow sites to assess clay material for disposal cell cover. In January 2025, EA used a CAT backhoe to dig the pits (A-1 to A-6, B-1 to B-5, C-1 to C-13), each about 6 feet deep. Figure 2.3 shows the test pit locations. The test pits logs are provided in Appendix A. Subsurface conditions included:

Topsoil:
The topsoil thicknesses at the site range from 2 inches to 6 inches. The topsoil consists of organics, loose sand, and is very dry.

Sand:
The topsoil is underlain by a sand layer at all the test pit locations except at locations A-6, B-1, B-2, C-2, and C-8. Silty sand underlies the topsoil at location A-6, sand and gravel at location B-1, and clay at location B-2. Sany clay lies beneath the topsoil at C-2 and C-8 test-pit locations. The sand layer is loose to very loose, frozen at some locations, dry to moist, and fine in texture. The termination depths of the sand layer range from 3 feet to the excavation depth of 6 feet.

Sand and Gravel:
Sand and gravel layer underlies the topsoil at test pit location B-1. This layer is loose, dry, and non-plastic. This layer extends to a depth of three feet at the test pit location. This layer is only peculiar to test-pit location B-1.

Silty Sand:
At test pit location A-6, a silty sand layer underlies the topsoil and extends to a depth of 4 feet. This layer is moist, loose, and very fine in texture.

Clay:
A thin layer of clay underlies the topsoil at test pit location B-2. The clay is stiff, low plastic, and moist. The clay layer extends to a depth of one foot and is found frozen during the investigation.

Sandy Clay:
Sandy clay is present at most test pit sites, except A-3, A-6, B-2, B-3, B-5, and C-12. This material is stiff to very stiff, dry, and brittle when frozen, and lies below the sand layer at depths of 3 to 4 feet, extending to 6 feet. At C-13, there is no sand layer, and at C-4, sandy clay ends at 5 feet underlain by sand. The absence of sandy clay at A-3, A-6, B-2, B-3, B-5, and C-12 may be due to limited excavation depth.

Siltstone:

Siltstone is present beneath the silty sand layer at the test pit location A-6. The siltstone is dry, fine, and has fragments of silt. The siltstone extends from a depth of 4 feet to the termination depth of the excavation at 6 feet. This is the only location of occurrence from the limited depth of the test pit excavation.

2.4 Results of Laboratory Testing for the Site

2.4.1 Historical Laboratory Testing

Engineering Analytics (EA) personnel conducted a review of previous laboratory testing associated with the site and supplemented these efforts with additional laboratory analyses to support the disposal cell expansion design. The prior testing referenced includes data from Hydro Engineering (2005b), Tetra Tech (2008a, 2008b), and Advanced Terra Testing (2008). Both the historical data and the tests performed by EA in 2025 formed the basis for the analysis undertaken for the disposal cell expansion design.

2.4.2 Laboratory Testing Completed in 2025

Selected material samples from Borrow Sources A, B, and C (see Figure 2.3) underwent laboratory testing to determine their physical and geotechnical properties for the disposal cell expansion design. Tests included water content, Atterberg limits, standard Proctor compaction, soil water characteristics, and consolidated undrained triaxial tests. EA performed and summarized these tests below. Test-pit logs and laboratory reports are provided in Appendices A and Appendix B, respectively.

Water Content: Measurements of water content and dry density were conducted on selected samples in accordance with ASTM test methods D2216 and D2937, respectively. The water content of the tested samples ranged from 4.6% to 24.1%. For the clay, silty clay, and sandy clay samples, the moisture content ranged from 6.8% to 24.1%, with an average of 11.7%, and a mode of 9.7%.

Atterberg Limits: Atterberg limits were determined for selected samples in accordance with ASTM test method D4318. These measurements facilitate the classification of soil. Based on the Unified Soil Classification System (USCS), a total of forty-eight (48) samples were analyzed: nine (9) were identified as non-plastic (NP), twenty-nine (29) as low plasticity clay (CL), two (2) as high plasticity clay (CH), three (3) as low plasticity silt (ML), and five (5) as low plasticity clay or silt (CL-ML). Discrepancies between field descriptions and laboratory classifications, observed in approximately 50% of cases, may be attributed to the frozen condition of the samples during field collection, which could have obscured soil fineness.

Standard Proctor Compaction Tests: Eight Standard Proctor Compaction Tests were conducted following ASTM test method D698. For the clay, silty clay, and sandy clay samples, maximum dry density ranged from 89.8 to 110.4 pcf, with optimum moisture content (OMC) varying between 16.1% and 26.6%. Sand soil specimens exhibited maximum dry densities from 111.1 to 117.6 pcf, with corresponding OMC values ranging from 12.2% to 15%.

Consolidated Undrained (CU) Triaxial Tests: EA performed two CU triaxial tests with pore pressure measurements per ASTM D4767 at its certified lab. This method assesses strength and

stress-strain properties of saturated cohesive soil specimens by isotropic consolidation followed by undrained axial compression at a constant strain rate, allowing calculation of total and effective stresses from measured axial load, deformation, and pore-water pressure. The tests results on remolded clay samples showed an average effective friction angle of 31° with zero effective cohesion.

2.5 Seismicity

EA conducted a seismic hazard analysis for Rio Grande Resources (RGR) pertaining to the Mt. Taylor Uranium Mine in New Mexico. The objective was to determine peak horizontal ground acceleration (PGA) for stability assessments, specifically focusing on a 10,000-year return period. The site is located within the Colorado Plateau, which exhibits structural stability, though it is proximate to tectonically active regions including the Rio Grande Rift and the Jemez Lineament. The local geology comprises Quaternary alluvium overlying the Cretaceous Menefee Formation. Seismicity at the site is considered low and influenced by regional tectonics rather than active volcanism.

The assessment incorporated a review of historical earthquakes within 300 kilometers of the facility, with detailed analysis of events within 100 kilometers. The historical record, spanning 1568 to 2025, indicates low seismic activity, with only a few moderate events occurring near the site. The largest recorded earthquake had a magnitude of 5.9 and was situated approximately 160 km away, while the nearest significant event (Mw 4.08) occurred 13 km from the facility.

Both deterministic and probabilistic analyses were performed. The deterministic approach identified a maximum PGA of 0.09g from a hypothetical random earthquake (MCE 6.3) located 15.1 km from the site. The probabilistic analysis, accounting for uncertainties and recurrence intervals, calculated a mean PGA of 0.21g for the 10,000-year return period. These results are consistent with, but slightly lower than those provided by the USGS Earthquake Hazard Toolbox and are recommended for engineering stability assessments at the mine. Based on this value, a pseudostatic seismic coefficient equal to two-thirds of the PGA (0.14g) was applied in seismic evaluations of the disposal cell. Appendix C presents the results of the seismic hazard analysis.

In conclusion, the seismic hazard at Mt. Taylor Mine is assessed as relatively low, with background seismicity representing the primary risk as opposed to nearby fault activity. The findings are supported by the best available data and methodologies; however, revisions may be warranted should added information emerge.

2.6 Climate

Mount Taylor Mine is located on the southwestern slope of Mount Taylor within the Colorado Plateau—a region characterized by rugged mesas and volcanic terrain situated at elevations surpassing 7,000 feet. This high-altitude environment contributes to unique climatic conditions that influence both natural ecosystems and engineered mining operations.

The area exhibits a cold semi-arid (BSk) climate, with warm summers and cold winters. Summer is distinguished by notable monsoonal activity, resulting in most annual precipitation occurring between July and September. These storms, though vary in intensity, deliver critical moisture for

local ecological systems. Winters are typically cold yet dry, with average snowfall amounting to approximately 7.5 inches per year. The region experiences significant diurnal and seasonal temperature fluctuations, leading to swift transitions between daytime warmth and nocturnal coolness, particularly during transitional periods.

Annual precipitation averages between 10 and 15 inches, primarily due to the summer monsoon; however, precipitation levels display substantial interannual variability, including extended dry intervals punctuated by intense, short-duration storm events. Such variability directly impacts surface runoff, groundwater recharge, and the performance of engineered cover systems. According to data from the Western Regional Climate Center, the mean annual pan evaporation is 63 inches; when adjusted with a coefficient of 1.3, the corresponding natural evaporation rate rises to 81.9 inches per year. Elevated evaporation rates—driven by strong solar radiation and low humidity—further constrain water availability and affect soil moisture levels essential for vegetation establishment and reclamation activities.

The site's mean annual temperature is 52°F, with extreme lows recorded at 15.6°F in winter and highs reaching up to 89.7°F during summer months. Substantial temperature fluctuations on a daily and seasonal basis impact freeze-thaw cycles, soil stability, and the structural integrity of engineered solutions. These thermal extremes also shape the physiological limitations and spatial distributions of indigenous plant and animal communities.

Prevailing winds are moderate but can become pronounced during weather fronts and storm events, thereby increasing evaporation rates and affecting microclimatic conditions throughout the mine property. Wind-induced desiccation reduces soil moisture retention and may intensify erosion risks, especially on exposed slopes and engineered covers. Additionally, wind patterns influence seed dispersal and particulate transport, which bear upon site revegetation and air quality management.

Vegetation across the site is sparse and dominated by drought-resistant species. Piñon-juniper woodlands occupy mid-elevations; grasslands and shrublands are present on lower slopes and plateaus, while coniferous forests are found at higher elevations. Limited precipitation and high evaporation restrict riparian corridor development, confining such zones to stream channels where willow and cottonwood thrive. Local fauna is well-adapted to these challenging conditions, comprising species such as mule deer, elk, pronghorn, coyote, jackrabbit, raptors, songbirds, and various reptiles and amphibians. These animals exhibit adaptations related to water conservation, thermal regulation, and seasonal migration according to resource dynamics.

Mount Taylor Mine's climate is marked by fluctuating precipitation, temperature extremes, high evaporation, and moderate winds affect environmental management and compliance. Cover systems must prevent moisture loss, handle freeze-thaw cycles, and resist erosion. Effective restoration depends on using vegetation suited to semi-arid conditions. Understanding these factors is essential for successful long-term containment and ecological recovery.

3.0 DESIGN CRITERIA

Disposal cells for uranium mill tailings must meet several regulatory standards:

- The Uranium Mill Tailings Radiation Control Act (UMTRCA) requires secure, long-term containment and environmental protection.
- EPA Standards (40 CFR Part 192) mandate that covers remain effective for 1,000 years where feasible, and at least 200 years in all cases, limiting radon emissions and groundwater pollution.
- NRC Requirements (10 CFR Part 40, Appendix A) set technical guidelines for building, operating, and closing uranium waste disposal sites, including specifications for tailings impoundments and covers.

The disposal cell is designed to contain and isolate uranium waste, current methods use an engineered multi-layer cover. A radon barrier of sufficient thickness is placed directly above the uranium waste to restrict radon release to 20 pCi/m²/s and reduce water infiltration. Above this, a specially designed cover system that minimizes both water penetration and erosion, resists animal burrowing, and is thick enough to withstand frost is placed.

For rock covers, a filter or bedding layer is put on top of the radon barrier under the erosion-protection (riprap) layer. This filter stops rocks from penetrating the radon barrier, aids drainage, and reduces water entry into the tailings. Filter criteria for uranium tailings caps are commonly based on Sherard et al. (1984), which link filter design to the fine content (% < No. 200 sieve) of various soils.

DOE (1988) expanded Sherard's criteria with these additions:

- Filter material should pass a 3-in. (76.2-mm) sieve to avoid particle segregation and bridging during installation; smaller maximum sizes may be used if needed. Filters should not have over 5% passing the No. 200 mesh sieve to prevent excess fine movement within the filter.
- Filter material needs to be well graded throughout.
- Filters for gap-graded bases may need finer grading than Sherard's basic criteria suggest.
- The minimum thickness of the filter should be 6 in. (152.4 mm) to aid placement.

The rock layer's thickness must be no less than the spherical diameter of the upper limit D100 rock, or at least 1.5 times the diameter of the upper limit D50 rock, whichever is larger. Using Sherard's filter design creates a stable, erosion-resistant cover to protect tailings, but recent field data shows slow drainage, especially on flat slopes (S < 5%). Water can persist and infiltrate the radon barrier and tailings, raising risks to groundwater.

Recommendations for the cover system include adding a thick, fine-grained soil layer for water storage over a coarse capillary break to hinder downward water flow—mimicking natural conservation and decreasing infiltration. The erosion control layer should prevent slumping and subsidence and can incorporate rock armor, vegetation, and careful gradation.

The New Mexico Copper Rule (N.M. Code R. § 20.6.7.33) outlines specific cover thickness requirements for the closure of copper mine facilities, summarized as follows:

- Upon closure, waste rock piles, leach stockpiles, tailing impoundments, and other units with potential for leachate generation must be covered using a store-and-release earthen cover system.
- The required cover must consist of 36 inches (3 feet) of earthen material suitable for sustaining vegetation without ongoing supplementation and featuring erosion-resistant properties.
- The system should minimize net percolation by retaining at least 95% of long-term average winter precipitation or 35% of long-term average summer precipitation, whichever is higher.
- Erosion rates should be comparable to those found on stable slopes in the surrounding landscape.

Cover thickness may be reduced when placed over lined units, or if an alternative design offers equivalent or improved groundwater protection. Such alternatives necessitate a robust modeling study, an appropriate performance monitoring plan, and independent third-party review.

While the Copper Rule pertains specifically to copper mining operations, EA intends to integrate selected elements into locations with a planned vegetative cover.

Minimal infiltration and absence of ponding atop the cover are essential, so surface water management is required, such as diversion channels, berms, and proper grading. Site selection and cell design must reduce groundwater contamination risk, using liners or natural low-permeability soils where suitable.

Proper compaction of waste and cover materials is necessary to avoid settlement and maintain structure. Quality control procedures (like moisture-density tests) are performed during construction. Slope stability and the integrity of the cover must be checked regularly to ensure long-lasting performance. Designs must allow for monitoring and addressing subsidence or deformation over time, and all elements should be chosen for long-term chemical and physical stability suitable for local conditions. Finally, the cell must remain accessible for periodic inspection, maintenance, and environmental monitoring.

In addition to regulatory compliance and engineering controls, site-specific environmental conditions must be considered when designing disposal cell covers. Factors such as local climate, soil characteristics, topography, and hydrology play a critical role in determining the effectiveness and durability of the cover system. For example, regions with high evaporation rates or pronounced freeze-thaw cycles may require thicker protective layers and specialized materials to minimize moisture loss, prevent frost penetration, and ensure vegetation establishment. Furthermore, ongoing monitoring of climatic variables and cover performance allows for adaptive management, ensuring that the disposal cell remains secure and environmentally protective over the long term. Integrating these environmental considerations into the engineering design helps to safeguard groundwater resources, support ecological recovery, and achieve sustainable reclamation goals tailored to the specific challenges of each site.

4.0 EXPANDED DISPOSAL CELL DESIGN

4.1 General

Reclamation of the waste rock and associated clean up material is organized into two distinct phases, each designed to promote structural stability, effective drainage, and long-term environmental protection.

The integrated disposal cell cover is purposefully engineered to address key factors such as frost penetration, radon attenuation, biointrusion, infiltration, and erosion protection, as detailed in Sections 4.3 through 4.11. This multi-layered system begins with a 12-inch rock mulch layer that provides robust erosion control, followed by 42 inches of onsite soils designed to defend against biointrusion and frost. Beneath this, a 12-inch sand filter serves as a capillary break to impede moisture movement, while the lowermost 12-inch compacted clay layer is specifically intended to minimize both water infiltration and the emanation of radon gas. Together, these layers work in concert to ensure long-term effectiveness and environmental safety of the disposal cell cover.

Cover performance has been validated against regulatory limits, with radon flux consistently below NRC requirements (20pCi/m²/s), and frost penetration analyses confirming adequate protection.

The reclamation and cover system adheres to multiple regulatory requirements and technical guidelines, including **10 CFR 61.56** for structural stability, **DOE** and **NRC** criteria for cover system performance, and selected aspects of the **New Mexico Copper Rule (N.M. Code R. § 20.6.7.33)** for vegetative cover and percolation control. These standards govern material selection, layer thickness, erosion resistance, and groundwater protection. Compliance is ensured through robust modeling, performance monitoring, and independent review as outlined throughout the referenced sections.

4.2 Description of Cover

After filling and grading, the expanded disposal cell cover will be placed over the waste material. The final cover system will consist of the following layers from top to bottom:

- 12 inches of rock mulch cover for erosion protection
- 42 inches of onsite soil for bio intrusion and frost protection
- 12 inches of sand filter layer for capillary break; and
- 12 inches of clay layer to minimize infiltration and emanation of radon gas.

A schematic of the cover is illustrated in Figure 4-1. Analyses for the cover design are summarized in the following sections.

4.3 Frost Penetration Analysis

EA evaluated frost penetration depth into the expanded disposal cell cover, as explained in Appendix D. Using a method developed by the U.S. Department of Energy (DOE, 1989) and endorsed by the Nuclear Regulatory Commission, the analysis considered local climate, soil type,

and moisture levels over the lifetime of the cover. The approach, based on Berggren's work (1943), uses site-specific calculations to estimate frost depth. Smith and Rager (2002) advanced these ideas to determine the required thickness of protective soil above compacted layers to shield against frost.

For this study, EA assessed the worst-case climate scenario, a 200-year recurrence interval event with only a 0.5% chance of occurring annually. Under these extreme conditions, frost was predicted to penetrate up to 45 inches into the cover. The design provides 66 inches of material above the radon barrier, ensuring that unusually harsh frost cannot reach the barrier, thereby protecting it from cracking, infiltration, and structural damage.

To reinforce these findings, EA analyzed the thermal characteristics of the cover materials, such as specific heat and thermal conductivity, along with expected winter moisture content. A thick layer of local soil and rock mulch adds insulation and slows down cold penetration.

The cover was designed to minimize frost heave, a problem that happens when water in soil freezes, expands, and may harm structures. Materials were selected for their resistance to frost heave, considering grain size and compaction criteria. Regular inspections will detect surface changes or cracks caused by frost, so repairs can be made quickly when necessary.

In summary, the frost penetration assessment shows that the expanded disposal cell cover is carefully designed to weather severe cold, ensuring lasting protection for stored waste and meeting environmental and safety regulations.

4.4 Radon Attenuation

EA modelled Radon-226 emanation from the upper surface of the proposed expanded disposal cell cover. The radon attenuation assessment evaluated the cover design, apart from the rock mulch component.

Modeling results indicate that the planned cover system effectively reduces radon emanation rates to below 11 pCi/m at the surface of the radon barrier, which is lower than the NRC regulatory limit of (20 pCi/m²/s. A comprehensive discussion and detailed modeling outcomes are presented in Appendix E.

To optimize radon attenuation, the final cover consists of a 12-inch compacted clay layer engineered specifically to restrict infiltration and radon gas migration. This clay layer serves as a robust physical and chemical barrier, impeding the upward movement of radon produced by the radioactive decay of radium-226 in underlying waste materials. Clay was selected for its inherently low permeability and high sorption capacity—key characteristics essential for minimizing gas transport.

Additionally, the cover design includes 42 inches of onsite soils placed above 12 inches of filter sand layer, acting as capillary break, underlain by the clay layer, enhancing protection against biointrusion and frost. These additional layers safeguard the integrity of the clay barrier by mitigating root penetration and lowering the likelihood of desiccation or cracking, which could otherwise reduce the effectiveness of radon attenuation.

Radon attenuation modeling incorporated site-specific variables, such as soil types, moisture levels, and climate data, to simulate realistic conditions over the anticipated operational lifespan of the disposal cell. Advanced numerical models were employed to estimate radon flux through the cover system, accounting for both diffusion processes and seasonal variations in temperature and moisture content. Findings confirm that this multi-layered cover system consistently achieves substantial reductions in radon flux, reliably meeting all regulatory requirements, even under adverse conditions.

Sensitivity analysis revealed that radon flux through the cover system depends on factors such as cover thickness, soil moisture, and soil diffusion coefficients. Moist soil slows down effective diffusion coefficients of the soil, thereby limiting its migration through the cover. In contrast, dry fine soils may develop cracks that increase permeability and result in higher radon exhalation from waste. The model's results are also affected by diffusion coefficients, of which lower values restrict radon movement within the soil. Additionally, increasing the thickness of the soil cover helps to reduce the overall flux through the cover system.

As part of long-term stewardship, routine monitoring of the cover's physical properties and radon flux will be carried out. Should monitoring reveal increased radon flux, cracking, or changes to the surface condition, immediate maintenance actions will be implemented to sustain compliance with safety standards.

In conclusion, the expanded disposal cell cover combines compacted clay and protective soil layers to provide effective radon attenuation. Modeling affirms that the system maintains radon flux well below regulatory limits, thereby ensuring environmental safety and compliance with NRC standards. This comprehensive design, supported by ongoing monitoring and maintenance, assures long-term environmental protection.

4.5 Biointrusion

Engineered barrier systems for waste containment were designed to meet NRC (10 CFR Part 61), EPA (40 CFR Part 192), and New Mexico Environment Department (NMED) standards. NRC rules require barriers to stop plant and animal intrusion for up to 1,000 years and ensure site stability. EPA mandates cover systems to last at least 1,000 years where possible, but no less than 200 years, with controls on radon emissions and groundwater pollution. NMED closure plans demand final covers that reduce environmental harm like erosion and groundwater contamination, with technical criteria for infiltration and erosion control. These combined regulations create strong, multi-layered protection against environmental risks, using both physical and biological measures to safeguard public health and ecosystems over time. At a minimum, cover system includes:

- Low-permeability soil barrier: Typically, compacted clay or equivalent, with a saturated hydraulic conductivity $\leq 1 \times 10^{-5}$ cm/sec, as required by NMED and EPA standards.
- Rock armor (riprap): Placed above the soil barrier to resist erosion, animal burrowing, and root penetration. Beneath the riprap, a filter or bedding layer is installed to prevent rock intrusion into the barrier and facilitate drainage.

- Vegetative layer: A minimum of six inches of earthen material capable of sustaining native plant growth, providing additional erosion control and evapotranspiration benefits.

Table 4.1 summarizes design measures to address ecological threats. Cedar Creek Associates, Inc. (Cedar Creek, 2023) evaluated biointrusion risks from plants and burrowing animals for the facility cover performance. Their technical memo found limited risk of animal or insect biointrusion. Without vegetation to provide habitat and food, insects and animals are unlikely to occupy the cover.

Continuous monitoring and adaptive management will further ensure that the engineered cover system maintains its integrity and effectiveness in the face of changing environmental conditions.

Table 4.1 Highlight of design measures against ecological threats in the cover design

Ecological Threat	Potential Impact	Design Measures in Disposal Cell
Deep-rooted vegetation	Root penetration can create water infiltration paths	- Thick protective soil layer - Low-permeability barrier - Vegetation control during closure
Burrowing mammals	Disturbance of engineered layers, increased erosion	- Rock armor on surface - Compacted soil layers - Monitoring for animal activity
Insects and small fauna	Micro-tunneling may compromise cover integrity	- Dense soil compaction - Use of fine-grained material to deter tunneling
Climate variability	Freeze-thaw cycles and drought stress can weaken cover	- Frost penetration analysis - Settlement monitoring - Adaptive maintenance plan
Long-term settlement	Creates cracks and voids for intrusion	- Multi-layer design with redundancy - Periodic inspection and repair protocols

4.6 Infiltration Analysis

4.6.1 *General*

Analyses were performed to calculate infiltration rates on the surface of the expanded disposal cell for use in the seepage modeling to evaluate the infiltration at the bottom of the final cover. The actual boundary condition for the surface of the final cover is the climatological conditions. To simulate the climatological surface conditions in the SEEP/W model (GEO-SLOPE, 2023), a net flux was determined by modeling a representative 2-D column and then applying that net flux as the boundary conditions.

4.6.2 *Method of Analysis*

EA performed infiltration analyses using SEEP/W (GEO-SLOPE, 2023), a finite-element analytical tool designed to model the movement and distribution of pore water within porous media. SEEP/W simulates both saturated and unsaturated flow in response to atmospheric conditions, facilitating comprehensive seepage analyses over time. The model considers infiltration, precipitation, surface water runoff and ponding, plant transpiration, and actual

evaporation, all of which are essential considerations in cover system design. Accurate seepage modeling requires input parameters such as temperature, relative humidity, wind speed, albedo, rainfall, material properties, and hydraulic conductivity.

A two-dimensional model was employed to evaluate infiltration through the lower boundary of the cover system. The model profile is illustrated in Figure 4-2. Transient analysis was conducted using synthetic climate data spanning one thousand years to assess percolation rates, precipitation, surface water runoff, and evapotranspiration.

4.6.3 *Parameters Used for Analysis*

4.6.3.1 Climate Data Used for Analysis

For the infiltration and water balance analyses, comprehensive daily climate data sets were utilized, including precipitation, evaporation, minimum and maximum temperatures, relative humidity, and average wind speed. These parameters are essential for accurately modeling hydrologic processes, affecting the cover system over time. The primary source of historical climate data was the National Oceanic and Atmospheric Administration (NOAA) weather stations, with records spanning a 50-year period from 1975 to 2025 for Grants, New Mexico. This extensive period provides a robust basis for simulating long-term climate variability and assessing its impact on the facility.

The town of Rice Park, New Mexico, located approximately 33 miles from the facility, served as the primary source of historical weather data. Rice Park was selected due to its proximity, which minimizes climatic discrepancies between the monitoring station and the facility. Additionally, Rice Park offers a comprehensive suite of meteorological records, including temperature, relative humidity, and average daily wind speed, which are critical input parameters for the SEEP/W infiltration modeling. This station's data provided reliable long-term trends and seasonal fluctuations necessary for detailed analysis of cover system performance.

In situations where data gaps or inconsistencies were present in the Rice Park dataset, alternative sources were consulted to ensure continuity and completeness of the climate record. The city of Grand Junction, Colorado, approximately 150 miles from the facility and with a 300-foot elevation difference, was selected as an alternative due to its extensive 75-year weather record. This station supplied temperature, relative humidity, and precipitation data when Rice Park data was unavailable. Similarly, the city of Page, Arizona, located 68 miles from the facility and 130 feet different in elevation, provided supplementary data with a 51-year record including temperature, relative humidity, average daily wind speed, and precipitation. These alternative sources ensured that the climate dataset used for modeling was both comprehensive and reflective of regional conditions.

To enable robust long-term simulations, a synthetic 1,000-year meteorological time series was created using the ClimGen program, developed by Washington State University. ClimGen generates realistic meteorological data by parameterizing and extrapolating from historical daily weather records. The synthetic data set incorporated the historical variability and range observed in the primary and supplementary data sources, allowing for analysis of cover system performance under a wide spectrum of potential future climate scenarios.

The climate data used in the modeling is considered conservative, reflecting trends identified by the Intergovernmental Panel on Climate Change (IPCC, 2023), which indicates a general warming and drying trajectory for the region. These trends were factored into the analysis to ensure that estimates of percolation and other hydrological processes do not underestimate potential impacts over the facility's operational lifetime.

4.6.3.2 Soil Properties

The design and long-term performance of the expanded disposal cell at Mt. Taylor Mine depend heavily on the selection and characterization of locally sourced soils. These soils are engineered to function as barriers against water infiltration, radon gas migration, biointrusion, and erosion. Field investigations conducted in January 2025 involved excavating 24 test pits across three borrow sites, revealing several distinct soil horizons.

The soil parameters for the materials used in the analyses are summarized in Table 4.2. Most of the parameters were obtained from the laboratory testing results provided by EA as discussed in Section 2.4.2. The remaining parameters were estimated based on typical values for the respective material types from technical literature.

Table 4.2 Summary of soil properties used for numerical analyses.

Name	Thickness (inch)	Unit Weight (pcf)	Effective Friction Angle (°)	Porosity	Specific Gravity	Compression Index
Rock Mulch	12	115	35	0.37	2.59	
Pediment Soil	42	110	25	0.37	2.59	
Sand Filter	12	95	33	0.41	2.63	
Clay	12	120	24	0.36	2.5	0.12
Interim Sand	18	107	33	0.41	2.63	
Mine Waste	704	102	25	0.48	2.5	

The soil water characteristic curves (SWCCs) for the rock mulch, pediment layer, sand layer, and interim cover were estimated using SEEP/W (GEO-SLOPE, 2023). The grain size distribution and porosity data obtained from the laboratory testing by EA, for the cover materials, were used in the estimation. The SWCC for the sandstone layer was estimated using the Fredlund-Xing Function incorporating curve fit parameters (a, n, and m) and porosity based on the Tetra Tech Design Report (2008b). The SWCC for the clay layer was constructed based on laboratory testing results. The SWCC for the tailing slurry was obtained from the Tetra Tech Design Report (2008b).

The hydraulic conductivity (K) functions for the materials, except for the compacted clay in the liner system, were estimated using the Fredlund-Xing Huang method in the SEEP/W program. The compacted clay in the liner system was assumed to be saturated.

Boundary Conditions

A steady-state model was used to set up the initial conditions for the infiltration analyses. The boundary conditions in the steady state assumed zero flux boundaries. This is a common practice in modeling to have initial values when performing a transient analysis. Ideally, in situ measured parameters in the field can be used as initial parameters but in the absence of such data, using steady state output to setup initial conditions for transient analyses is a common practice for seepage modeling.

For the 1,000-year transient model, the climate data discussed in Section 4.6.3.1 were used as an upper boundary condition at the ground surface. A unit gradient boundary condition was specified at the bottom boundary of the sandstone foundation. This boundary simulated the deep boundary condition where the groundwater table was located far away, preventing it from disturbing the upper model. The pore water pressure distribution obtained from the steady-state model was used as the initial conditions of the transient model.

4.6.4 *Results of Infiltration Analysis*

The model results indicate that the mean annual percolation value through the cover system is 0.45 inches/year or 7.4% of the mean annual precipitation value. Caldwell et al. (2022) studied the ratio of percolation to precipitation at various Uranium Mill Tailings Radiation Control Act (UMTRCA) sites. They concluded that the ratio of percolation to precipitation ranges from 0 to 26%, with a mean value of 7%. Consequently, the ratio of percolation to precipitation of 7.4% determined for the Facility is reasonable compared to other sites presented in Caldwell et al. (2022). The selected results of infiltration analysis are presented in Appendix F.

4.7 Settlement Analysis

4.7.1 *General*

The settlement of the compacted disposal cell will be computed at the time of placement of the material. Prior to construction, representative samples of the waste will be collected and remolded to 95% of the standard Proctor dry density and tested for consolidation/swell under wetting conditions. This data will be used to confirm that enough camber has been placed on the top of the water to facilitate surface drainage. Tanks or other vessels that could collapse overtime will be flow filled to limit potential future settlement.

4.8 Slope Stability Analysis

4.8.1 *General*

To assess the global stability of the disposal cell after placement of the final cover system . The evaluation relied on assumed waste properties to calculate the factor of safety against major shear failure in the embankment. During final design and construction strength testing of the remodel waste placed in the disposal cell will be completed.

4.8.2 *Method of Analysis*

EA performed limit equilibrium global stability analyses using the Morgenstern-Price method (Morgenstern-Price, 1965), implemented in the computer program SLOPE/W (GEO-SLOPE International, Ltd. 2021). The analysis utilized the section shown in Figure 4-3. EA conducted

both static stability and pseudo-static seismic stability assessments. The target factor of safety (FOS) for static global stability was set at 1.5, following NRC (1989) guidelines. For pseudo-static global stability, EA selected a target FOS of 1.1, also based on NRC (1989). Each scenario and condition included analyses of both rotational (circular) and wedge (block) failure mechanisms.

Section 2.5 describes the probabilistic seismic hazard analysis for the Facility, which indicates a peak ground acceleration (PGA) of 0.21g for a 10,000-year return period. This corresponds to a 9.5% probability of exceedance within the 1,000-year design life of TSF. EA applied a horizontal coefficient of two-thirds the PGA, or 0.14, for the pseudo-static analyses.

4.8.3 *Material Properties*

Soil properties used in the stability analyses were consistent with those obtained from laboratory testing or assumed values as presented in in these stability analyses are included in Table 4.2.

4.8.4 *Results of Analysis*

Results of the slope stability analyses indicate minimum factors of safety greater than 2 for static conditions and greater than 1.1 for pseudo-static conditions which exceed the minimum criteria established by the NRC (1989). The results of the slope stability analyses are shown in Figures 4.4 and 4.5.

4.9 Surface Water Hydrology and Erosion Protection

The reclaimed surface will be protected from water and wind erosion through a combination of offsite runoff diversion and rock mulch surface facing, discussed separately below.

4.9.1 *Rock Mulch Cover*

The expanded disposal cell cover will be sloped at 20% and will incorporate a 1-foot-thick top layer of rock mulch, consisting of rock/soil admixture. The admixture design consists of 30 percent AASHTO No. 1 gravel and 70 percent onsite pediment material. T

4.10 Grading

The final reclamation plan involves grading the final cover to 20% slope. The analyses in the preceding sections informed the design and thickness specifications for the final cover system.

For the sand layers, including the 18-inch interim cover, adjustments after primary consolidation settlement, and the 12-inch final cover; approximately 240,200 cubic yards of fill will be required. In summary, the total estimated quantity of clay, pediment, sand, and rock necessary for all reclamation activities amounts to 849,500 cubic yards of fill material.

4.11 Borrow Source Location and Characterization

The disposal cell cover system will consist of (from bottom to top) interim cover, clay (radon barrier), sand (capillary break), pediment layer (biointrusion and frost protection), and a rock mulch layer (erosion protection). Rock will also be required for the riprap and bedding within the diversion channel. The proposed cover system is shown in Figure 4.1. This section discusses the location and characterization of the borrow source areas for the proposed cover materials.

4.11.1 *Borrow Source Locations*

The EA site investigation showed that the clay for the radon barrier, filter sand, and the pediment soils is procurable from the site. Figure 2-2 includes the locations of the potential burrow sources at the site.

4.11.2 *Borrow Source Characterization*

4.11.2.1 Clay Borrow Source

The field investigation of the clay borrow source, conducted by EA, included excavation of 24 test pits as discussed in Section 2.3. The test pit locations are shown on Figure 2.3, and the test pit logs are included in Appendix A. EA encountered clay and silty clay/clayey silt, sandy clay, sand, sand, sandstone in the test pits.

4.11.2.2 Sand Borrow Source

A borrow source for the pediment and sand soil exists at the Facility as shown on Figure 4-6. As discussed in Section 2.4.2, samples of the sand borrow sources were collected for laboratory testing. The laboratory test results are included in Appendix B.

4.11.2.3 Rock Mulch Borrow Source

The rock mulch cover layer for the cover design will be locally sourced. The material will comprise 30% AASHTO No. 1 gravel and 70% sandy soil. The source rock for the mixture may be imported to the site if locally sourced alternative is not found. NUREG-1623 provides specific criteria for the use of sandstone in reclamation applications. These include requirements for fine-grained quartz cementation, low porosity, insignificant vertical or horizontal joints and fractures, and sourcing from massive bedding formations. Prior to final design a borrow source for the rock will be identified and tested.

4.12 Borrow Source Quantities

EA has estimated the required volumes of borrow source for each material type. The proposed borrow sources are included in Figure 4-6.

Figure 4.6 shows the potential borrow sources. It is calculated that approximately 274,300 and 240,200 cubic yards of pediment and sand, respectively, are required for reclamation. 270,000 cubic yards of rock are required to complete the reclamation, which consists of 20,500 cubic yards of rock mulch for the final cover and 9,700 cubic yards of rock fill for the tailings regrading. Additionally, 18,800 cubic yards of rock are required for the diversion channel riprap and bedding, 52,000 cubic yards of rock are required for the north area grading, and 169,000 cubic yards of rock are required for the South Dam slope grading. 314,000 cubic yards of rock will be excavated within the east grading area and north channel as part of the diversion channel construction, which is more than the 270,000 cubic yards of rock required.

In total, between the clay borrow source and the onsite borrow locations for sand, pediment, and rock, the required material for closure is available. A

4.13 Revegetation of Disturbed Areas

4.13.1 *Seedbed Preparation*

Revegetation of the expanded disposal cell cover will employ various methods depending on the steepness of the slope. The cover will be revegetated using standard mine reclamation equipment such as tracked and wheeled tractors, rangeland seed drills, and common mulch spreaders. In areas that may have slopes steeper than 3H:1V, a mixture of manual and mechanical application techniques will be used, including broadcasting seed by hand, or chain seeding. Revegetation of the disposal cell will be completed in agreement with the plan presented in the Closeout/Closure Pan (EA, 2025)

4.14 Material Placement

Materials and structures determined to have no salvageable value, or those requiring permanent containment due to contamination, will be transported to the expanded disposal cell at the Mount Taylor uranium mine in accordance with federal and state regulatory requirements, including the Surface Mining Control and Reclamation Act (SMCRA, 30 CFR §816.116) and EPA guidelines for uranium mill tailings (40 CFR Part 192 Subpart D). This category encompasses contaminated soils, facility debris, and dismantled equipment. All materials will be placed within the disposal cell using controlled, engineered lifts to ensure effective isolation, long-term structural stability, and compliance with applicable geotechnical standards. EA understands that there are soils on site that are contaminated with petroleum products. Prior to placement in the disposal cell those soils maybe be land-farmed to remove the contamination or additional analyses will be completed to confirm that they are compatible with the cell design and State regulations for placement in the disposal cell. During excavation the soil will be placed on an impervious surface (i.e. concrete pad or liner system).

All equipment and structural materials designated for disposal shall be conveyed to disposal cell l following procedures specifically developed for uranium mine reclamation and consistent with ASTM D1557 (Modified Proctor) compaction standards and site-specific geotechnical protocols. The placement of these materials will be governed by the following steps:

- Materials will be cut or dismantled into manageable sections to facilitate safe handling and minimize the creation of voids within the disposal cell, thereby reducing the risk of future subsidence, as recommended by geotechnical guidance for engineered landfill covers and stabilization designs. (See NUREG-1623 and NUREG/CR-4620 for methodologies.
- Compressible debris will be staged in approved areas and compacted using heavy equipment such as backhoes, front-end loaders, or tracked crawlers, in accordance with site safety, environmental protocols, and ASTM D1557 requirements.
- Pipes or conduits with openings greater than 12 inches that cannot be crushed will be filled with clean earthen materials prior to placement, eliminating internal voids and enhancing overall stability as outlined in landfill cover design standards.

- Tanks and vessels will be crushed or dismantled whenever feasible. If this is not possible, tanks will be filled with suitable earthen material and buried in the South Cell to ensure proper containment and void elimination.

Compaction requirements for the disposal cell are as follows:

- All materials, including contaminated soils and debris, must be placed in controlled lifts not exceeding 12 inches in thickness prior to compaction. Each lift shall be compacted using heavy equipment (such as vibratory rollers, compactors, or tracked dozers) until a minimum of 90% of the maximum dry density is achieved, as determined by ASTM D1557 (Modified Proctor) or applicable site-specific geotechnical standards. (Refer to ASTM D1557 and NUREG-1623.)
- Compaction will be verified through field density testing at a minimum frequency of one test per 2,500 square feet per lift, or as otherwise directed by project geotechnical requirements.
- Areas failing to meet the specified compaction standard shall be reworked and retested until full compliance is achieved, following quality assurance protocols outlined in technical guidance documents.
- Special attention will be given to void-prone materials, such as pipes and tanks, ensuring that fill used to eliminate voids is compacted to the same specification as the surrounding fill material.
- The entire compaction process will be overseen and documented by qualified personnel, with all records maintained to ensure regulatory compliance and quality assurance, in line with EPA, NRC, and SMCRA requirements.

Contaminated soils generated from facility operations will be co-disposed with structural debris in the disposal cell , following protocols designed to:

1. Establish a compacted and stable working surface above disposed materials, facilitating safe operation of construction equipment and preventing tire damage, as recommended by landfill and tailings stabilization standards. (See NUREG/CR-4620 and EPA 40 CFR Part 192.
2. Provide interim cover over disposed materials to minimize exposure to air and precipitation, thereby reducing the risk of contaminant migration, consistent with EPA and NRC guidelines.
3. Mitigate void spaces and prevent future settlement by alternating lifts of fill and disposed materials, thoroughly compacted with multiple passes of heavy equipment in accordance with the specified compaction requirements for the South Cell.

Throughout all phases of material placement, best management practices for dust control will be strictly implemented to safeguard worker health and minimize the release of fugitive dust, in full compliance with regulatory standards applicable to uranium mine reclamation, including those set forth by the EPA and state agencies.

5.0 CONCLUSIONS

The expanded disposal cell cover design at Mt. Taylor Mine demonstrates a comprehensive, multi-layered approach to long-term containment and environmental protection. The system integrates a 12-inch rock mulch layer for erosion resistance, 42 inches of onsite soil for biointrusion and frost protection, a 12-inch sand filter as a capillary break, and a 12-inch compacted clay layer engineered to minimize infiltration and radon gas migration. This configuration not only meets but exceeds regulatory requirements set by the NRC, EPA, and New Mexico Environment Department, ensuring that radon flux remains well below permissible limits and that the cover is robust against climatic extremes, settlement, and ecological threats.

The design is grounded in extensive site-specific investigations, including field sampling, laboratory testing, and advanced modeling. Analyses of infiltration, settlement, frost penetration, and slope stability confirm that the cover system will perform reliably under both typical and extreme conditions. The use of locally sourced materials, validated through geotechnical testing, ensures compatibility with the site's unique geological and climatic context. Ongoing monitoring and adaptive management protocols are embedded in the plan to address any unforeseen changes in cover performance, thereby supporting regulatory compliance and long-term stewardship.

The Mt. Taylor disposal cell cover is a carefully engineered system that combines best practices, regulatory compliance, and site-specific solutions to ensure long-term containment of contaminants, promote revegetation, and protect human health and the environment.

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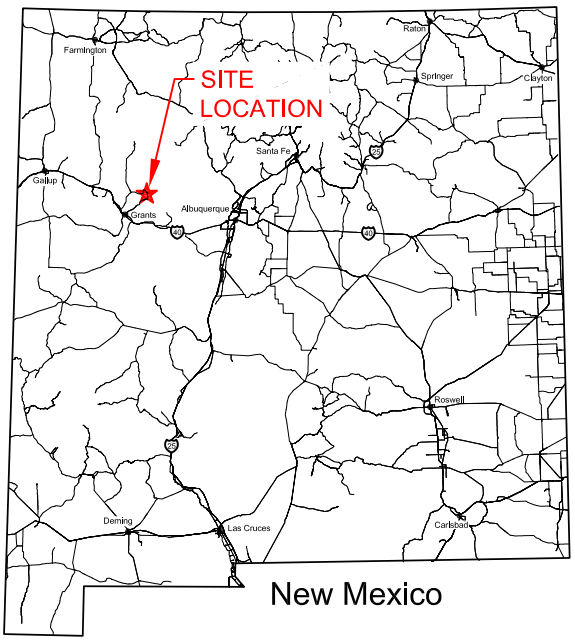
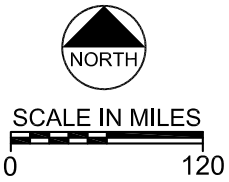
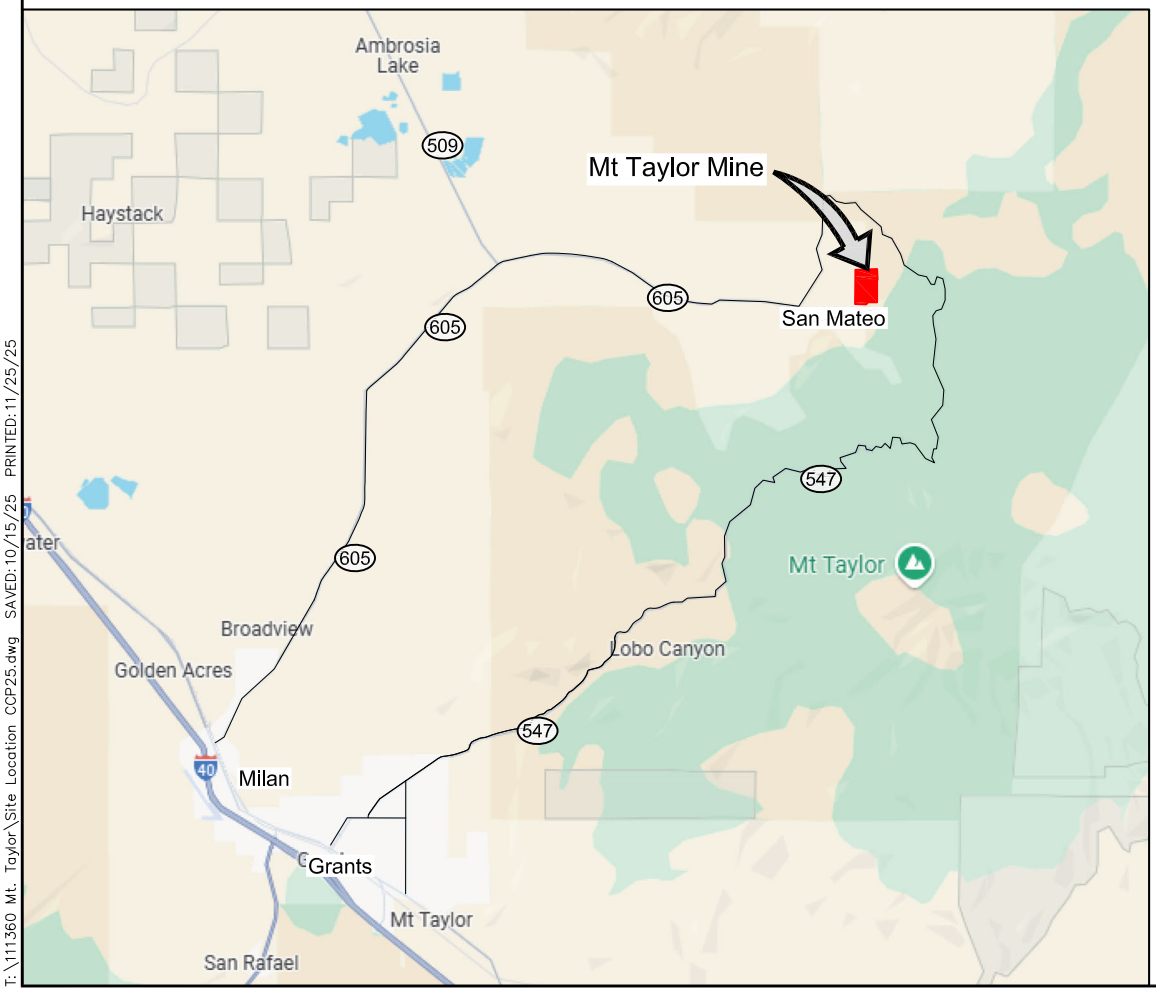
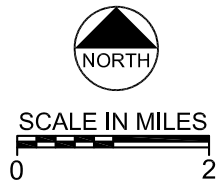
FIGURES









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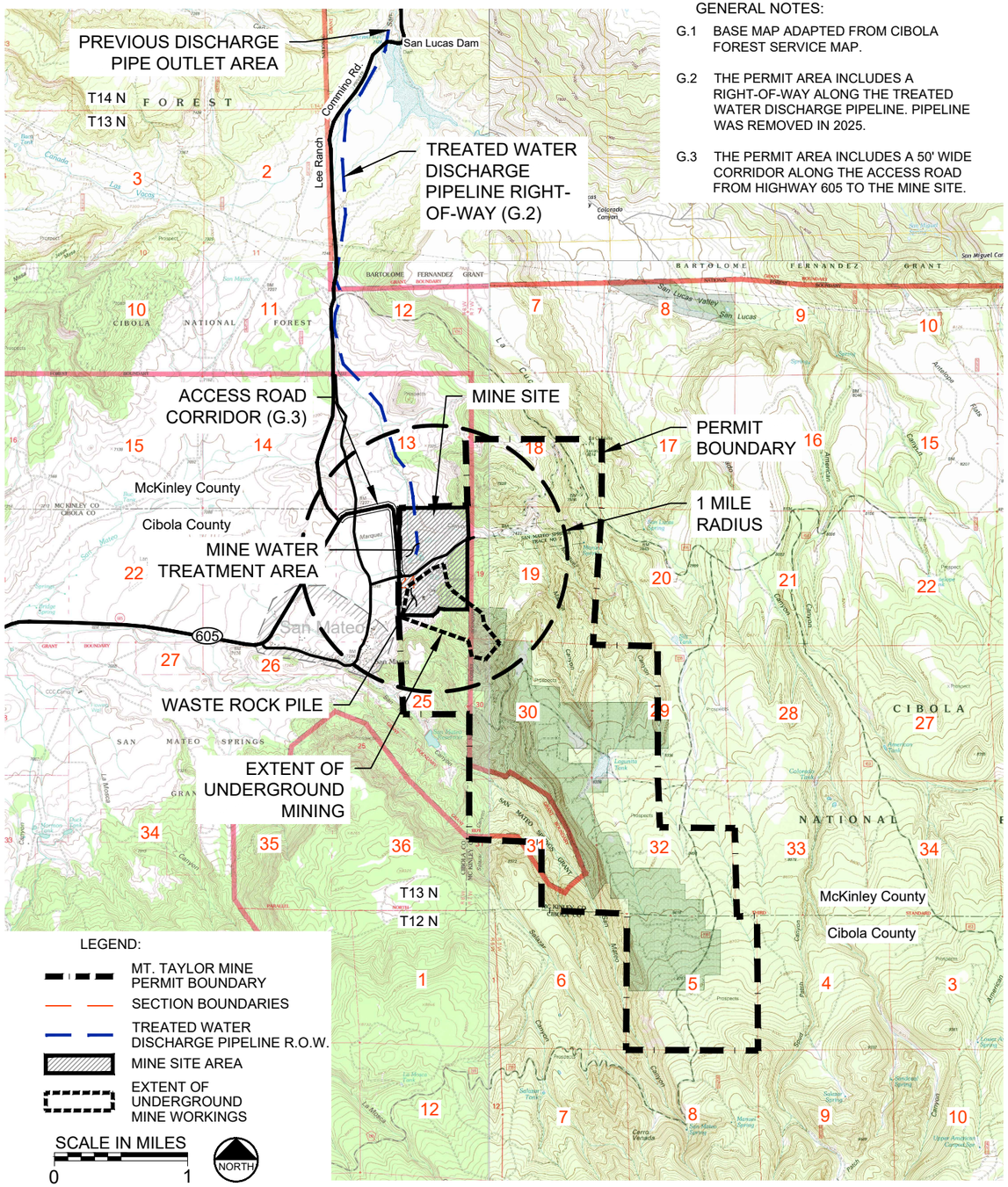
Project No. 111360

November 2025

Engineering Analytics, Inc.

FIGURE 2-1
SITE LOCATION MAP
MT. TAYLOR MINE

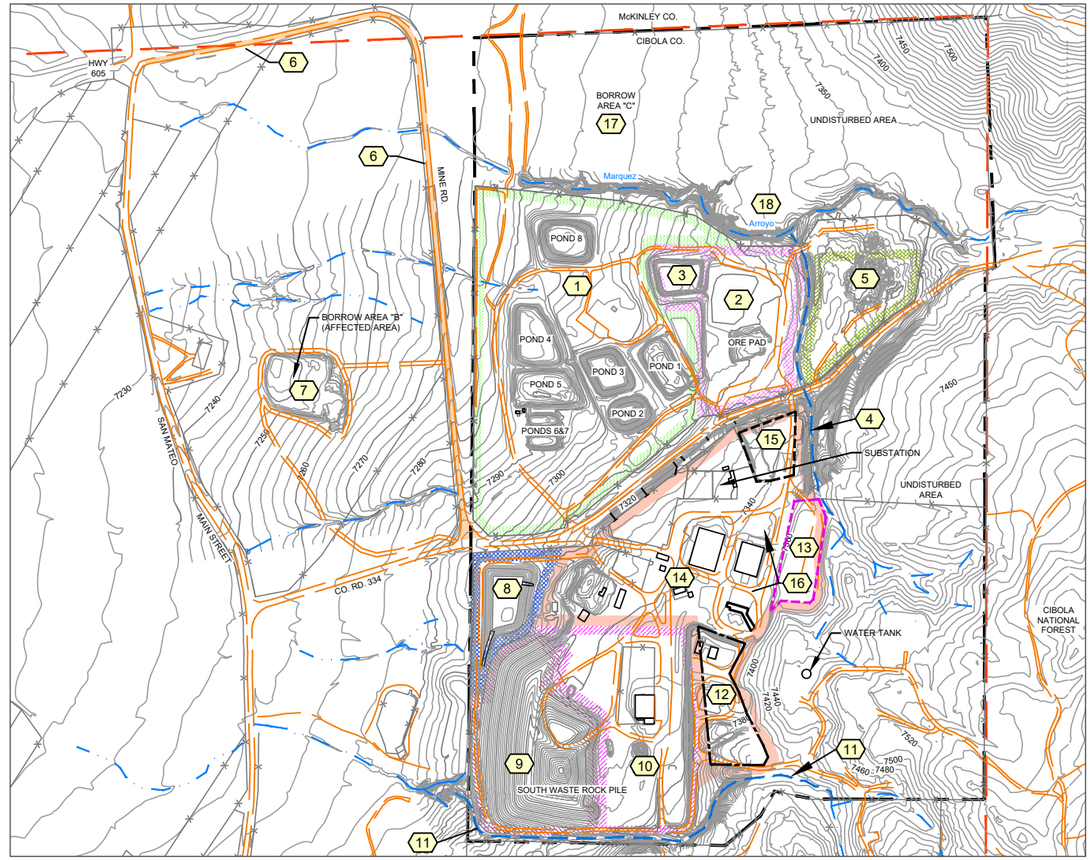


GENERAL NOTES:

G.1 BASE MAP ADAPTED FROM CIBOLA FOREST SERVICE MAP.

G.2 THE PERMIT AREA INCLUDES A RIGHT-OF-WAY ALONG THE TREATED WATER DISCHARGE PIPELINE. PIPELINE WAS REMOVED IN 2025.

G.3 THE PERMIT AREA INCLUDES A 50' WIDE CORRIDOR ALONG THE ACCESS ROAD FROM HIGHWAY 605 TO THE MINE SITE.



MINE UNITS AND OTHER AREAS:

1	MINE WATER TREATMENT AREA	7	BORROW AREA "B"	13	CHILLER BENCH AREA
2	ORE PAD	8	SOUTH STORM WATER POND	14	SERVICE AND SUPPORT AREA
3	ORE PAD RUNOFF RETENTION POND	9	EXISTING WASTE ROCK PILE/ DISPOSAL AREA	15	OLD ORE LOADING AREA
4	NORTH DIVERSION CHANNEL	10	DISPOSAL CELL EXPANSION AREA	16	MINE SHAFTS
5	BORROW AREA "A"	11	SOUTH DIVERSION CHANNEL	17	BORROW AREA "C"
6	MINE ACCESS ROAD	12	COMPRESSOR BENCH AREA	18	WINDBLOWN AREA

LEGEND:
- MINE SITE AREA
- SECTION 24 BOUNDARY
- ROADWAY
- FENCE
- EXISTING TOPOGRAPHY
- DRAINAGE PATHWAYS
- MINE BUILDINGS (PRIOR TO REMOVAL ACTIVITIES)

GENERAL NOTES:

G.1 THE MINE PERMIT AREA INCLUDES THE RIGHT OF WAY ALONG THE TREATED WATER DISCHARGE PIPELINE AND A 50' WIDE CORRIDOR FOR AN ACCESS ROAD (SEE FIGURE 1-3).

G.2 AFFECTED AREAS INCLUDE BUT ARE NOT LIMITED TO BORROW AREA "B", BORROW AREA "C", AND WINDBLOWN AREA. EVALUATION OF OTHER POSSIBLE AFFECTED AREAS IS ONGOING.

G.3 THIS DRAWING SHOWS THE SITE CONDITIONS AS OF JULY 2025. SEE FIGURE 1-2B AND TABLE 4.2 FOR DETAILED FACILITY DISPOSITION INFORMATION.

G.4 TOPOGRAPHY BASED ON A 2012 AERIAL SURVEY BY THOMAS R. MANN AND ASSOCIATES AND 2021 SURVEYS BY SOUTHWEST SURVEYING SOLUTIONS (S3).

NORTH

SCALE IN FEET
0
800'

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Project No. 111360

November 2025

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FIGURE 2-2
SITE LOCATION AND EXISTING CONDITIONS
MT. TAYLOR MINE

LEGEND:
- MINE SITE AREA
- ROADWAY
- FENCE
- EXISTING TOPOGRAPHY
- DRAINAGE PATHWAYS
- TEST PIT LOCATION

NORTH

SCALE IN FEET
0 300'

McKINLEY CO.
CIBOLA CO.
C-1 C-2 C-3 C-4 C-5 C-6 C-7 C-8 C-9 C-10 C-11 C-12 C-13
BORROW AREA "C"
UNDISTURBED AREA
7350 7400 7450 7500
BORROW AREA "A"
Marquez
Arroyo
MINE RD.
POND 8
POND 4
POND 3
POND 5
POND 1
POND 2
PONDS 6&7
ORE PAD
A-1 A-2 A-3 A-4 A-5 A-6
BORROW AREA "B"
B-1 B-2 B-3 B-4 B-5
SAN MATEO
MAIN STREET
7240 7250 7260 7270 7280 7290 7300 7320 7340 7450
SUBSTATION
UNDISTURBED AREA

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Project No. 111360

November 2025

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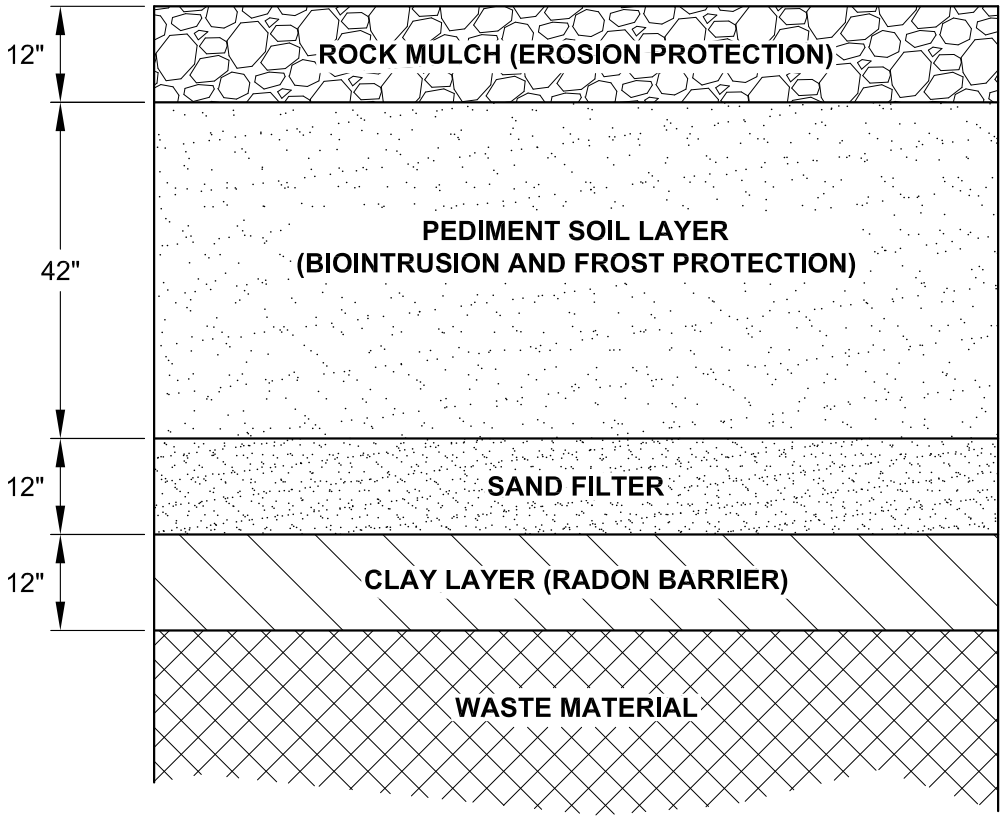
FIGURE 2-3
TEST PIT LOCATION MAP
MT. TAYLOR MINE



NOT TO SCALE

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Project No. 110444

November 2025

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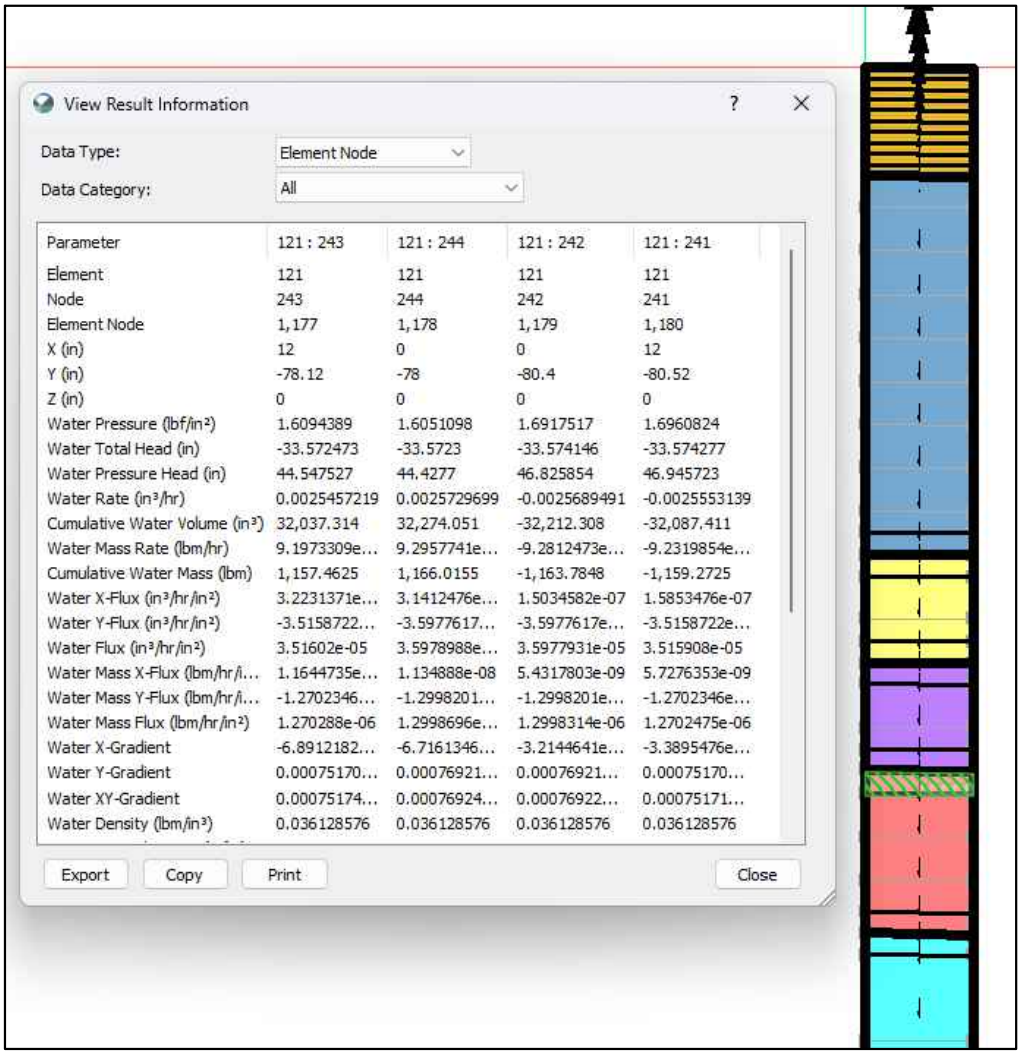
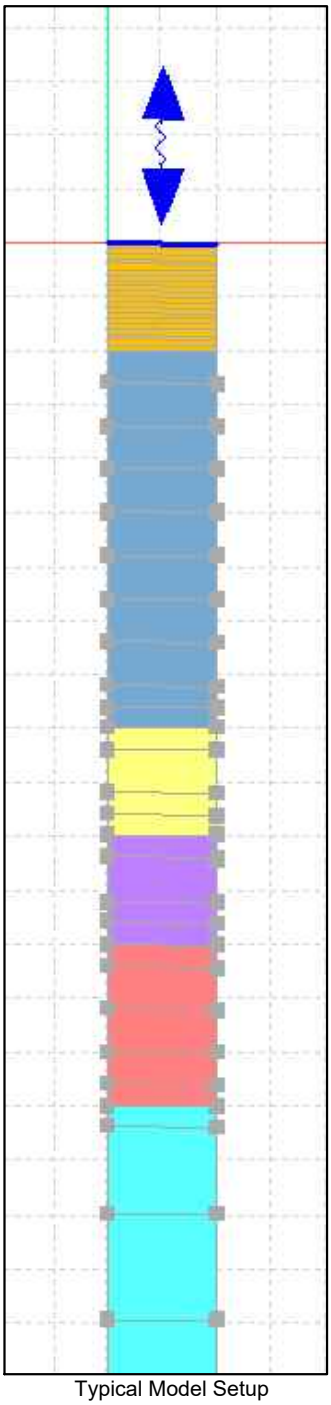
FIGURE 4-1
FINAL RECLAMATION COVER SYSTEM
MT. TAYLOR MINE

Summary of Material Properties for Simulation

Color	Name	Material Model	Sat Kx (in/hr)	Vol. WC. Function	K-Function
	1-Rock Mulch	Saturated / Unsaturated		(2024)Rock Mulch	(2024)Rock Mulch
	2-Pediment Layer	Saturated / Unsaturated		(2024)Pediment Layer	(2024)Pediment Layer
	3-Sand Layer	Saturated / Unsaturated		(2024)Sand & Interim Cover	(2024)Sand & Interim Cover
	4-Clay Layer	Saturated / Unsaturated		(2024)Clay Layer (Update)	(2024)Clay Layer
	5-Interim Cover	Saturated / Unsaturated		(2024)Sand & Interim Cover	(2024)Sand & Interim Cover
	6-Tailings Slurry	Saturated / Unsaturated		(2024)Tailings Slurry	(2024)Tailing Slurry
	7-Compacted Clay	Saturated Only	6.54803e-07		
	8-Foundation Soil	Saturated / Unsaturated		(2024)Sandstone	(2024)Sandstone



Summary Results Output



Typical Model Setup

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Project No. 111360

November 2025

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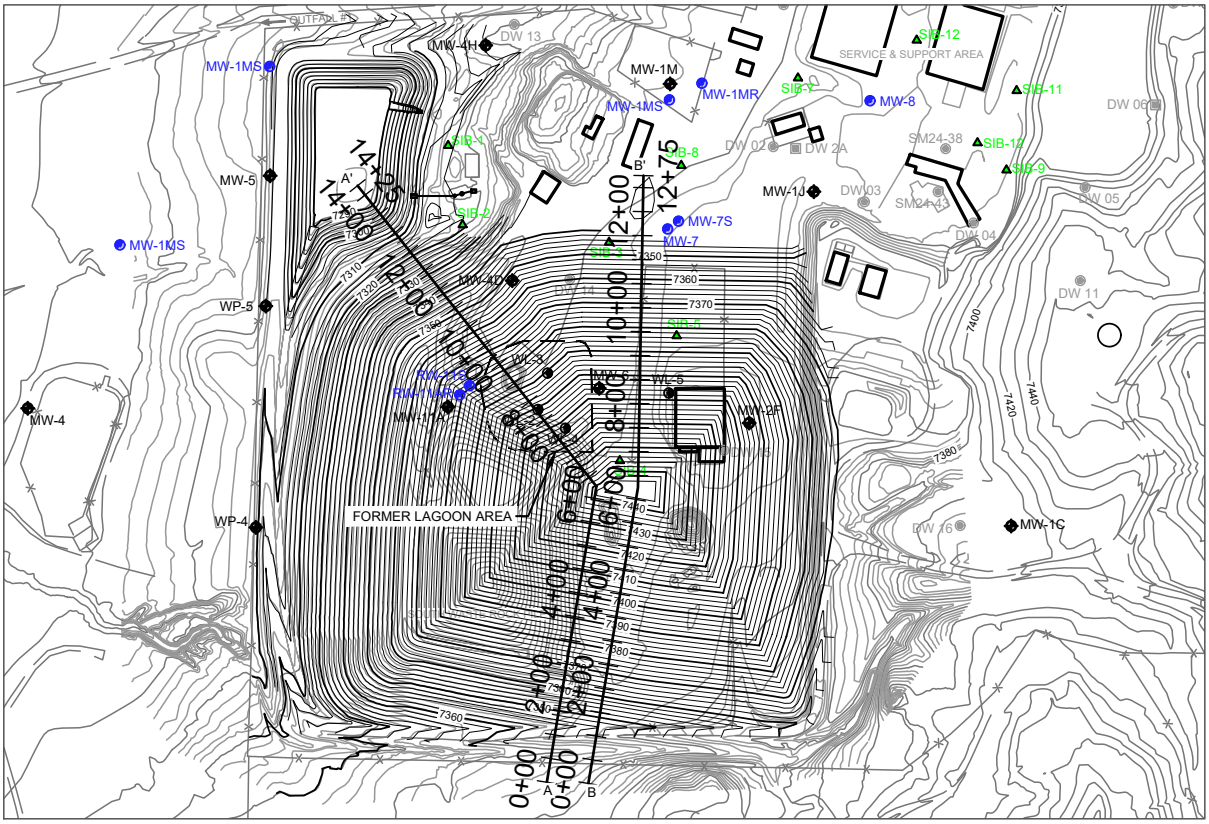
FIGURE 4-2
INFILTRATION ANALYSIS MODEL PROFILE
MT. TAYLOR MINE



- MONITOR WELL
- DRY WELL (PLUGGED AND ABANDONED)
- RECOVERY WELL
- DEWATERING WELL
- FACILITY WATER SUPPLY
- PROPOSED WELL 2025 SIP
- PROPOSED BORING 2025 SIP
- STORMWATER DRAINAGE
- FENCE
- ROADWAY
- FORMER LAGOON AREA
- EXISTING TOPOGRAPHY
- PROPOSED TOPOGRAPHY

NOTE:
MAX DEPTH AT HIGHEST POINT;

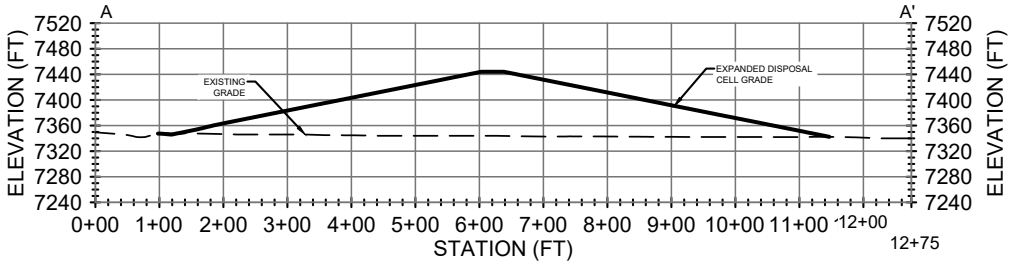
Current El	Proposed El	Height
7344'	7444'	100'

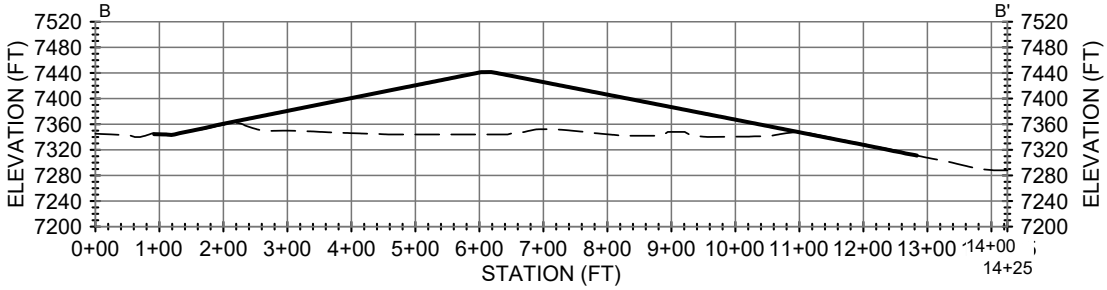
EXPANDED VOLUME
(Compared to original disposal cell volume)

CUT	FILL	NET
7,250	1,101,090	1,093,840

in cubic yards

PLAN
SCALE IN FEET
0 400'
NORTH





SECTIONS
SCALE IN FEET
0 300'

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Project No. 111360

November 2025

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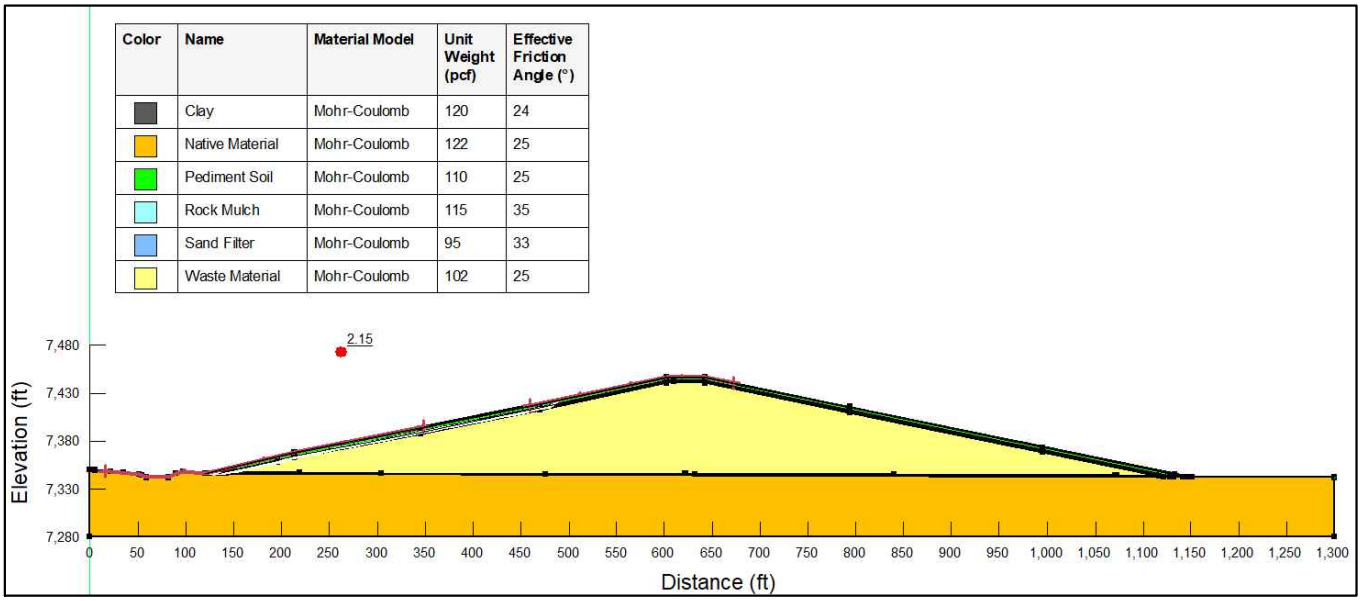
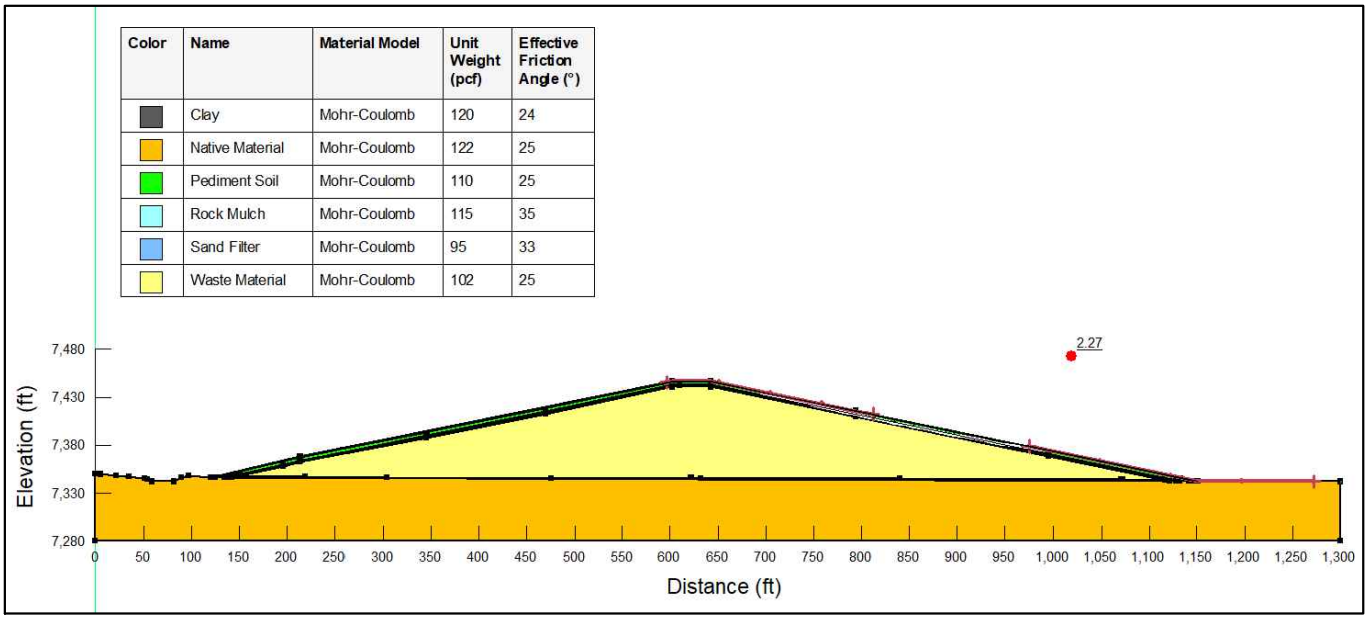
FIGURE 4-3
SECTIONS USED FOR STABILITY ASSESSMENT
MT. TAYLOR MINE



Global Stability Result at the Left Side



Global Stability Result at the Right Side

NOTE:
Factor of Safety (FS) above the regulatory requirement of 1.5.

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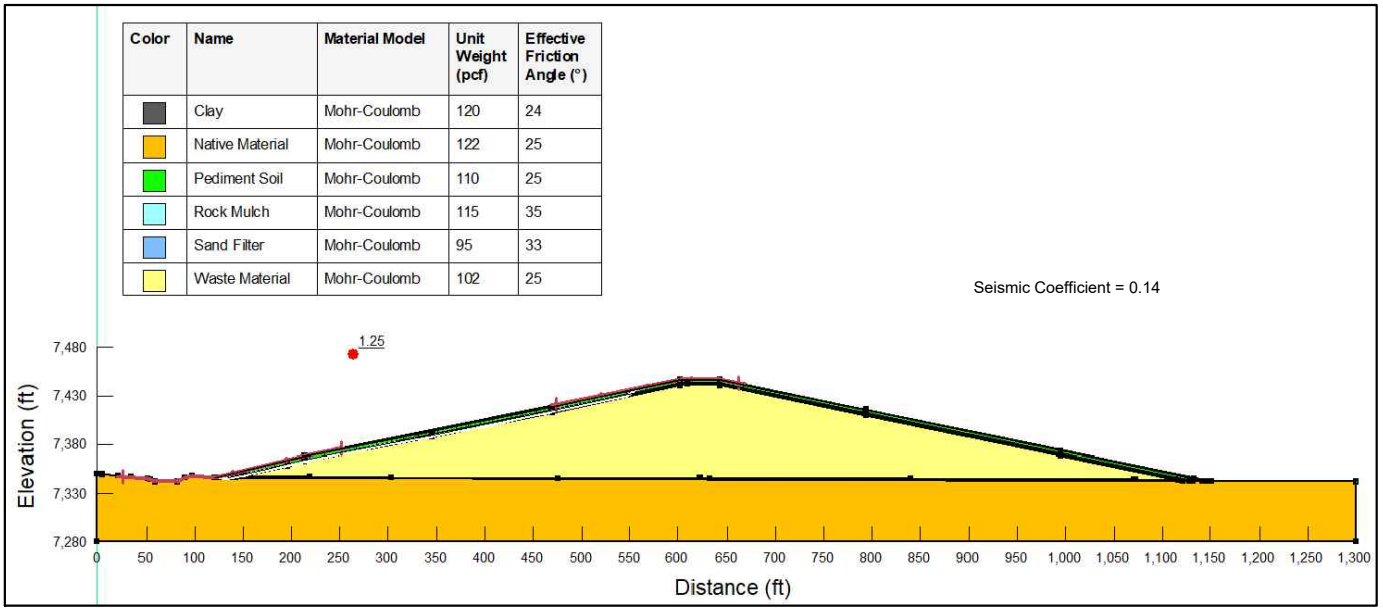
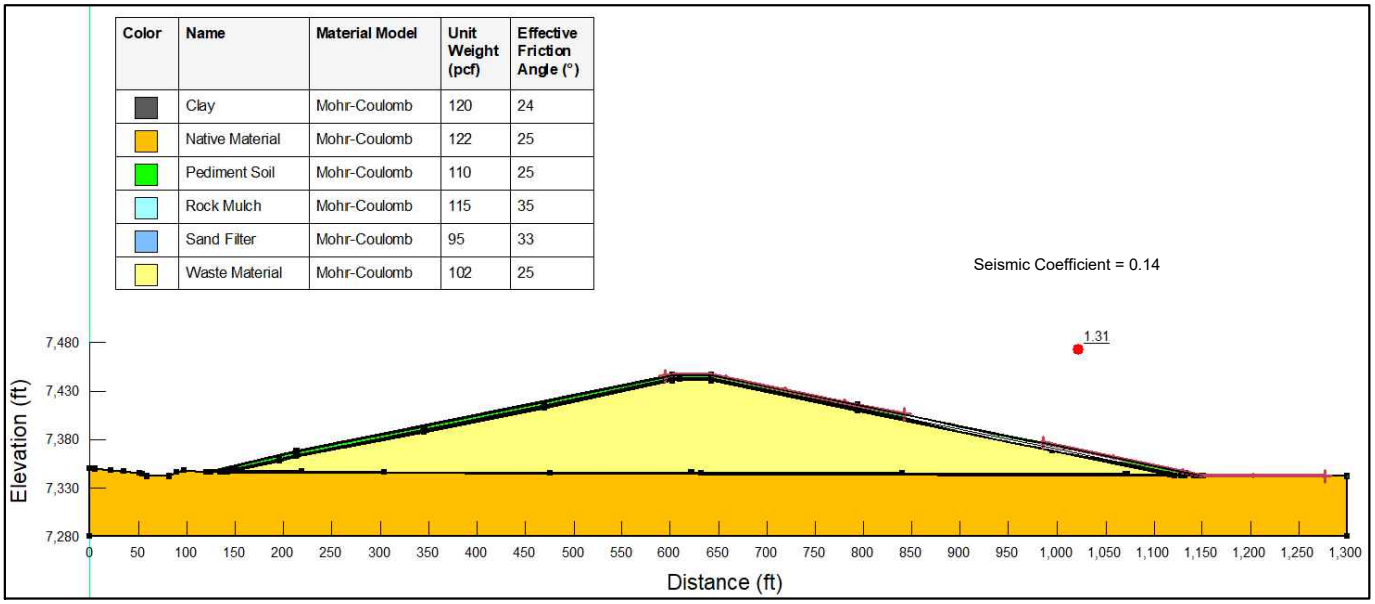
FIGURE 4-4
STABILITY CROSS SECTIONS
MT. TAYLOR MINE



Pseudo-Static Stability Analyses Result to the Left



Pseudo-Static Stability Analyses Result to the Right

NOTE:
The pseudo-static analyses show that the factor of safety (FS) are above 1.1, which is the regulatory criterion.

T:\111360 Mt. Taylor\Expanded Slope calcs.dwg SAVED:11/25/25 PRINTED:11/25/25

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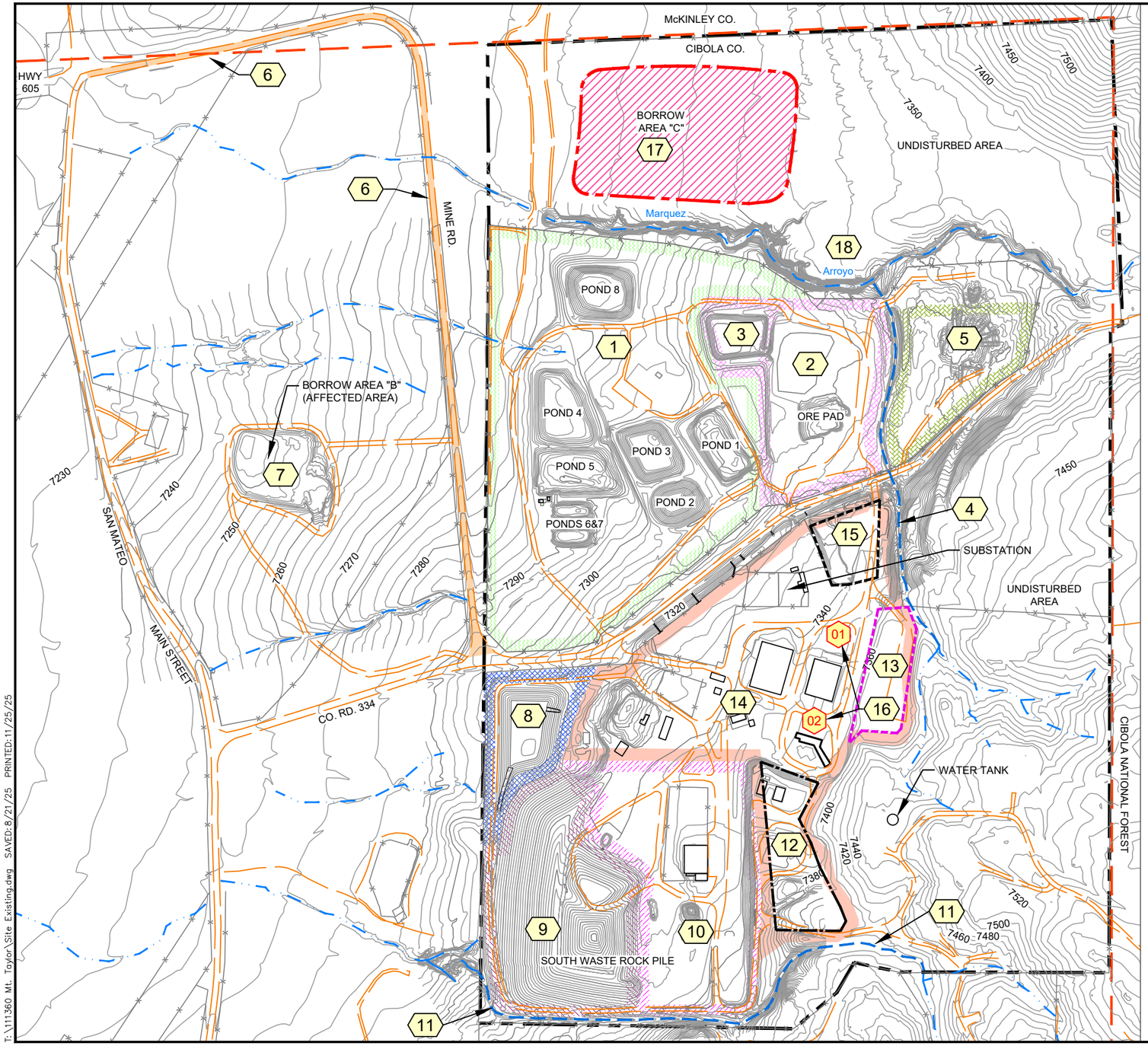
FIGURE 4-5
STABILITY CROSS SECTIONS
MT. TAYLOR MINE



MINE UNITS AND OTHER AREAS:

1	MINE WATER TREATMENT AREA	10	DISPOSAL CELL EXPANSION AREA
2	ORE PAD	11	SOUTH DIVERSION CHANNEL
3	ORE PAD RUNOFF RETENTION POND	12	COMPRESSOR BENCH AREA
4	NORTH DIVERSION CHANNEL	13	CHILLER BENCH AREA
5	BORROW AREA "A"	14	SERVICE AND SUPPORT AREA
6	MINE ACCESS ROAD	15	OLD ORE LOADING AREA
7	BORROW AREA "B"	01	16 MINE SHAFTS
8	SOUTH STORM WATER POND	17	BORROW AREA "C"
9	EXISTING WASTE ROCK PILE/ DISPOSAL AREA	18	WINDBLOWN AREA

LEGEND:

- MINE SITE AREA
- SECTION 24 BOUNDARY
- ROADWAY
- FENCE
- EXISTING TOPOGRAPHY
- DRAINAGE PATHWAYS
- MINE BUILDINGS (PRIOR TO REMOVAL ACTIVITIES)

GENERAL NOTES:

G.1 THE MINE PERMIT AREA INCLUDES THE RIGHT OF WAY ALONG THE TREATED WATER DISCHARGE PIPELINE AND A 50' WIDE CORRIDOR FOR AN ACCESS ROAD (SEE FIGURE 1-3).

G.2 AFFECTED AREAS INCLUDE BUT ARE NOT LIMITED TO BORROW AREA "B", BORROW AREA "C", AND WINDBLOWN AREA. EVALUATION OF OTHER POSSIBLE AFFECTED AREAS IS ONGOING.

G.3 THIS DRAWING SHOWS THE SITE CONDITIONS AS OF JULY 2025. SEE FIGURE 1-2B AND TABLE 4.2 FOR DETAILED FACILITY DISPOSITION INFORMATION.

G.4 TOPOGRAPHY BASED ON A 2012 AERIAL SURVEY BY THOMAS R. MANN AND ASSOCIATES AND 2021 SURVEYS BY SOUTHWEST SURVEYING SOLUTIONS (S3).

NORTH

SCALE IN FEET

0 500'

T:\111360 Mt. Taylor\Site Existing.dwg SAVED:8/21/25 PRINTED:11/25/25

Project No. 111360

November 2025

Engineering Analytics, Inc.

FIGURE 4-6
LOCATION OF CLAY BORROW SOURCE
MT. TAYLOR MINE

APPENDIX A
Test Pit Logs for 2025 Field Investigation

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE: date

TEST PIT NO.: A-1

PROJECT INFORMATION

PROJECT: MT. TAYLOR

PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

FIELD INFORMATION

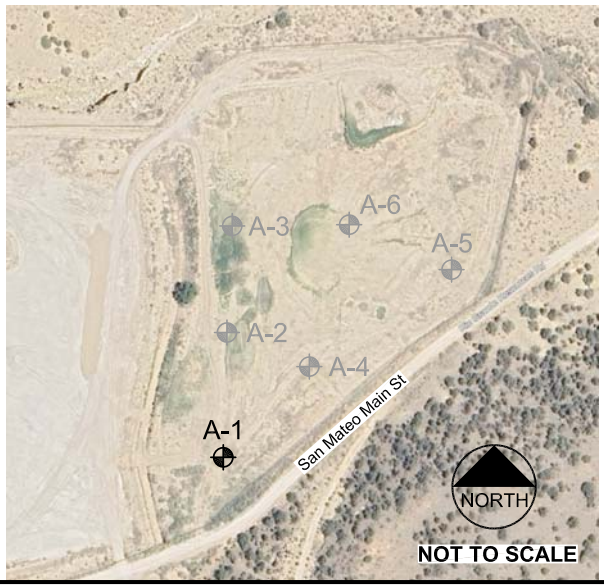
DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER:

TEST PIT LOCATION



EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

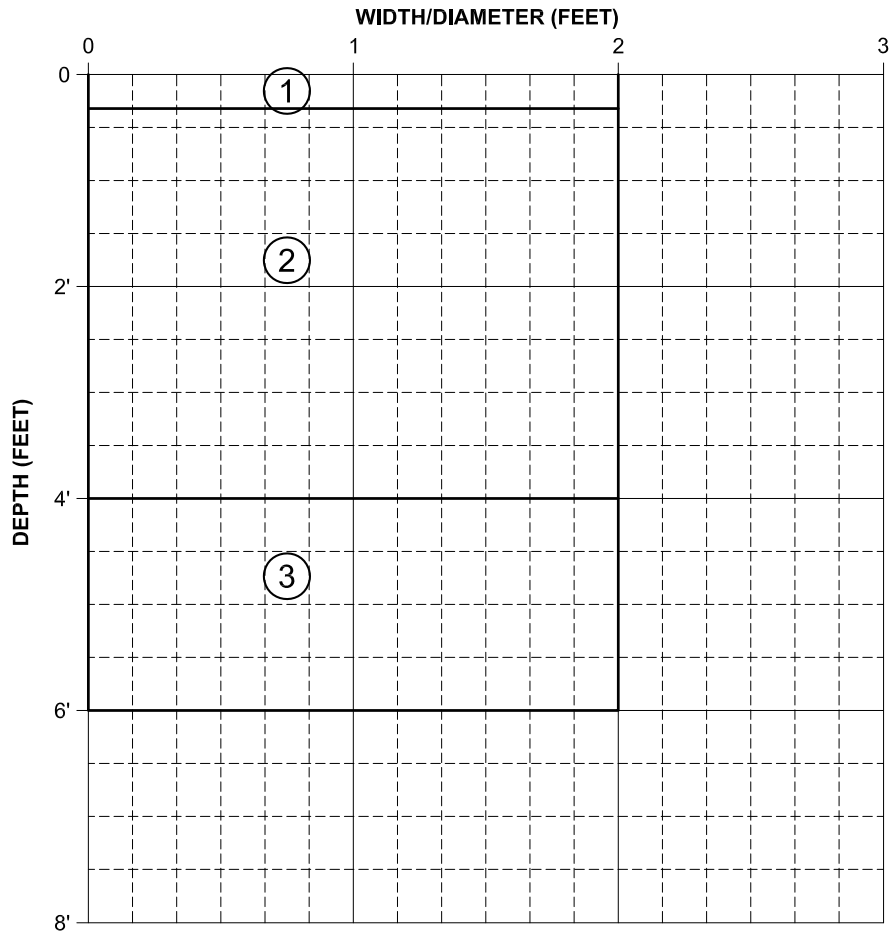
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: A-1



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	A1	BKT
4'	A1C	CA
6'	A1	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 2"	VEGETATION, SAND, DRY, (2.5Y, 5/3), LOOSE
2	2" - 4'	SAND, DRY (2.5Y, 5/3), LOOSE, NON-FROZEN BITS, FROZEN
3	4'-E.O.B.	VERY SANDY CLAY, DRY, TAN/ BROWN (2.5Y, 4/3), CHUNKY, BRITTLE, FROZEN

NOTES: HARD TO TELL, GROUND IS FROZEN, MAY BE CLAYEY SAND SILT

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: A-2

PROJECT INFORMATION

PROJECT: MT. TAYLOR

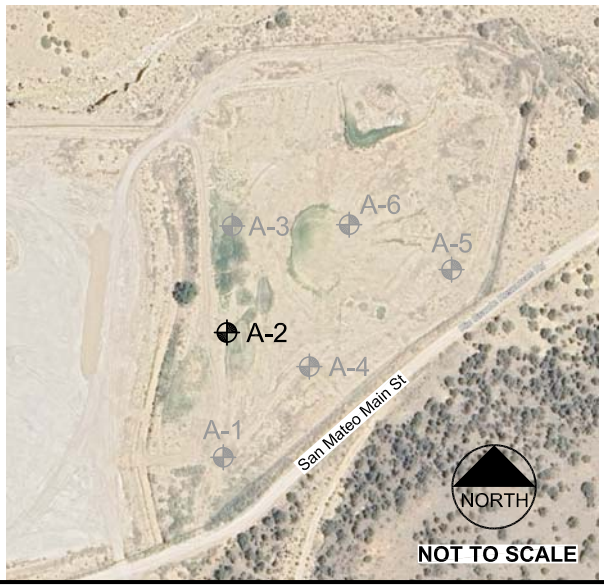
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER:

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

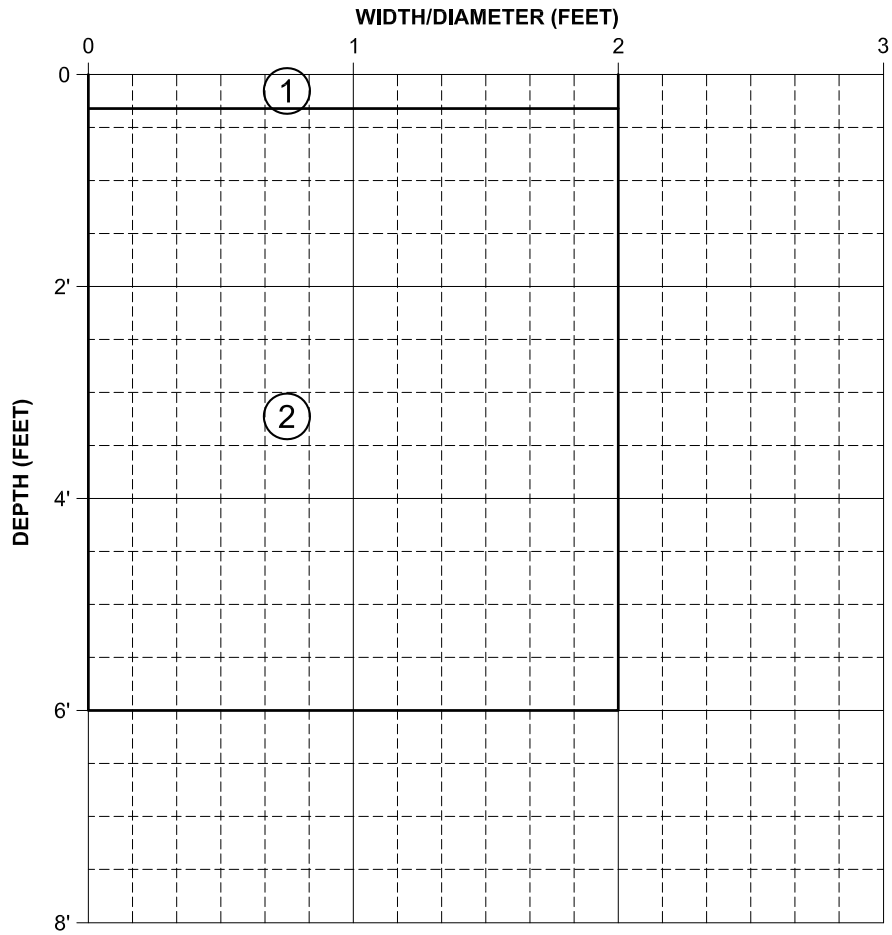
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: A-2



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	A2	BKT
6'	A2	BKT
NR	---	CA

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 2"	VEGETATION, SAND, DRY, (2.5Y, 5/3), LOOSE
2	2" - E.O.B.	SAND, DRY, (TAN 2.5Y, 5/3), VERY LOOSE, NO PLASTICITY
		NO CLAY

NOTES:

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: A-3

PROJECT INFORMATION

PROJECT: MT. TAYLOR

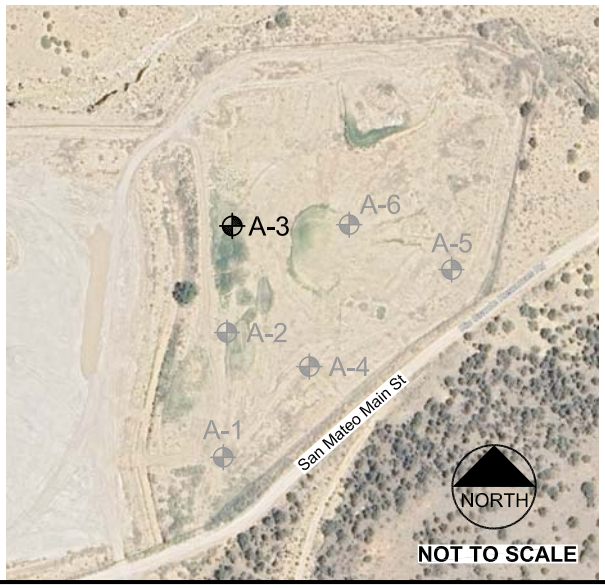
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER:

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

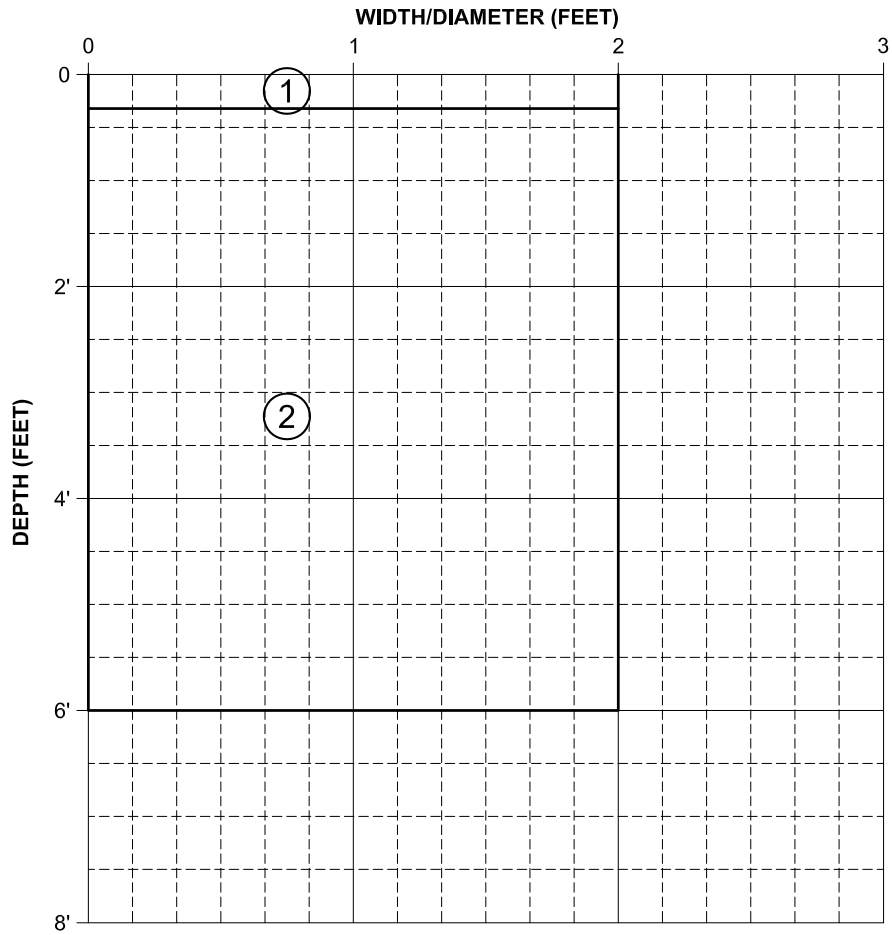
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: A-3



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	A3	BKT
6'	A3	BKT
NR	---	CA

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, SAND, DRY, (2.5Y, 5/3), LOOSE, NO PLASTICITY
2	3" - E.O.B.	SAND, FROZEN, (2.5Y, 5/3), LOOSE BITS, NO PLASTICITY

NOTES: NO CLAY

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: **A-4**

PROJECT INFORMATION

PROJECT: MT. TAYLOR

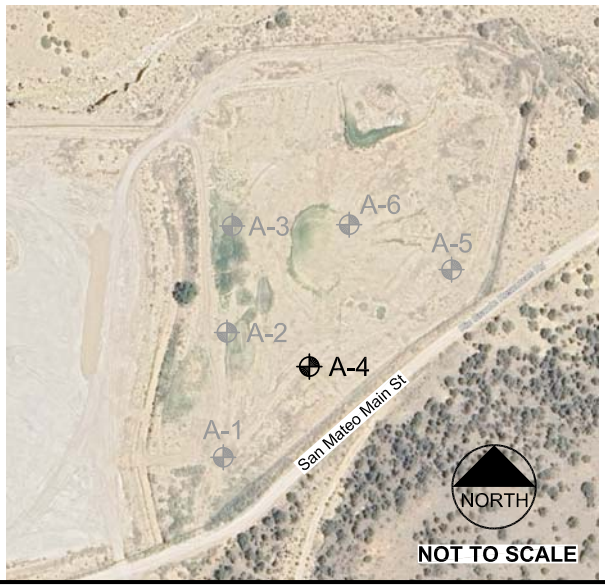
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER:

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

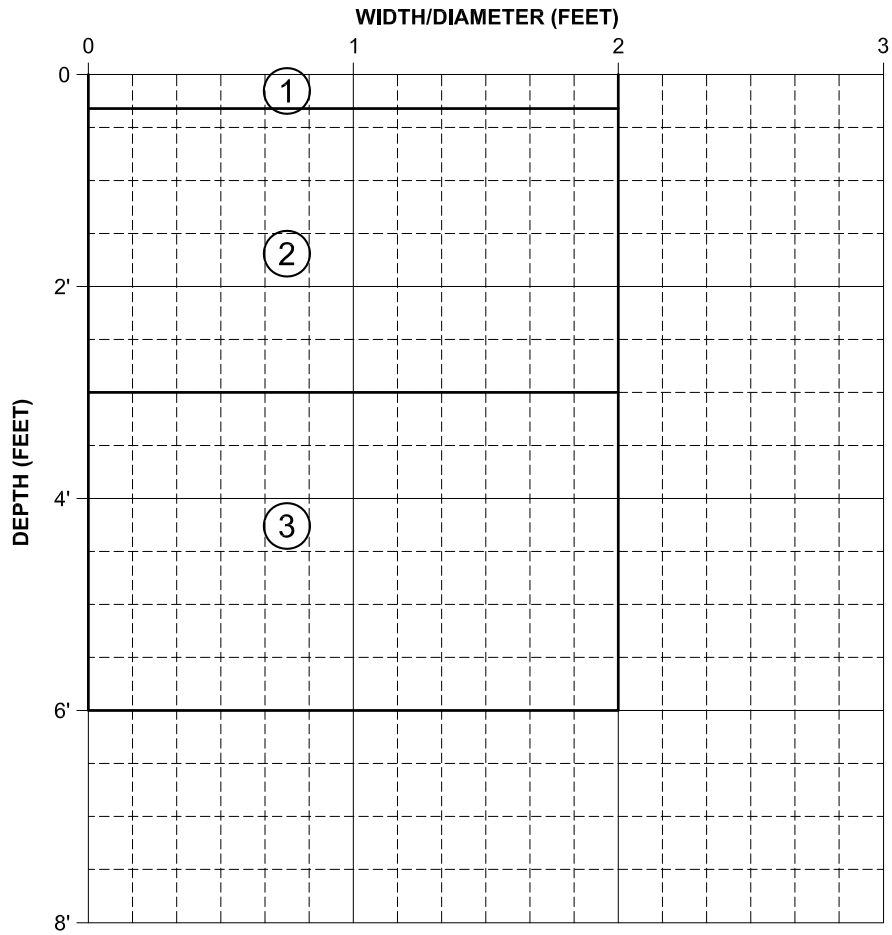
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: A-4



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	A4C	CA
3'	A4	BKT
6'	A4	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 2"	VEGETATION, SAND, DRY, (2.5Y, 5/3), LOOSE
2	2" -3'	SAND, FROZEN, (2.5Y, 5/3), NO PLASTICITY, CAME OFF IN BLOCKS, ROOTS
3	3' - E.O.B.	VERY SANDY CLAY, (TAN/ BROWN 2.5Y, 5/3), CHUNKY, BRITTLE
		E.O.T.P. = 6'

NOTES: HARD TO DISTINGUISH CLAY FROM FROZEN SAND.

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: A-5

PROJECT INFORMATION

PROJECT: MT. TAYLOR

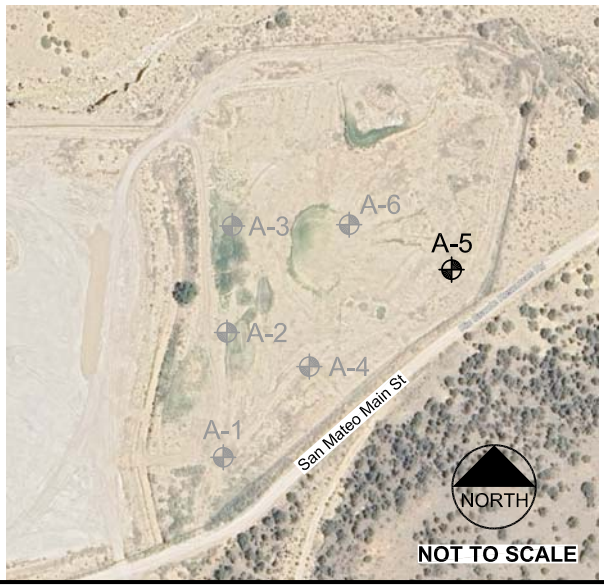
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER:

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

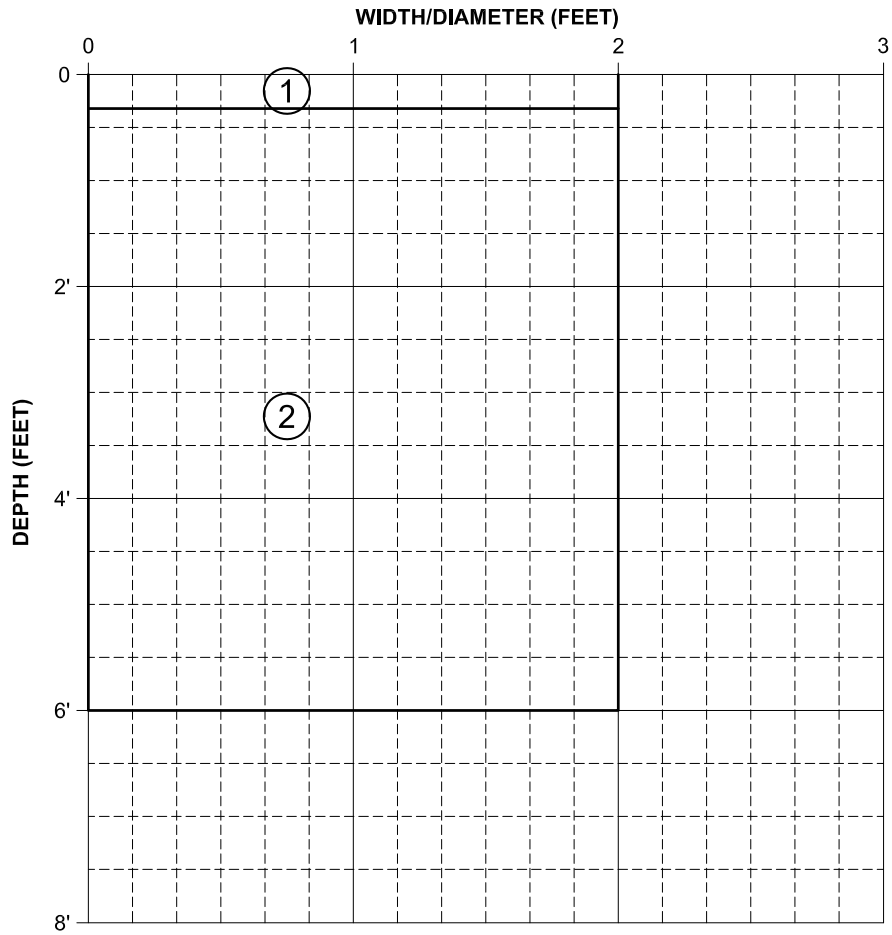
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: A-5



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	A5	BKT
6'	A5	BKT
NR	---	CA

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 2"	VEGETATION, SAND, DRY, (2.5Y, 5/3), NO PLASTICITY
2	2" - E.O.B.	SAND, (2.5Y, 5/3), VERY LOOSE, VERY FINE, CHUNKS THAT ARE BRITTLE
		E.O.T.P. = 6'

NOTES: NO CLAY

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: A-6

PROJECT INFORMATION

PROJECT: MT. TAYLOR

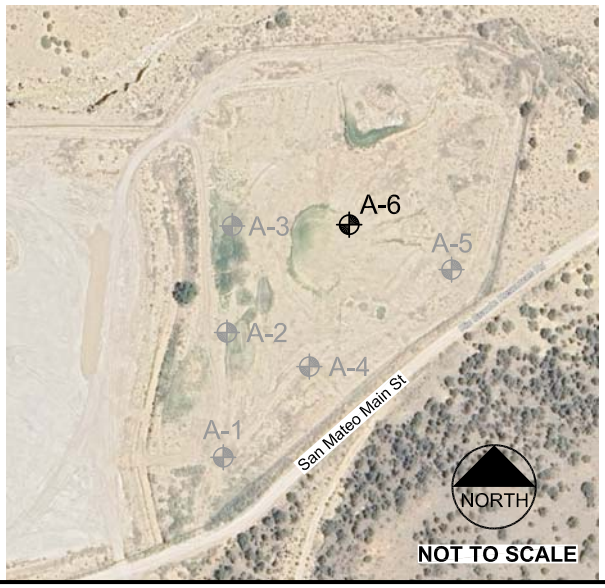
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER:

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

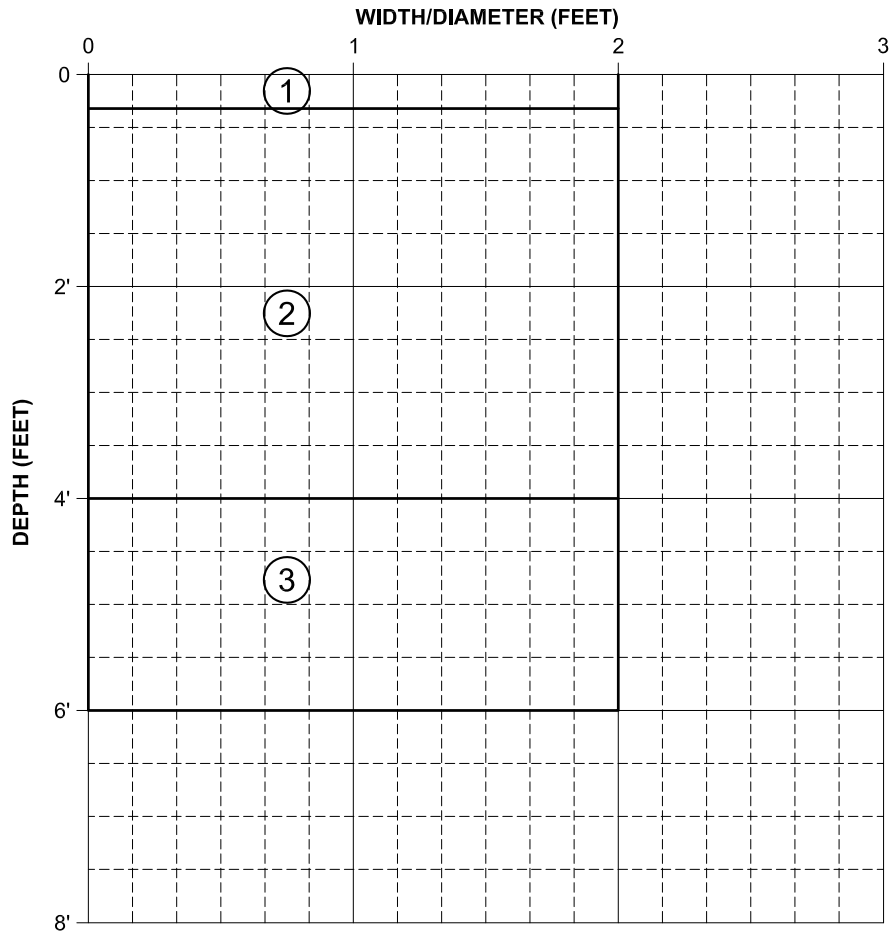
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: A-6



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	A6	BKT
5'	A6	BKT
NR	---	CA

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 2"	VEGETATION, SAND, DRY, (2.5Y, 5/3), LOOSE, NO PLASTICITY
2	2" - 4'	SILTY SAND, SLIGHTLY MOIST, (2.5Y, 5/3), LOOSE, VERY FINE, NO PLASTICITY
3	4' - E.O.B.	SILTSTONE, DRY, GRAY (2.5Y, 7/1), FINE, THIN FRAGMENTS AND SILT, NO PLASTICITY
		E.O.T.P. = 6'

NOTES:

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: **B-1**

PROJECT INFORMATION

PROJECT: MT. TAYLOR

PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

FIELD INFORMATION

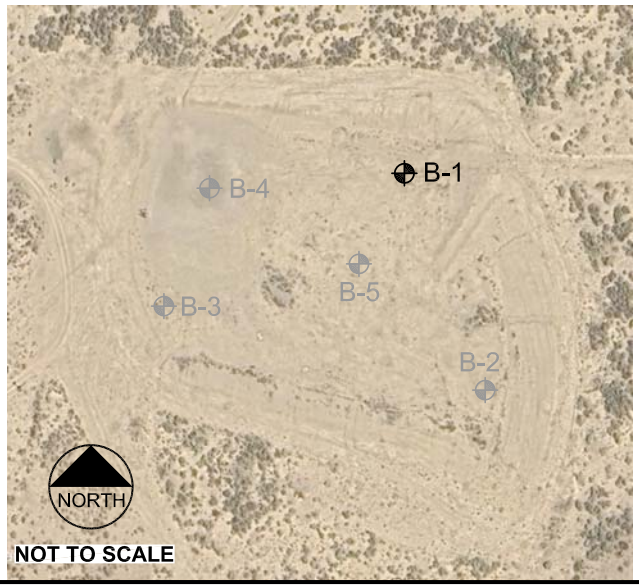
DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

TEST PIT LOCATION



NOT TO SCALE

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 5 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

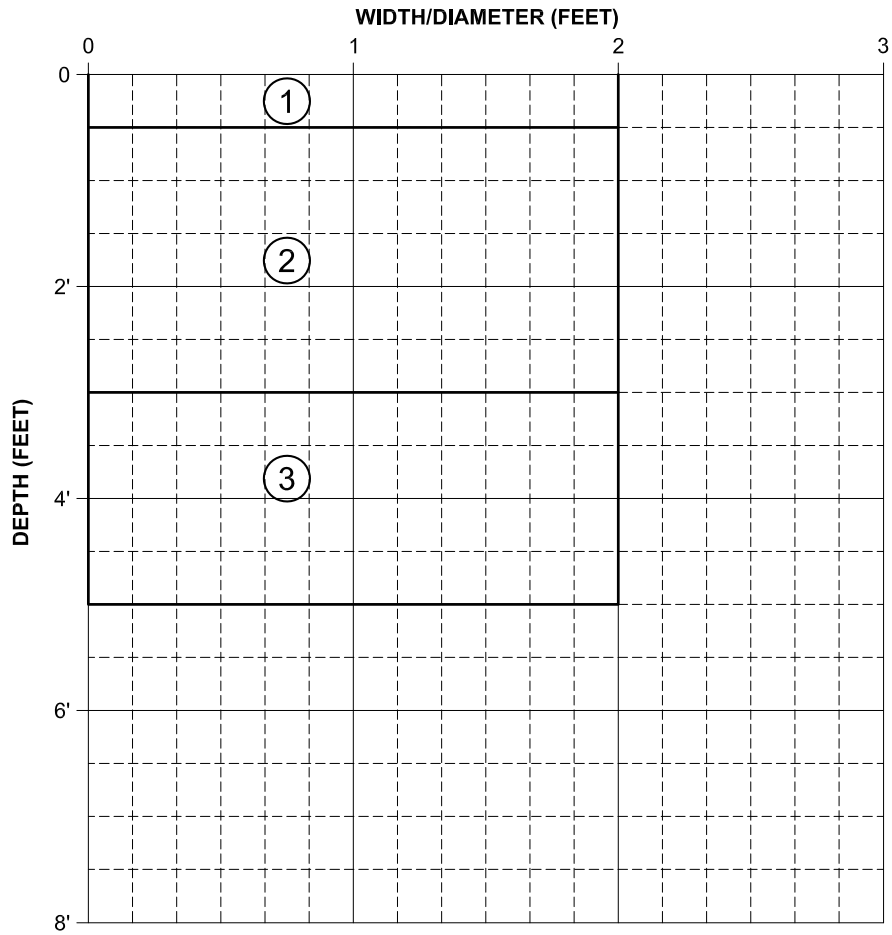
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: B-1



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	BK1-3	BKT
5'	BK1-5	BKT
2'	NR	CA
3'	NR	CA
5'	NR	CA

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 6"	VEGETATION AND TOPSOIL (MOSTLY VEGETATION), SAND
2	6" - 3'	SAND WITH GRAVEL, DRY, LOOSE SAND WITH GRAVEL UP TO 1.5", BROWN/TAN (2.5Y 5/3), NON PLASTIC
3	3' - E.O.B.	SANDY CLAY, BROWN/ BLACK (2.5Y, 2.5/1), VERY STIFF, MIXED, INTERBEDDED, CLAY LAYER VERY STIFF AT BOTTOM
		E.O.T.P. = 5'

NOTES: HARD CLAY LAYERS AT 3FT, BACKHOE STRUGGLING, REFUSAL AT 5'.

NO CAL RECOVERY (SAND IN 2FT CAL, 3FT & 5FT 100 BLOWS).

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: **B-2**

PROJECT INFORMATION

PROJECT: MT. TAYLOR

PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

FIELD INFORMATION

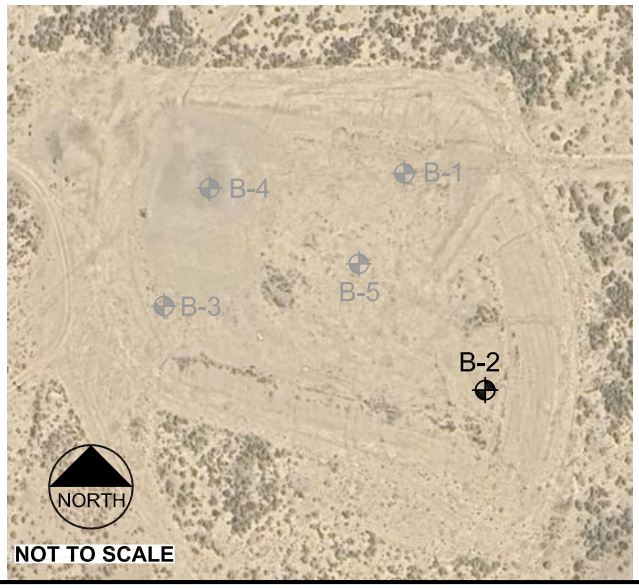
DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

TEST PIT LOCATION



EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

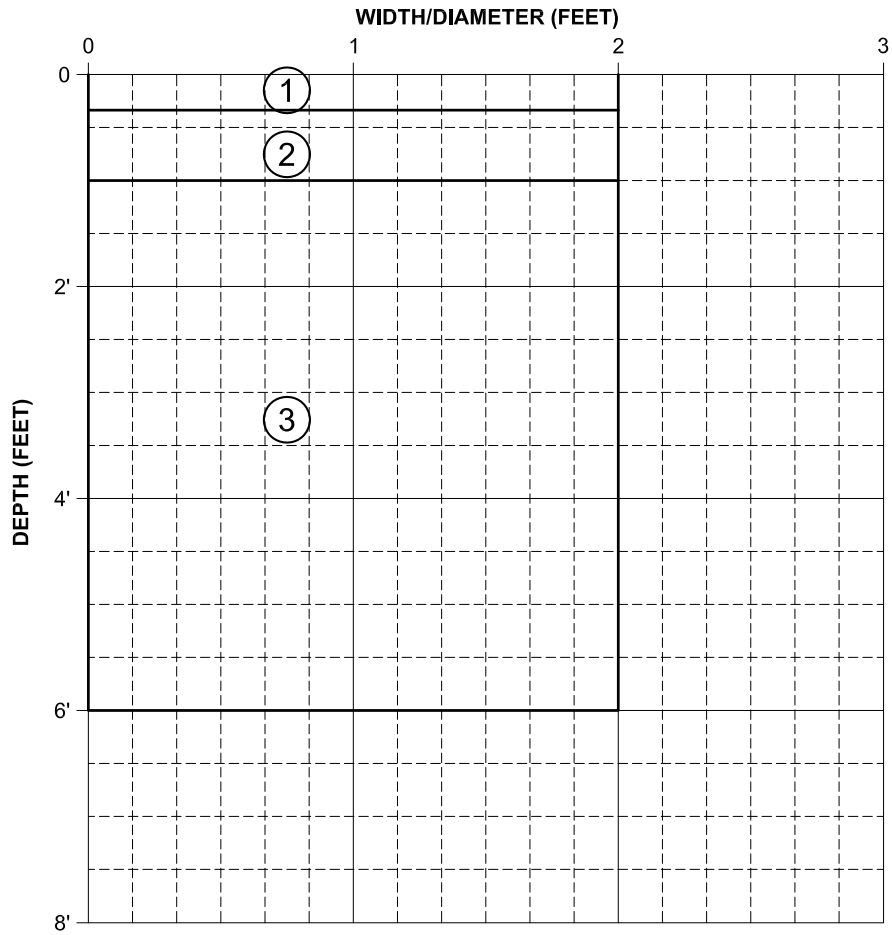
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: B-2



DEPTH	SAMPLE I.D.	SAMPLE TYPE
8"	B2	BKT
5'	B2	BKT
1'	NR	CA
4'	B-2C	CA

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 4"	OVERBURDEN, VEGETATION, LOOSE SAND
2	4" - 1'	CLAY, BROWN (2.5Y 2.5/1), STIFF, PLASTIC, MOISTURE PRESENT BUT FROZEN
3	1' - E.O.B.	SAND, DRY, TAN/ BROWN (2.5Y, 2.5/1), VERY LOOSE, NO PLASTICITY
		E.O.T.P. = 6'

NOTES: CAL BARREL ON CLAY LAYER IS FROZEN, 0/ 100

TRYING WITH HAND DRIVE BUT NOT WORKING

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: **B-3**

PROJECT INFORMATION

PROJECT: MT. TAYLOR

PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

FIELD INFORMATION

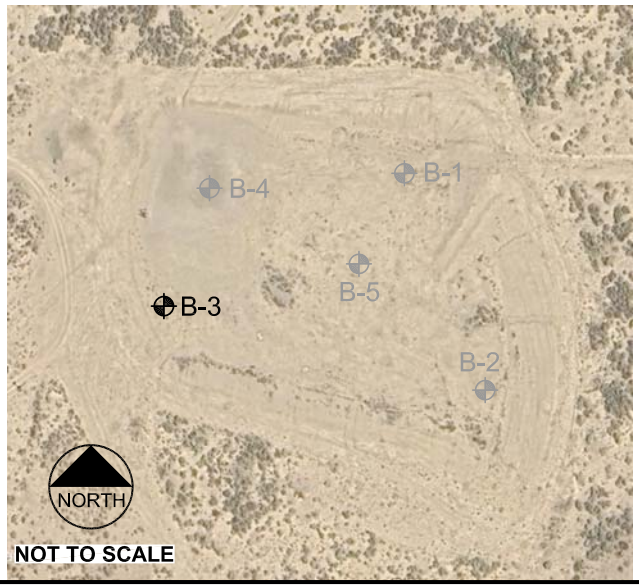
DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

TEST PIT LOCATION



NOT TO SCALE

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

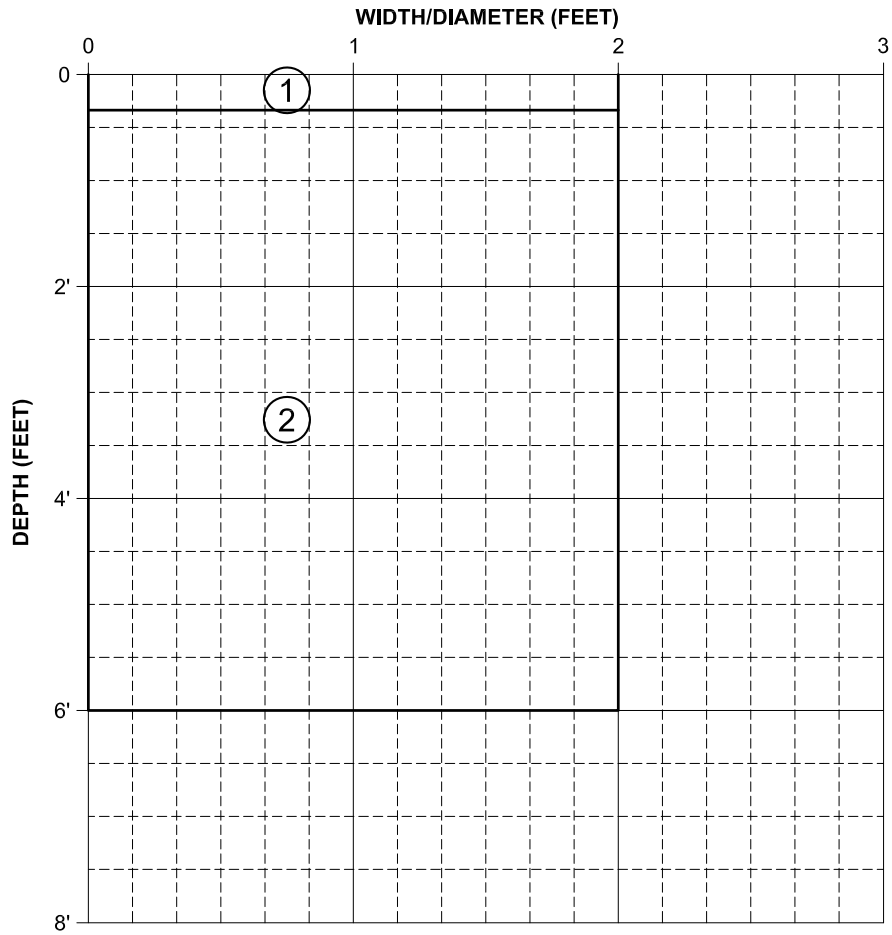
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: B-3



DEPTH	SAMPLE I.D.	SAMPLE TYPE
2'	B3-C	CA
4'	B3	BKT
6'	B3	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 4"	OVERBURDEN, VEGETATION, LOOSE SAND
2	4" - E.O.B.	SAND, TAN/ BROWN (2.5Y, 2.5/3), VERY LOOSE, NO PLASTICITY
		E.O.T.P. = 6'

NOTES: NO CLAY IN HOLE AT ALL

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: **B-4**

PROJECT INFORMATION

PROJECT: MT. TAYLOR

PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

FIELD INFORMATION

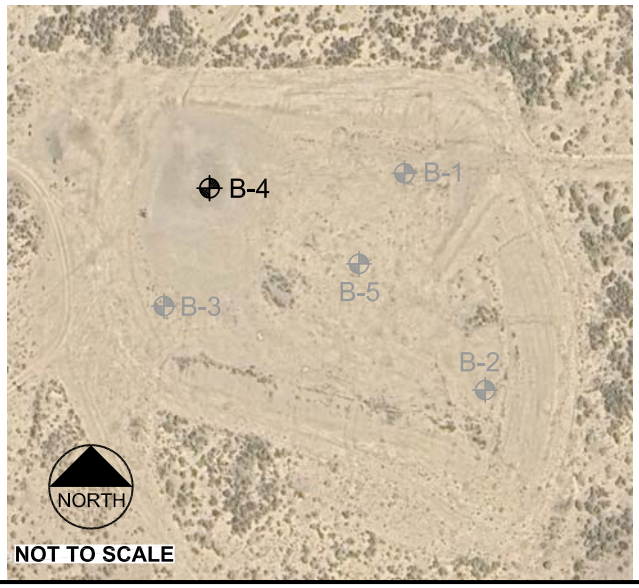
DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

TEST PIT LOCATION



EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

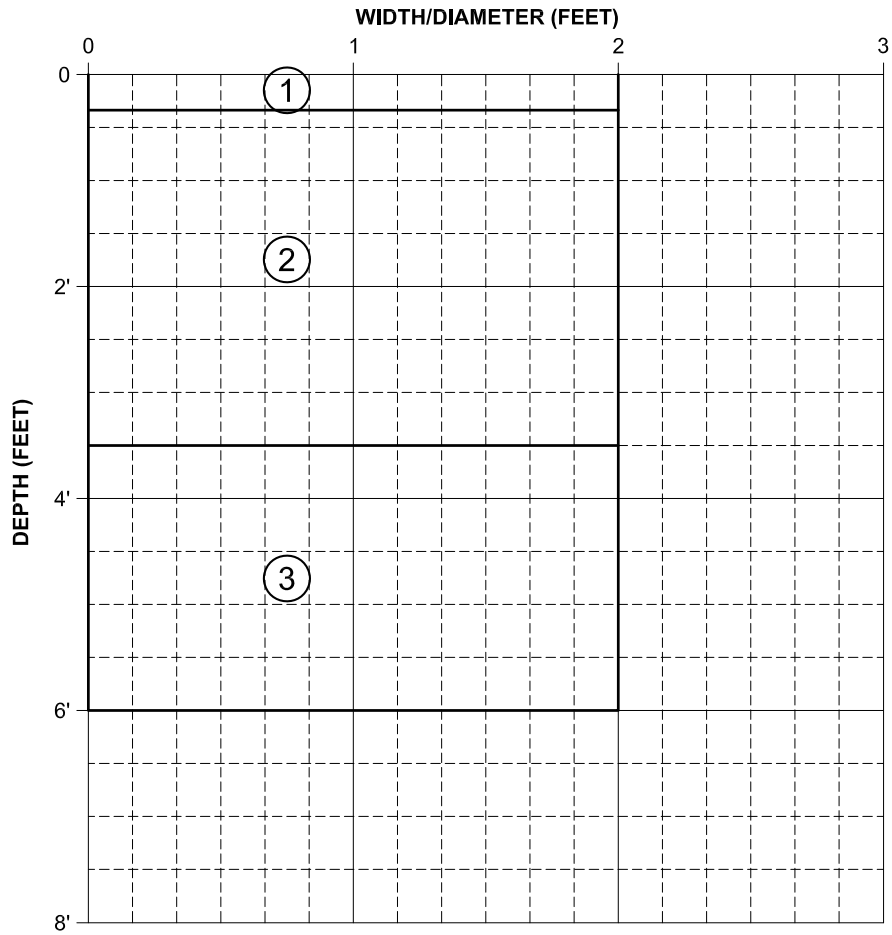
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: B-4



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	B4	BKT
5'	B4	BKT
5'	B4-C	CA

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 4"	VEGETATION, DRY, LOOSE SAND
2	4" - 3.5'	SAND, DRY, TAN/ BROWN (2.5Y, 2.5/3), VERY LOOSE, NO PLASTICITY
3	3.5' - E.O.B.	CLAY WITH SAND, DARK BROWN (2.5Y, 2.5/1), STIFF, PLASTIC
		E.O.T.P. = 6'

NOTES: 100 DRIVES

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: **B-5**

PROJECT INFORMATION

PROJECT: MT. TAYLOR

PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

FIELD INFORMATION

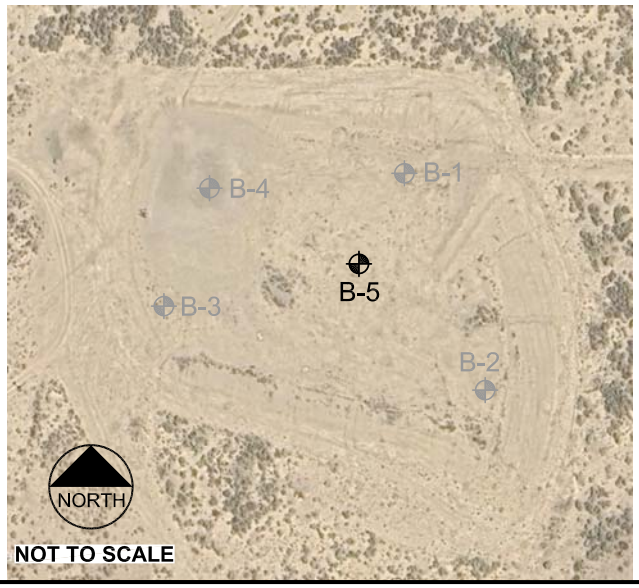
DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

TEST PIT LOCATION



NOT TO SCALE

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

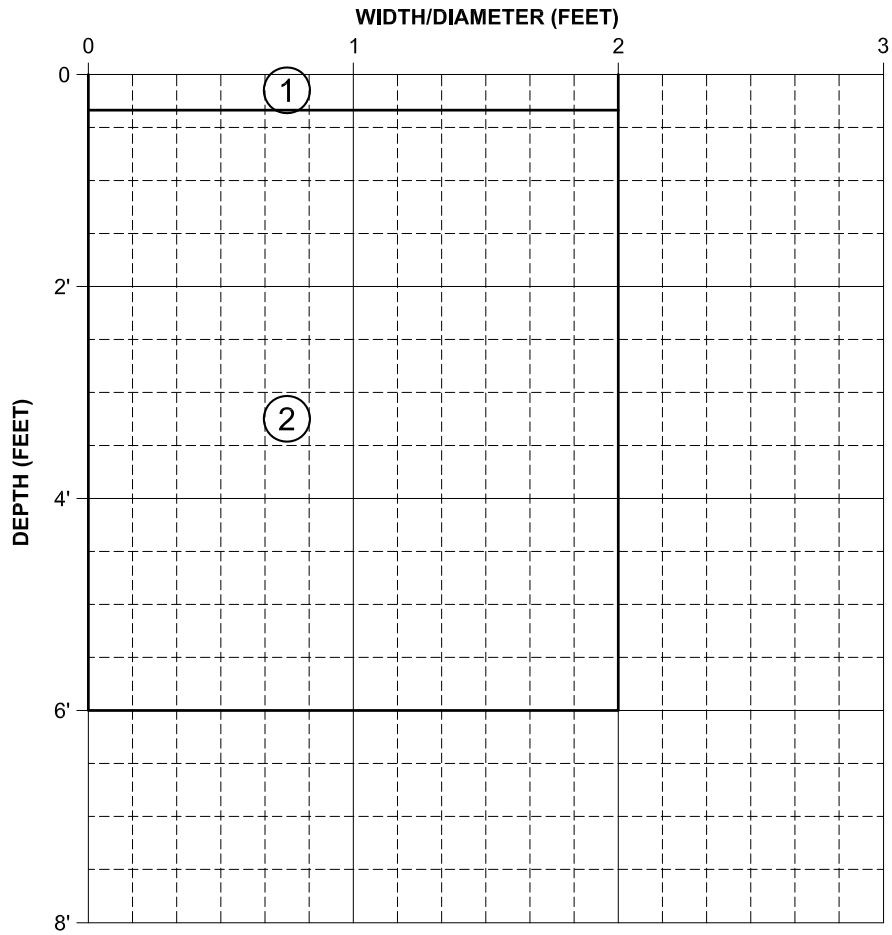
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: B-5



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	B5	BKT
6'	B5	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 4"	VEGETATION, DRY, LOOSE SAND
2	4" - E.O.B.	SAND, DRY, BROWN/ TAN (2.5Y, 5/3), VERY LOOSE, NO PLASTICITY
		E.O.T.P. = 6'

NOTES: NO CLAY TO 7'

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-1

PROJECT INFORMATION

PROJECT: MT. TAYLOR

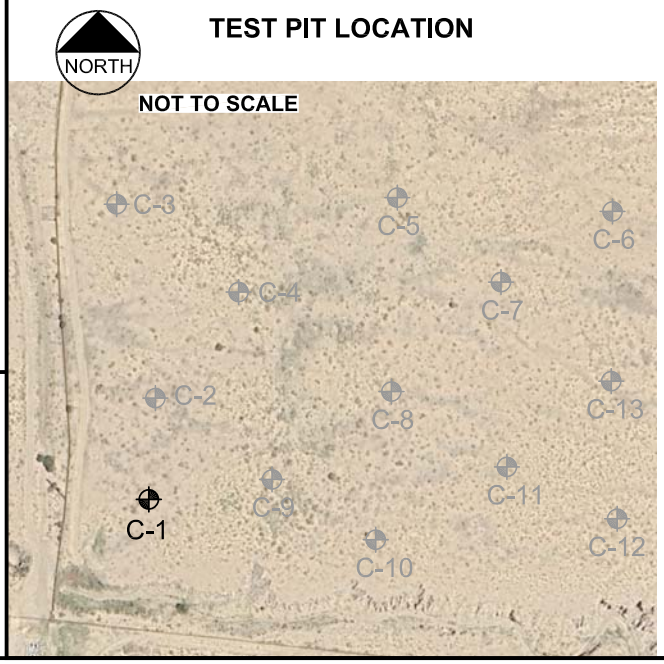
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 5 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

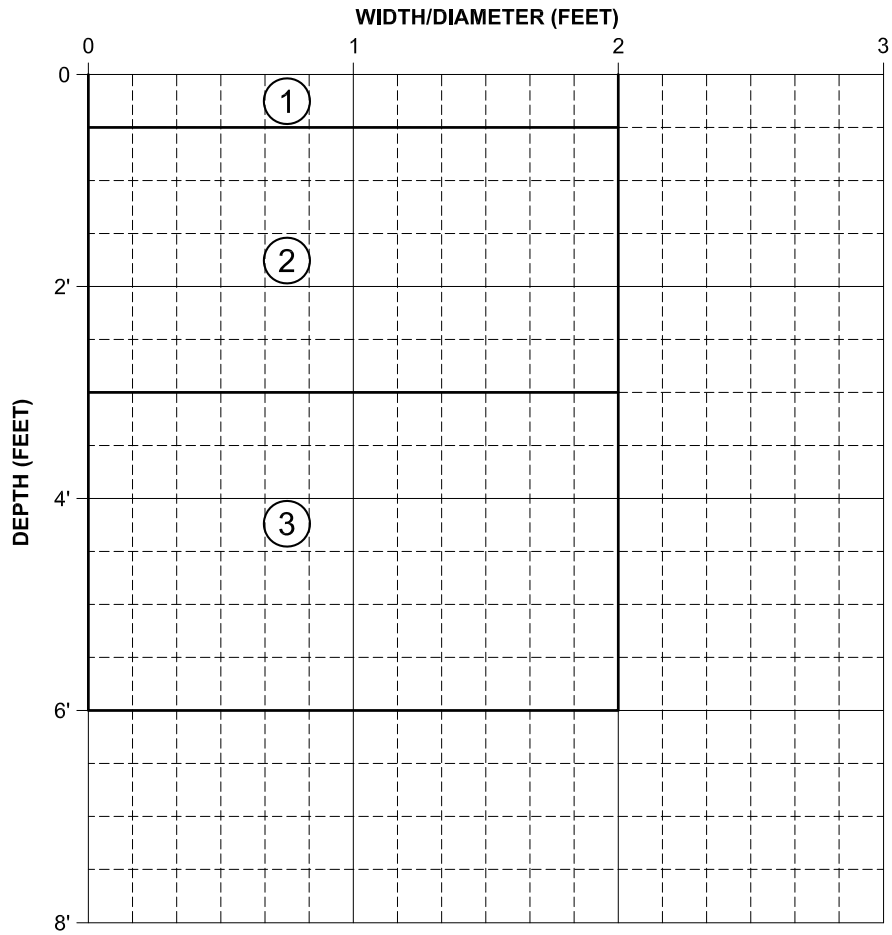
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-1



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-1C	CA
2'	C-1	BKT
5'	C-1	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 6"	SAND WITH VEGETATION, DRY, TAN/ BROWN (2.5Y, 5/3), LOOSE
2	6" - 3'	VERY LOOSE SAND, DRY, TAN/ BROWN (2.5Y, 5/3), NO PLASTICITY
3	3' - E.O.B.	SANDY CLAY WITH SAND, MOTTLED BROWN (5YR, 3/1), BRITTLE, CALCITE
		E.O.T.P. = 6'

NOTES:

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-2

PROJECT INFORMATION

PROJECT: MT. TAYLOR

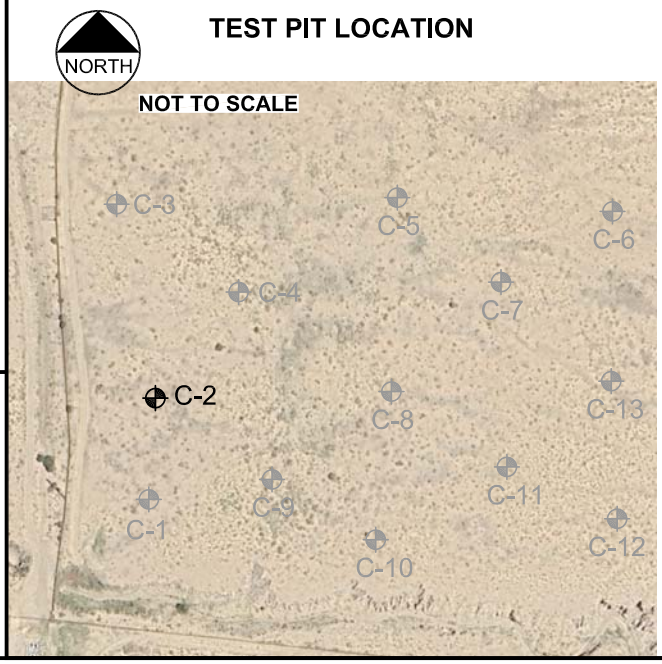
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 5 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

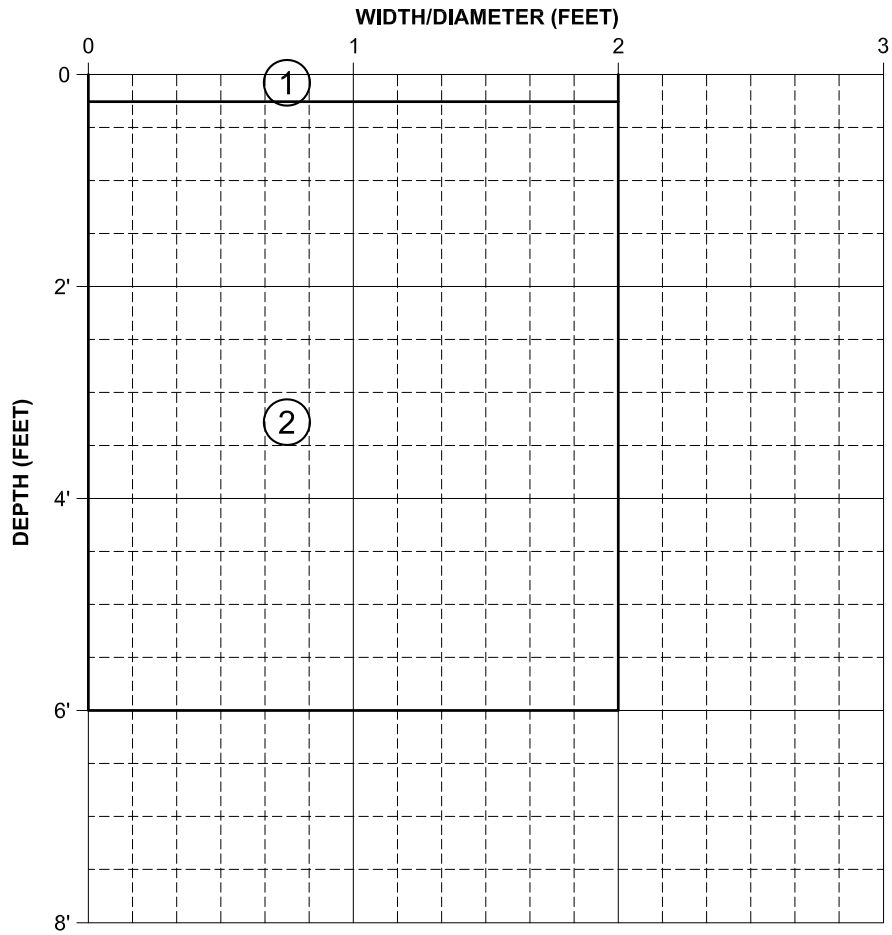
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-2



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-2C	CA
2'	C-2	BKT
5'	C-2	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	SANDY VEGETATION, TAN (2.5Y, 5/3)
2	3" - E.O.B.	SANDY CLAY, DRY, BROWN (5YR, 3/1), BRITTLE, LOOSE/ CHUNKS, CALCITE
	4'	MORE SAND
		E.O.T.P. = 6'

NOTES:

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-3

PROJECT INFORMATION

PROJECT: MT. TAYLOR

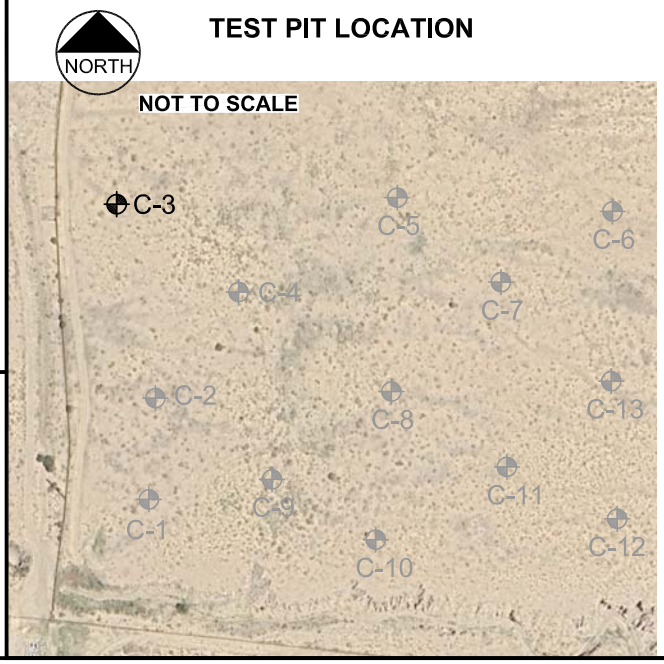
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

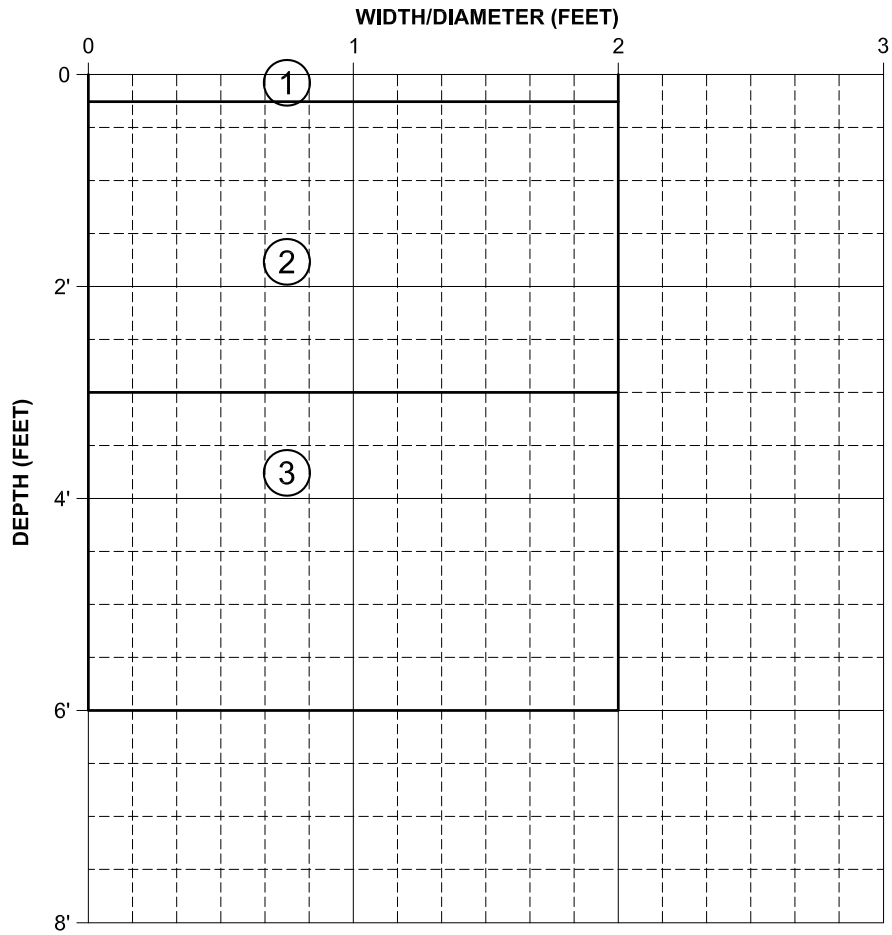
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-3



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-3C	CA
2'	C-3	BKT
5'	C-3	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 6"	SAND, LOTS OF VEGETATION, TAN (2.5Y, 5/3)
2	6" - 3'	VERY LOOSE SAND, DRY, TAN/ BROWN (2.5Y, 5/3), NO PLASTICITY
3	3' - E.O.B.	SANDY CLAY, DRY, MOTTLED BROWN (5YR, 3/1), BRITTLE
		E.O.T.P. = 6'

NOTES: ISSUES WITH HAND SAMPLER

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-4

PROJECT INFORMATION

PROJECT: MT. TAYLOR

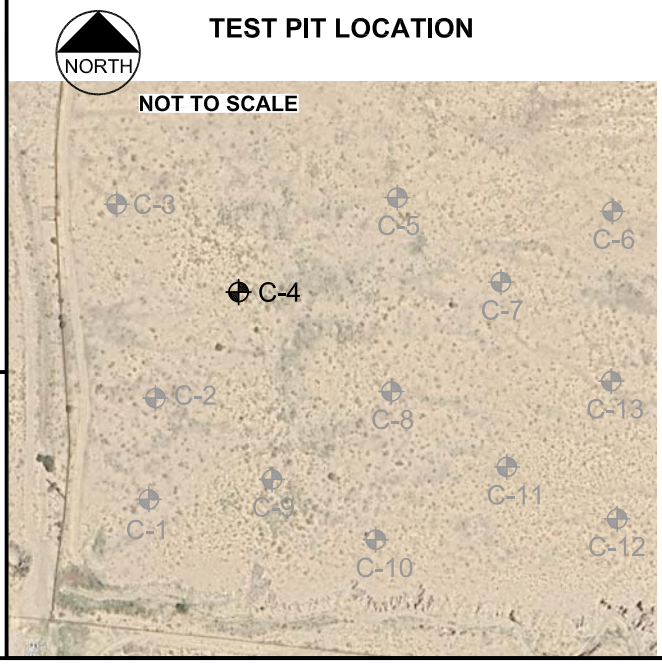
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

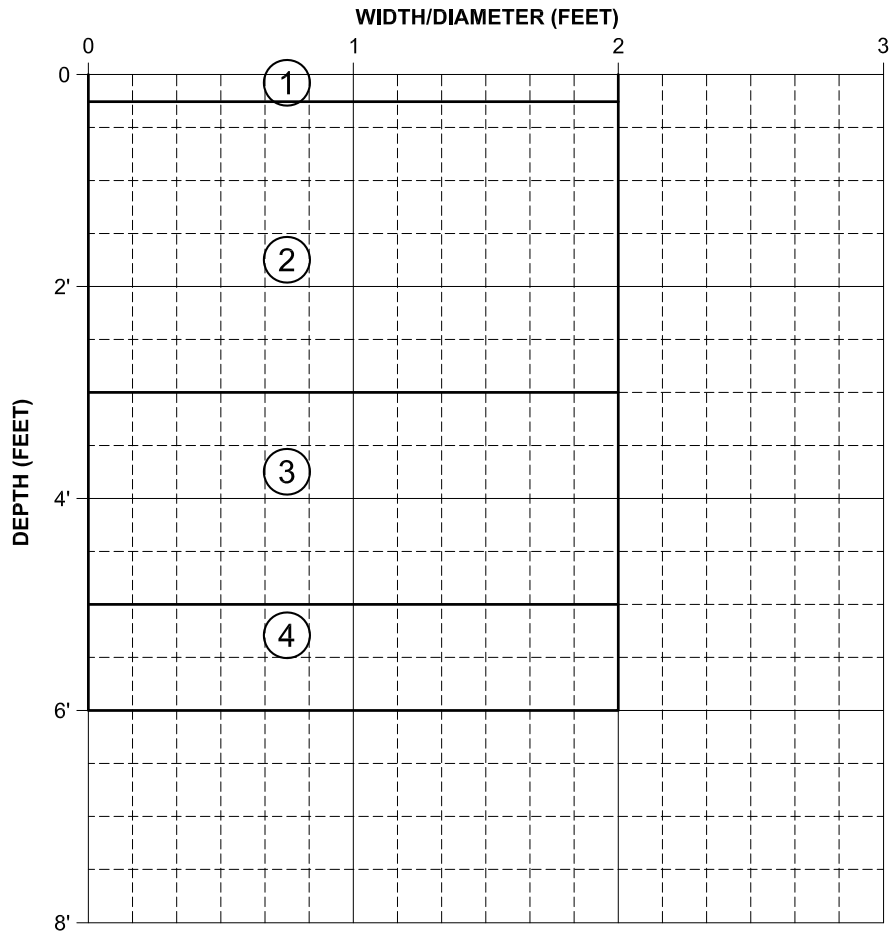
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-4



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-4C	CA
4'	C-4	BKT
6'	C-4	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, SAND, LOOSE
2	3" - 3'	VERY LOOSE SAND, DRY, TAN/ BROWN (2.5Y, 5/3), NO PLASTICITY
3	3' - 5'	SANDY CLAY, DRY, BROWN (5YR, 3/1), BRITTLE, CLUMPY
4	5' - E.O.B.	VERY LOOSE SAND, DRY, TAN/ BROWN (2.5Y, 5/3), NO PLASTICITY
		E.O.T.P. = 6'

NOTES: TEST PIT IN OLD WASHOUT FEATURE

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-5

PROJECT INFORMATION

PROJECT: MT. TAYLOR

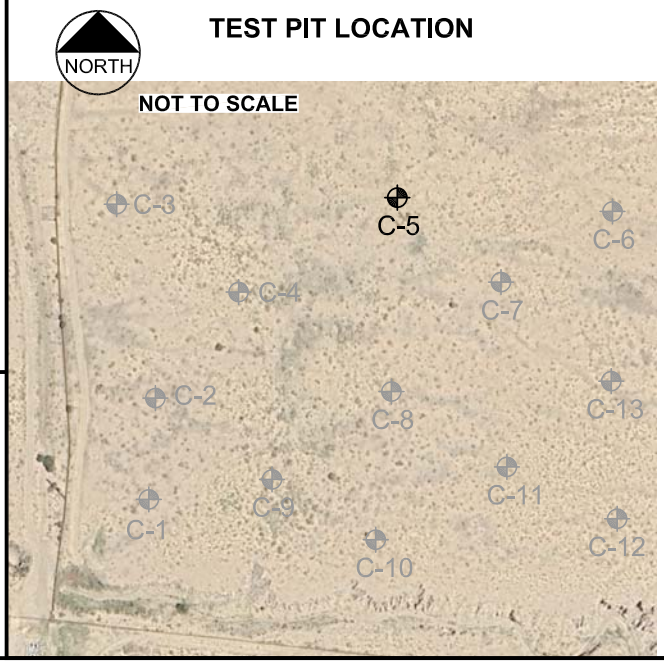
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 5 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

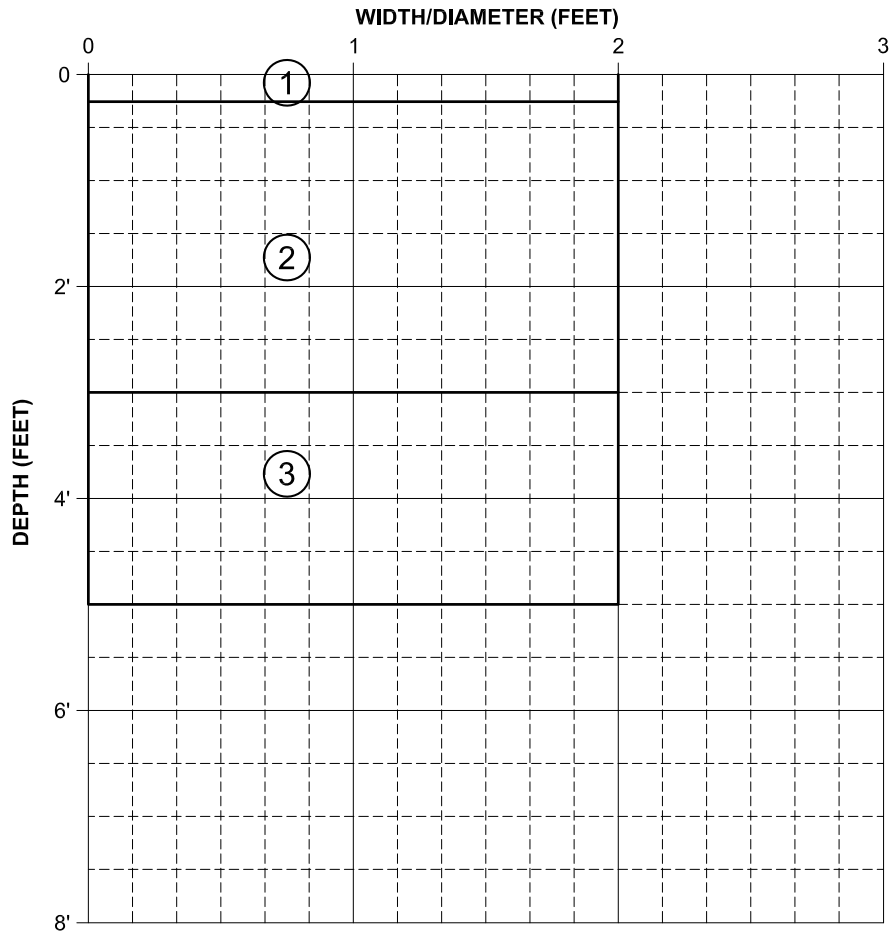
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-5



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-5C	CA
2'	C-5	BKT
5'	C-5	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, DRY, LOOSE SAND
2	3" - 3'	VERY LOOSE SAND, DRY, TAN/ BROWN (2.5Y, 5/3), NO PLASTICITY
3	3' - E.O.B.	SANDY CLAY, DRY, MOTTLED BROWN (5YR, 3/1), BRITTLE, LOOSE, CHUNKY, CALCITE
	5'	VERY FIRM, MOTTLED CLAY
		E.O.T.P. = 5'

NOTES: REFUSAL AT 5'

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-6

PROJECT INFORMATION

PROJECT: MT. TAYLOR

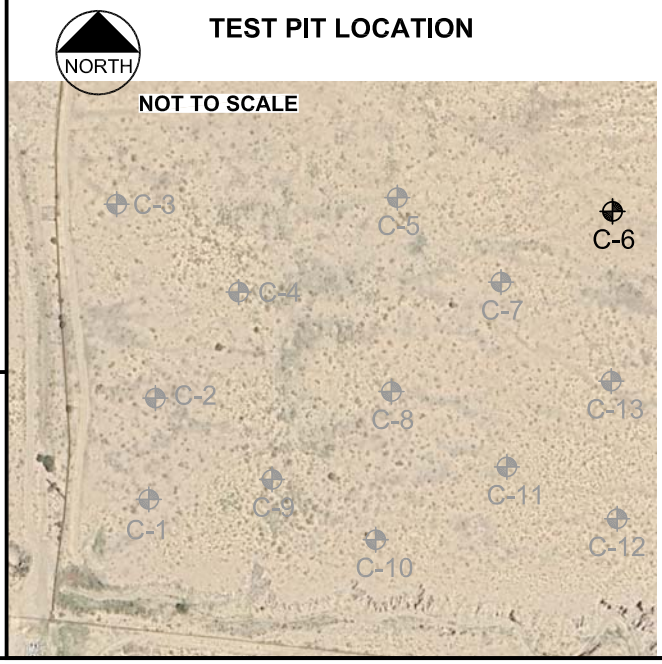
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

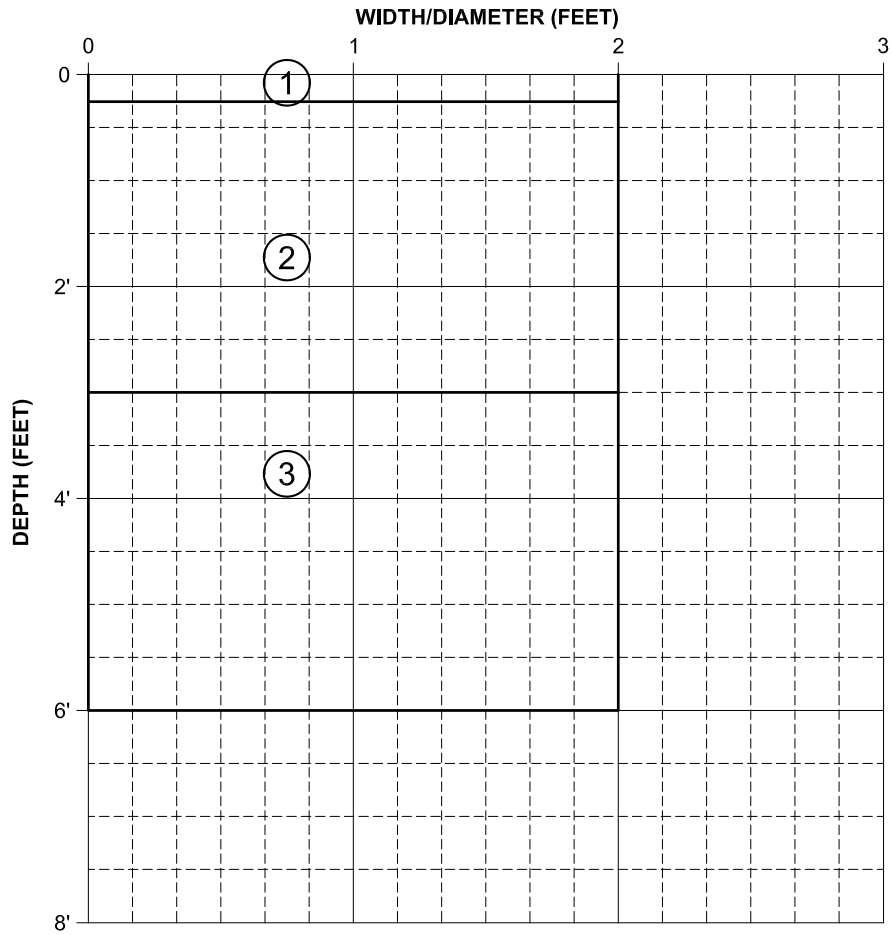
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-6



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-6C	CA
2'	C-6	BKT
5'	C-6	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, DRY, TAN (2.5Y, 5/3), SAND, NO PLASTICITY
2	3" - 3'	VERY LOOSE SAND, DRY, TAN/ BROWN (2.5Y, 5/3), NO PLASTICITY
3	3' - E.O.B.	SANDY CLAY, DRY, MOTTLED BROWN (5YR, 3/1), BRITTLE, CHUNKY, CALCITE
		E.O.T.P. = 6'

NOTES:

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-7

PROJECT INFORMATION

PROJECT: MT. TAYLOR

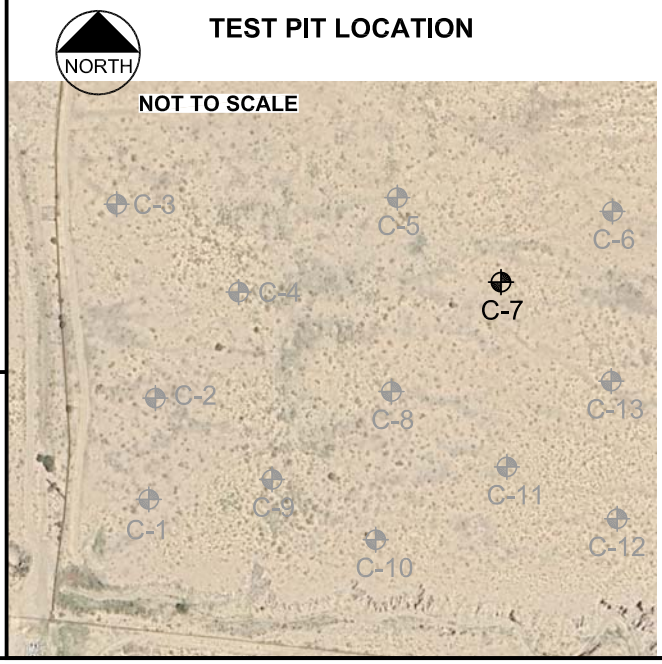
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

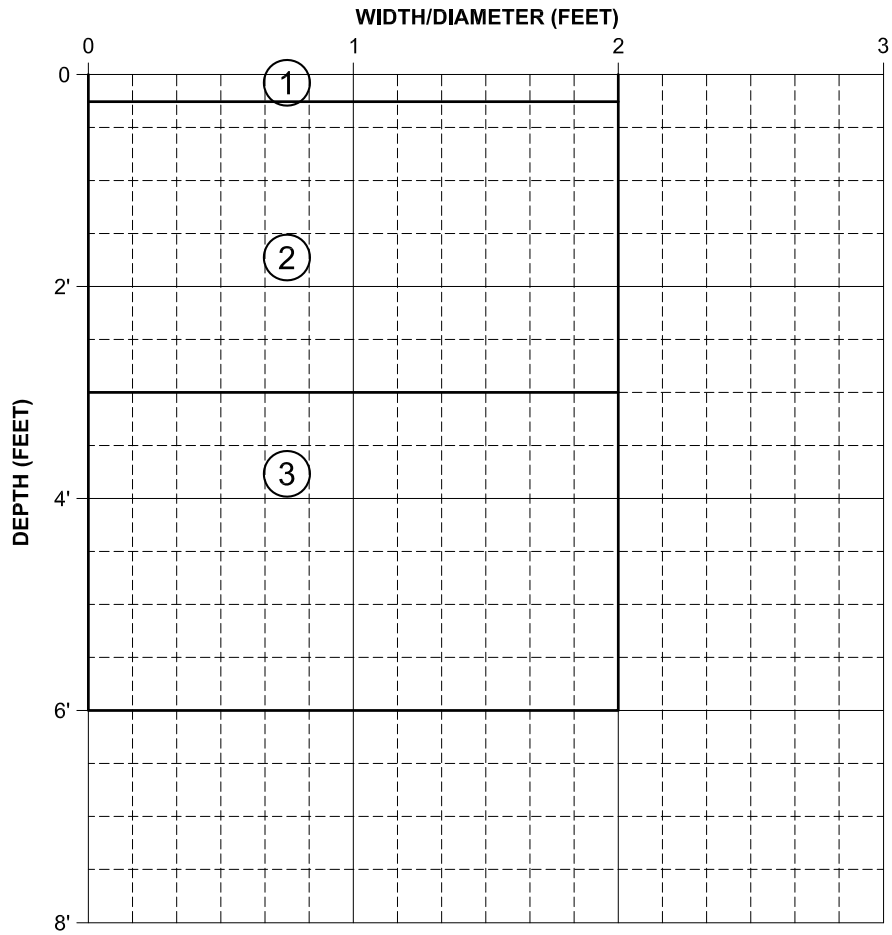
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-7



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-7C	CA
2'	C-7	BKT
6'	C-7	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, SAND, DRY, (2.5Y, 5/3)
2	3" - 3'	VERY LOOSE SAND, DRY, TAN/ BROWN (2.5Y, 5/3), NO PLASTICITY
3	3' - E.O.B.	SANDY CLAY, DRY, MOTTLED BROWN (5YR, 3/1), BRITTLE, CHUNKY
		E.O.T.P. = 6'

NOTES: RECOVERY WITH CAL SAMPLER HAS BEEN POOR

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-8

PROJECT INFORMATION

PROJECT: MT. TAYLOR

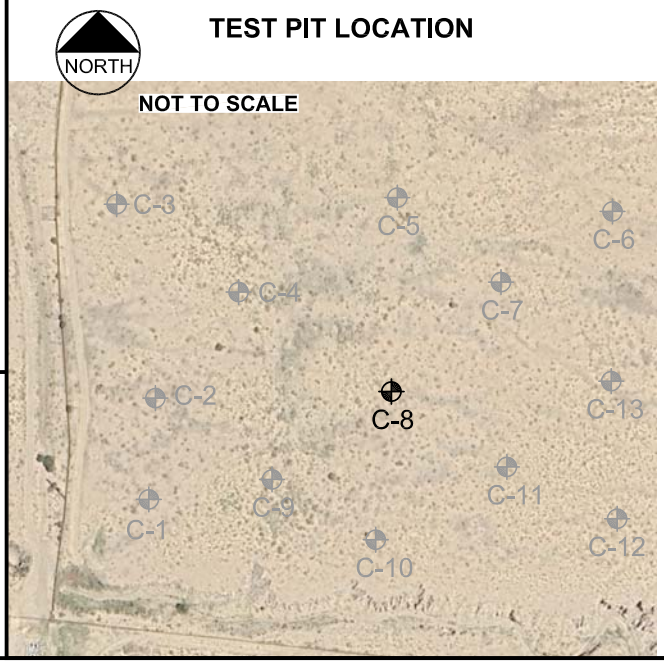
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

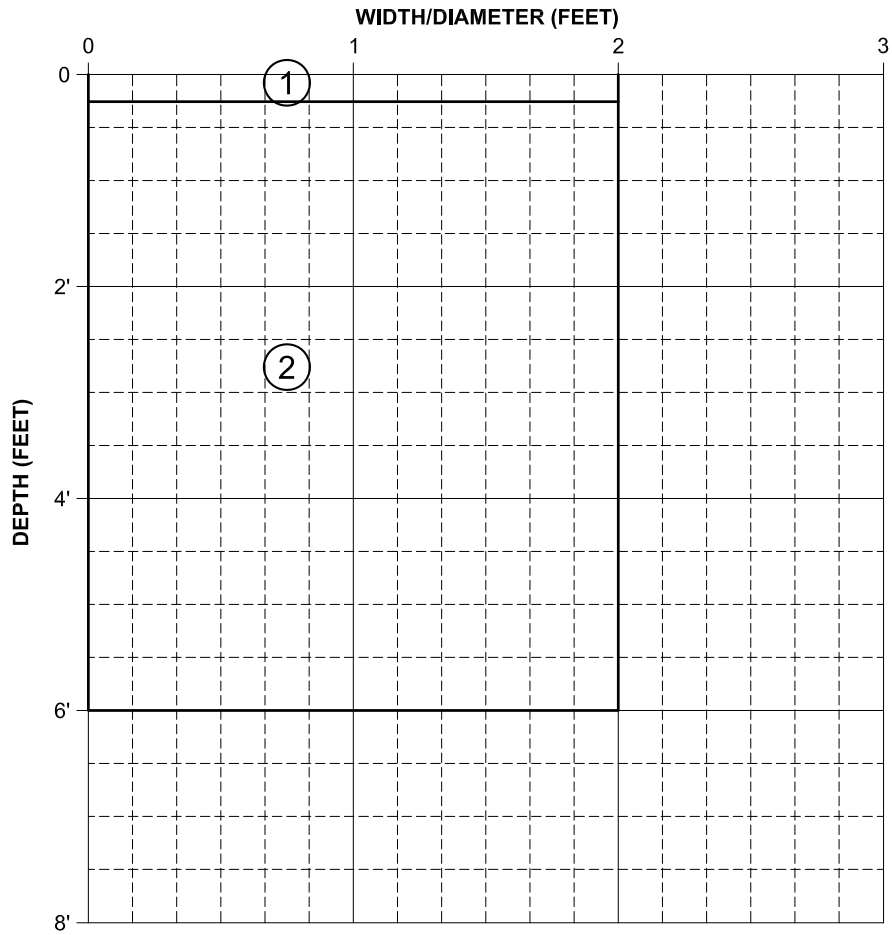
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-8



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-8C	CA
2'	C-8	BKT
5'	C-8	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, SAND, DRY, (2.5Y, 5/3), LOOSE
2	3" - E.O.B.	SANDY CLAY, DRY, BROWN (5YR, 3/1), BRITTLE, CHUNKY
	5'	SAND INCREASES
		E.O.T.P. = 6'

NOTES:

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-9

PROJECT INFORMATION

PROJECT: MT. TAYLOR

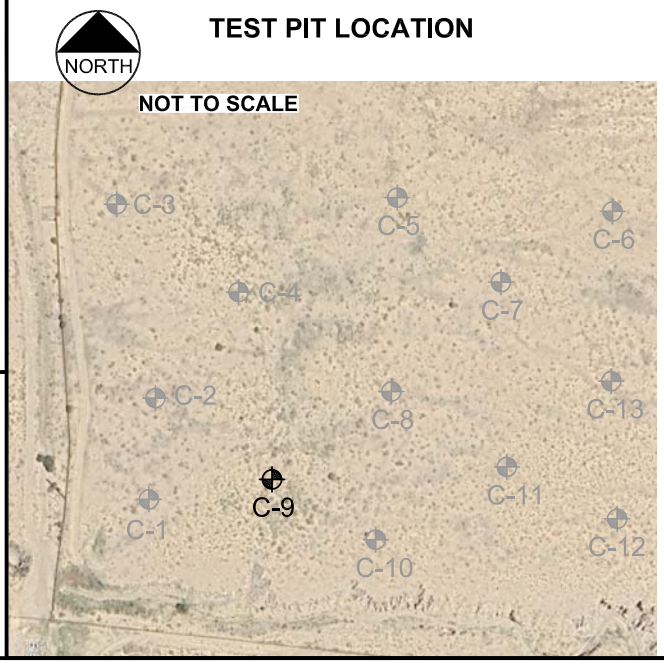
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

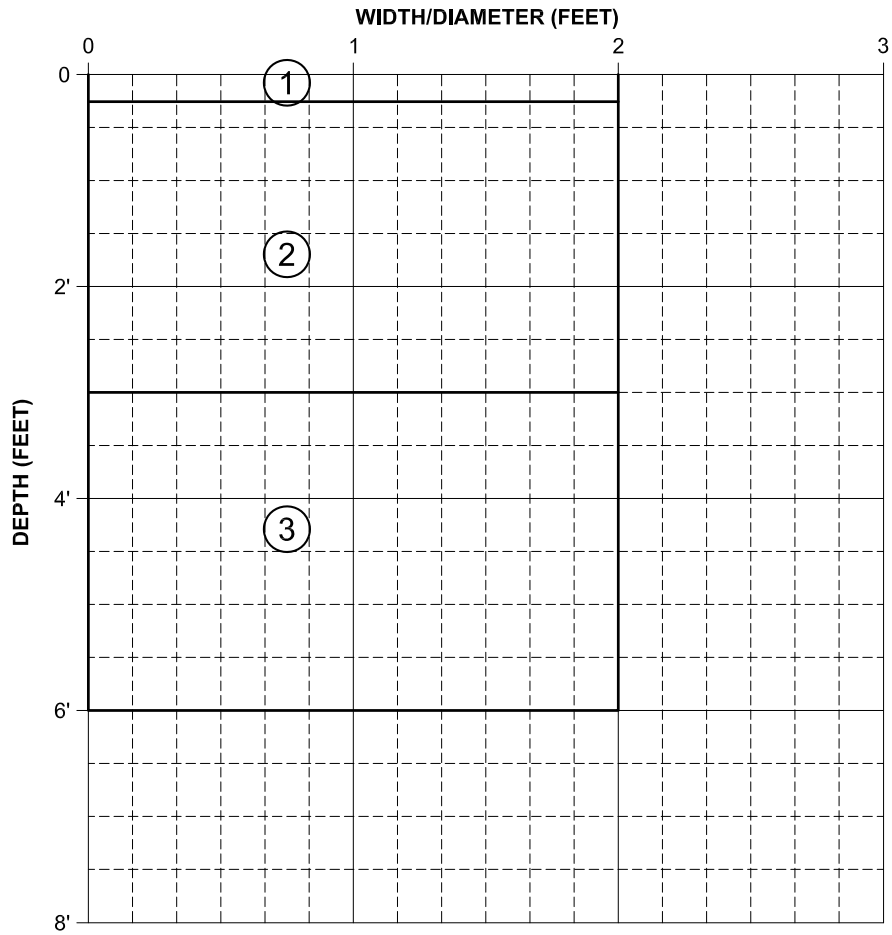
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-9



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-9C	CA
2'	C-9	BKT
5'	C-9	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, SAND, DRY, TAN (2.5Y, 5/3)
2	6" - 3'	VERY LOOSE SAND, DRY, TAN/ BROWN (2.5Y, 5/3), NO PLASTICITY
3	3' - E.O.B.	SANDY CLAY, DRY, MOTTLED BROWN (5YR, 3/1), CHUNKY, BRITTLE
		E.O.T.P. = 6'

NOTES: GROUND FROZEN

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-10

PROJECT INFORMATION

PROJECT: MT. TAYLOR

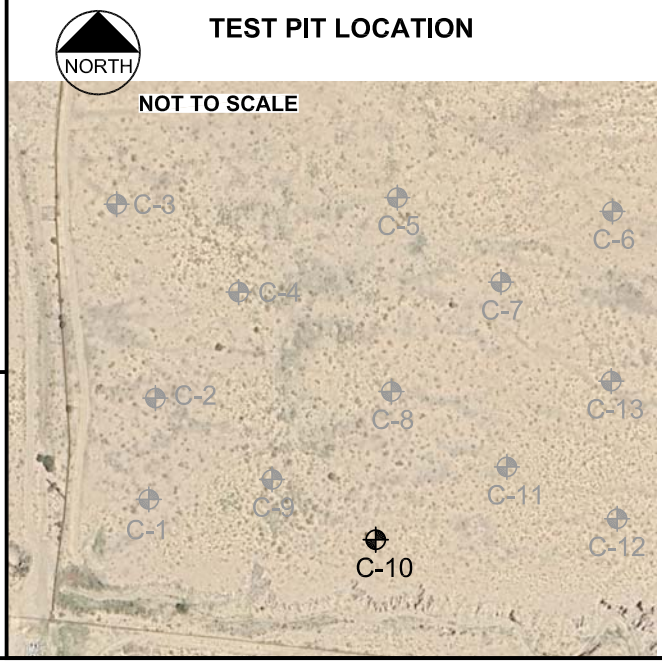
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

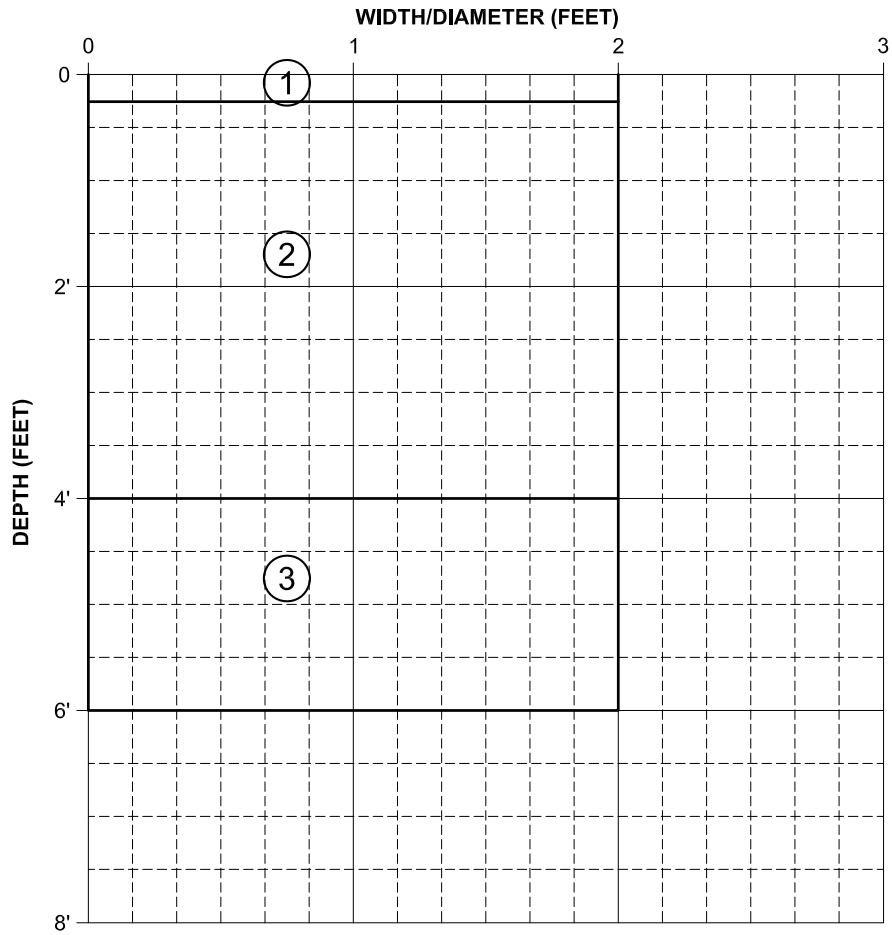
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-10



DEPTH	SAMPLE I.D.	SAMPLE TYPE
4'	C-10C	CA
3'	C-10	BKT
6'	C-10	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, SAND, DRY, TAN (2.5Y, 5/3), NO PLASTICITY
2	6" - 4'	VERY LOOSE SAND, DRY, TAN (2.5Y, 5/3), NO PLASTICITY
3	4' - E.O.B.	SANDY CLAY, DRY, MOTTLED BROWN (5YR, 3/1), CHUNKY, BRITTLE MORE SAND
		E.O.T.P. = 6'

NOTES:

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-11

PROJECT INFORMATION

PROJECT: MT. TAYLOR

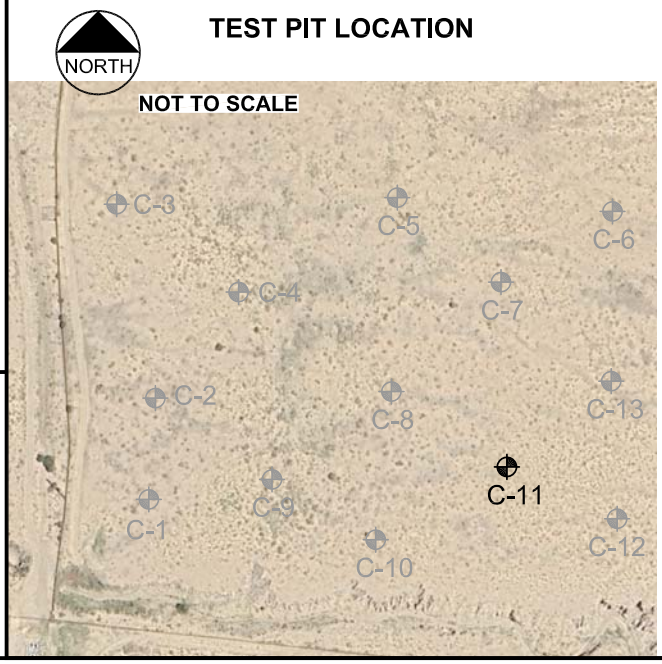
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

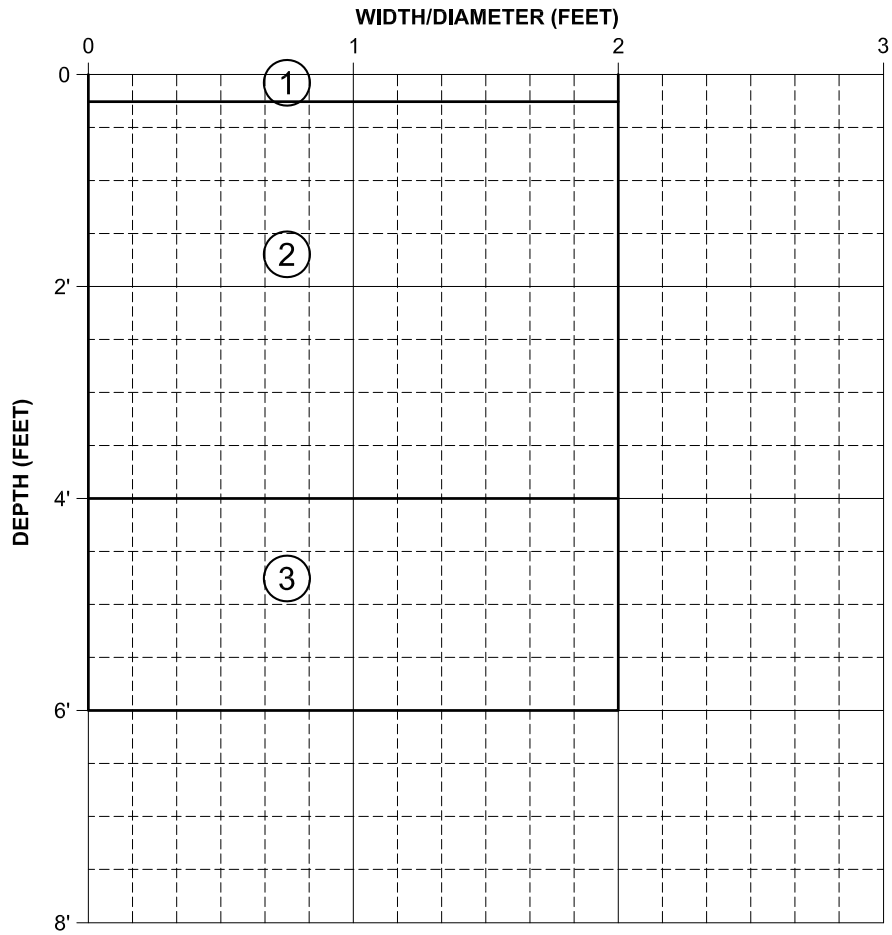
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-11



DEPTH	SAMPLE I.D.	SAMPLE TYPE
4'	C-11C	CA
3'	C-11	BKT
5'	C-11	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, SAND, DRY, TAN (2.5Y, 5/3)
2	6" - 4'	VERY LOOSE SAND, DRY, TAN (2.5Y, 5/3), NO PLASTICITY
3	4' - E.O.B.	SANDY CLAY, DRY, MOTTLED BROWN (5YR, 3/1), CHUNKY, BRITTLE
		E.O.T.P. = 6'

NOTES:

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-12

PROJECT INFORMATION

PROJECT: MT. TAYLOR

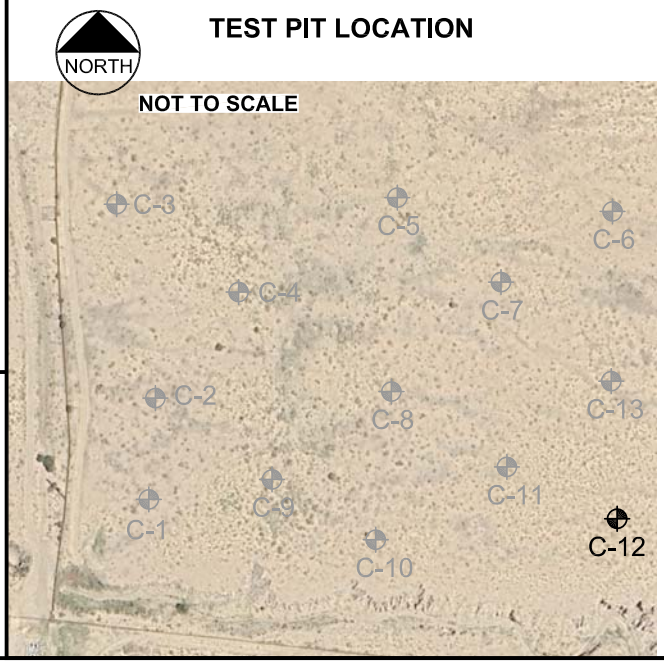
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

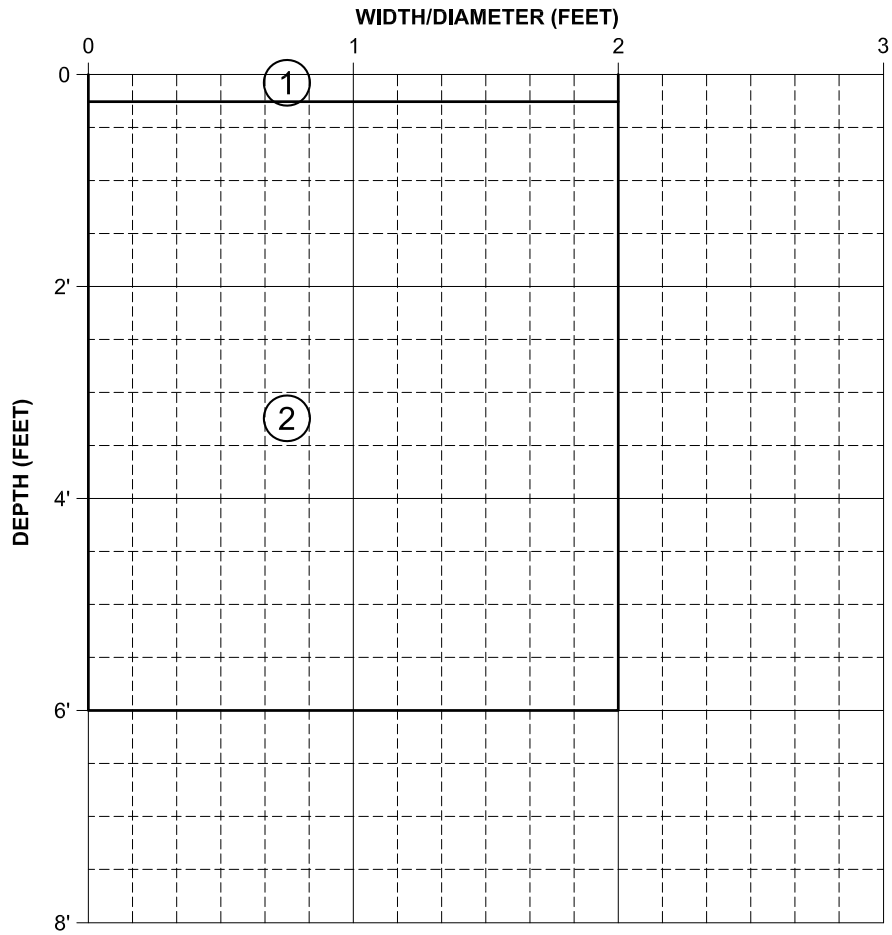
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-12



DEPTH	SAMPLE I.D.	SAMPLE TYPE
N/R	N/R	CA
3'	C-12	BKT
6'	C-12	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, SAND, DRY, TAN (2.5Y, 5/3), NO PLASTICITY
2	3" - E.O.B.	VERY LOOSE SAND, DRY, TAN (2.5Y, 5/3), NO PLASTICITY
		E.O.T.P. = 6'

NOTES: NO CLAY

Engineering Analytics, Inc.

TEST PIT LOG

PAGE: 1 of 2

DATE:

TEST PIT NO.: C-13

PROJECT INFORMATION

PROJECT: MT. TAYLOR

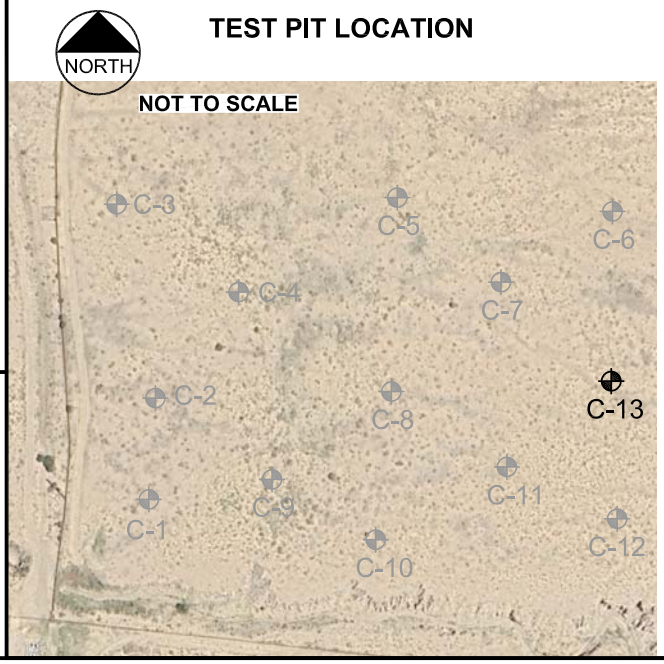
PROJECT NO.: 111360

CLIENT: MT. TAYLOR

OWNER:

LOCATION: GRANTS, NEW MEXICO

TEST PIT LOCATION



FIELD INFORMATION

DATE & TIME ARRIVED:

TEST PIT LOGGED BY: JBB

VISITORS:

WEATHER: VERY COLD

EXCAVATION INFORMATION

EXCAVATION COMPANY: RGR

START TIME:

TEST PIT DEPTH: 6 FT TEST PIT DIA.: 2 FT

EXCAVATION METHOD:

SAMPLING METHOD:

TIME EXCAVATION COMPLETE:

TEST PIT COMPLETION / ABANDONMENT INFORMATION

START TIME: COMPLETE TIME:

INSTRUMENTATION: BACKFILL:

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: TIME LEFT SITE:

NOTES:

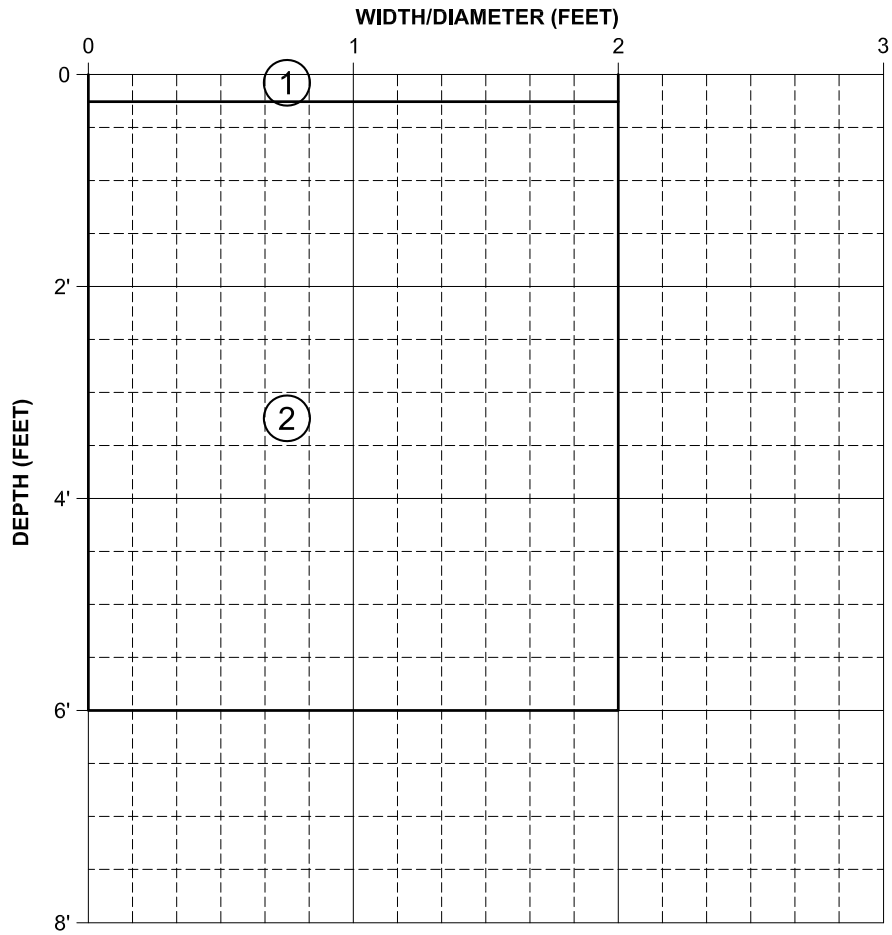
Engineering Analytics, Inc.

TEST PIT LOG

PROJECT: MT. TAYLOR **PAGE:** 2 OF 2

PROJECT NO.: 111360 **DATE:**

TEST PIT NO.: C-13



DEPTH	SAMPLE I.D.	SAMPLE TYPE
3'	C-13C	CA
3'	C-13	BKT
6'	C-13	BKT

SOIL TYPE	SOIL DEPTH	SOIL DESCRIPTION AND EXCAVATION NOTES
1	0 - 3"	VEGETATION, SAND, DRY, TAN (2.5Y, 5/3)
2	3" - E.O.B.	VERY SANDY CLAY, DRY, MOTTLED BROWN (2.5Y, 3/1), BRITTLE, CHUNKY
		CLAY AND SAND ALMOST 1/2 & 1/2
		E.O.T.P. = 6'

NOTES:

APPENDIX B
Results of Geotechnical Laboratory Testing for Mt. Taylor Disposal Cell

Geotechnical Laboratory Test Report
Mt. Taylor Mine

Prepared for:

Rio Grand Resources

750 W Pender Street, Suite 250,
Vancouver, BC, V6C 2T7,
Canada

Prepared by:

Engineering Analytics, Inc.

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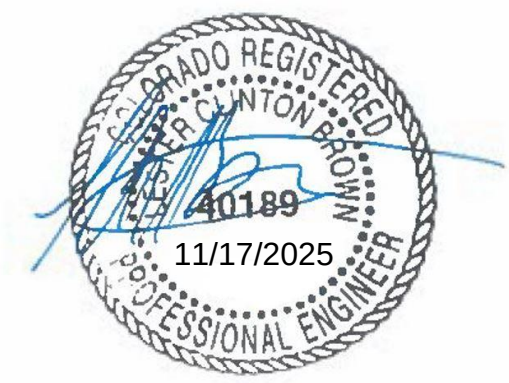
Project No. 111360

November 2025



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6.0 Flexible Wall Permeability

7.0 Soil Water Characteristic Curve

8.0 Standard Proctor Compaction

9.0 Consolidated Undrained Triaxial Shear

1.0 Summary

This report presents the results of laboratory testing conducted on soil samples provided by Engineering Analytics of Fort Collins, Colorado. The sample selection and testing parameters were designated by personnel from Engineering Analytics. All laboratory analyses were performed by Engineering Analytics under the direct supervision of a Professional Engineer licensed in the State of Colorado.

The testing procedures adhered to the standards outlined by the American Society of Testing and Materials (ASTM). Where ASTM standards were not applicable, established industry standards were employed. Any deviations from standard procedures are explicitly noted within this report the table below lists ASTM procedures used in this investigation. The results of the laboratory tests, including relevant graphical representations, are presented in the following sections.

Test Performed	ASTM Test Method	No. of Tests Performed
Moisture Determination	D2216	48
Percent Passing No. 200	D1140	48
Atterberg Limits	D4318	48
Flexible Wall Permeability	D5084	2
Soil Water Characteristic Curve	D6836	7
Standard Proctor Compaction	D698	8
Consolidated Undrained Triaxial Shear	D4767	1

2.0 Summary of Test Results

Engineering Analytics, Inc.

					Project Name: Mt. Taylor Mine		**Project No.** 111360		**Date:** 02/21/2025		**Date:**
Hole ID	**Sample ID**	**Sampling Depth (ft)**		**Sample Type**	**Moisture Content (%)**	**Percent Passing #200 (ASTM D1140)**	**Atterberg Limits (ASTM D4318) (LL / PL / PI)**	**Flexible Wall Permeability (ASTM D5084)**	**Soil Water Characteristic Curve (SWCC)**	**Standard Proctor Compaction (ASTM D698)**	Triaxial (CUPP), 3-stage (ASTM D4767)
		From	**To**								
TOTAL NUMBER OF COMPLETED TESTS					**48**	**48**	**48**	**2**	**7**	**8**	**1**
EA-BSA01	EA-BSA01 A	2.0	3.0	BKT	9.7%	76.4%	40 / 20 / 20				
	EA-BSA01 B	5.0	6.0	BKT	12.4%	78.8%	38 / 19 / 19				
EA-BSA02	EA-BSA02 A	2.0	3.0	BKT	9.5%	66.5%	26 / 20 / 6				
	EA-BSA02 B	5.0	6.0	BKT	8.9%	65.1%	25 / 20 / 5				
EA-BSA03	EA-BSA03 A	2.0	3.0	BKT	7.0%	46.1%	NV / NP / NP				
	EA-BSA03 B	5.0	6.0	BKT	6.8%	40.8%	NV / NP / NP				
EA-BSA04	EA-BSA04 A	2.0	3.0	BKT	13.2%	56.5%	28 / 18 / 10				
	EA-BSA04 B	5.0	6.0	BKT	6.9%	51.2%	25 / 18 / 7				
EA-BSA05	EA-BSA05 A	2.0	3.0	BKT	6.2%	41.8%	25 / 20 / 5		(1)	111.1 @ 13.9%	
	EA-BSA05 B	5.0	6.0	BKT	6.5%	43.0%	25 / 20 / 5				
EA-BSA06	EA-BSA06 A	2.0	3.0	BKT	12.8%	51.9%	23 / 20 / 3				
	EA-BSA06 B	5.0	6.0	BKT	8.6%	28.9%	NV / NP / NP		(1)	117.6 @ 12.2%	
EA-BSB01	EA-BSB01 A	2.0	3.0	BKT	18.9%	81.1%	39 / 16 / 23				
	EA-BSB01 B	5.0	6.0	BKT	8.1%	39.0%	NV / NP / NP				
EA-BSB02	EA-BSB02 A	2.0	3.0	BKT	16.8%	68.0%	35 / 16 / 19				
	EA-BSB02 B	5.0	6.0	BKT	7.9%	55.0%	22 / 20 / 2		(1)	110.3 @ 16.2%	
EA-BSB03	EA-BSB03 A	2.0	3.0	BKT	14.6%	71.1%	26 / 19 / 7				
	EA-BSB03 B	5.0	6.0	BKT	11.6%	45.6%	NV / NP / NP				
EA-BSB04	EA-BSB04 A	2.0	3.0	BKT	6.1%	30.0%	NV / NP / NP		(1)	112.5 @ 15.0%	
	EA-BSB04 B	5.0	6.0	BKT	24.1%	90.1%	51 / 17 / 34				
EA-BSB05	EA-BSB05 A	2.0	3.0	BKT	10.4%	65.1%	31 / 19 / 12				
	EA-BSB05 B	5.0	6.0	BKT	4.6%	30.9%	NV / NP / NP				
EA-BSC01	EA-BSC01 A	2.0	3.0	BKT	9.7%	60.6%	31 / 16 / 15				
	EA-BSC01 B	5.0	6.0	BKT	11.9%	78.8%	42 / 17 / 25				
EA-BSC02	EA-BSC02 A	2.0	3.0	BKT	12.7%	87.6%	50 / 17 / 33				
	EA-BSC02 B	5.0	6.0	BKT	12.6%	80.7%	38 / 18 / 20				
EA-BSC03	EA-BSC03 A	2.0	3.0	BKT	9.6%	61.2%	29 / 15 / 14		(1)	108.2 @ 16.8%	
	EA-BSC03 B	5.0	6.0	BKT	11.7%	79.1%	39 / 18 / 21				
EA-BSC04	EA-BSC04 A	2.0	3.0	BKT	12.1%	80.0%	39 / 16 / 13				
	EA-BSC04 B	5.0	6.0	BKT	10.7%	68.9%	34 / 16 / 8				
EA-BSC05	EA-BSC05 A	2.0	3.0	BKT	8.6%	57.0%	23 / 18 / 5				
	EA-BSC05 B	5.0	6.0	BKT	13.8%	90.2%	56 / 16 / 40				
EA-BSC06	EA-BSC06 A	2.0	3.0	BKT	7.9%	58.5%	30 / 17 / 13				
	EA-BSC06 B	5.0	6.0	BKT	17.2%	95.3%	65 / 23 / 42			89.8 @ 26.6%	(1)
EA-BSC07	EA-BSC07 A	2.0	3.0	BKT	10.1%	77.7%	35 / 19 / 16				
	EA-BSC07 B	5.0	6.0	BKT	10.4%	71.9%	35 / 17 / 18				
EA-BSC08	EA-BSC08 A	2.0	3.0	BKT	11.2%	77.2%	44 / 17 / 27				
	EA-BSC08 B	5.0	6.0	BKT	11.7%	86.5%	49 / 24 / 25				
EA-BSC09	EA-BSC09 A	2.0	3.0	BKT	6.8%	50.0%	26 / 18 / 8	7.9E-06	(1)	110.4 @ 16.1%	
	EA-BSC09 B	5.0	6.0	BKT	14.7%	96.9%	60 / 27 / 33				
EA-BSC10	EA-BSC10 A	2.0	3.0	BKT	9.0%	69.4%	39 / 16 / 23				
	EA-BSC10 B	5.0	6.0	BKT	12.0%	69.6%	33 / 18 / 15				
EA-BSC11	EA-BSC11 A	2.0	3.0	BKT	10.0%	63.5%	30 / 19 / 11				
	EA-BSC11 B	5.0	6.0	BKT	12.7%	69.1%	42 / 18 / 24				
EA-BSC12	EA-BSC12 A	2.0	3.0	BKT	7.3%	52.7%	NV / NP / NP	1.2E-04	(1)	109.3 @ 16.4%	
	EA-BSC12 B	5.0	6.0	BKT	8.2%	49.0%	23 / 20 / 3				
EA-BSC13	EA-BSC13 A	2.0	3.0	BKT	9.5%	75.8%	38 / 17 / 21				
	EA-BSC13 B	5.0	6.0	BKT	13.3%	81.4%	45 / 23 / 22				

MCS = Modified California Sample, BKT = Bucket

3.0 Moisture Content

The natural moisture content of 48 soil samples was determined in accordance with ASTM D2216, "Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass."

This test yields the gravimetric moisture content, expressed as a percentage, which represents the ratio of the mass of water to the mass of dry soil within the sample.

A summary of the natural moisture content results are presented in Section 2.0 of this report.

4.0 Percent Passing No. 200

A selection of 48 soil samples was tested in general accordance with ASTM D1140, "Standard Test Methods for Determining the Amount of Material Finer than 75-µm (No. 200) Sieve in Soils by Washing."

- A selection of soil samples was tested in general accordance with ASTM D1140, "Standard Test Methods for Determining the Amount of Material Finer than 75-µm (No. 200) Sieve in Soils by Washing."
- The testing procedure involved oven-drying the samples, recording their initial dry weight, and then washing them through a 75-µm (No. 200) sieve.
- The material retained on the sieve was recovered, oven-dried, and weighed.
- The percentage of material passing the No. 200 sieve was calculated using the initial total dry weight of the sample and the dry weight of the material retained on the sieve.

A summary of the percent finer than No. 200 sieve results is presented in Section 2.0 of this report.

5.0 Atterberg Limits

The Atterberg Limits, specifically the liquid limit (LL) and plastic limit (PL), were determined on 48 soil samples in accordance with ASTM D4318, "Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils."

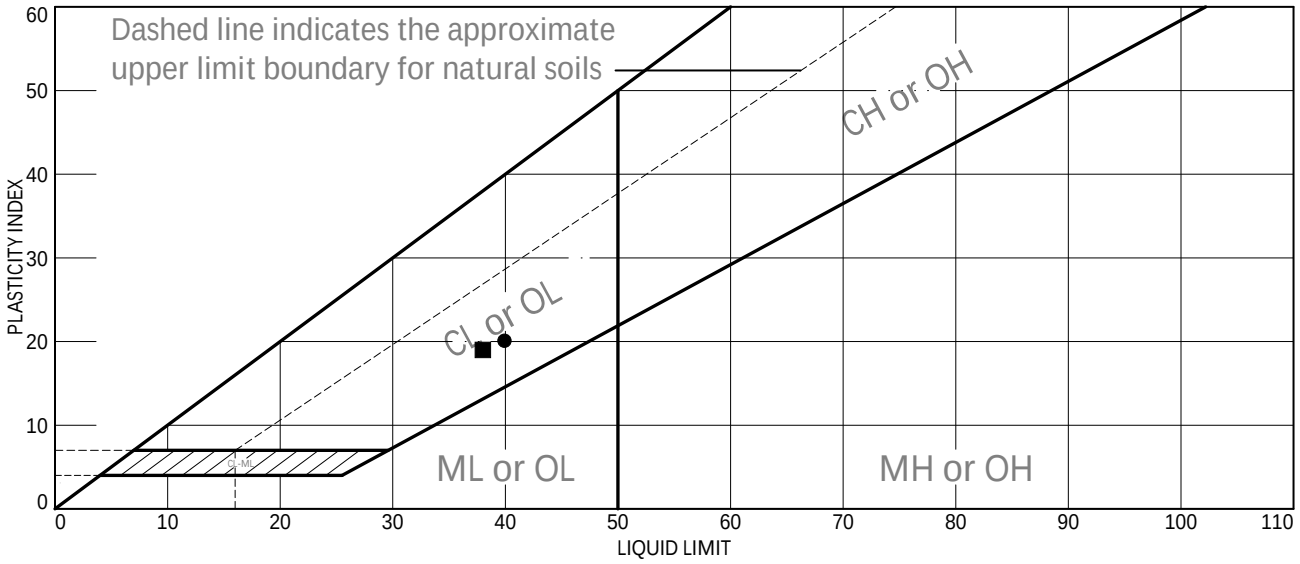
- Sample Preparation:
    - The soil sample is processed to pass the 0.425 mm (No. 40) sieve.
    - A representative portion of this fine-grained material is used for the tests.
- Liquid Limit (LL):
    - A soil paste is prepared with distilled water.
    - The paste is placed in a Casagrande cup, and a groove is made in the soil.
    - The cup is repeatedly dropped from a specified height.
    - The liquid limit is determined as the moisture content at which the groove closes over a distance of 12.7 mm (0.5 inches) after 25 blows.
- Plastic Limit (PL):
    - A soil thread is rolled out on a flat surface.
    - The plastic limit is determined as the moisture content at which the soil thread crumbles when rolled to a diameter of 3.2 mm (1/8 inch).
- Plasticity Index (PI):
    - The plasticity index is calculated by subtracting the plastic limit from the liquid limit (PI = LL - PL).

A summary of the Atterberg Limits test results is presented in Section 2.0 of this report.

A graph depicting the Plasticity Index versus the Liquid Limit is included on the following pages.

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSA01 Depth: 2' - 3' Sample Number: A			02/21/2025	CF
■	Source of Sample: EA-BSA01 Depth: 5' - 6' Sample Number: B			02/20/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		40	20	20		
■	Clay		38	19	19		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

Checked by: KG

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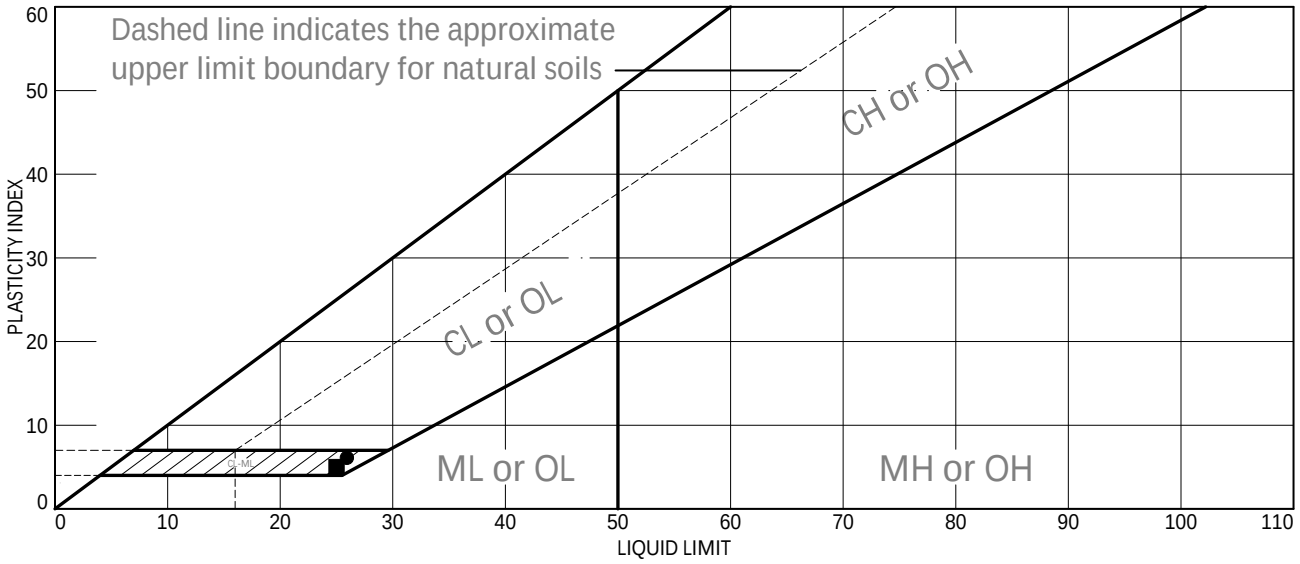
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
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■	Source of Sample: EA-BSA02 Depth: 5' - 6' Sample Number: B			02/20/2025	SY

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		26	20	6		
■	Sandy Clay		25	20	5		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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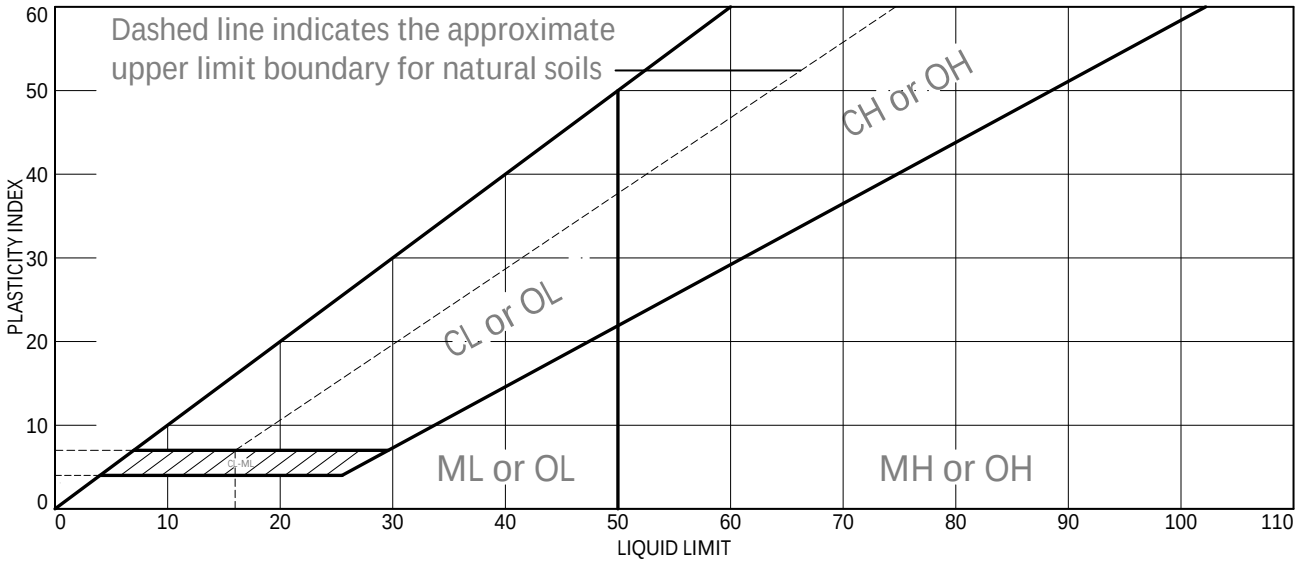
ENGINEERING ANALYTICS, INC.

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSA03 Depth: 2' - 3' Sample Number: A			02/20/2025	SY
■	Source of Sample: EA-BSA03 Depth: 5' - 6' Sample Number: B			02/20/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Sand		NV	NP	NP		
■	Sandy Clay		NV	NP	NP		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

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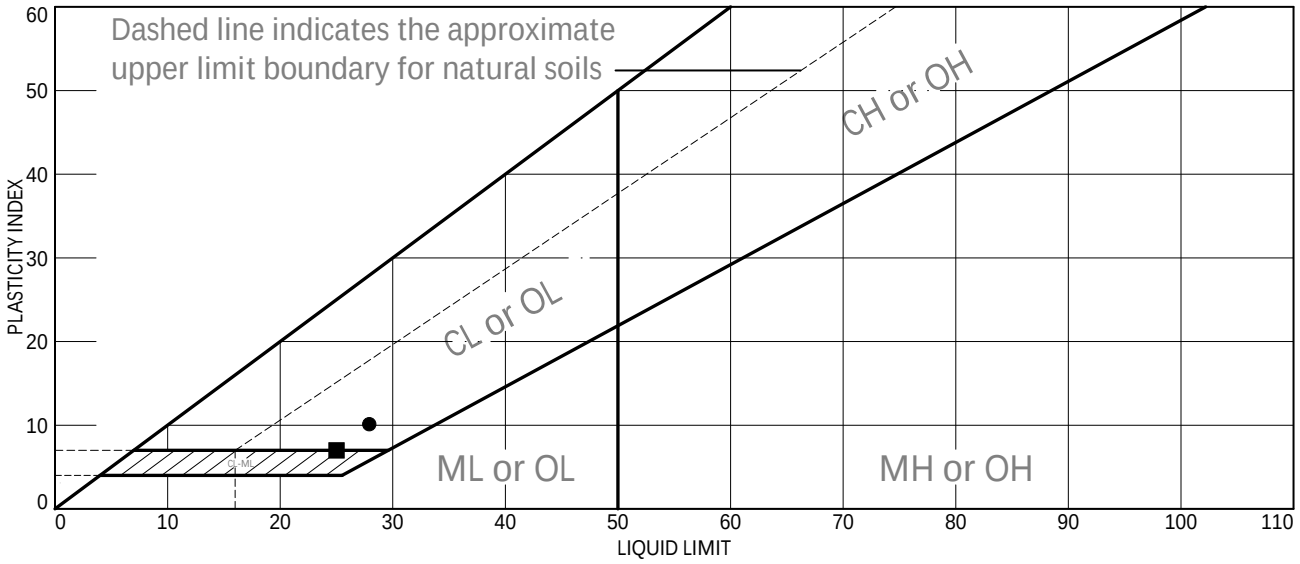
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSA04 Depth: 2' - 3' Sample Number: A			02/21/2025	CF
■	Source of Sample: EA-BSA04 Depth: 5' - 6' Sample Number: B			02/19/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		28	18	10		
■	Silty Clay		25	18	7		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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Title:

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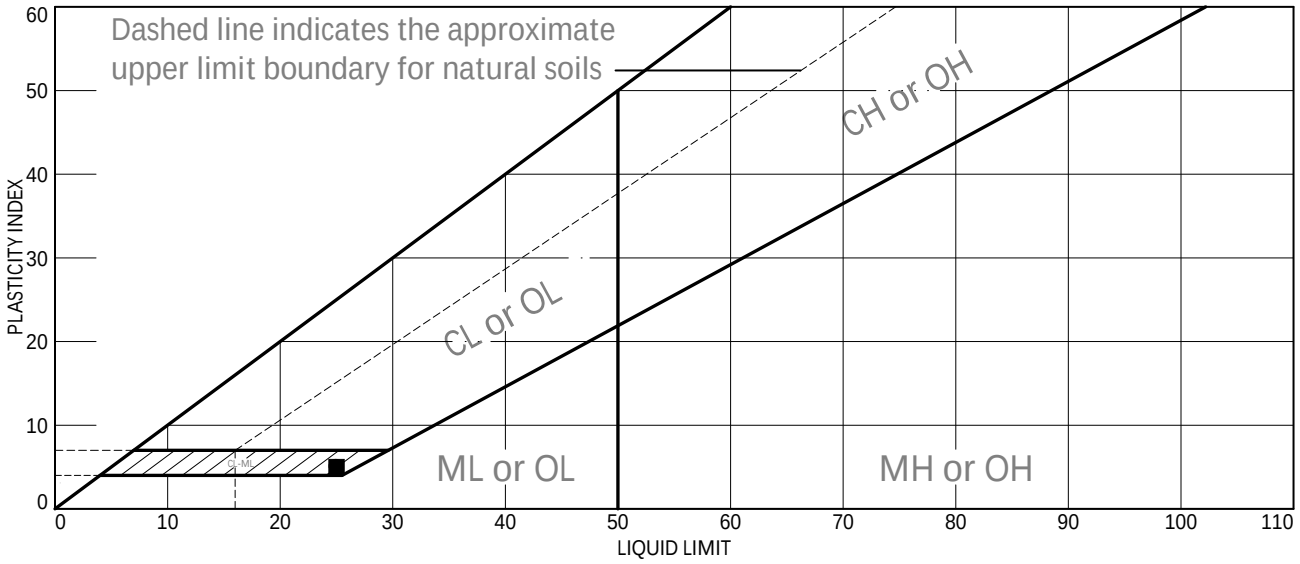
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSA05 Depth: 2' - 3' Sample Number: A			02/20/2025	SY
■	Source of Sample: EA-BSA05 Depth: 5' - 6' Sample Number: B			02/20/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Sand		25	20	5		
■	Clayey Sand		25	20	5		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

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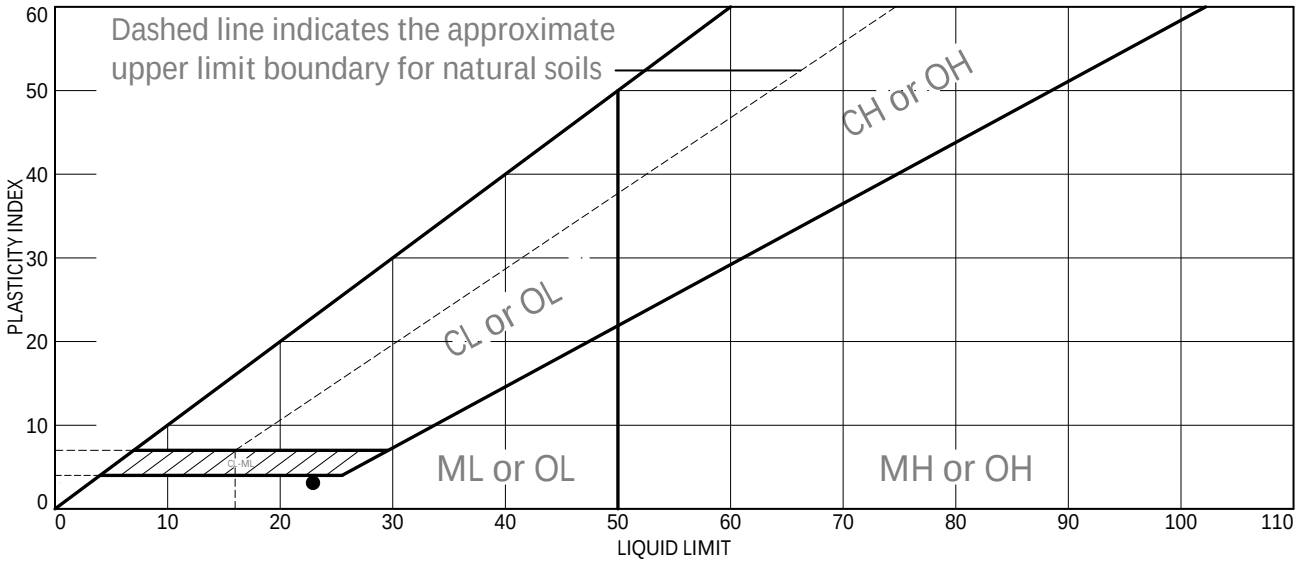
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSA06 Depth: 2' - 3' Sample Number: A			02/20/2025	CF
■	Source of Sample: EA-BSA06 Depth: 5' - 6' Sample Number: B			2/21/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		23	20	3		
■	Sand		NV	NP	NP		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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Title:

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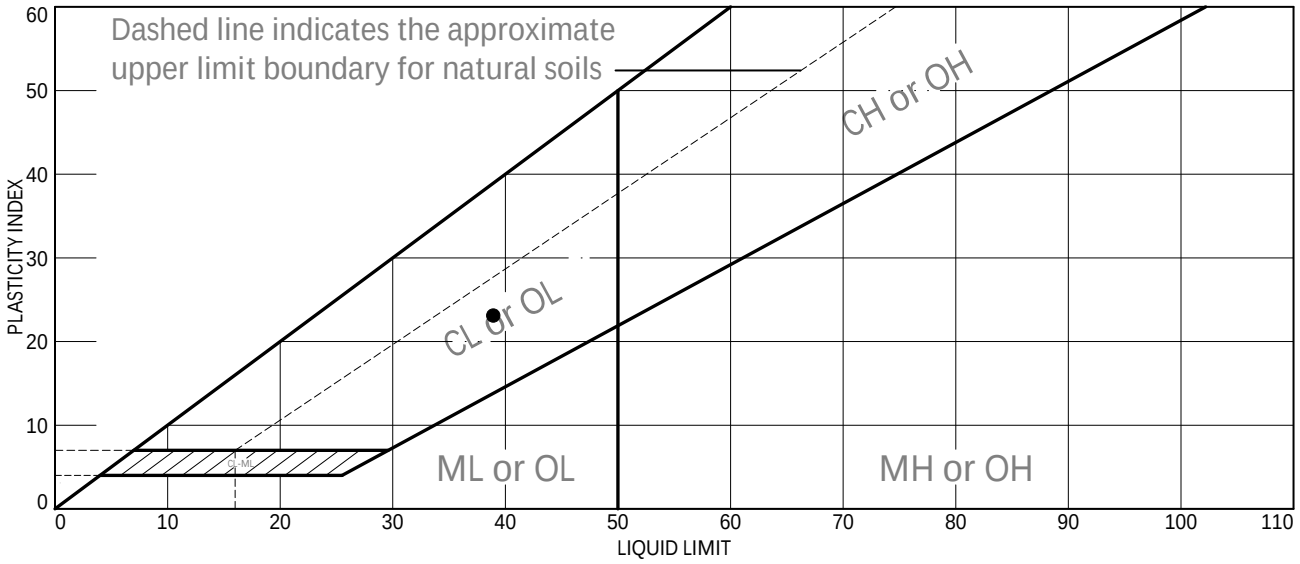
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSB01 Depth: 2' - 3' Sample Number: A			02/21/2025	CF
■	Source of Sample: EA-BSB01 Depth: 5' - 6' Sample Number: B			02/20/2025	SY

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		39	16	23		
■	Sand		NV	NP	NP		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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Title:

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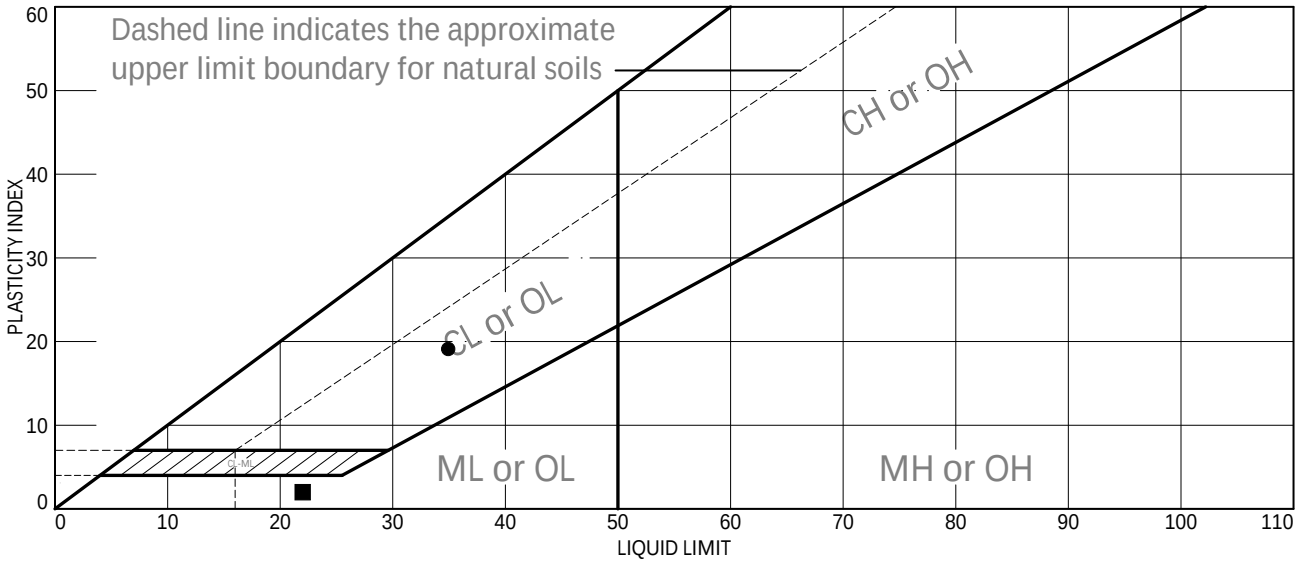
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSB02 Depth: 2' - 3' Sample Number: A			02/24/2025	CF
■	Source of Sample: EA-BSB02 Depth: 5' - 6' Sample Number: B			02/20/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		35	16	19		
■	Silty Clay		22	20	2		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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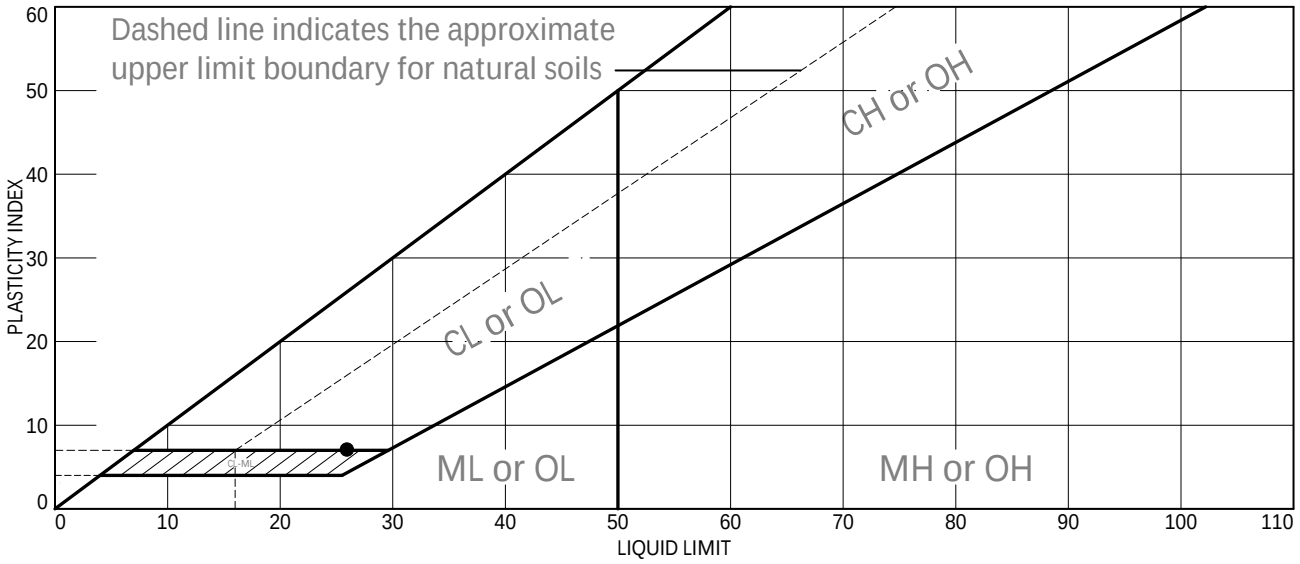
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSB03 Depth: 2' - 3' Sample Number: A			02/20/2025	CF
■	Source of Sample: EA-BSB03 Depth: 5' - 6' Sample Number: B			02/20/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		26	19	7		
■	Sand		NV	NP	NP		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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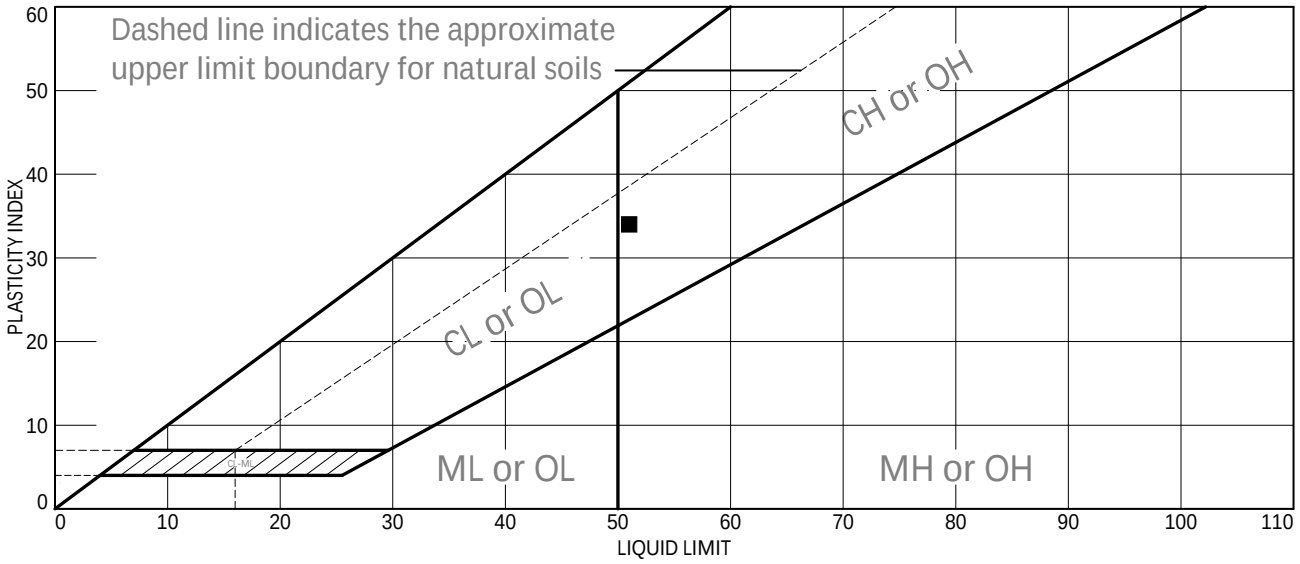
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSB04 Depth: 2' - 3' Sample Number: A			02/20/2025	SY
■	Source of Sample: EA-BSB04 Depth: 5' - 6' Sample Number: B			02/21/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Sand		NV	NP	NP		
■	Silty Clay		51	17	34		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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Title:

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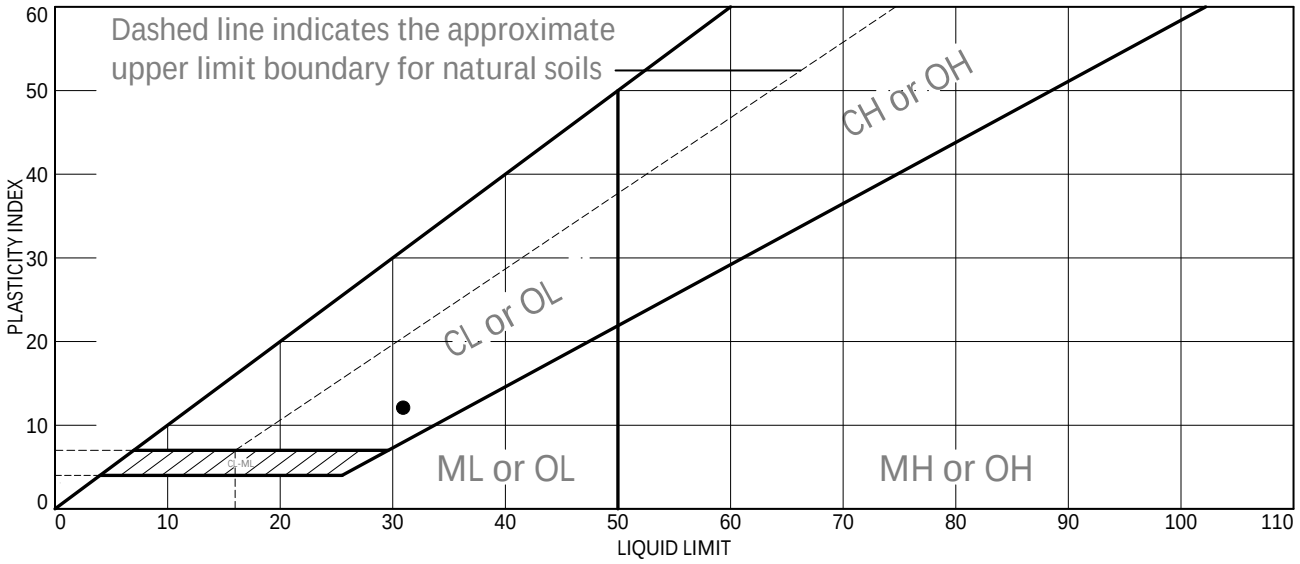
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSB05 Depth: 2' - 3' Sample Number: A			02/19/2025	CF
■	Source of Sample: EA-BSB05 Depth: 5' - 6' Sample Number: B			02/20/2025	SY

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		31	19	12		
■	Sand		NV	NP	NP		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

Checked by: KG

Title:

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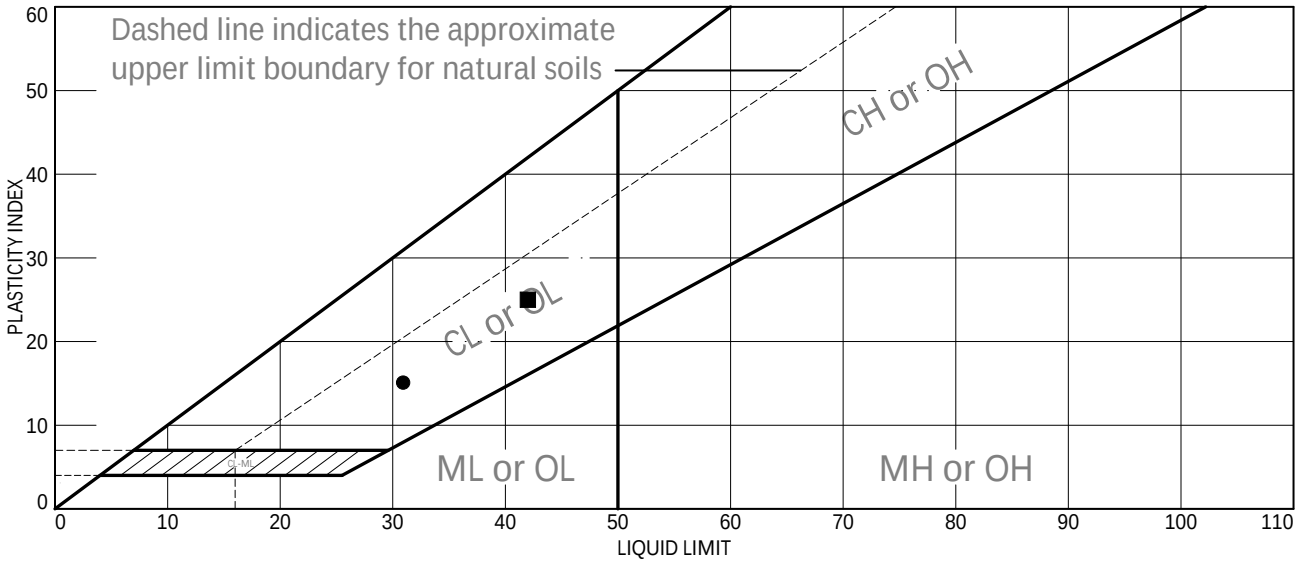
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC01 Depth: 2' - 3' Sample Number: A			02/06/2025	CF
■	Source of Sample: EA-BSC01 Depth: 5' - 6' Sample Number: B			02/06/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		31	16	15		
■	Silty Clay		42	17	25		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

Checked by: KG

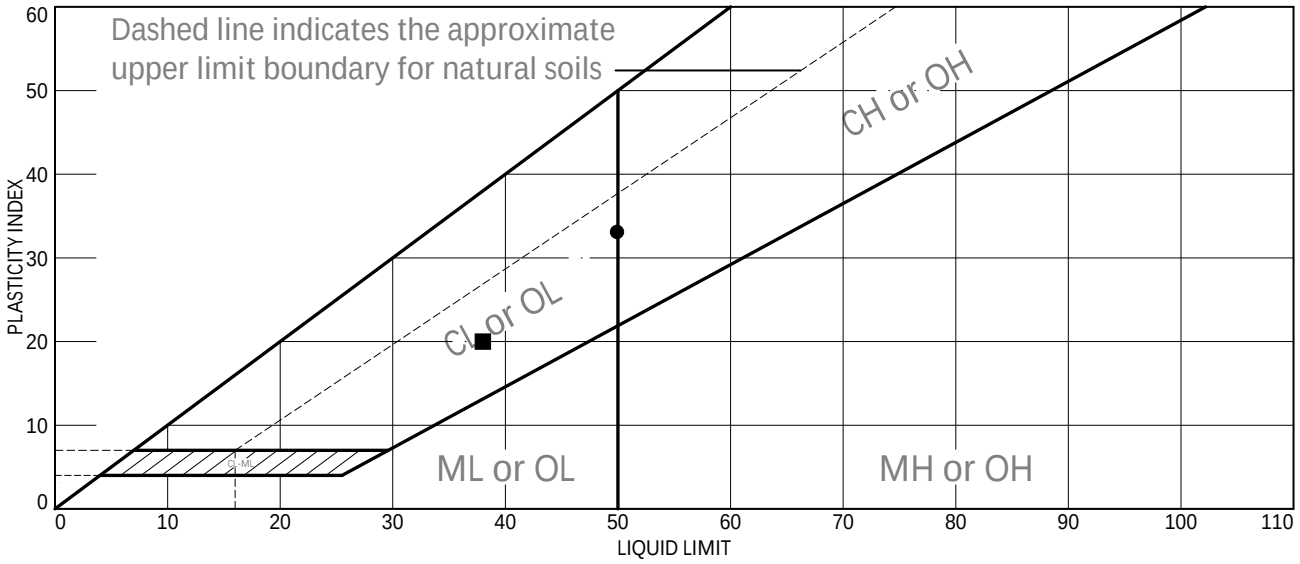
Title:

ENGINEERING ANALYTICS, INC.

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC02 Depth: 2' - 3' Sample Number: A			02/07/2025	EH
■	Source of Sample: EA-BSC02 Depth: 5' - 6' Sample Number: B				02/06/2025

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Clay		50	17	33		
■	Silty Clay		38	18	20		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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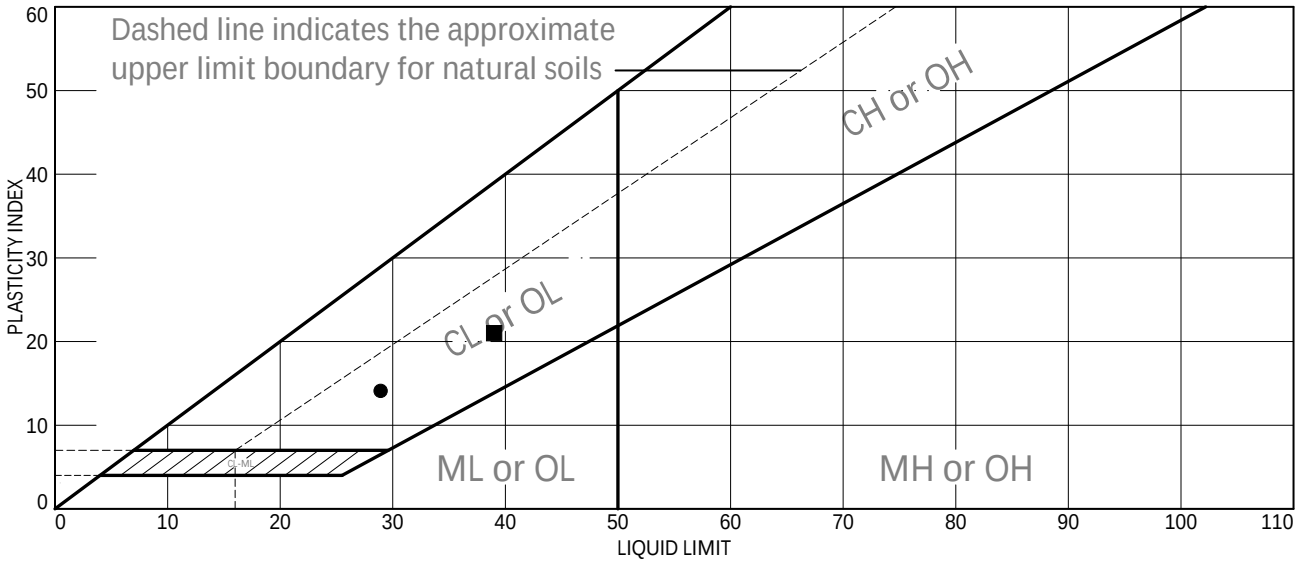
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC03 Depth: 2' - 3' Sample Number: A			02/06/2025	CF
■	Source of Sample: EA-BSC03 Depth: 5' - 6' Sample Number: B			02/05/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		29	15	14		
■	Silty Clay		39	18	21		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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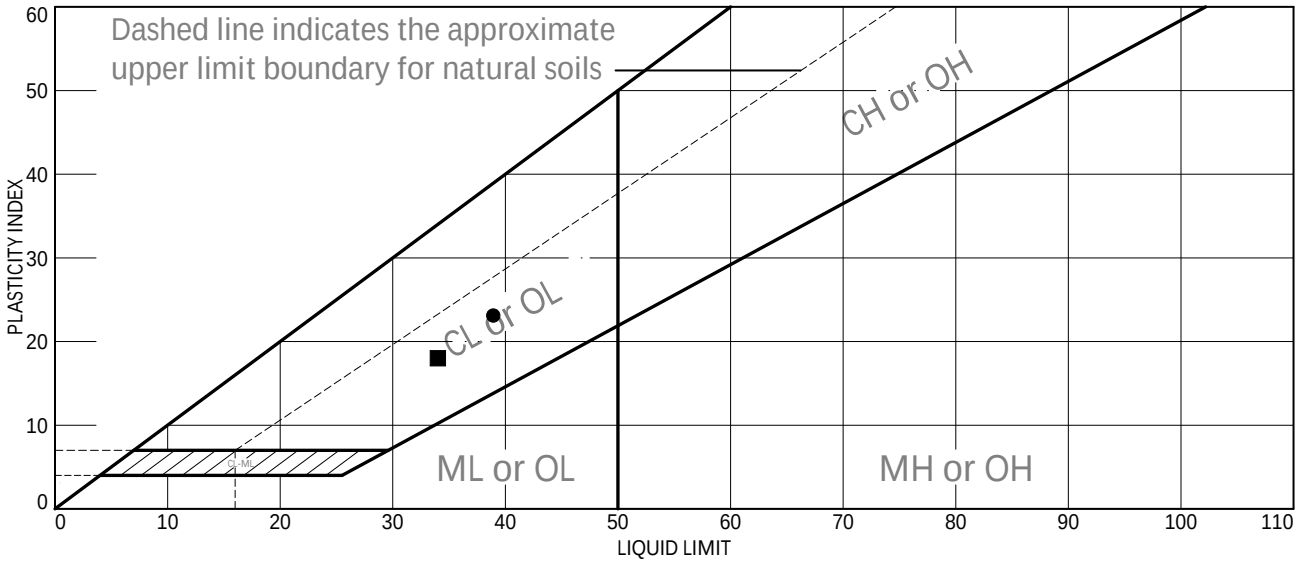
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC04 Depth: 2' - 3' Sample Number: A			02/19/2025	CF
■	Source of Sample: EA-BSC04 Depth: 5' - 6' Sample Number: B			02/13/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Clay		39	16	23		
■	Silty Clay		34	16	18		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

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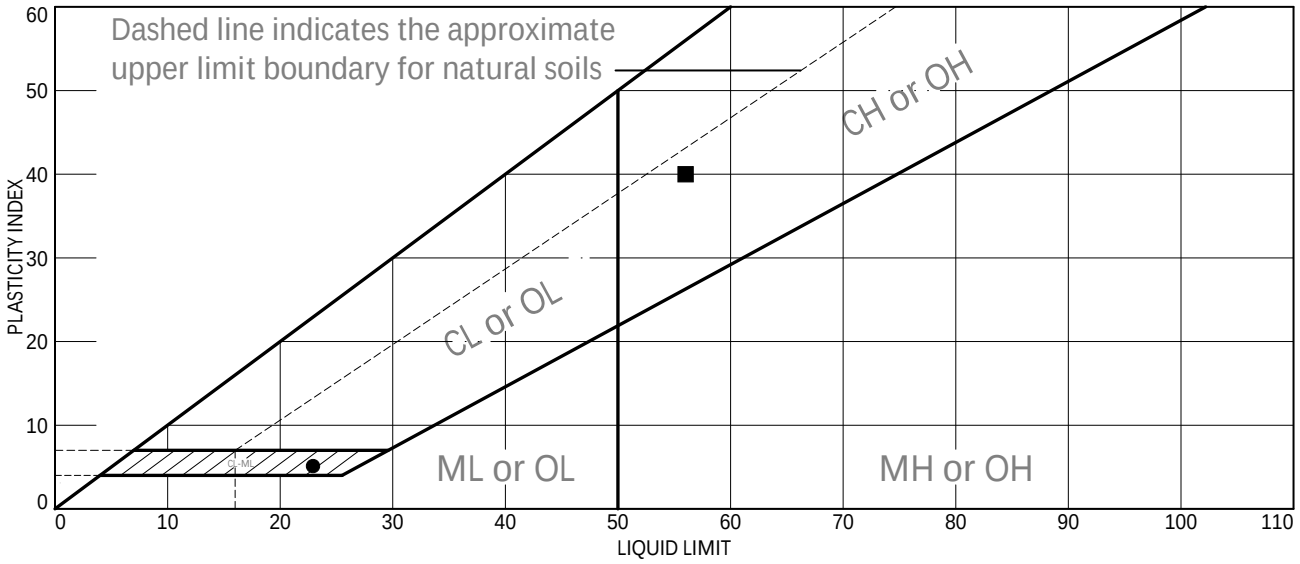
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC05 Depth: 2' - 3' Sample Number: A			02/11/2025	CF
■	Source of Sample: EA-BSC05 Depth: 5' - 6' Sample Number: B			2/07/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Sandy Clay		23	18	5		
■	Silty Clay		56	16	40		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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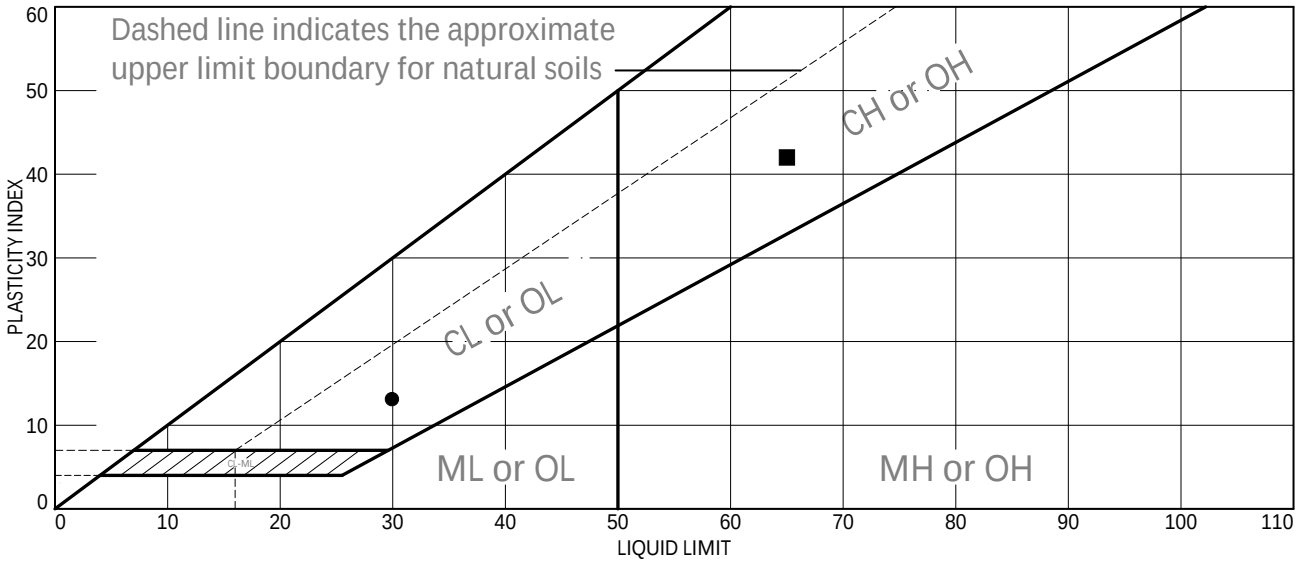
Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC06 Depth: 2' - 3' Sample Number: A			02/20/2025	CF
■	Source of Sample: EA-BSC06 Depth: 5' - 6' Sample Number: B			02/15/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		30	17	13		
■	Clay		65	23	42		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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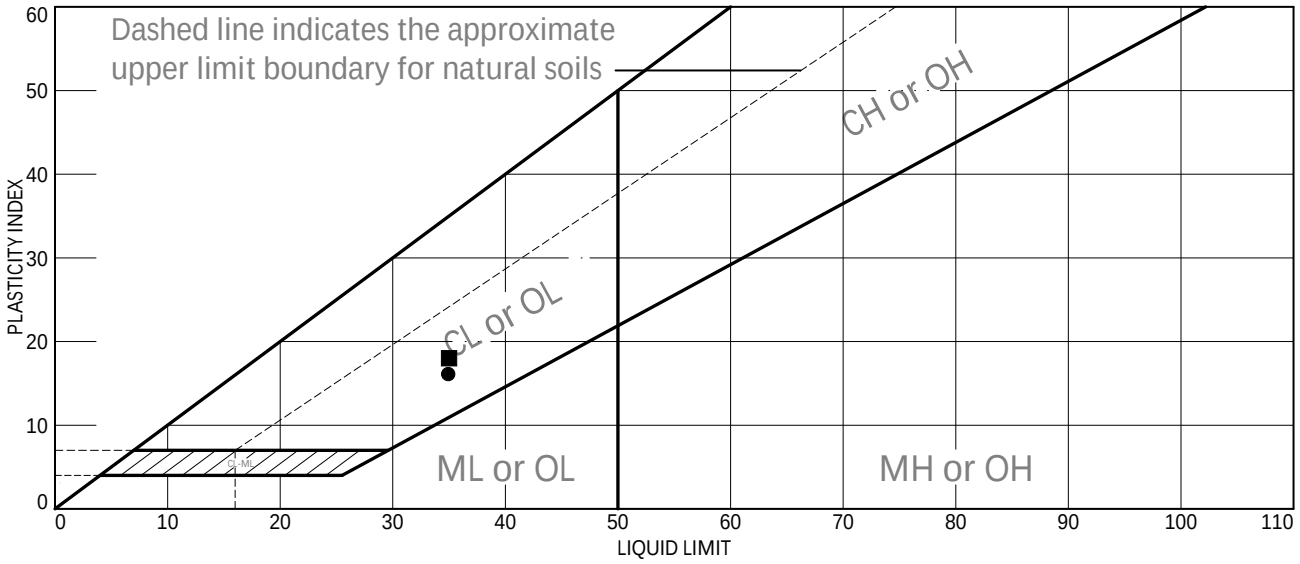
Title:

ENGINEERING ANALYTICS, INC.

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC07 Depth: 2' - 3' Sample Number: A			02/11/2025	SY
■	Source of Sample: EA-BSC07 Depth: 5' - 6' Sample Number: B			02/12/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	SAndy Clay		35	19	16		
■	Silty Clay		35	17	18		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

Checked by: KG

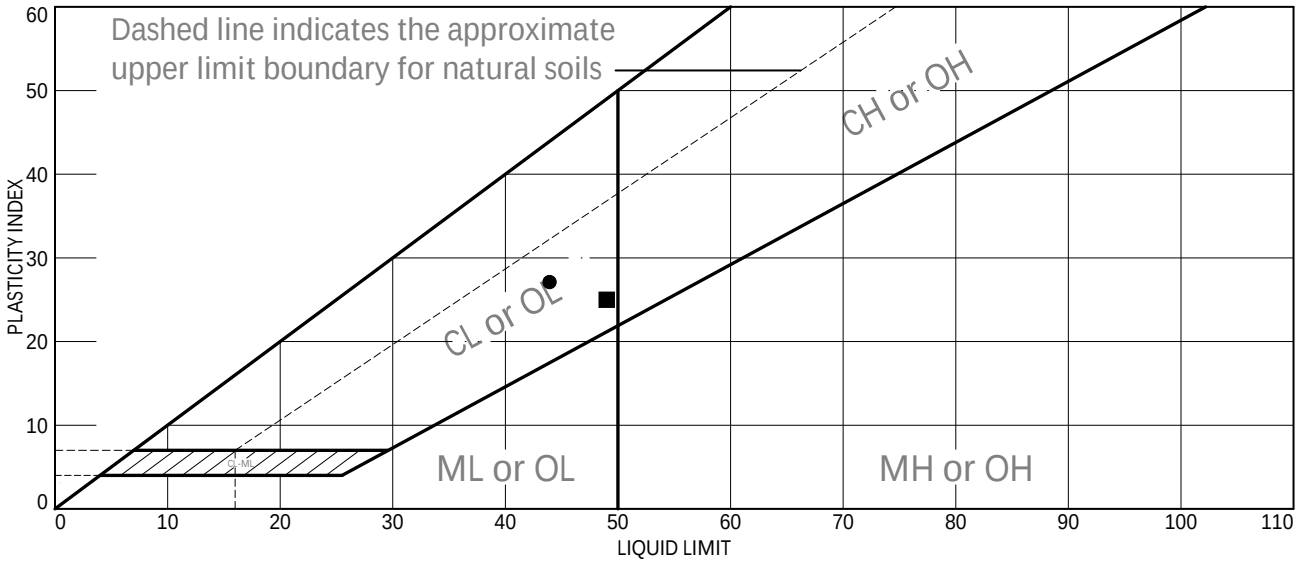
Title:

ENGINEERING ANALYTICS, INC.

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC08 Depth: 2' - 3' Sample Number: A			2/13/2025	CF
■	Source of Sample: EA-BSC08 Depth: 5' - 6' Sample Number: B			02/18/2025	SY

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		44	17	27		
■	Sandy Clay		49	24	25		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

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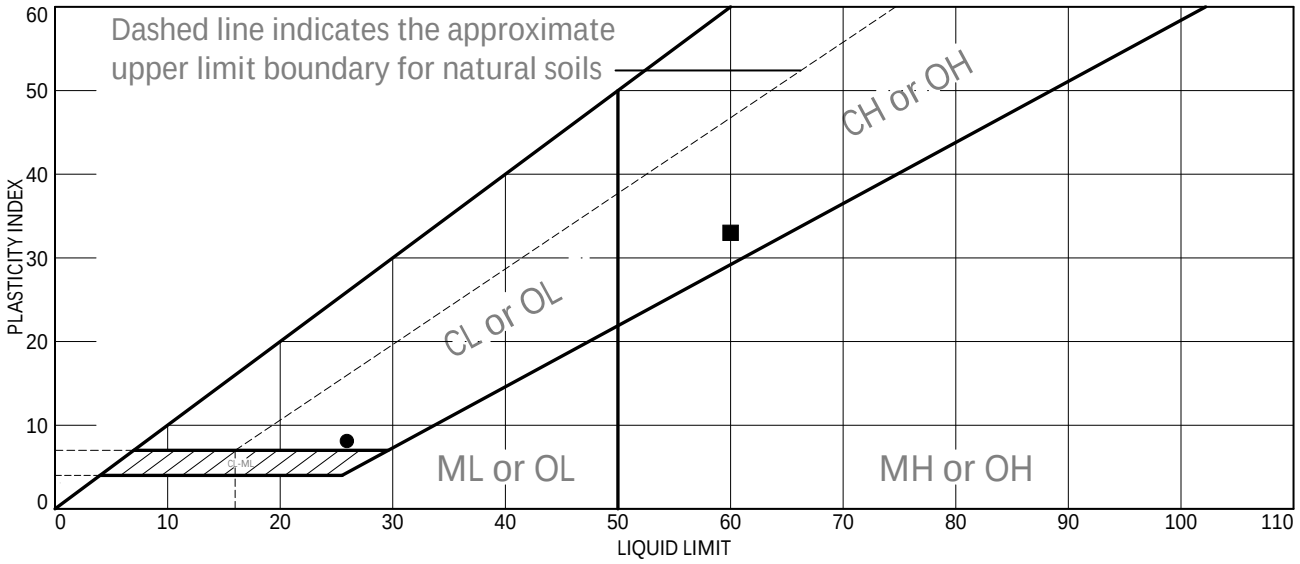
Title:

ENGINEERING ANALYTICS, INC.

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC09 Depth: 2' - 3' Sample Number: A			02/18/2025	CF
■	Source of Sample: EA-BSC09 Depth: 5' - 6' Sample Number: B			02/19/2025	AW

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		26	18	8		
■	Clay		60	27	33		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

Checked by: KG

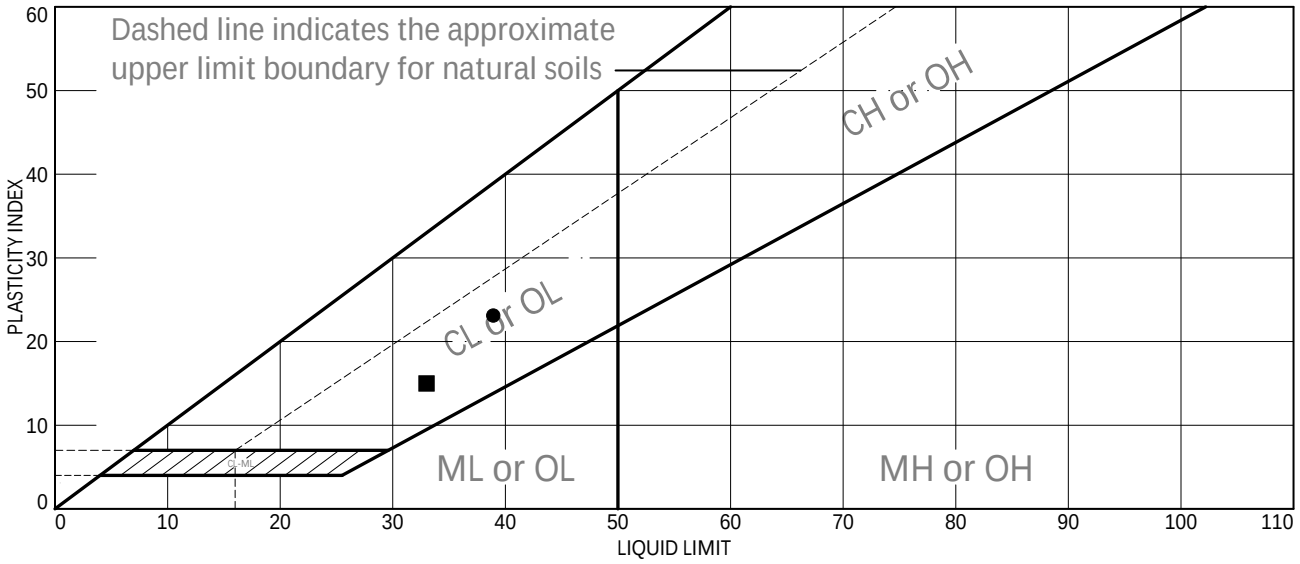
Title:

ENGINEERING ANALYTICS, INC.

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC10 Depth: 2' - 3' Sample Number: A			02/10/2025	CF
■	Source of Sample: EA-BSC10 Depth: 5' - 6' Sample Number: B			02/18/2025	SY

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		39	16	23		
■	Sandy Clay		33	18	15		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

Checked by: KG

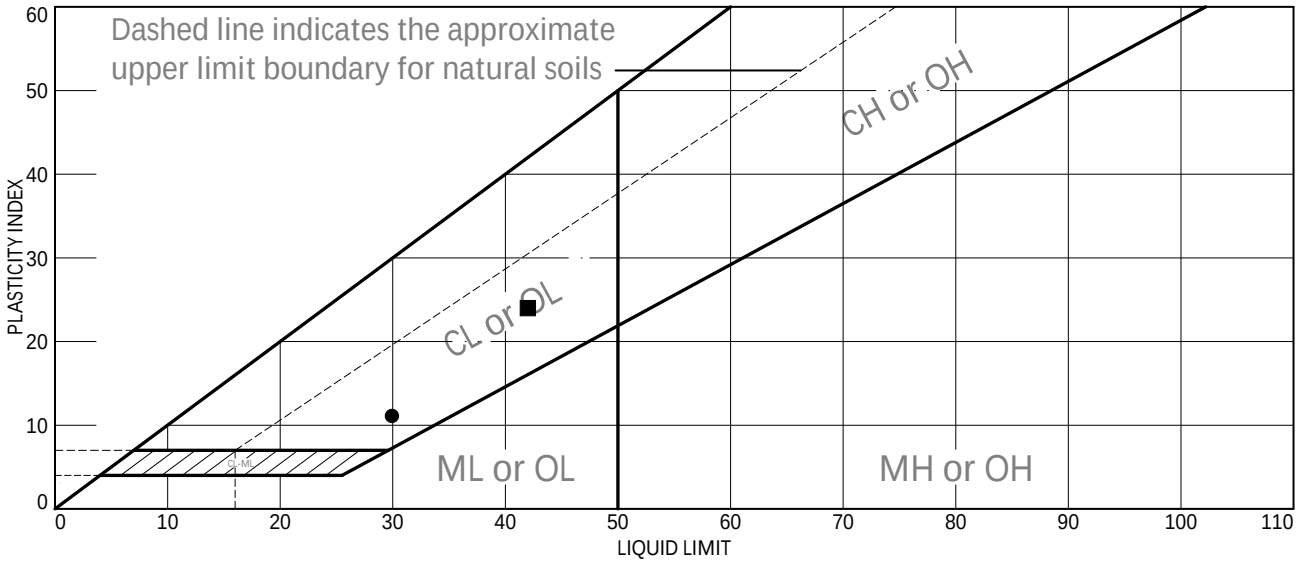
Title:

ENGINEERING ANALYTICS, INC.

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC11 Depth: 2' - 3' Sample Number: A			02/10/2025	CF
■	Source of Sample: EA-BSC11 Depth: 5' - 6' Sample Number: B			02/12/2025	CF

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		30	19	11		
■	Silty Clay		42	18	24		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

Checked by: KG

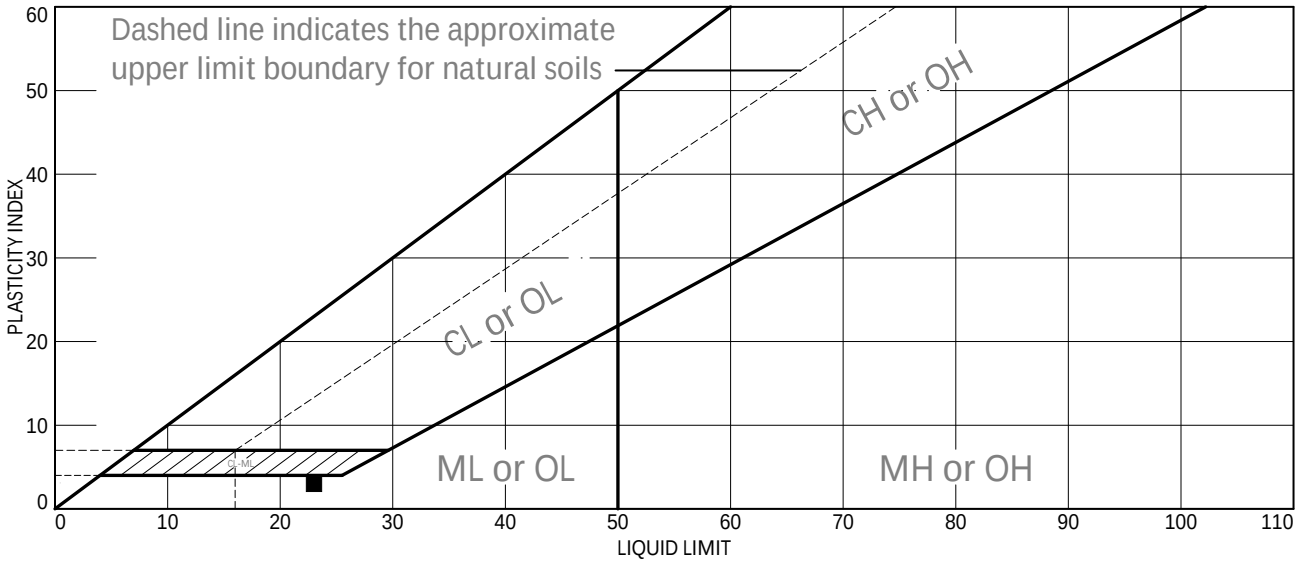
Title:

ENGINEERING ANALYTICS, INC.

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC12 Depth: 2' - 3' Sample Number: A			02/11/2025	CF
■	Source of Sample: EA-BSC12 Depth: 5' - 6' Sample Number: B				02/07/2025

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Sandy Clay		NV	NP	NP		
■	Sandy Clay		23	20	3		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

Checked by: KG

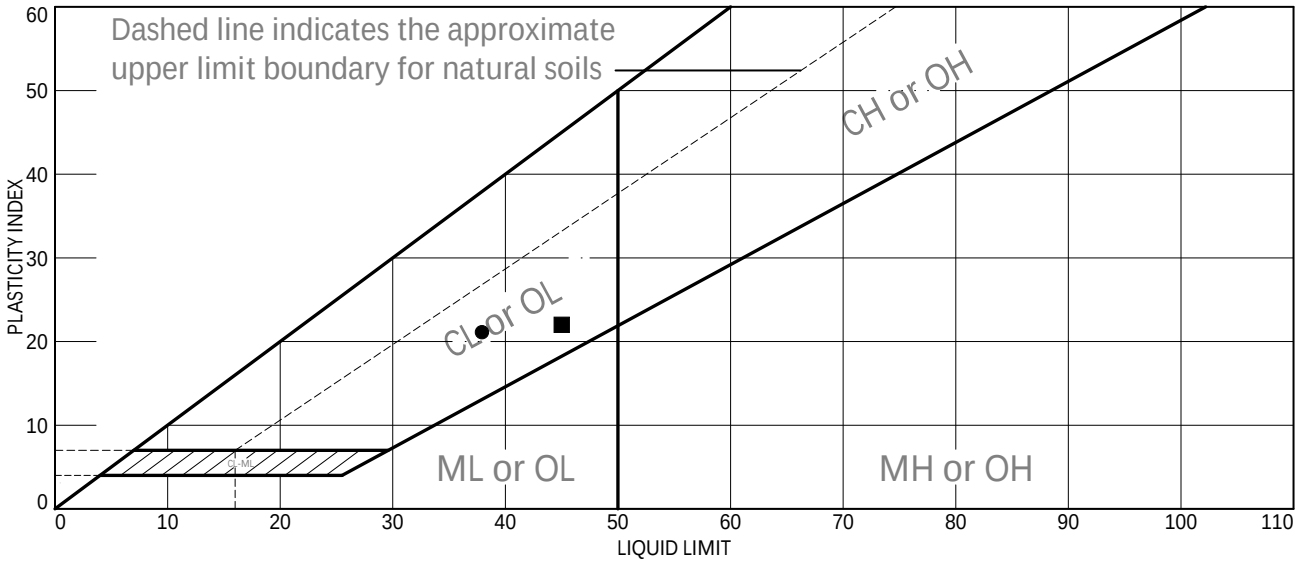
Title:

ENGINEERING ANALYTICS, INC.

Figure

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	Sample Identification	Sampled	Received	Tested	Technician
●	Source of Sample: EA-BSC13 Depth: 2' - 3' Sample Number: A			02/14/2025	CF
■	Source of Sample: EA-BSC13 Depth: 5' - 6' Sample Number: B			02/11/2025	SY

	Material Description	USCS	LL	PL	PI	NM	%<#40
●	Silty Clay		38	17	21		
■	Clay		45	23	22		

	PL Rolling Method	LL Device	Grooving Tool	Test Remarks
●	Hand rolled	Manual	Metal	
■	Hand rolled	Manual	Metal	

Project No. 111360 Client: Rio Grand Resources

Project: Mt.Taylor

Checked by: KG

Title:

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Figure

6.0 Flexible Wall Permeability

The hydraulic conductivity (coefficient of permeability) of saturated porous material was determined on 2 soil samples using a flexible wall permeameter in accordance with ASTM D5084, "Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall[1] Permeameter (Method C: Falling Head Test)."

- Soil samples were trimmed, encased within a flexible rubber membrane, and placed within a triaxial test cell.
- An initial effective stress of 1-3 psi was applied to each sample to facilitate saturation.
- Following saturation, each sample was consolidated to the effective stress specified by the project engineer.
- After a 24-hour consolidation period, a hydraulic gradient was established by applying differential pressures to the top and bottom of the samples. The magnitude of the gradient was determined based on the soil classification.
- The outflow of water from the top of the sample was measured at predetermined time intervals to determine the flow rate and, subsequently, the hydraulic conductivity.

The results of the hydraulic conductivity are presented on the following pages

Flexible Wall Permeability Test

Mt. Taylor - 111360

EA-BSC 9 @ 2'-3' Remolded

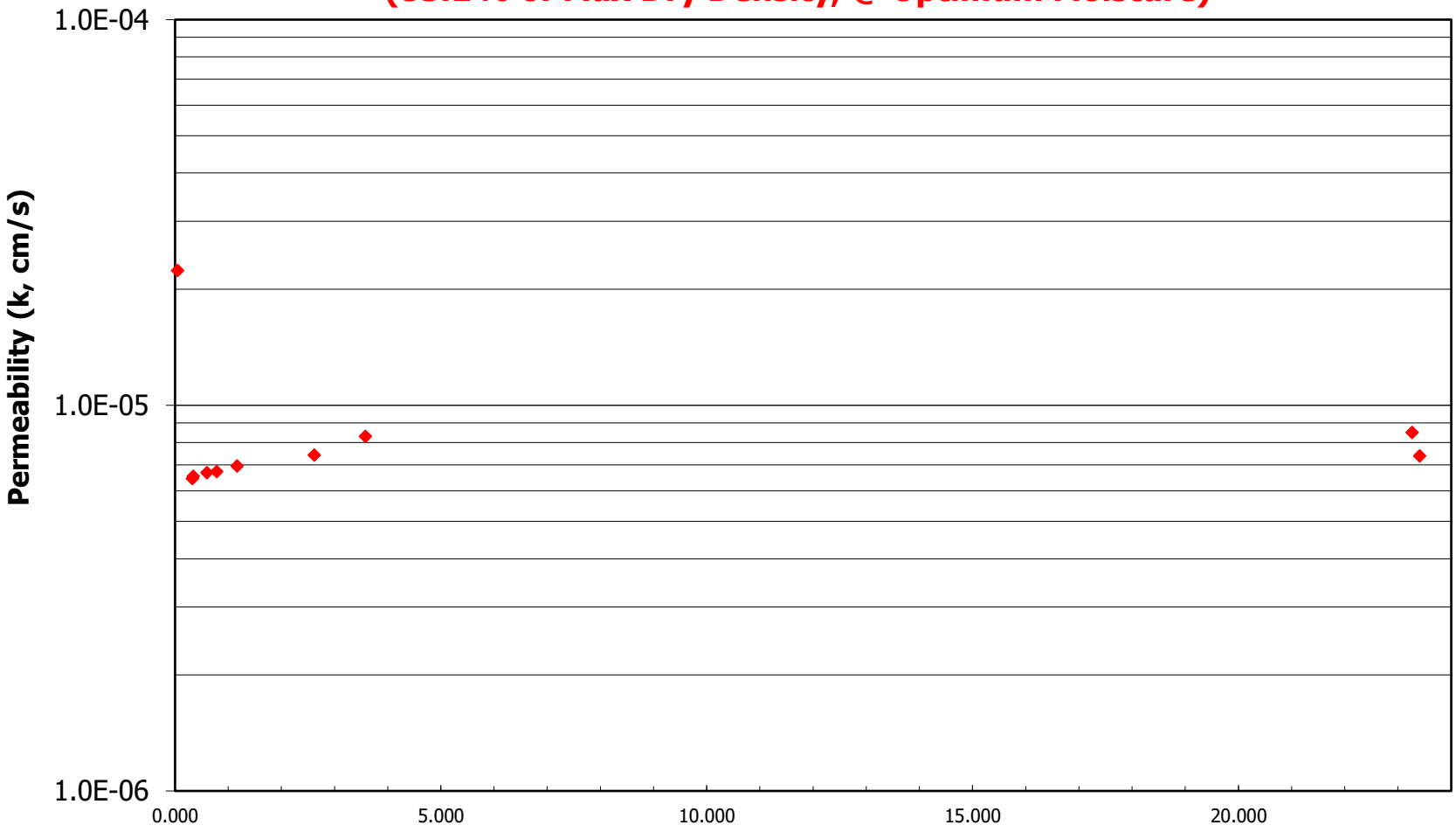
Length of sample	L	7.52	cm	2.960 in
Area of sample	A	29.50	cm^2	2.413 in
Area of standpipe	a	0.713	cm^2	0.375 in

Cell Pressure	85.00	psi		
Upper Cap Pressure	79.79	psi		
Lower Cap Pressure	80.00	psi		
Dry Density	93.9		% Remold @	85.1 %
% of Moisture	16.1 %		Water content ±	0 %
Gradiant	1.96		Remold Dry Density	93.9
Consolidation (psi)	5.00 psi		Remold % of Moisture	16.1 %
Consolidation (psf)	720 psf			

Date & Time	E.T . (s)	Reading Lower (cc)	Reading Upper (cc)	k(cm/s)
10/28/25 10:45 AM		11.000	49.300	
10/28/25 10:48 AM	180	12.000	48.000	2.2E-05
10/28/25 10:48 AM		12.000	48.000	
10/28/25 11:05 AM	1050	13.800	46.100	6.5E-06
10/28/25 11:05 AM		13.800	46.100	
10/28/25 11:07 AM	120	14.000	45.900	6.5E-06
10/28/25 11:07 AM		14.000	45.900	
10/28/25 11:21 AM	810	15.300	44.500	6.7E-06
10/28/25 11:21 AM		15.300	44.500	
10/28/25 11:32 AM	660	16.400	43.500	6.7E-06
10/28/25 11:32 AM		16.400	43.500	
10/28/25 11:55 AM	1380	18.500	41.400	7.0E-06
10/28/25 11:55 AM		18.500	41.400	
10/28/25 1:22 PM	5220	25.000	34.800	7.4E-06
10/28/25 1:22 PM		25.000	34.800	
10/28/25 2:20 PM	3480	28.500	31.600	8.3E-06
10/29/25 9:59 AM		19.600	49.600	
10/29/25 10:01 AM	120	19.800	49.300	8.5E-06
10/29/25 10:01 AM		19.800	49.300	
10/29/25 10:09 AM	510	20.700	48.400	7.4E-06
10/29/25 10:09 AM		20.700	48.400	
10/29/25 10:25 AM	930	22.200	46.800	7.4E-06
		Average k=	7.9E-06	

Flexwall Permeability Test

Mt. Taylor - 111360
EA-BSC09 @ 2' - 3'
Remolded to 93.9 @ 16.1%
(85.1% of Max Dry Density, @ Optimum Moisture)



Average Permeability k = 7.9E-06cm/s

Flexible Wall Permeability Test

Mt. Taylor - 111360

EA-BSC 12A @ 2'-3'

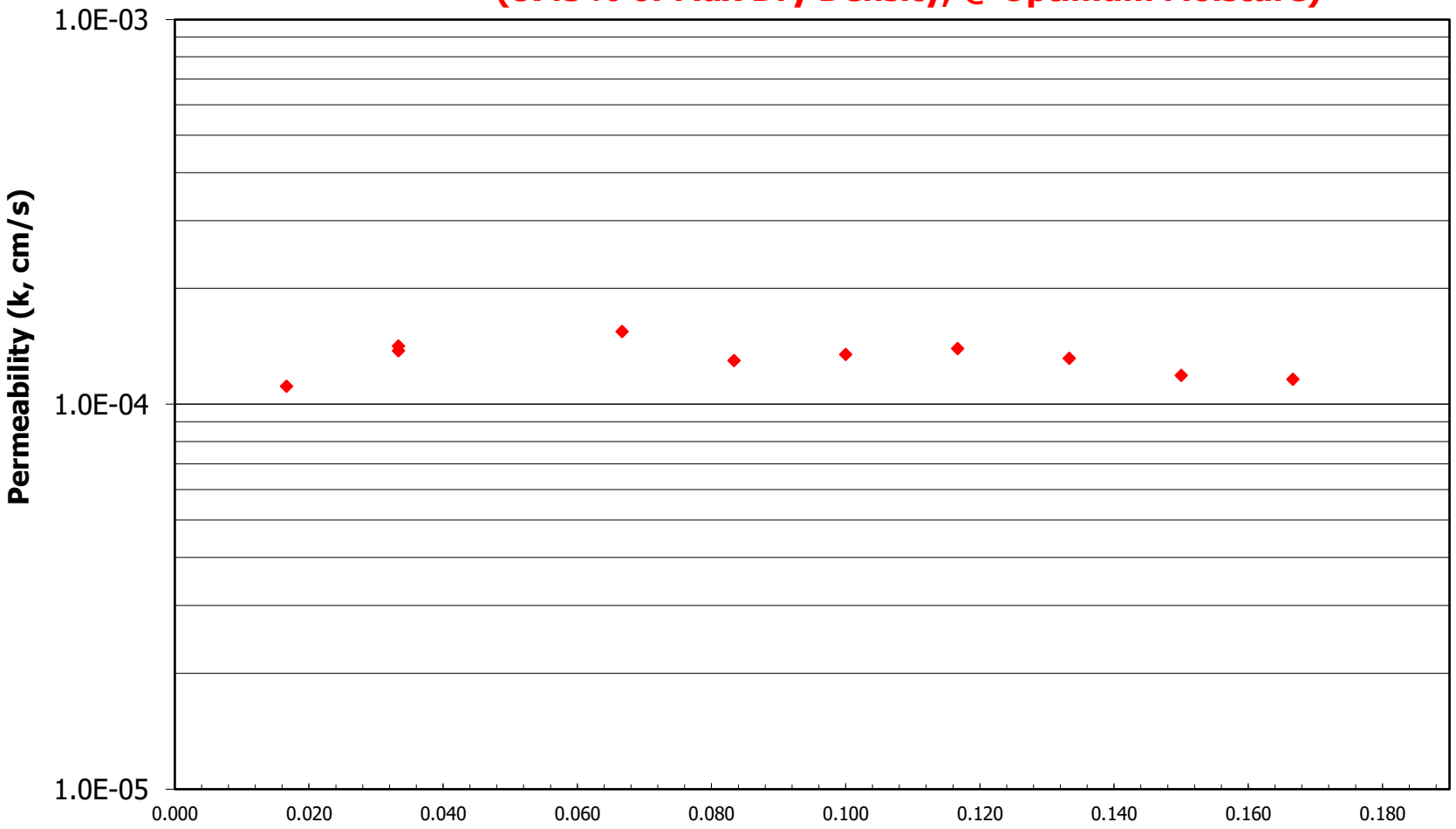
Length of sample	L	6.24	cm	2.456 in
Area of sample	A	29.50	cm^2	2.413 in
Area of standpipe	a	0.713	cm^2	0.375 in

Cell Pressure	90.00	psi			
Upper Cap Pressure	84.82	psi			
Lower Cap Pressure	85.00	psi			
Dry Density	95.4		% Remold @	87.3	%
% of Moisture	16.4	%	Water content ±	0	%
Gradiant	2.03		Remold Dry Density	95.4	
Consolidation (psi)	5.00	psi	Remold % of Moisture	16.4	%
Consolidation (psf)	720	psf			

Date & Time	E.T . (s)	Reading Lower (cc)	Reading Upper (cc)	k(cm/s)
10/28/25 10:58 AM		25.500	36.400	
10/28/25 10:59 AM	60	26.500	35.400	1.1E-04
10/28/25 10:59 AM		26.500	35.400	
10/28/25 11:00 AM	60	27.700	34.300	1.4E-04
10/28/25 11:00 AM		27.700	34.300	
10/28/25 11:01 AM	60	28.800	33.400	1.4E-04
10/28/25 11:01 AM		28.800	33.400	
10/28/25 11:02 AM	60	29.700	32.300	1.5E-04
10/28/25 11:02 AM		29.700	32.300	
10/28/25 11:03 AM	60	30.500	31.600	1.3E-04
10/28/25 11:03 AM		30.500	31.600	
10/28/25 11:04 AM	60	31.100	30.800	1.3E-04
10/28/25 11:04 AM		31.100	30.800	
10/28/25 11:05 AM	60	31.800	30.200	1.4E-04
10/28/25 11:05 AM		31.800	30.200	
10/28/25 11:06 AM	60	32.300	29.600	1.3E-04
10/28/25 11:06 AM		32.300	29.600	
10/28/25 11:07 AM	60	32.800	29.200	1.2E-04
10/28/25 11:07 AM		32.800	29.200	
10/28/25 11:08 AM	60	33.200	28.800	1.2E-04
10/28/25 11:08 AM		33.200	28.800	
10/28/25 11:09 AM	60	33.600	28.400	1.3E-04
		Average k=	1.2E-04	

Flexwall Permeability Test

Mt. Taylor - 111360
EA-BSC 12A @ 2'-3'
Remolded to 95.4 @ 16.4%
(87.3% of Max Dry Density, @ Optimum Moisture)



Average Permeability k = 1.2E-04cm/s

7.0 Soil Water Characteristic Curve

The moisture-retention curve (also known as the soil-water characteristic curve) was determined on 7 soil samples in accordance with ASTM D6836, "Standard Test Methods for Determination of the Soil Water Characteristic Curve for Soil and Rock by the Pressure Plate Method." This test establishes the relationship between the water content of a soil and the applied suction or negative matric potential (soil water potential).

To create a full-range curve, a combination of two methods was employed:

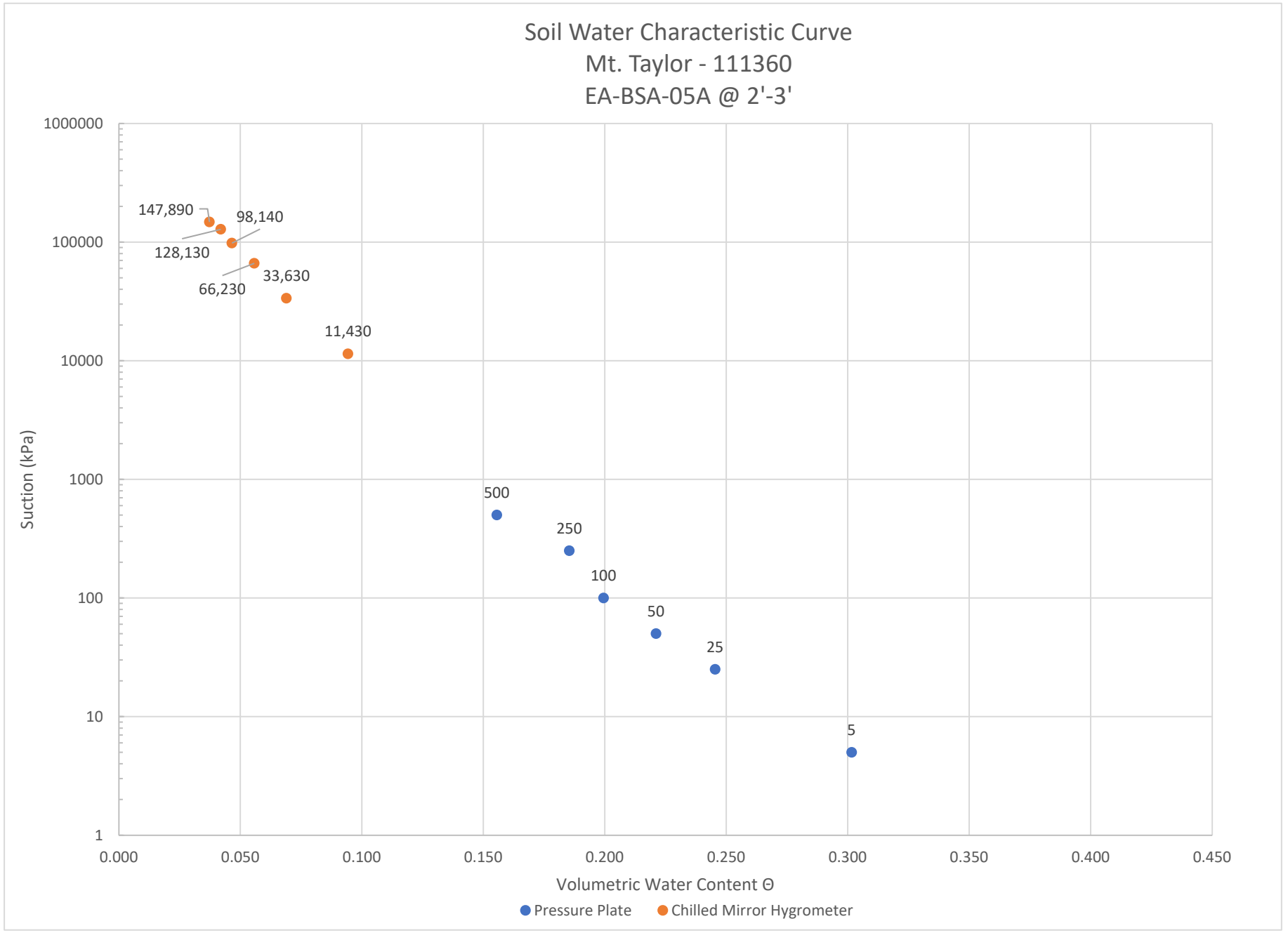
- Low Suction Range (Method C - Pressure Plate): Used to determine the water content at low suctions (0 kPa to 500 kPa).
- High Suction Range (Method D - Chilled Mirror Hygrometer): Used to determine the water content at high suctions (500 kPa to 250,000 kPa or more).

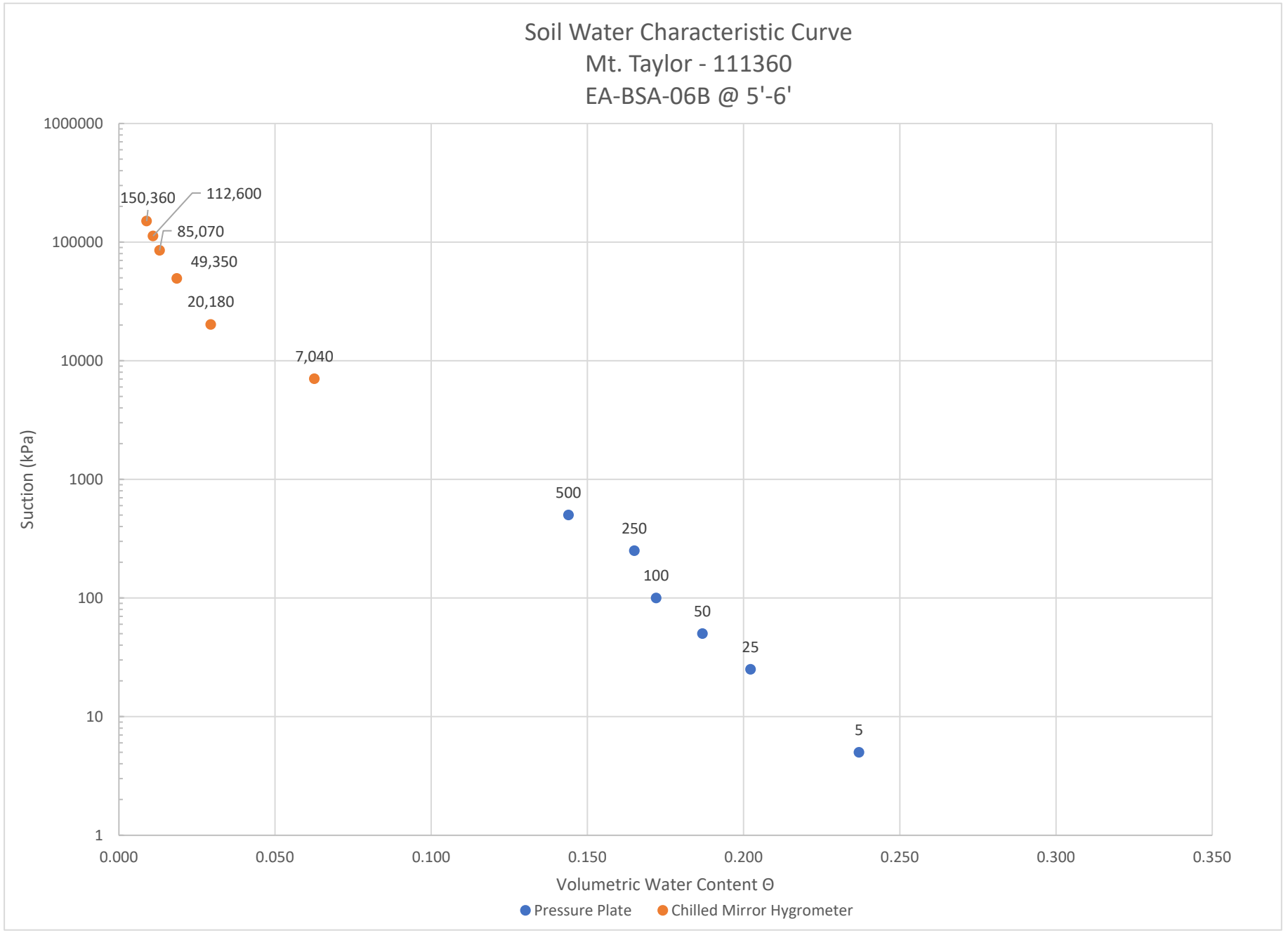
Combined Test Procedure

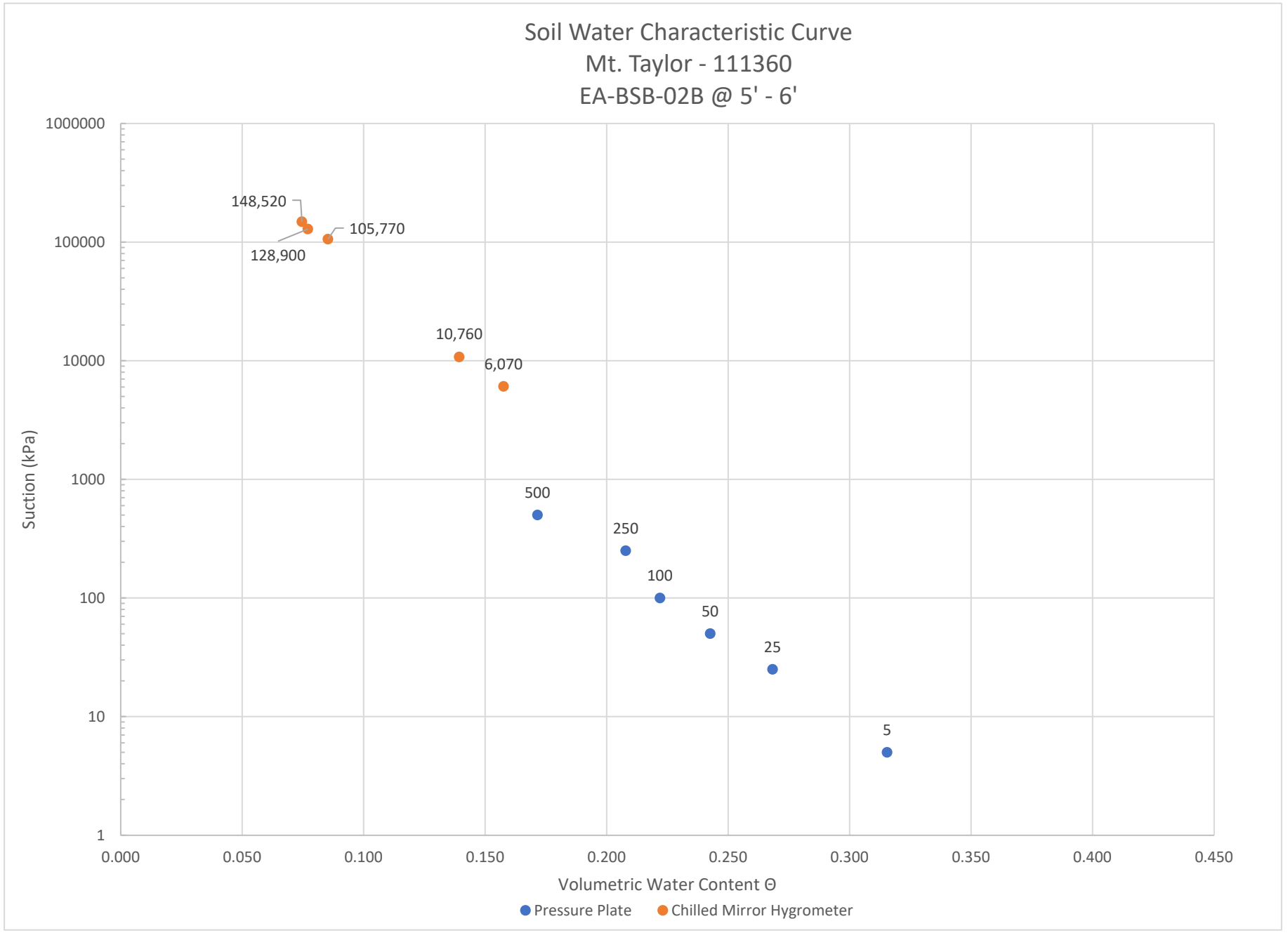
1. Sample Preparation (Method C): Representative soil specimens were prepared and placed on ceramic plates of appropriate air-entry values within a pressure chamber.
2. Saturation: The specimens were saturated by submerging them in water, allowing them to reach equilibrium.
3. Low Suction Application (Method C): The pressure chamber was subjected to a series of low, incremental air pressures (suctions), typically up to 1500 kPa. At each pressure step, the system was allowed to reach hydraulic equilibrium (i.e., water stopped flowing out of the samples). The water outflow was measured and recorded.
4. High Suction Application (Method D): After the final low-suction step, or on a separate subset of samples, the soil was tested using the Chilled Mirror Hygrometer technique.
    - A small, representative portion of the soil was placed in the hygrometer's sample chamber.
    - The instrument measured the relative humidity in equilibrium with the soil water potential (suction) above the sample.
    - This measurement was taken by chilling a mirror surface until dew condensation occurred. The measured dew point temperature was used to calculate the corresponding high soil suction.
5. Moisture Content Determination: For both methods, the water content corresponding to each suction step was determined, by determining the gravimetric moisture content of the tested specimen.

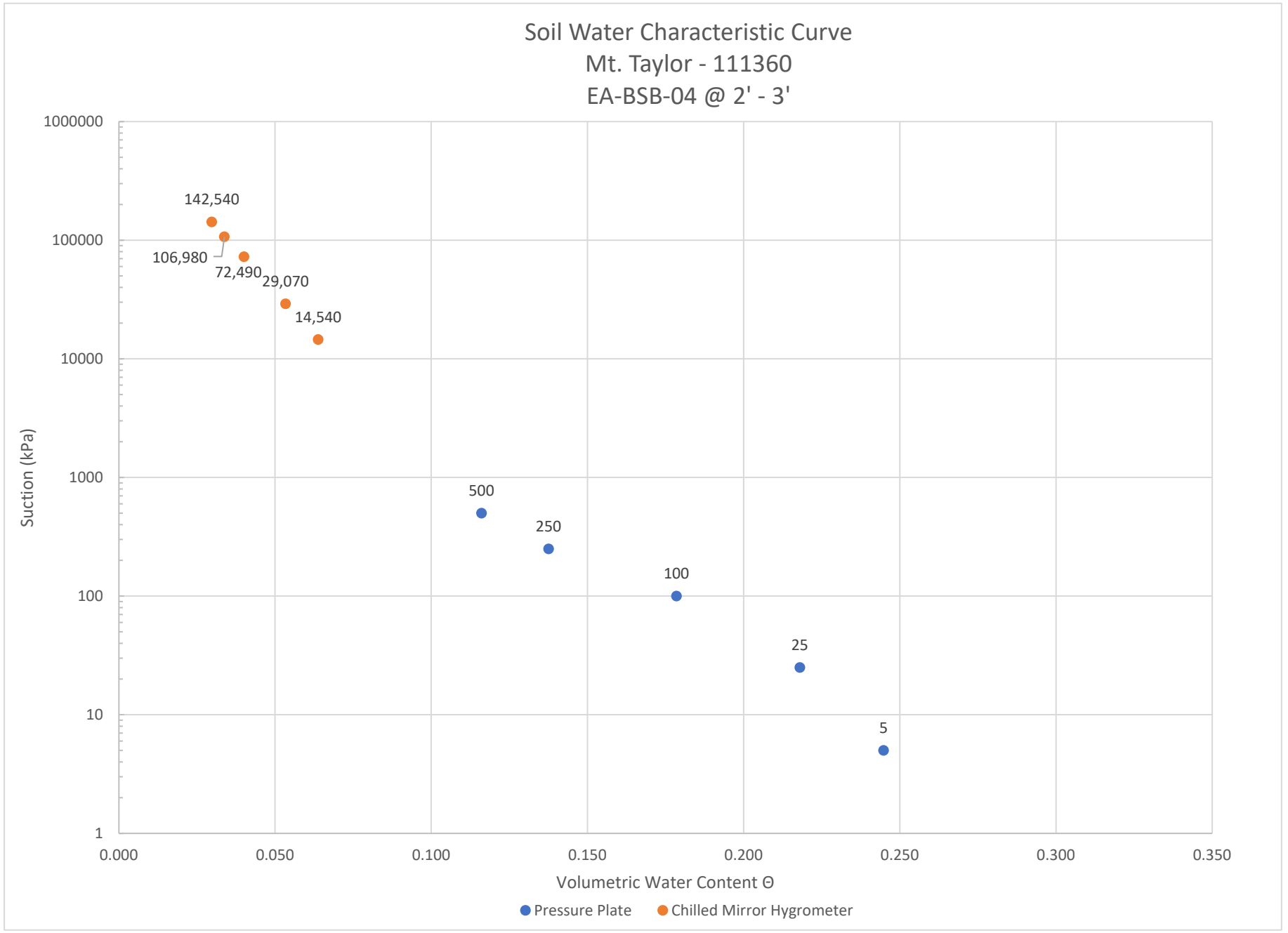
By combining the data from the Pressure Plate (low suction) and the Chilled Mirror Hygrometer (high suction), a complete moisture-retention curve was generated, spanning the full range of suction required for engineering analysis.

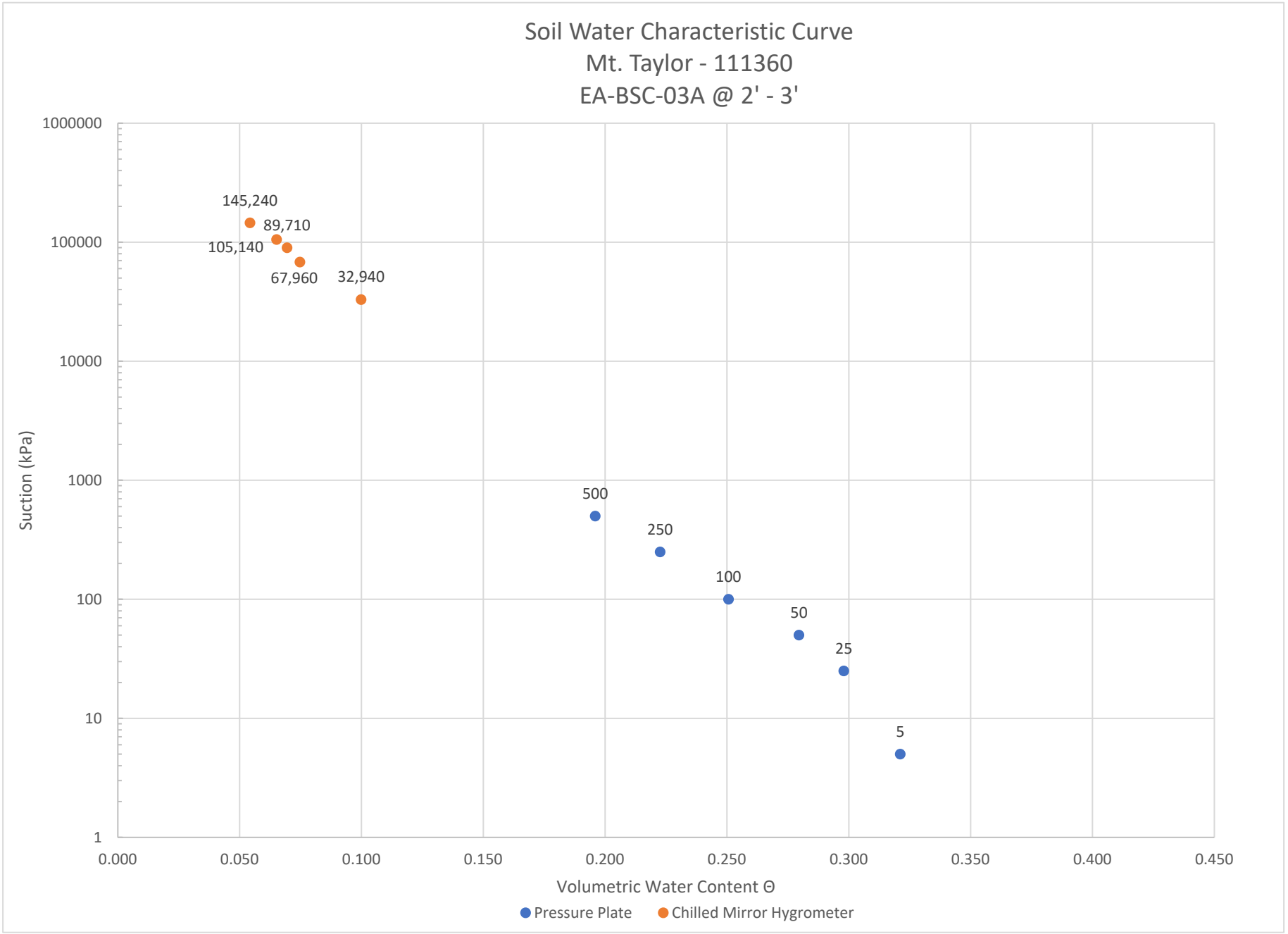
The results of the Soil Water Characteristic Curves are presented on the following pages.

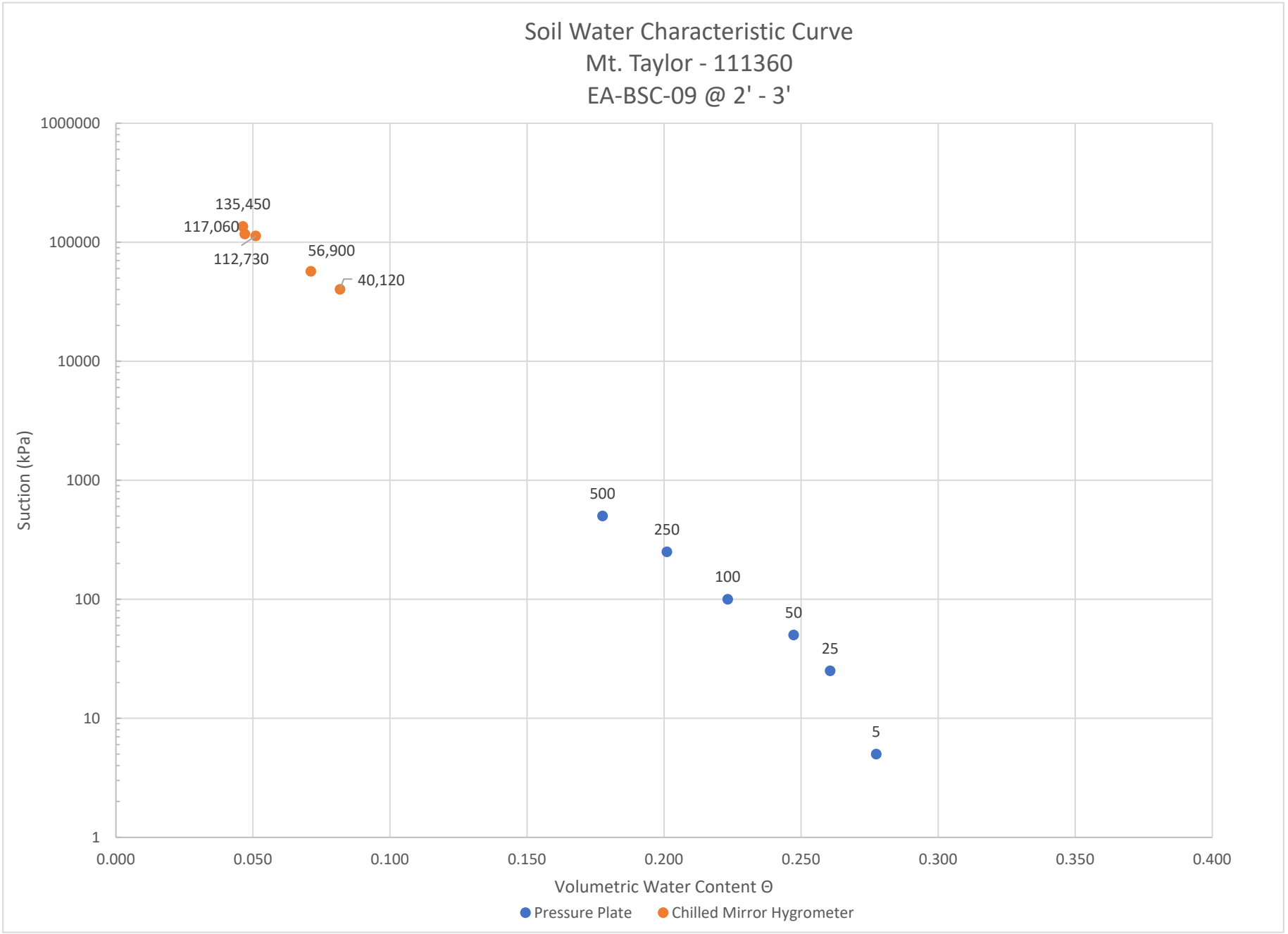

Soil Water Characteristic Curve
Mt. Taylor - 111360
EA-BSA-05A @ 2'-3'
Suction (kPa)
1000000
100000
10000
1000
100
10
1
147,890
98,140
128,130
33,630
66,230
11,430
500
250
100
50
25
5
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
0.450
Volumetric Water Content Θ
Pressure Plate
Chilled Mirror Hygrometer

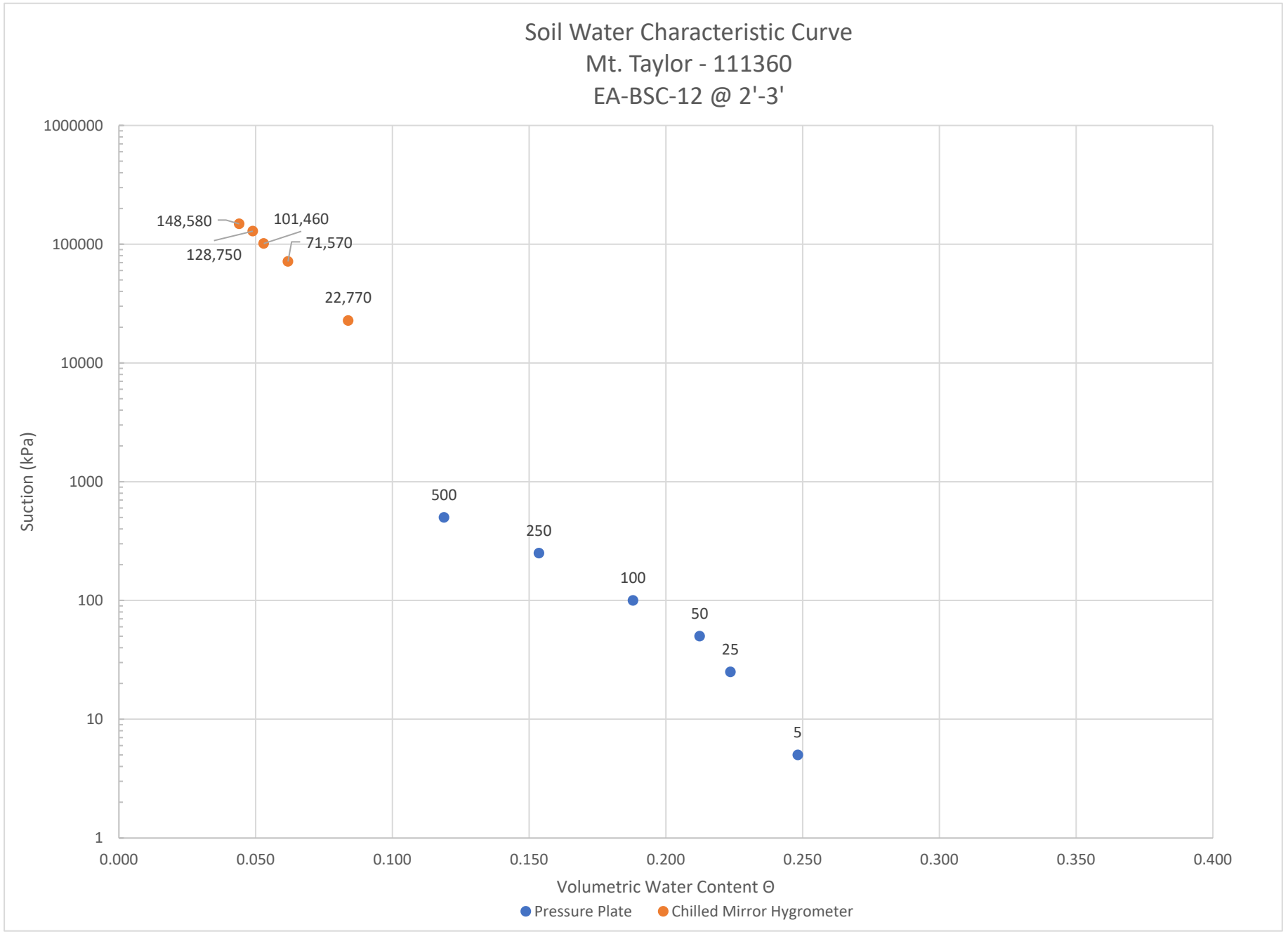

Soil Water Characteristic Curve
Mt. Taylor - 111360
EA-BSA-06B @ 5'-6'
Suction (kPa)
1000000
100000
10000
1000
100
10
1
150,360
112,600
85,070
49,350
20,180
7,040
500
250
100
50
25
5
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
Volumetric Water Content Θ
Pressure Plate
Chilled Mirror Hygrometer


Soil Water Characteristic Curve
Mt. Taylor - 111360
EA-BSB-02B @ 5' - 6'
Suction (kPa)
1000000
100000
10000
1000
100
10
1
148,520
105,770
128,900
10,760
6,070
500
250
100
50
25
5
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
0.450
Volumetric Water Content Θ
Pressure Plate
Chilled Mirror Hygrometer


Soil Water Characteristic Curve
Mt. Taylor - 111360
EA-BSB-04 @ 2' - 3'
Suction (kPa)
1000000
100000
10000
1000
100
10
1
142,540
106,980
72,490
29,070
14,540
500
250
100
25
5
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
Volumetric Water Content Θ
Pressure Plate
Chilled Mirror Hygrometer


Soil Water Characteristic Curve
Mt. Taylor - 111360
EA-BSC-03A @ 2' - 3'
Suction (kPa)
1000000
100000
10000
1000
100
10
1
145,240
89,710
105,140
67,960
32,940
500
250
100
50
25
5
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
0.450
Volumetric Water Content Θ
Pressure Plate
Chilled Mirror Hygrometer


Soil Water Characteristic Curve
Mt. Taylor - 111360
EA-BSC-09 @ 2' - 3'
Suction (kPa)
1000000
100000
10000
1000
100
10
1
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
Volumetric Water Content Θ
135,450
117,060
112,730
56,900
40,120
500
250
100
50
25
5
Pressure Plate
Chilled Mirror Hygrometer


Soil Water Characteristic Curve
Mt. Taylor - 111360
EA-BSC-12 @ 2'-3'
Suction (kPa)
1000000
100000
10000
1000
100
10
1
148,580
101,460
128,750
71,570
22,770
500
250
100
50
25
5
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
Volumetric Water Content Θ
Pressure Plate
Chilled Mirror Hygrometer

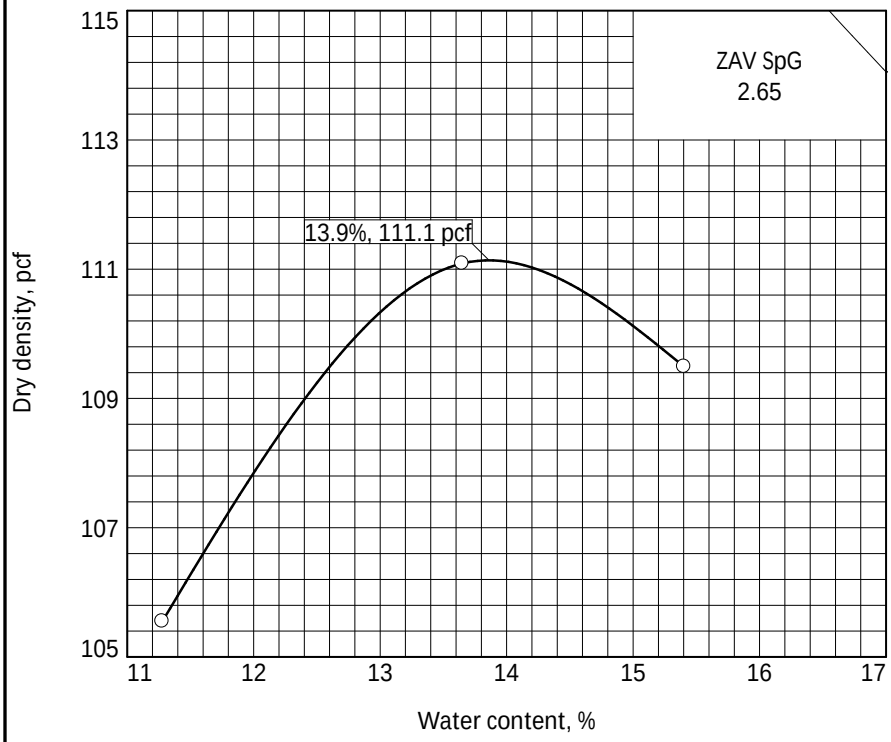
8.0 Standard Proctor Compaction

Standard Proctor Compaction tests were performed on 8 selected soil samples in accordance with ASTM D698, “Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.”

- For each test, soil at a predetermined moisture content was placed in three equal layers into a cylindrical mold of specified dimensions. Each layer was compacted by 25 blows from a 5.5-pound (2.49 kg) hammer dropped from a height of 12 inches (305 mm) for Methods A and B of the standard. For Method C, a larger mold and 56 blows per layer were used. The specific method employed is noted in the results section.
- Following compaction, the wet unit weight of the soil in the mold was determined by measuring the mass of the compacted soil and the known volume of the mold.
- The moisture content of a representative portion of the compacted soil was determined, and the dry unit weight was subsequently calculated.
- This procedure was repeated for each soil sample with four or more different moisture contents to establish the moisture-density relationship (compaction curve) for the soil.

Graphs illustrating the moisture-density relationships (Proctor curves) for each tested soil sample are shown on the following pages.

COMPACTION TEST REPORT



Curve No.
2

Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method: Moist
Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Hammer Type: Manual
Layers: three Blows/Layer: 25
Mold Size: 0.03333 cu. ft.

Test Performed on Material
Passing: #4 Sieve

NM: LL: 25 PI: 5
Sp.G. (Assumed): 2.650
%>#4: %<No.200:
USCS: AASHTO:
Date Sampled:
Date Received:
Date Tested: 3/07/2025
Tested By: SY

TESTING DATA	1	2	3	4	5	6
WM + WS	6161.5	6159.9	6026.9			
WM	4251.2	4251.2	4251.2			
WW + T #1	1309.6	1466.2	1581.9			
WD + T #1	1189.6	1338.5	1462.3			
TARE #1	410.5	402.9	401.8			
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	15.4	13.6	11.3			
DRY DENSITY	109.5	111.1	105.6			

TEST RESULTS

Maximum dry density = 111.1 pcf

Optimum moisture = 13.9 %

Material Description: Sand

Remarks:

Project No.: 111360 Client: Rio Grand Resources
Project: Mt.Taylor

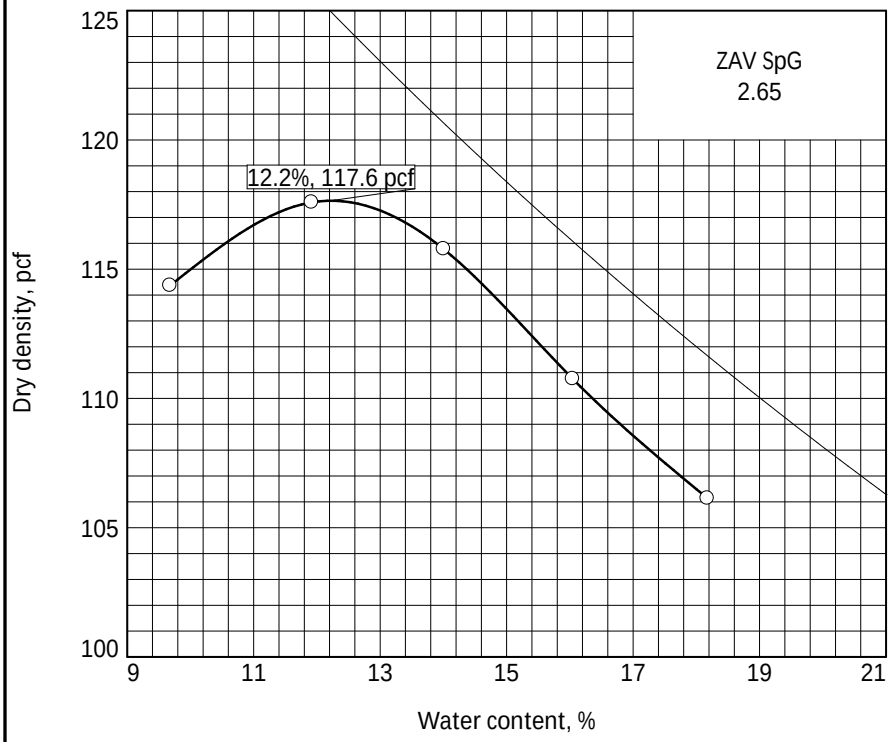
○ Source of Sample: EA-BSA05 Depth: 2' - 3' Sample Number: A

Checked by: KG
Title:

ENGINEERING ANALYTICS, INC.

Figure

COMPACTION TEST REPORT



Curve No.
3

Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method	Moist
Hammer Wt.	5.5 lb.
Hammer Drop	12 in.
Hammer Type:	Manual
Layers	three
Blows/Layer	25
Mold Size	0.03333 cu. ft.

Test Performed on Material
Passing #4 Sieve

NM _____ LL NV PI NP
Sp.G. (Assumed): 2.650
%>#4 _____ %<No.200 _____
USCS _____ AASHTO _____
Date Sampled _____
Date Received _____
Date Tested 3/11/2025
Tested By SY

TESTING DATA	1	2	3	4	5	6
WM + WS	6241.2	6247.1	6194.7	6147.9	6147.9	
WM	4251.6	4251.6	4251.6	4251.6	4251.6	
WW + T #1	1459.3	1369.9	1341.9	1156.3	1297.7	
WD + T #1	1346.8	1250.9	1211.9	1040.2	1218.6	
TARE #1	402.9	401.2	401.7	401.5	401.8	
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	11.9	14.0	16.0	18.2	9.7	
DRY DENSITY	117.6	115.8	110.8	106.1	114.4	

TEST RESULTS

Maximum dry density = 117.6 pcf

Optimum moisture = 12.2 %

Material Description

Sand

Remarks:

Project No.: 111360 Client: Rio Grand Resources
Project: Mt.Taylor

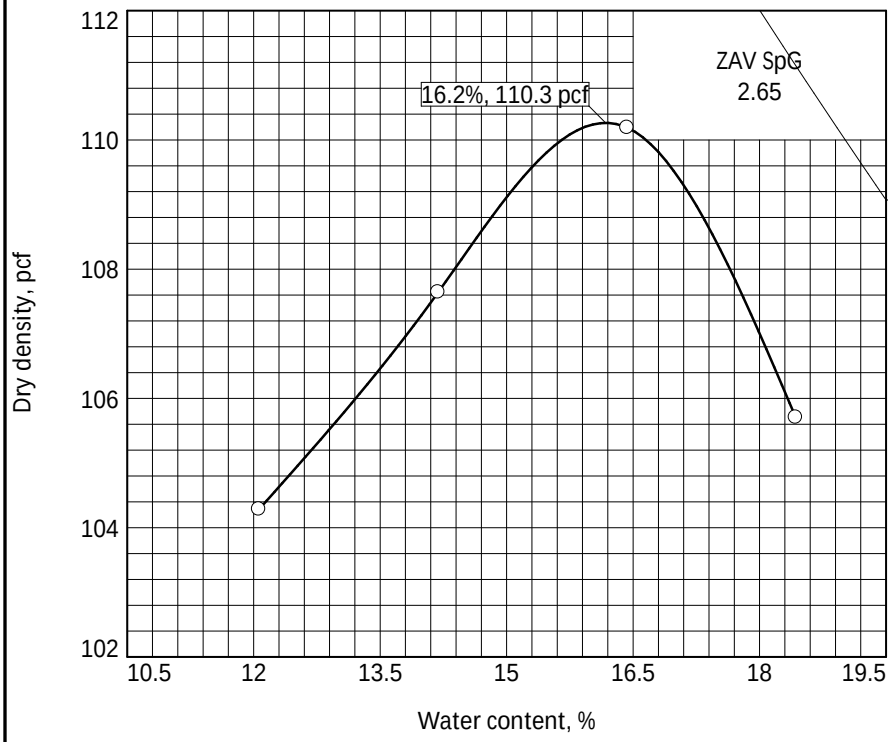
○ Source of Sample: EA-BSA06 Depth: 5' - 6' Sample Number: B

Checked by: KG
Title:

Figure

ENGINEERING ANALYTICS, INC.

COMPACTION TEST REPORT



Curve No.
1

Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method: Moist
Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Hammer Type: Manual
Layers: three Blows/Layer: 25
Mold Size: 0.03333 cu. ft.

Test Performed on Material
Passing: #4 Sieve

NM: LL: 22 PI: 2
Sp.G. (Assumed): 2.650
%>#4: %<No.200:
USCS: AASHTO:
Date Sampled:
Date Received:
Date Tested: 3/11/2025
Tested By: SY

TESTING DATA	1	2	3	4	5	6
WM + WS	6018.4	6109.9	6191.2	6144.2		
WM	4251.6	4251.6	4251.6	4251.6		
WW + T #1	1413.6	1345.8	1353.8	1326.2		
WD + T #1	1304.8	1228.5	1223.3	1182.4		
TARE #1	402.9	401.8	429.1	402.1		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	12.1	14.2	16.4	18.4		
DRY DENSITY	104.3	107.6	110.2	105.7		

TEST RESULTS

Maximum dry density = 110.3 pcf

Optimum moisture = 16.2 %

Material Description

Silty Clay

Remarks:

Project No.: 111360 Client: Rio Grand Resources
Project: Mt.Taylor

○ Source of Sample: EA-BSB02 Depth: 5' - 6' Sample Number: B

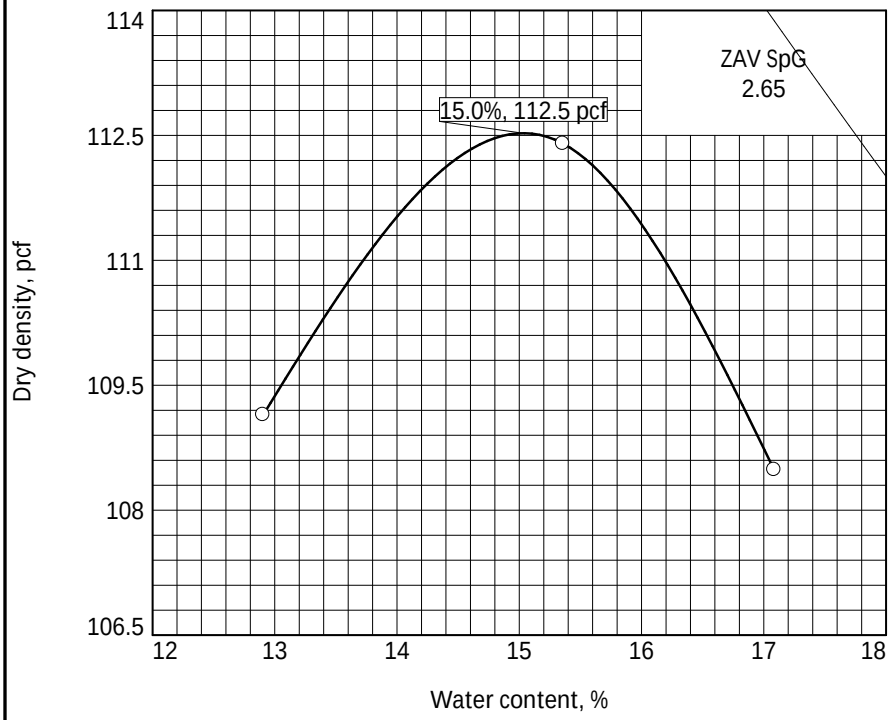
Checked by: KG
Title:

ENGINEERING ANALYTICS, INC.

Figure

COMPACTION TEST REPORT

Curve No.



Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method: Moist
Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Hammer Type: Manual
Layers: three Blows/Layer: 25
Mold Size: 0.03333 cu. ft.
Test Performed on Material Passing #4 Sieve
NM _____ LL NV PI NP
Sp.G. (Assumed): 2.65
%>#4 _____ %<No.200 _____
USCS _____ AASHTO _____
Date Sampled _____
Date Received _____
Date Tested: 4/16/25
Tested By: SY

TESTING DATA	1	2	3	4	5	6
WM + WS	6114.4	6211.7	6171.7			
WM	4251.4	4251.4	4251.4			
WW + T #1	1015.2	1106.6	897.9			
WD + T #1	933.6	1009.1	810.6			
TARE #1	301.0	374.0	299.9			
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	12.9	15.4	17.1			
DRY DENSITY	109.1	112.4	108.5			

TEST RESULTS

Maximum dry density = 112.5 pcf

Optimum moisture = 15.0 %

Material Description: Sand

Remarks:

Project No.: 111360 Client: Rio Grand Resources
Project: Mt.Taylor

○ Source of Sample: EA-BSB04 Depth: 2' - 3' Sample Number: A

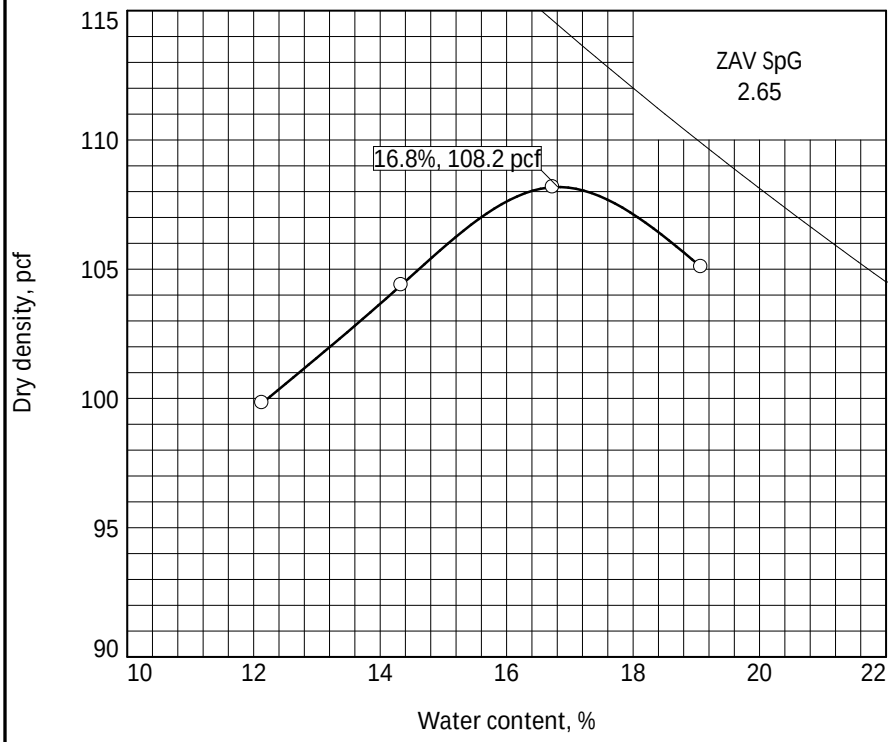
Checked by: AW
Title:

ENGINEERING ANALYTICS, INC.

Figure

COMPACTION TEST REPORT

Curve No.



Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method
Hammer Wt. 5.5 lb.
Hammer Drop 12 in.
Hammer Type:
Layers three Blows/Layer 25
Mold Size 0.03333 cu. ft.

Test Performed on Material
Passing #4 Sieve

NM LL 29 PI 14
Sp.G. (D854): 2.65
%>#4 %<No.200
USCS AASHTO
Date Sampled
Date Received
Date Tested
Tested By

TESTING DATA	1	2	3	4	5	6
WM + WS	5943.1	6055.2	6159.8	6142.6		
WM	4250.8	4250.8	4250.8	4250.8		
WW + T #1	1096.2	1043.8	1092.9	1088.9		
WD + T #1	1022.0	963.8	996.6	973.7		
TARE #1	410.5	405.5	420.8	369.7		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	12.1	14.3	16.7	19.1		
DRY DENSITY	99.8	104.4	108.2	105.1		

TEST RESULTS

Maximum dry density = 108.2 pcf

Optimum moisture = 16.8 %

Material Description

Silty Clay

Remarks:

Project No.: 111360 Client: Rio Grand Resources
Project: Mt.Taylor

○ Source of Sample: EA-BSC03 Depth: 2' - 3' Sample Number: A

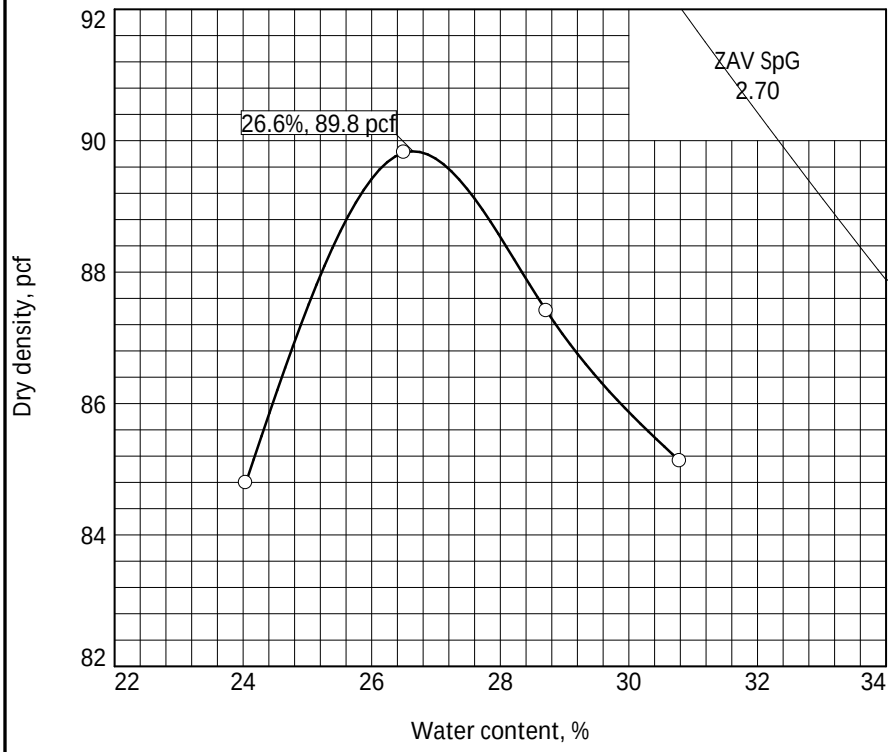
Checked by:
Title:

ENGINEERING ANALYTICS, INC.

Figure

COMPACTION TEST REPORT

Curve No.



Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method: Moist
Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Hammer Type: Manual
Layers: three Blows/Layer: 25
Mold Size: 0.03333 cu. ft.

Test Performed on Material
Passing: #4 Sieve

NM: LL: PI:
Sp.G. (Assumed): 2.700
%>#4: %<No.200:
USCS: AASHTO:
Date Sampled:
Date Received:
Date Tested: 10/09/2025
Tested By: LR

TESTING DATA	1	2	3	4	5	6
WM + WS	5840.6	5968.3	5951.5	5933.7		
WM	4250.5	4250.5	4250.5	4250.5		
WW + T #1	706.1	886.9	883.8	827.1		
WD + T #1	647.1	785.5	779.2	727.3		
TARE #1	401.7	403.1	415.1	403.3		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	24.0	26.5	28.7	30.8		
DRY DENSITY	84.8	89.8	87.4	85.1		

TEST RESULTS

Maximum dry density = 89.8 pcf

Optimum moisture = 26.6 %

Material Description: Clay

Remarks:

Project No.: 111360 Client: Rio Grand Resources
Project: Mt.Taylor

○ Source of Sample: EA-BSC06/09 Combined

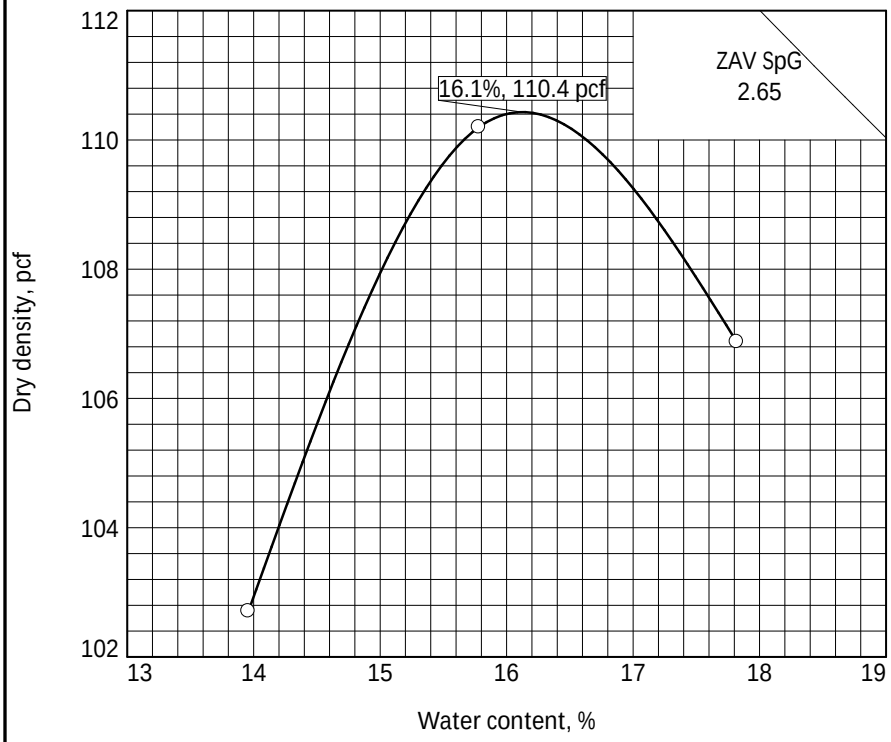
Checked by: KG
Title:

ENGINEERING ANALYTICS, INC.

Figure

COMPACTION TEST REPORT

Curve No.



Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method: Moist
Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Hammer Type: Manual
Layers: three Blows/Layer: 25
Mold Size: 0.03333 cu. ft.

Test Performed on Material
Passing: #4 Sieve

NM: LL: 26 PI: 8
Sp.G. (Assumed): 2.65
%>#4: %<No.200:
USCS: AASHTO:
Date Sampled:
Date Received:
Date Tested: 4/16/2025
Tested By: SY

TESTING DATA	1	2	3	4	5	6
WM + WS	6020.3	6179.7	6154.5			
WM	4250.8	4250.8	4250.8			
WW + T #1	1243.0	1130.4	1178.8			
WD + T #1	1136.1	1027.5	1056.4			
TARE #1	370.5	375.5	369.7			
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	14.0	15.8	17.8			
DRY DENSITY	102.7	110.2	106.9			

TEST RESULTS

Maximum dry density = 110.4 pcf

Optimum moisture = 16.1 %

Material Description: Silty Clay

Remarks:

Project No.: 111360 Client: Rio Grand Resources
Project: Mt.Taylor

○ Source of Sample: EA-BSC09 Depth: 2' - 3' Sample Number: A

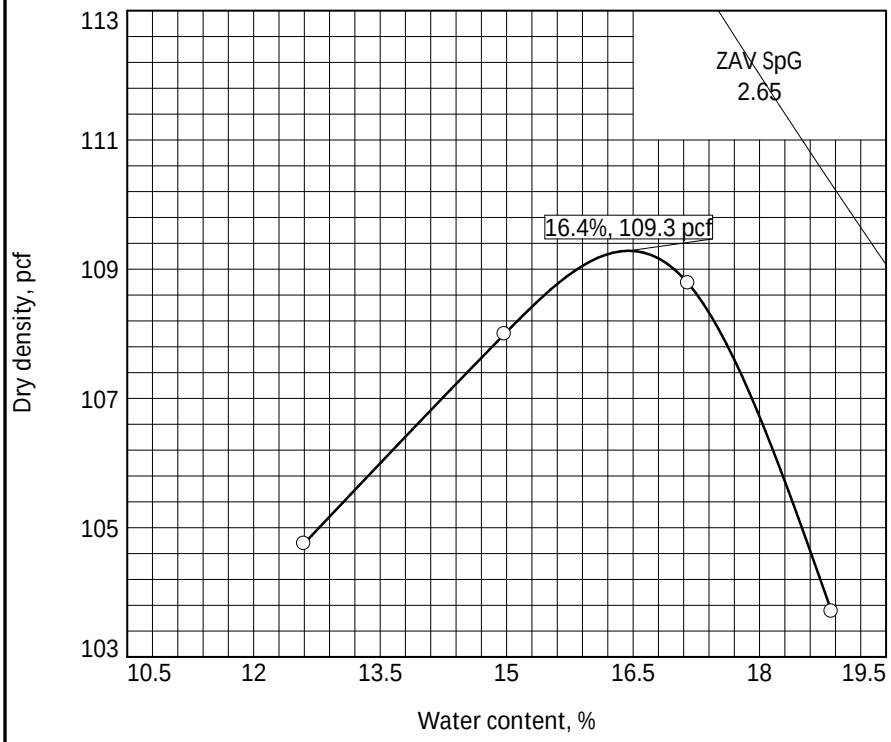
Checked by: KG
Title:

ENGINEERING ANALYTICS, INC.

Figure

COMPACTION TEST REPORT

Curve No.



Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method: Moist
Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Hammer Type: Manual
Layers: three Blows/Layer: 25
Mold Size: 0.03333 cu. ft.

Test Performed on Material
Passing: #4 Sieve

NM: LL: NV PI: NP
Sp.G. (Assumed): 2.65
%>#4: %<No.200:
USCS: AASHTO:
Date Sampled:
Date Received:
Date Tested: 4/10/25
Tested By: SY

TESTING DATA	1	2	3	4	5	6
WM + WS	6033.2	6176.7	6127.2	6113.4		
WM	4250.0	4250.0	4250.0	4250.0		
WW + T #1	1060.2	1080.7	1199.7	864.2		
WD + T #1	986.7	981.3	1095.7	774.7		
TARE #1	402.9	402.0	400.9	299.8		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	12.6	17.2	15.0	18.9		
DRY DENSITY	104.8	108.8	108.0	103.7		

TEST RESULTS

Maximum dry density = 109.3 pcf

Optimum moisture = 16.4 %

Material Description: Sandy Clay

Remarks:

Project No.: 111360 Client: Rio Grand Resources
Project: Mt.Taylor

○ Source of Sample: EA-BSC12 Depth: 2' - 3' Sample Number: A

Checked by: AW
Title:

ENGINEERING ANALYTICS, INC.

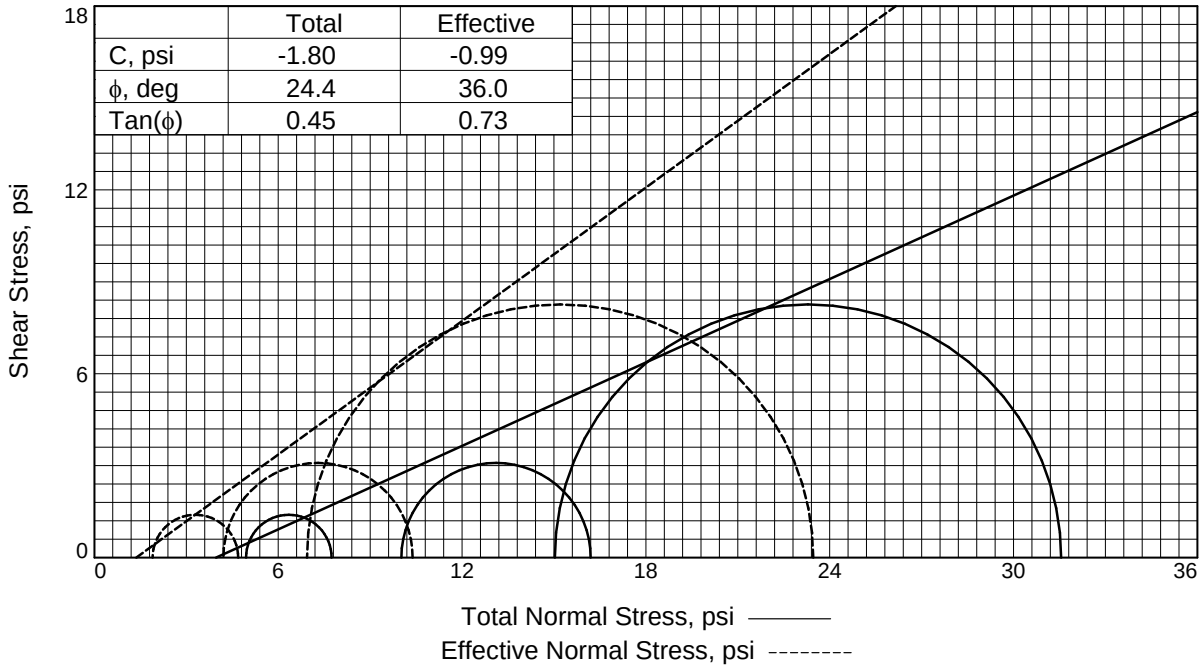
Figure

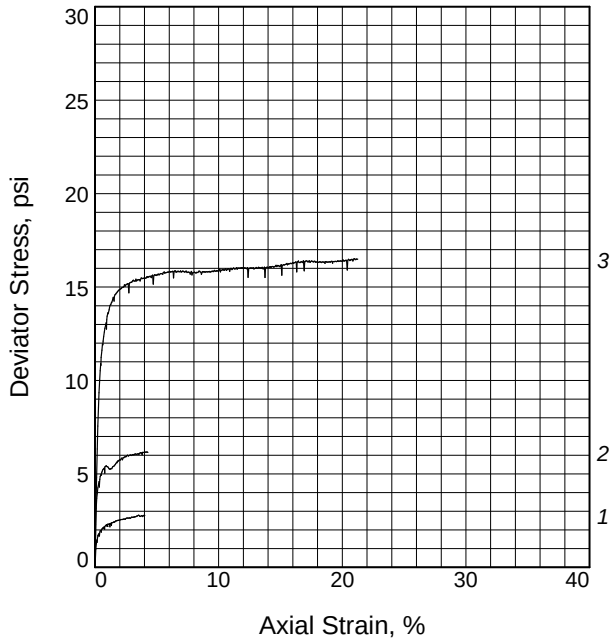
9.0 Consolidated Undrained Triaxial Shear

Consolidated undrained (CU) triaxial shear tests were performed on 1 soil samples in accordance with ASTM D4767, "Standard Test Method for Consolidated Undrained Triaxial Compression Test for Cohesive Soils."

- Soil samples were trimmed, encased in a rubber membrane, and installed in the triaxial test cell.
- An initial effective stress of 1-3 psi was applied to facilitate saturation.
- Specimens were saturated to ≥ 95%.
- Following saturation, samples tested using the three-load method were consolidated to the effective stress specified by the project engineer. Samples tested using the three-stage method were consolidated to the effective stresses designated prior to each stage of testing.
- During the consolidation phase, drainage was permitted, allowing for volume changes.
- After a 24-hour consolidation period, the triaxial load cell was engaged, drainage was closed, and axial loading was initiated.
- Axial load, deformation, and pore-water pressure were measured to determine total stresses and axial compression.
- Each sample was sheared, and axial strain was recorded.
- Strength envelopes (total stress Mohr circles) were developed based on the test data.
- Strength envelopes were determined using either the three-load or three-stage method, as specified by the project engineer.
    - The three-load method utilizes data from three distinct samples, each consolidated under a different effective stress.
    - The three-stage method utilizes one sample, which is consolidated to differing effective stresses for each stage of the test.

The results of the CU tests are presented on the following pages.





Sample No.		1	2	3
Initial	Water Content, %	26.2	26.2	26.2
	Dry Density, pcf	74.6	74.6	74.6
	Saturation, %	57.0	57.0	57.0
	Void Ratio	1.2186	1.2186	1.2186
	Diameter, in.	2.39	2.39	2.39
	Height, in.	5.20	5.20	5.20
At Test	Water Content, %	40.3	37.1	35.1
	Dry Density, pcf	78.8	82.2	84.4
	Saturation, %	97.3	97.1	96.9
	Void Ratio	1.0988	1.0136	0.9597
	Diameter, in.	2.34	2.34	2.36
	Height, in.	5.16	4.93	4.71
Strain rate, in./min.		0.005	0.005	0.005
Eff. Cell Pressure, psi		5.0	10.0	15.0
Fail. Stress, psi		2.8	6.2	16.5
Total Pore Pr., psi		83.0	85.8	88.1
Strain, %		3.5	4.2	20.9
Ult. Stress, psi				
Total Pore Pr., psi				
Strain, %				
$\bar{\sigma}_1$ Failure, psi		4.7	10.4	23.5
$\bar{\sigma}_3$ Failure, psi		1.9	4.2	6.9

Type of Test:
CU with Pore Pressures

Sample Type: Remolded

Description: Clay

Specific Gravity= 2.650

Remarks: While the test followed the ASTM D4767 Staged Method, the resulting data indicates the sample should be re-tested using the Three-Load Method for improved accuracy and reliability.

Figure _____

Client: Rio Grand Resources

Project: Mt.Taylor

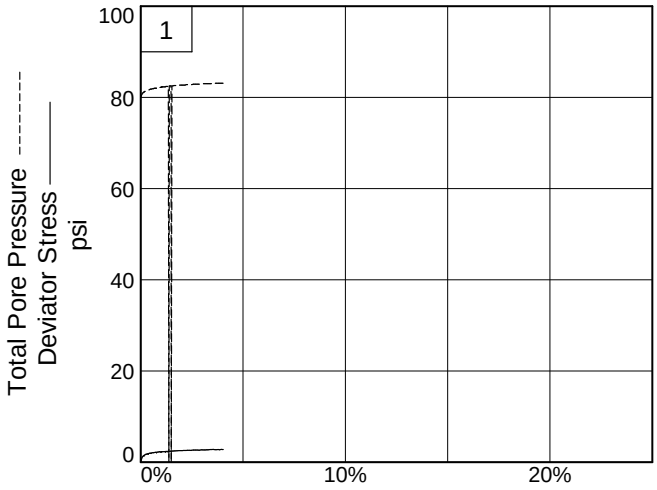
Source of Sample: EA-BSC06/09 Combined

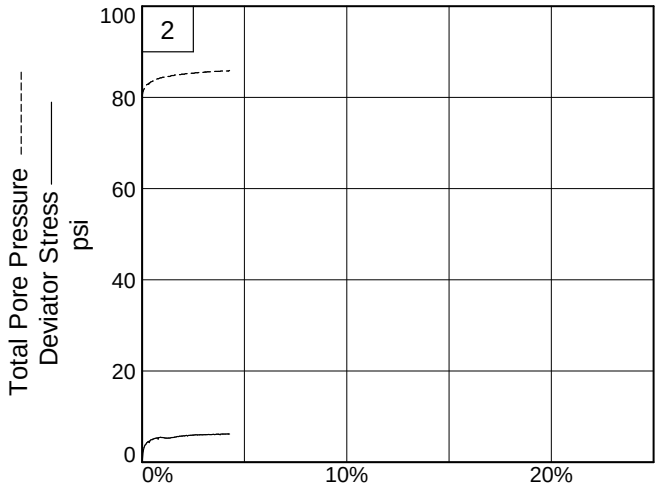
Proj. No.: 111360 **Date Sampled:**

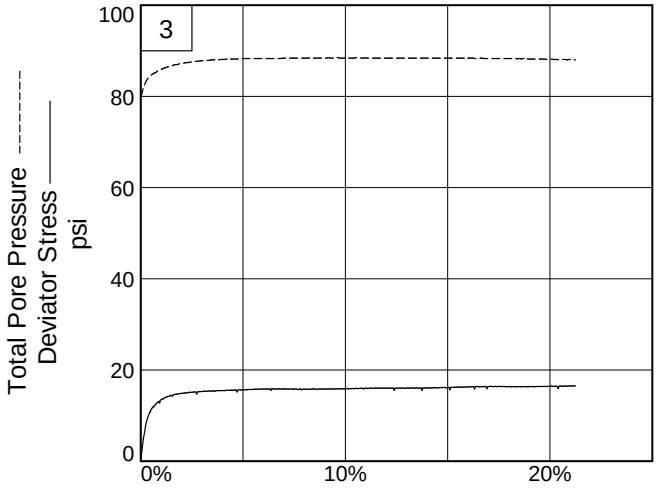
TRIAXIAL SHEAR TEST REPORT

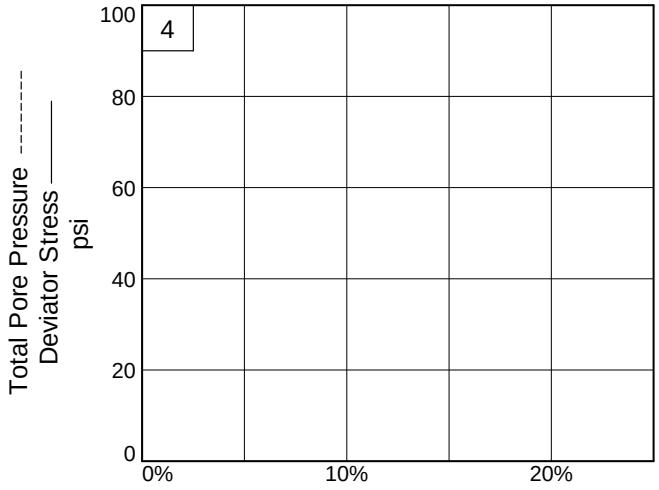
ENGINEERING ANALYTICS, INC.

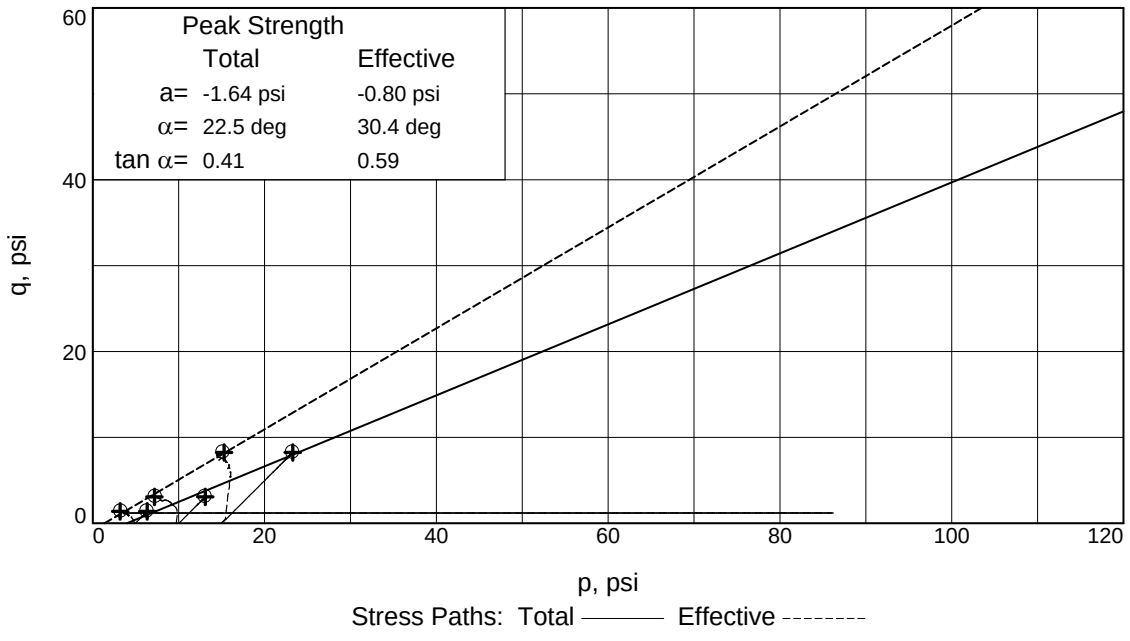
Tested By: AW **Checked By:** KG









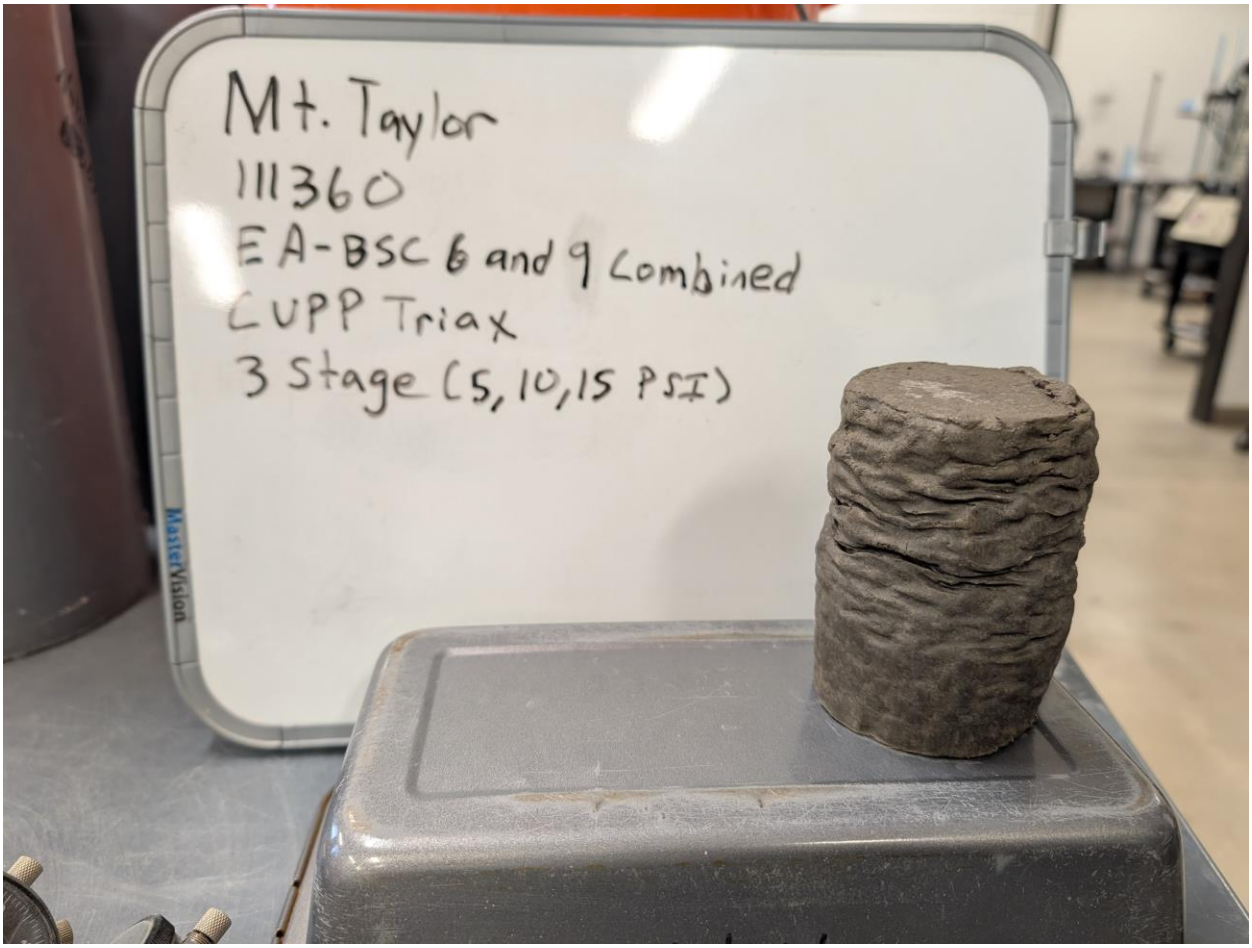


Client: Rio Grand Resources
Project: Mt.Taylor
Source of Sample: EA-BSC06/09 Combined
Project No.: 111360

Figure _____

ENGINEERING ANALYTICS, INC.

Tested By: AW **Checked By:** KG


Mt. Taylor
111360
EA-BSC 6 and 9 Combined
CUPP Triax
3 Stage (5, 10, 15 PSI)
MasterVision

APPENDIX C
Seismic Hazard Analysis – Mt. Taylor

Seismic Hazard Analysis

Mt. Taylor Mine

Existing Mine Permit No. C1002RE

Prepared for:

Rio Grande Resources

P.O. Box 1150

Grants, NM 87020

Prepared by:

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(970) 488-3111
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Project No. 111360

November 26, 2025

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1.0 INTRODUCTION

Engineering Analytics, Inc. (EA) has prepared this report to present the results of a seismic hazard analysis conducted for the Mt. Taylor Uranium Mine (Facility). This seismic hazard analysis has been prepared to characterize the peak horizontal ground acceleration (PGA) for use in stability analyses for the Facility. The seismic hazard was determined for the 10,000-year return period.

The Mt Taylor Uranium Mine is located just northeast of the town of San Mateo in Cibola County, New Mexico. The site is shown on Figure 1-1. For the purposes of these analyses, EA used a central location with coordinates of 35.3409°N latitude and 107.6353°W longitude.

2.0 GEOLOGIC SETTING

2.1 Regional Physiographic and Tectonic Setting

The Facility is located within the Colorado Plateau physiographic province in northwestern New Mexico. The Colorado Plateau is a broad, roughly circular region of relative structural stability within a more structurally active region of disturbed mountain systems. Broad basins and uplifts, monoclines, and belts of anticlines and synclines are characteristic of the plateau (Kelley, 1979). Igneous intrusions have formed several mountains. However, most of the topographic relief in the Colorado Plateau is the result of erosion of deep canyons rather than upstanding mountain ranges (Thornbury, 1965). According to the New Mexico Bureau of Geology and Mineral Resources (2025):

> *The Colorado Plateau in New Mexico includes the San Juan Basin, a major source of oil, gas, coal, and uranium for our state. The northwest-trending Zuni Mountains form the southwestern margin of the San Juan Basin. Both the San Juan Basin and the Zuni Mountains are broad downwarps and upwarps that formed during regional-scale compression about 75 million years ago during the Laramide orogeny (e.g., Cather, 2004). The southeast margin of the Colorado Plateau is covered by <5 million year-old volcanic rocks that erupted along the Jemez lineament, a northeast-trending zone of weakness that likely developed about 1.6 billion years ago as the North American continent was forming.*

The site is located at the base of the Mt Taylor Volcanic Field. Mount Taylor is an extinct composite stratovolcano that is part of the greater Mount Taylor–Mesa Chivato volcanic field (Hunt, 1938; Crumpler, 1980a, b). According to the New Mexico Bureau of Geology and Mineral Resources (2025):

> *Mount Taylor volcano, a prominent landmark that can be seen on the skyline west of Albuquerque, is located about 15 miles northwest of the town of Grants, New Mexico. Mount Taylor Peak, at an elevation of 11,301 feet, stands approximately one mile above the Rio San Jose 12 miles to the south (Hunt, 1938). Mount Taylor volcano is part of a larger, northeast-trending volcanic field that includes Mesa Chivato, a broad plateau located northeast of the cone, and Grants Ridge (Keating and Valentine, 1998; WoldeGabriel et al., 1999), located southwest of the cone. Basalt that caps Mesa Chivato and other mesas surrounding Mount Taylor makes up about 80% of the volume of the volcanic field (Perry et al., 1990). The Mount Taylor volcanic field lies on the southern flank of the San Juan Basin on the Colorado Plateau and straddles the extensional transition zone between the Colorado Plateau and the Rio Grande rift. The Mount Taylor volcanic field is considered to be part of the Jemez Lineament, a zone of young (< 5 million years old) volcanism aligned along an ancient suture in the 1.7 to 1.6 billion year old Proterozoic basement (Mayo, 1958, Laughlin et al., 1976; Lipman and Moench, 1972; Perry et al., 1990).*

Seismicity in the Mt Taylor Volcanic Field is generally low and is linked to regional tectonic activity rather than active volcanism. This seismic activity is influenced by geological features such as the Jemez Lineament and the Rio Grande Rift (Goff et. al., 2021). The adjacent Rio Grande Rift physiographic province is characterized as having low to moderate seismic activity.

2.2 Site Geology

The geologic map by McCraw et. al. (2009) indicates that the Facility is underlain by Quaternary-aged stream and valley slope alluvium overlying the Cretaceous-aged Menefee Formation. The alluvium is described as unconsolidated to partly consolidated, well-sorted, fine-grained sand, silty sand, and clay with a thickness 1 to 3 meters (McCraw et. al., 2009). The Menefee Formation is described as interbedded shales, siltstones, fine to medium grained sandstones, mudstones, and thin coals that generally form low-relief topography or forms landslides around the margins of the basalt-capped La Jara Mesa. The top of the unit is not exposed, but a minimum thickness is at least 90 meters (McCraw et. al., 2009).

3.0 SEISMICITY

NRC NUREG-6372 recommends that seismic sources within 300 kilometers be characterized for a site. The publication states that the distance for detailed source characterization for a site that contains a fault within 50 kilometers of the site is 100 kilometers. Therefore, this seismic hazard analysis for the Facility included a review of historic earthquakes which have occurred within 300 kilometers of the Facility and detailed review of the earthquakes within 100 kilometers. This earthquake record, which contains earthquakes from 1568 to 2025, provides a general overview of the seismicity in the study area. Our final search and review of earthquake activity took place on August 27, 2025; therefore, any earthquakes occurring after this date are not included in the analysis.

Catalogs from the USGS NSHMP for 2023 for the Western United States (WUS) and Central and Eastern United States (CEUS) (Peterson et. al., 2023) were reviewed to compile information on the historic earthquakes. These catalogs, compiled by the USGS for their study, included removal of duplicate events as well as aftershocks and foreshocks related to the primary earthquake events in order to obtain a catalog of independent events (Mueller, 2019 and Llenos, 2023). EA used the catalogs declustered with Reasenberg (1985; r85). The database includes historic seismic events over the period from 1568 through 2022. The WUS catalog contained 40 earthquakes in the 300-kilometer study area and the CEUS catalog contained no earthquakes. The catalogs were supplemented with events occurring between January 2023 and August 2025 by searching the National Earthquake Information Center (NEIC) database, also maintained by the USGS. This supplemental search resulted in no additional earthquakes. The catalog searches were limited to events with moment magnitude (Mw) greater than or equal to 4.0. A total of 40 events are included in the record for the 300-kilometer search as shown on Figure 3-1 and tabulated in Appendix A.1.

The earthquakes generally have small magnitudes with only 5 of the earthquakes having a magnitude greater than 5.0. Figure 3-1 shows that many of the earthquakes occur in the more seismically active Rio Grande Rift area to the east of the Facility. The largest event is estimated in the WUS catalog to have an Mw of 5.9. This event occurred west of San Antonio, New Mexico on July 16, 1906. The epicenter is approximately 160 kilometers southeast of the Facility, within the Rio Grande Rift. The event closest to the Facility had an epicenter about 13 kilometers southwest of the Facility. This earthquake, which occurred on December 24, 1973, had an Mw of 4.08.

In addition to the evaluation of significant earthquakes (Mw>4) as described above, a search of low magnitude events (Mw>2.4) within 100 kilometers of the Facility was also conducted. These events are shown in Figure 3-2 and are tabulated in Appendix A.2. The figure shows that the earthquake activity within a 100-kilometer radius of the site is diffuse. The earthquake record contained 15 earthquakes from the WUS catalog and 9 earthquakes from the NEIC catalog, the majority of which are low magnitude. A review of the historic seismicity confirms that this area has seen fairly low seismic activity.

4.0 SEISMIC HAZARD ANALYSIS

Seismic hazard analyses are typically conducted using one of two methods: (1) deterministic analysis or (2) probabilistic analysis. A deterministic seismic hazard analysis (DSHA) estimates the maximum ground motion that could occur at a specific location considering specific earthquake sources. It does not take into account the likelihood of occurrence. A probabilistic seismic hazard analysis (PSHA) estimates the likelihood that various levels of ground motion will be exceeded at a specific location over a given time. Both analyses were conducted for this seismic study as discussed below. EA used the deterministic analyses to aid in the probabilistic analyses. The final recommended PGA for the Facility was derived using probabilistic analyses for the 10,000-year return period. The seismic sources and attenuation equations used for this seismic hazard analysis are also discussed below, followed by the results of the deterministic and probabilistic analyses.

4.1 Seismic Sources

4.1.1 Faults

The existence and location of faults with Quaternary displacement were primarily identified using the USGS Quaternary Fault and Fold database (USGS et. al., 2025). A "capable fault" is defined by the Nuclear Regulatory Commission (NRC) in 10 CFR Appendix A to Part 100 – Seismic and Geologic Siting Criteria for Nuclear Power Plants – as a fault that has exhibited one or more of the following characteristics:

1. *Movement at or near the ground surface at least once within the past 35,000 years or movement of a recurring nature within the past 500,000 years.*

2. *Macro-seismicity (magnitude 3.5 or greater) instrumentally determined with records of sufficient precision to demonstrate a direct relationship with the fault.*

3. *A structural relationship to a capable fault according to characteristics (1) or (2) above such that movement on one could be reasonably expected to be accompanied by movement on the other.*

The faults from the Quaternary fault and fold database within 300 kilometers of the Facility are shown on Figure 4-1. Capable faults must also meet the minimum criteria for fault length and distance from the Facility, as defined by NRC 10 CFR Appendix A to Part 100, and included in Table 4-1 in this report. A fault that is deemed capable by the criteria listed above, but does not meet the minimum criteria provided in Table 4-1, does not need to be considered in the seismic hazard analysis. For the detailed analysis, the faults within 100 kilometers of the Facility that met these criteria are shown on Figure 4-2. A tabulated list of the faults is included in Appendix B.1.

All faults meeting the requirements outlined in Table 4-1 were considered in this seismic study. This is a conservative approach because although the NRC defines a "capable fault" as one having *"movement at or near the ground surface at least once within the past 35,000 years or movement of a recurring nature within the past 500,000 years,"* including all identifiable faults with Quaternary displacement would include fault movement over the past 1.6 million years. This was done because sufficient information does not exist for many of the faults with

Quaternary displacement as to the timing of the last movement of the fault.

The USGS separates the faults with Quaternary displacement into classes. These classes are provided below, as described by USGS.

- For a Class A fault, geologic evidence demonstrates the existence of a Quaternary fault of tectonic origin, whether the fault is exposed by mapping or inferred from liquefaction or other deformational features.
- For a Class B fault, geologic evidence demonstrates the existence of Quaternary deformation, but either 1) the fault might not extend deeply enough to be a potential source of significant earthquakes, or 2) the currently available geologic evidence is too strong to confidently assign the feature to Class C but not strong enough to assign it to Class A.
- For a Class C fault, geologic evidence is insufficient to demonstrate 1) the existence of tectonic faulting, or 2) Quaternary slip or deformation associated with the feature.
- For a Class D fault, geologic evidence demonstrates that the feature is not a tectonic fault or feature; this category includes features such as joints, landslides, erosional or fluvial scarps, or other landforms resembling fault scarps but of demonstrable non-tectonic origin.

The faults with Quaternary displacement included in this analysis are either Class A or B. Descriptions from the USGS of the faults included in this analysis, are included in Appendix B.2.

4.1.2 Background Event

Earthquakes sometimes occur that are not associated with a known geologic structure. These events are termed "background events" or "floating earthquakes." Evaluation of background events allows for potential low to moderate earthquakes unassociated with tectonic structures to be considered in the seismic hazard of the Facility. The maximum magnitude for these background events within the Intermountain United States ranges between local magnitude (M_L) 6.0 and 6.5 (Woodward-Clyde, 1996). Larger earthquakes would be expected to leave a detectable surface expression, especially in arid to semiarid climates, with slow erosion rates and limited vegetation. In seismically less active areas such as the Colorado Plateau, the maximum magnitude associated with a background event is assumed to be 6.3, consistent with that used in seismic evaluations performed for uranium tailing sites in Green River (DOE 1991a, pg. 26), and Grand Junction (DOE 1991b, pg. 71).

4.1.2.1 Background Event in Deterministic Analyses

Background or floating earthquakes are typically evaluated deterministically by placing the largest earthquake that can be assumed to occur unassociated with a known fault, at a distance of 15 kilometers from the project location.

4.1.2.2 Background Event in Probabilistic Analyses

For probabilistic analyses, the hazard from background earthquakes is typically assessed using two approaches. The first approach uses areal source zones and assumes a uniformly distributed seismicity within the zone. The second approach uses gridded seismicity which

retains a degree of stationarity using 0.1-degree latitude and longitude grid spacing, as used by USGS for the NSHMP. Due to the fact that the historic seismic record within 100 km of the Facility contains a small number of earthquakes, determination of recurrence intervals for a site-specific areal source zone was not completed. EA used the 2014 gridded source zone for the CEUS and the 2014 shallow extensional gridded source zone for the WUS in our analyses.

4.2 Attenuation Relations

Attenuation of ground motions from the location of a seismic event to the site was calculated using attenuation relations. Due to the absence of abundant strong ground motion records, no specific attenuation relation exists solely for New Mexico. Therefore, we have used ground motion models (GMMs) appropriate for tectonically active crustal regions. The crustal GMMs that were used were developed as part of the NGA-West2 Project sponsored by the Pacific Earthquake Engineering Research (PEER) Center Lifelines Program. These models are also used by the USGS in developing the U.S. National Seismic Hazard Maps. EA used four of the five NGA-West2 GMMs in the analyses: Chiou and Youngs (2014), Campbell and Bozorgnia (2014), Abrahamson and others (2014), and Boore and others (2014). Idriss (2014) was not included due to its lack of a hanging wall model.

Three parameters (depth to V_s of 1000 m/s and 2,500 m/s and average V_s30) need to be specified in order to use the above attenuation equations. The three parameters are related to the shear wave velocity of the underlying soil and rock.

4.2.1 Depth to Shear Wave Velocity of 1,000 m/s

The National Earthquake Hazards Reduction Program (NEHRP, 2003) issued a publication which discusses site classification for seismic design. The publication listed the site classes and corresponding shear wave velocities. This information is summarized in Table 4-2.

The first parameter is the depth at which the shear wave velocity (V_s) of the soil reaches 1,000 meters per second (m/s) which is in the rock category as shown in Table 4-2. Based on previous subsurface investigation that EA has completed at the site along with the published site geology, this parameter was assumed to be 5 meters.

4.2.2 Depth to Shear Wave Velocity of 2,500 m/s

The next parameter is the depth at which shear wave velocity of the profile reaches 2,500 m/s (hard rock according to Table 4-2). EA was provided with a site geophysical scan for a draft pilot hole issued by Dames and Moore. The geophysical scan included a compressive wave velocity (V_p) profile. EA used the V_p profile in determining the depth to 2,500 m/s for the shear wave velocity. The V_p values needed to be converted to V_s values. EA used a common equation to convert the V_p values to V_s values.

$$Vs = Vp\sqrt{\frac{1-2\nu}{2(1-\nu)}}$$

where:

V_s = shear wave velocity
V_p = compression wave velocity
ν = Poisson's ratio

The geophysical scan also included information on Poisson's ratio. Using that information and empirical correlations published in Bowles (1982) that indicate Poisson's ratios ranging from 0.1 to 0.4 for rock, EA used a Poisson's ratio of 0.27 for the calculations, which is generally consistent with the surficial and bedrock materials. The profile indicates the approximate average depth to a shear wave velocity of 2,500 m/s is 0.79 kilometers below the ground surface.

4.2.3 Average Shear Wave Velocity for Upper 30 Meters

The next parameter to be specified is the average shear wave velocity of the upper 30 meters (V_s30) of the original ground surface. EA estimated an average V_p30 velocity for the profile and converted that to V_s30 using the above equation. The resulting V_s30 for the profiles 30 meters below the Facility was calculated to be 1,200 m/s. This value is in the rock category according to Table 4-2.

4.3 Deterministic Analysis

A deterministic analysis was completed for the Facility in order to determine which faults from the USGS Quaternary fault and fold database have the potential to produce PGAs of 0.05g or greater and would need further evaluation in a probabilistic model. A PGA of 0.05g is commonly used as a threshold value to streamline probabilistic hazard analysis by excluding sources unlikely to cause significant seismic shaking. PGA values around 0.05g are often seen as the threshold below which the ground shaking is considered negligible for most engineering purposes. In deterministic analyses, the ground motions from the maximum credible earthquake (MCE) associated with capable faults are attenuated to the site.

The seismic sources considered for the deterministic analysis include the previously described faults listed in Appendix B.1. The MCE associated with each fault was calculated based on correlations between fault surface rupture length and earthquake magnitude as presented by Wells and Coppersmith (1994). The ground motions from the MCE associated with the faults were attenuated to the Facility using the attenuation relations described in Section 4.2. Typically, ground motions of median plus one standard deviation are reported in deterministic analyses. The PGA was calculated using EZ-FRISK Version: 8.11 (Risk Engineering, 2024). Input and the complete deterministic spectra from the EZ-FRISK analysis are included in Appendix C.1 and C.2, respectively. The inputs and results of the deterministic analyses are also summarized in a table in the beginning of Appendix C.2.

4.4 Probabilistic Analysis

A probabilistic analysis was performed for the Facility in order to evaluate the amount of risk associated with larger PGAs calculated by the deterministic analysis. In probabilistic analyses, ground motions and the associated probability of exceedance are estimated for background seismicity and for earthquakes on specific faults in order to evaluate the amount of risk associated with the PGA.

For the purpose of the seismic hazard evaluation, a 10,000-year return period is adopted for evaluating long-term stability. For the probabilistic analysis, faults that are included in the USGS Quaternary fault and fold database and have the potential to produce PGAs of 0.05g or greater (based on deterministic methods) were selected for further evaluation in the probabilistic model. These criteria resulted in the inclusion of the following 9 faults:

1. Intrabasin faults on the Llano de Albuquerque (2121);
2. Jemez-San Ysidro fault (Jemez and San Ysidro sections) (2029ab);
3. Jemez-San Ysidro fault (Calabacillas section) (2029c);
4. Mesa Prieta faults (1985);
5. Nacimiento fault (northern and southern sections) (2002ab);
6. Sand Hill fault zone (2039);
7. Santa Fe fault (2123);
8. unnamed faults near Albuquerque Volcanoes (2049);
9. unnamed faults of El Malpais lava field (2146);

As discussed above, EA also included the 2014 CEUS gridded source and the 2014 shallow extensional WUS gridded source in our analyses. The gridded seismicity retains a degree of stationarity using 0.1-degree latitude and longitude grid spacing, as used by USGS for the NSHMP.

The USGS descriptions included in Appendix B.2 were used to determine fault characteristics where possible. Uncertainties in the fault characteristics are incorporated into the probabilistic analysis by representing the possible scenarios with a weight value. Maximum magnitudes for the faults were estimated based upon the empirical relationship developed by Wells and Coppersmith (1994) for surface rupture length, with an uncertainty of 0.3 corresponding to the standard error in the Wells and Coppersmith (1994) relationship. The recurrence relationships for the faults were modeled using maximum magnitude recurrence models. Slip rates are used to characterize rates of fault activity. However, very limited data was available regarding slip rates, and the USGS Fault and Fold Database categorizes all the considered faults as simply having a slip-rate less than 0.2 mm per year. Slip rates were therefore modeled as being 0.02 mm per year, similar to rates of activity assigned to many faults of questionable Quaternary activity in the Rio Grande Rift area east of the Colorado Plateau (Wong et. al., 2004).

The EZ Frisk probabilistic input is included in Appendix D.2. Table 4-3 shows the seismic source contribution to the total mean hazard at a return period of 10,000 years (1E-4 annual percent exceedance). The total hazard curve is shown in Figure 4-3 and the source contribution is shown in Figure 4-4. The complete results of the probabilistic analyses are included in Appendix D.3.

5.0 RESULTS AND CONCLUSIONS

EA conducted deterministic and probabilistic analyses for the 10,000-year return period seismic events to support stability analyses for the Facility.

The deterministic analysis showed that the random earthquake produced the highest PGA for the Facility. EA determined that the random earthquake with an MCE of magnitude of 6.3, located 15.1 km from the site, produced a mean PGA of 0.09g. Additionally, the Mesa Prieta faults are the closest faults to the site (~47 kilometers) and EA determined a maximum credible earthquake (MCE) of magnitude 6.3 for this fault based on the Wells and Coppersmith (1994) relationship. The deterministic PGA determined for the Busted Boiler Fault was 0.03g.

The probabilistic analyses show that the hazard is controlled by the gridded seismicity. For the probabilistic analysis, EA calculated a mean PGA of 0.21g for the 10,000-year return period. These values should be used in slope stability and other technical analyses as appropriate for the site.

To confirm the validity of these values, EA ran a cross check using a USGS screening-level methodology. The USGS maintains a *"USGS Earthquake Hazard Toolbox"* that has web applications for computing hazards for the USGS National Seismic Hazard Models. EA used the 2023 model (accessed in November 2025) as a screening tool for this site, which calculated PGA of 0.37g for the 10,000-year return period. It is likely that the majority of the difference between the USGS and the site-specific PGA is a result of using different attenuation relationships. The USGS applied some attenuation relations developed for the CEUS. However, using attenuation relations that are specific to normal extensional faulting is appropriate for this area.

6.0 LIMITATIONS

The opinions and recommendations in this report are based on a reasonable degree of certainty. This report has been prepared based upon review of the reference documents, geological analyses, and our experience. The conclusions presented represent our best judgment based on the information available. Should additional information become available we should be allowed to review that information and modify our conclusions accordingly.

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TABLES

Table 4-1 Minimum Criteria for Faults Considered in Seismic Investigation (NRC 10 CFR Appendix A to Part 100)

Distance from Facility (mi) (km)	**Minimum length of fault to be considered (mi) (km)**
0 – 20 (0-32)	1 (1.6)
20 – 50 (32.2-80.5)	5 (8.0)
50 – 100 (80.5-160.9)	10 (16.1)
100 – 150 (160.9-241.4)	20 (32.2)
150 – 200 (241.4-321.9)	40 (64.4)

Note: The numbers listed in parentheses are in kilometers.

Table 4-2 National Earthquake Hazards Reduction Program (NEHRP) Site Class Definitions

Soil Profile Type	**Average Shear Wave Velocity to 30-meter Depth (V_s)**
A – Hard Rock	> 1500 m/s
B – Rock	$760 < v_s < 1500$ m/s
C – Very Dense Soil and Soft Rock	$360 < v_s < 760$ m/s
D – Stiff Soil Profile	$180 < v_s < 360$ m/s
E – Soft Soil Profile	< 180 m/s

Table 4-3 Hazard Contribution to Total Mean Hazard for 10,000-year Return Period, Probabilistic Analysis

Source Name	USGS Fault ID Number	Distance from Facility (km)	Peak Ground Acceleration (10,000-year return period)
USGS 2014 CEUS Gridded	---	---	0.03
USGS 2014 WUS Shallow Extensional Gridded	---	---	0.21
Total Hazard[1]	---	---	0.21

Note: 1) The total hazard PGA is the PGA for a specific return period considering the sources all together. Refer to Figure 4-3 for a visual explanation of individual source PGAs and the total hazard for the Facility.

FIGURES



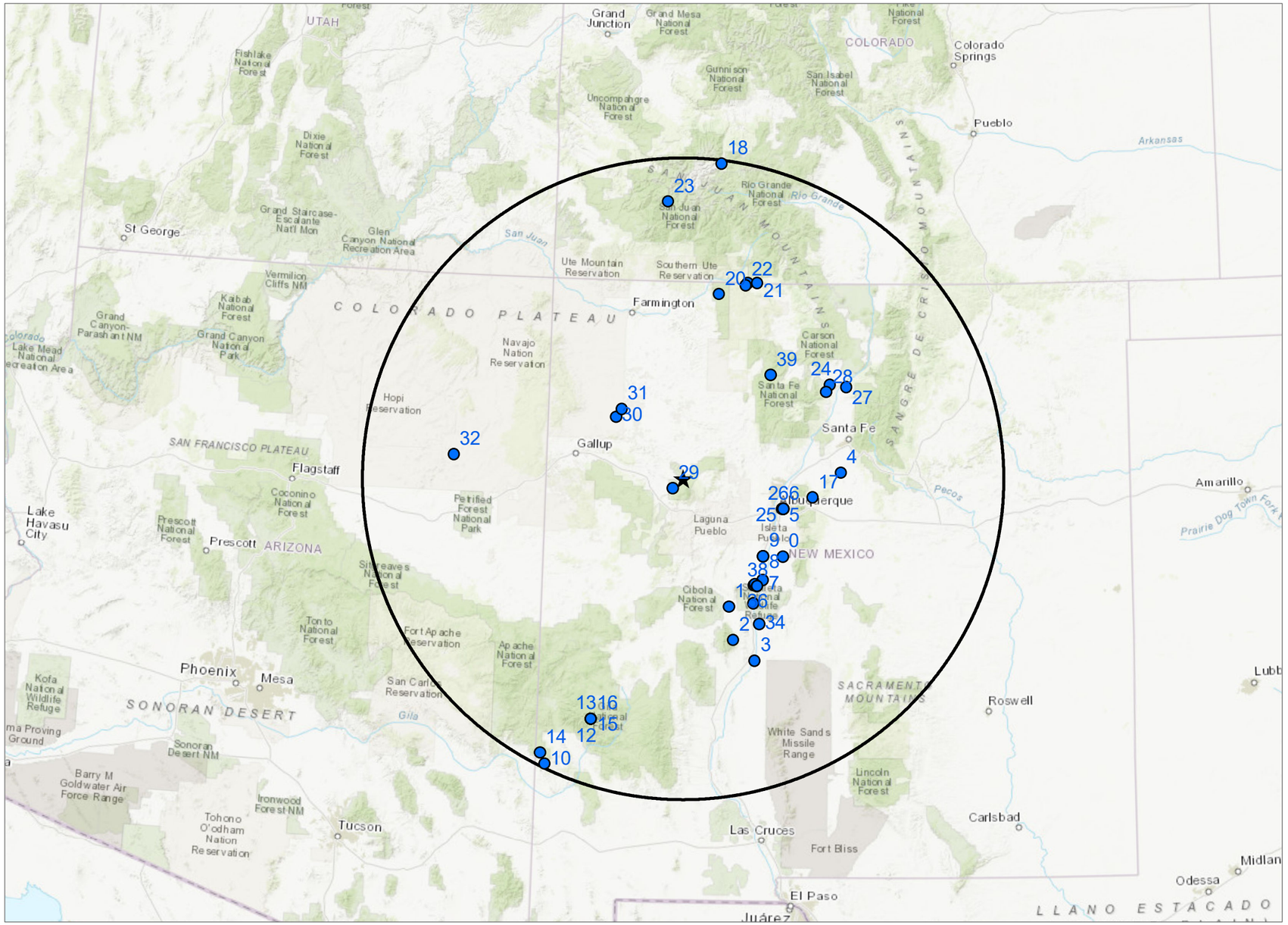
Project No. 111360

October 2025

Location used for Analysis

Engineering Analytics, Inc.

FIGURE 1-1
PROJECT LOCATION
SEISMIC HAZARD ANALYSIS
MT TAYLOR MINE
CIBOLA COUNTY, NEW MEXICO



LEGEND

- WUS Earthquakes
- ★ Mt Taylor Mine
- 300 Kilometers

Note: Earthquake number cooresponds to Appendix A.1 list of earthquakes

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Project No: 111360

October 2025

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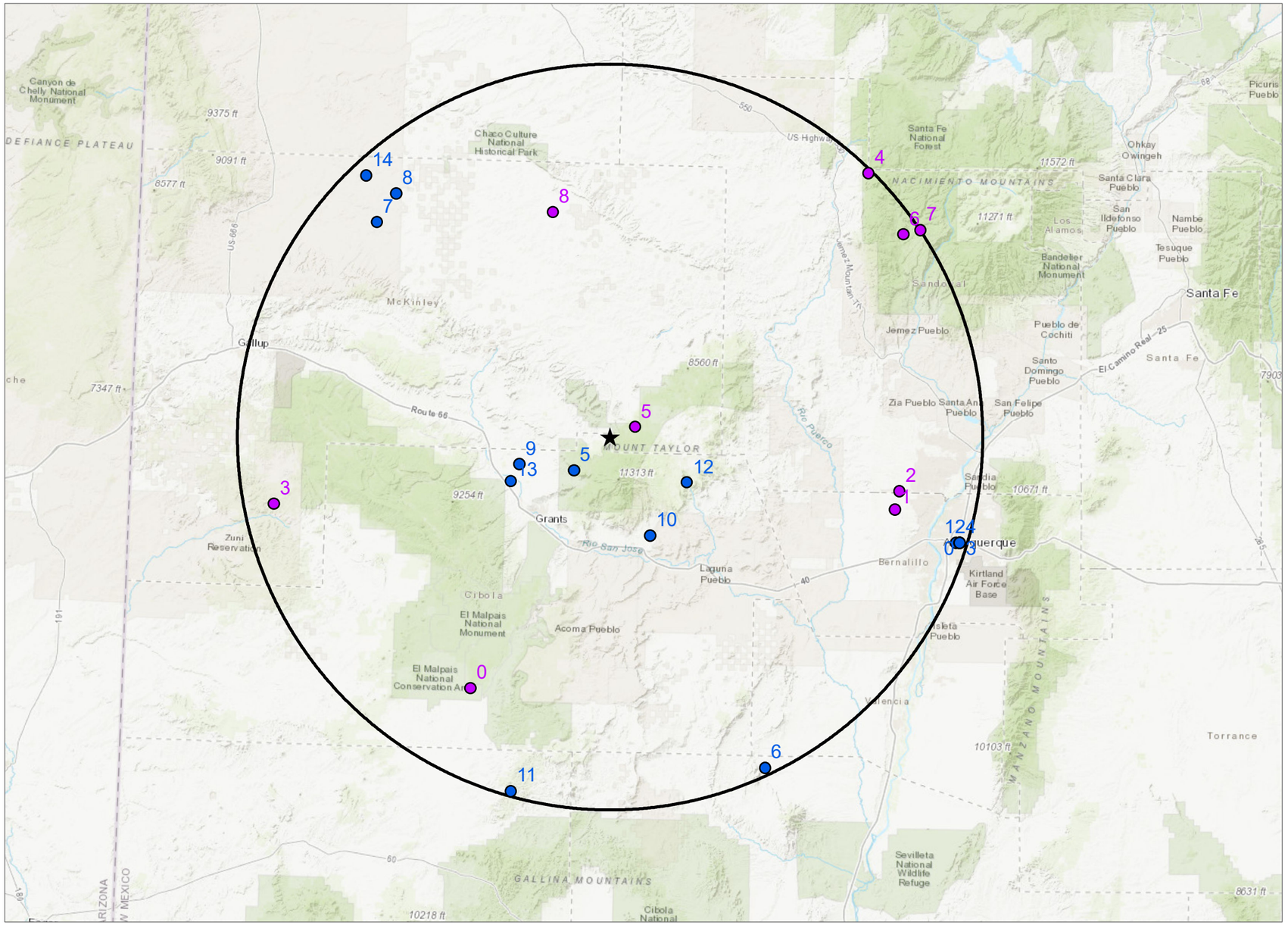
FIGURE 3-1
HISTORIC EARTHQUAKES WITH MAGNITUDE GREATER THAN 4.0 WITHIN 300 KILOMETERS OF THE FACILITY
SEISMIC HAZARD ANALYSIS
MT TAYLOR MINE
CIBOLA COUNTY, NEW MEXICO



LEGEND

- WUS Earthquakes
- NEIC Earthquakes
- ★ Mt Taylor
- 300 Kilometers

Note: Earthquake number cooresponds to Appendix A.2 list of earthquakes

0 12.5 25 50
Kilometers

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Project No: 111360

October 2025

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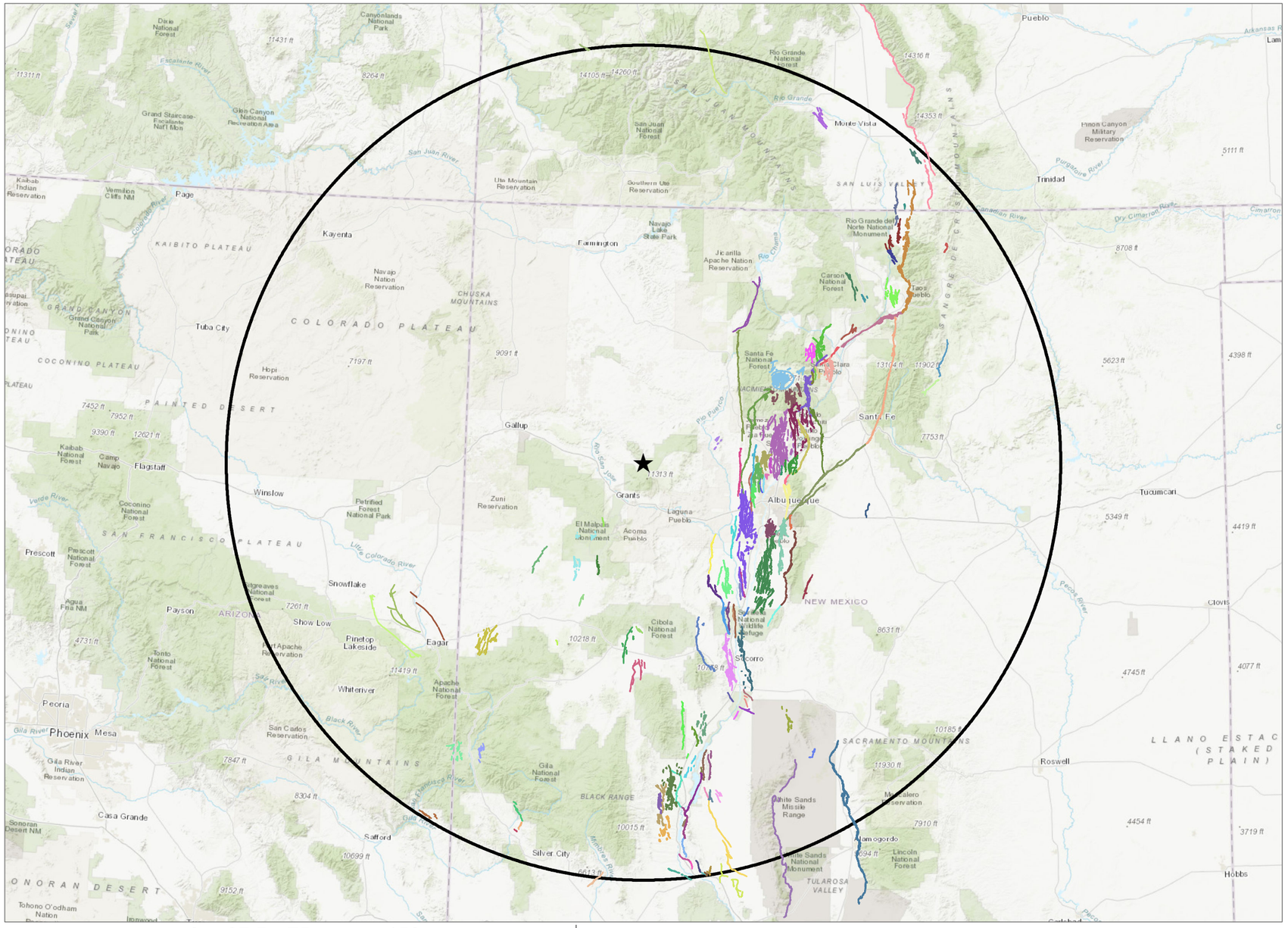
FIGURE 3-2
HISTORIC EARTHQUAKES WITH MAGNITUDE GREATER THAN 2.4 WITHIN 100 KILOMETERS OF THE FACILITY
SEISMIC HAZARD ANALYSIS
MT TAYLOR MINE
CIBOLA COUNTY, NEW MEXICO



LEGEND

★ Mt Taylor Mine

Quaternary Faults

300 Kilometers

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Project No. 111360

October 2025

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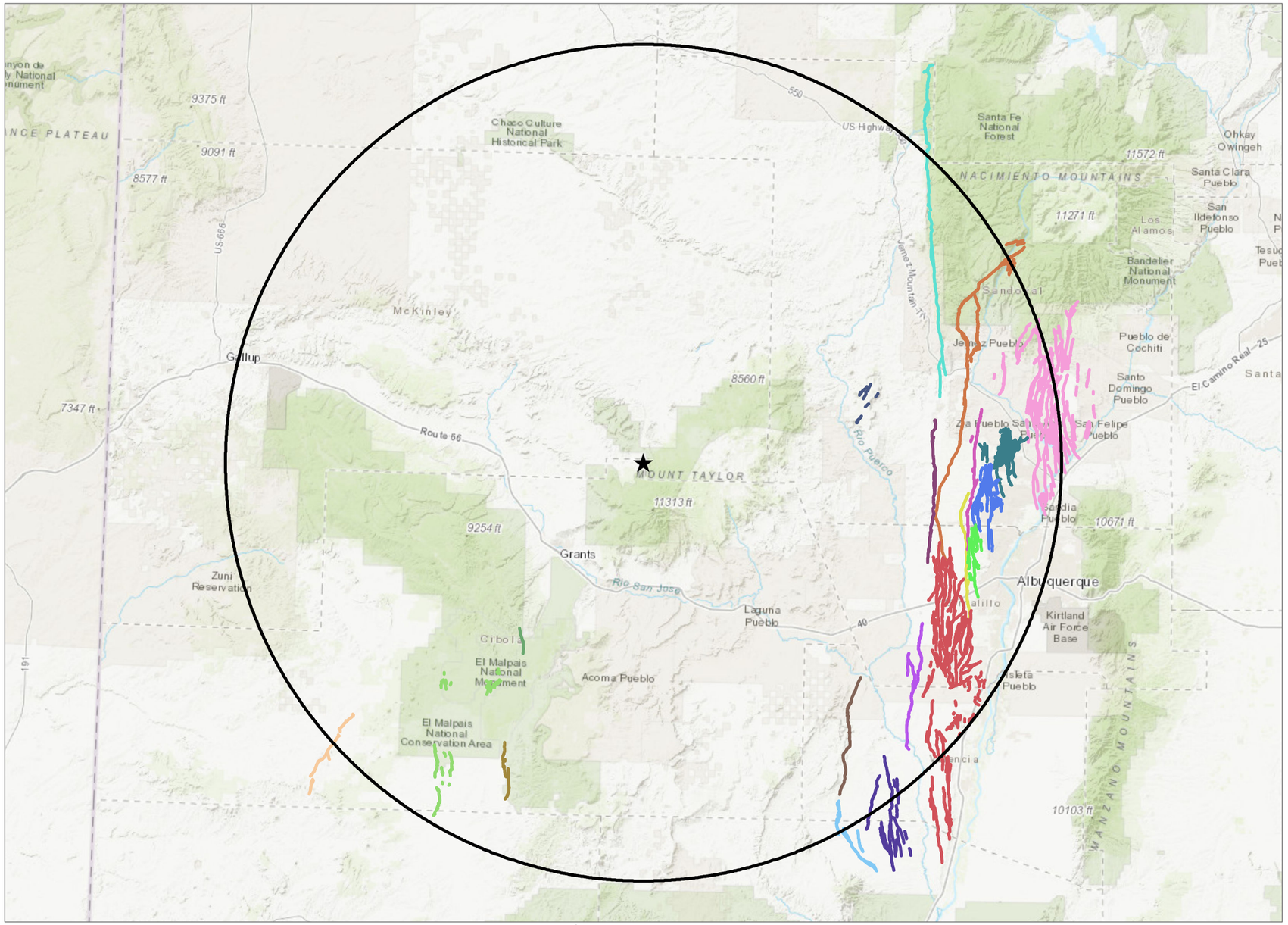
FIGURE 4-1
FAULTS WITH QUATERNARY DISPLACEMENT WITHIN 300 KILOMETERS OF THE FACILITY
SEISMIC HAZARD ANALYSIS
MT TAYLOR MINE
CIBOLA COUNTY, NEW MEXICO



LEGEND

- Mt Taylor Mine
- 100 Kilometers

Fault Name

- Cat Mesa fault
- Cebollita Mesa fault
- Continental Divide fault
- County Dump fault
- Coyote Springs fault
- Intrabasin faults on the Llano de Albuquerque
- Jemez-San Ysidro fault
- Mesa Prieta faults
- Nacimiento fault
- San Felipe fault zone
- Sand Hill fault zone
- Santa Fe fault
- Zia fault
- unnamed fault of Bonita Canyon
- unnamed faults near Albuquerque Volcanoes
- unnamed faults near Picuda Peak
- unnamed faults near Star Heights
- unnamed faults of El Malpais lava field
- unnamed intrabasin faults west of the Rio Puerco

Note: Fault characteristics provided in Appendix B

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Project No. 111360

October 2025

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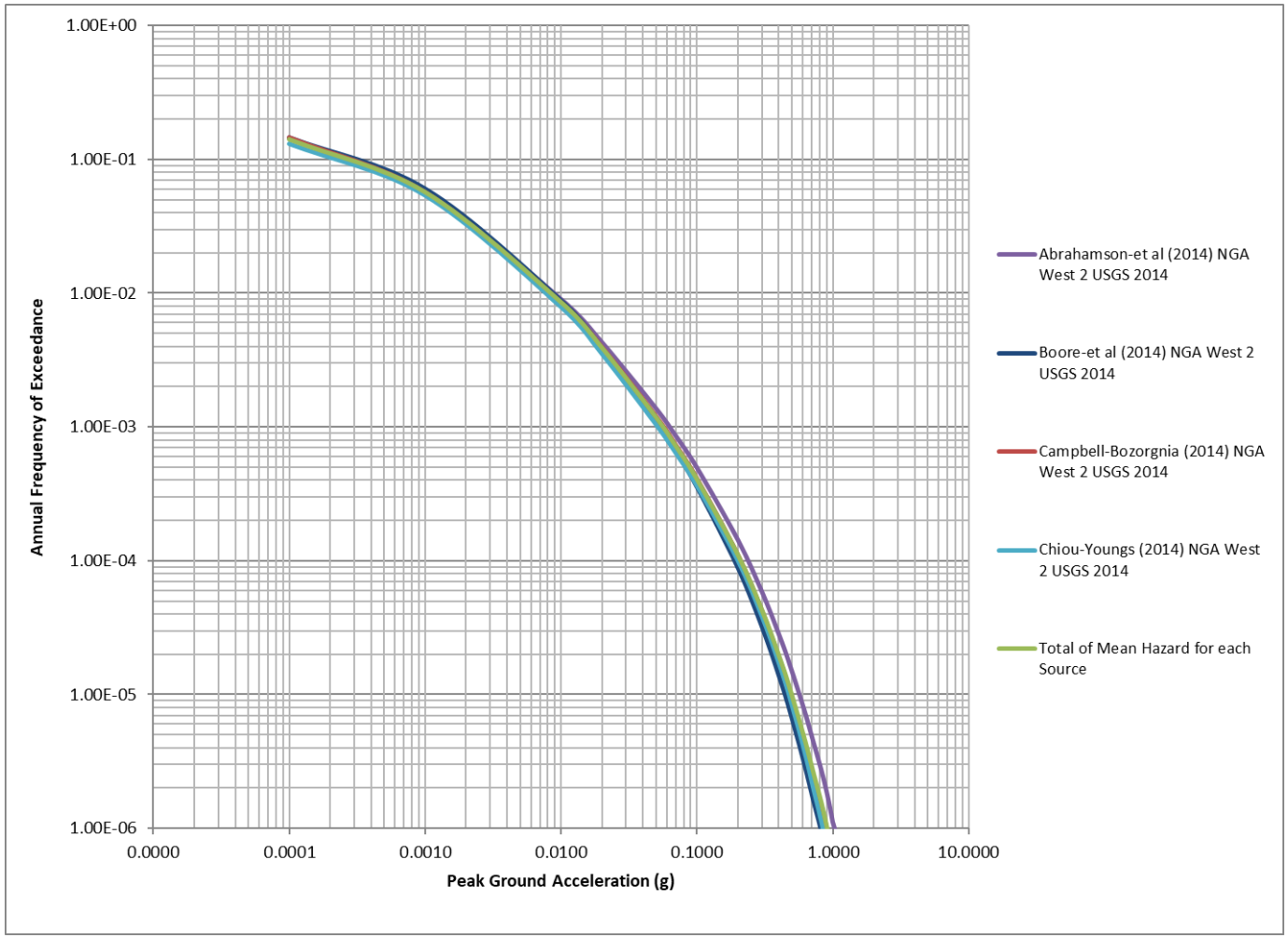
FIGURE 4-2
FAULTS WITH QUATERNARY DISPLACEMENT THAT MEET NRC MINIMUM CRITERIA WITHIN 100 KILOMETERS OF THE FACILITY
SEISMIC HAZARD ANALYSIS
MT TAYLOR MINE
CIBOLA COUNTY, NEW MEXICO



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October 2025

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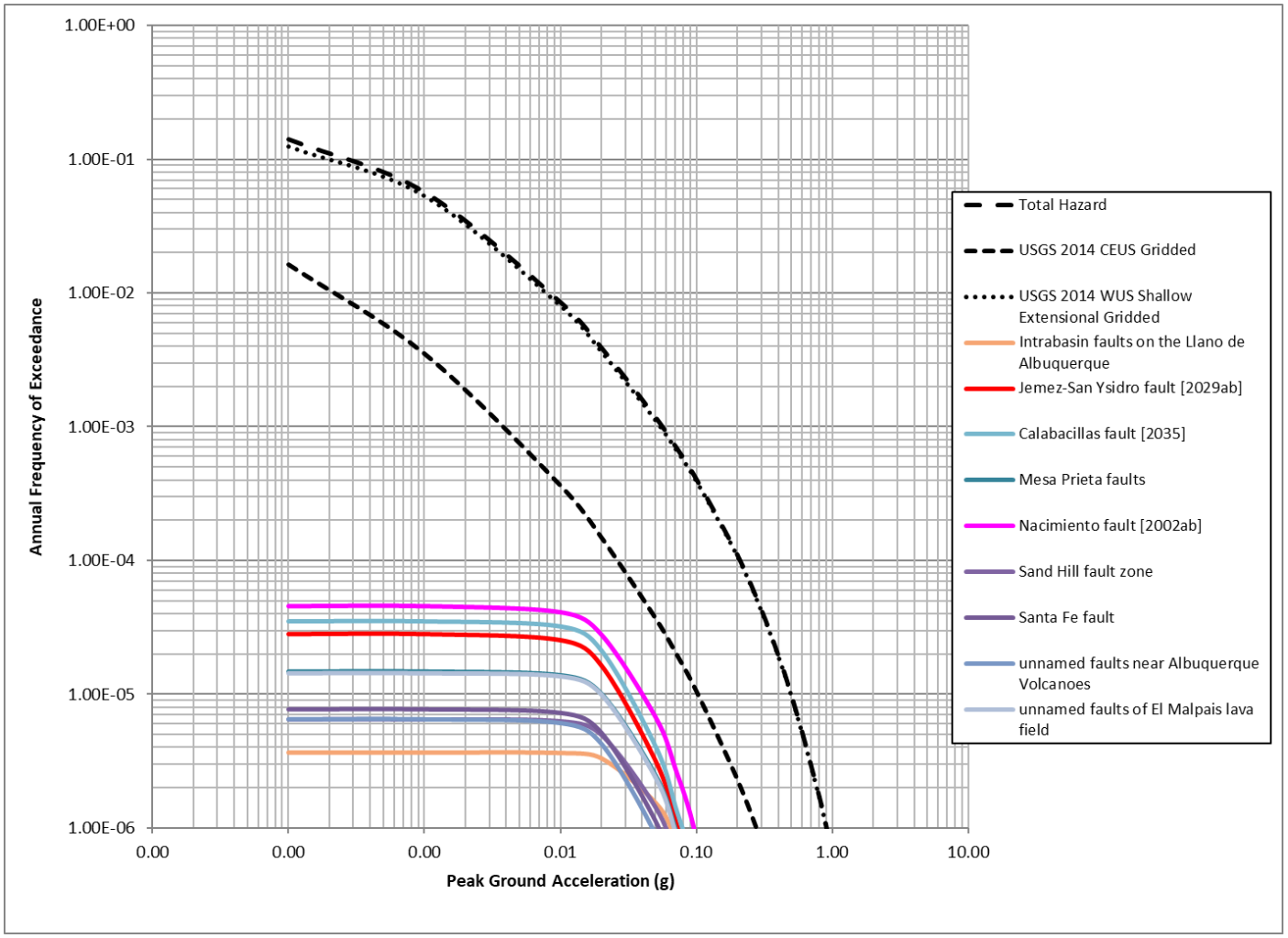
FIGURE 4-3
TOTAL SEISMIC HAZARD CURVE
SEISMIC HAZARD ANALYSIS
MT TAYLOR MINE
CIBOLA COUNTY, NEW MEXICO



Project No. 111360

October 2025

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FIGURE 4-4
SOURCE CONTRIBUTION TO TOTAL SEISMIC HAZARD
SEISMIC HAZARD ANALYSIS
MT TAYLOR MINE
CIBOLA COUNTY, NEW MEXICO

APPENDIX A
EARTHQUAKE EVENTS NEAR THE FACILITY

APPENDIX A.1
EARTHQUAKE EVENTS WITH MAGNITUDE GREATER THAN OR EQUAL TO 4.0 OCCURRING WITHIN 300 KILOMETERS OF THE FACILITY

Appendix A.1 Earthquake Events with Magnitude Greater than or equal to 4.0 occurring within 300 kilometers of Mt Taylor

Catalog: Western United States (WUS) Magnitude greater than or equal to 4.0

Figure 3-2 ID	Magnitude (Mw)	Longitude (degree, west)	Latitude (degree, north)	Depth (km)	Year	Month	Day	Hour	Minute	Second
0	5.2	-106.6	34.7	0	1893	9	7	0	0	0
1	5.8	-107.14	34.27	0	1906	7	12	12	15	0
2	5.9	-107.09	33.99	0	1906	7	16	19	0	0
3	5.8	-106.87	33.82	0	1906	11	15	12	15	0
4	4.7	-106.01	35.41	0	1918	5	28	11	30	0
5	5	-106.6	35.1	0	1930	12	3	21	36	0
6	5	-106.6	35.1	0	1931	2	5	4	48	0
7	5	-106.8	34.5	0	1935	2	21	1	25	0
8	5	-106.8	34.7	0	1935	12	16	18	0	0
9	5	-106.8	34.7	0	1935	12	20	10	30	0
10	4.1	-108.95	32.91	0	1938	9	17	17	20	0
11	4.9	-108.5	33.3	0	1938	9	17	17	20	17
12	4.3	-108.5	33.3	0	1938	11	2	8	59	58
13	4.6	-108.5	33.3	0	1938	11	27	0	12	39
14	5.5	-109	33	0	1939	2	26	23	27	0
15	4.6	-108.5	33.3	0	1939	6	4	1	19	10

APPENDIX A.2
EARTHQUAKE EVENTS WITH MAGNITUDE GREATER THAN OR EQUAL TO 2.4 OCCURRING WITHIN 100 KILOMETERS OF THE FACILITY

Appendix A.2 Earthquake Events with Magnitude Greater than or equal to 2.4 occurring within 100 kilometers of Mt Taylor

Catalog: Western United States (WUS) Magnitude greater than or equal to 2.4

Figure 3-2 ID	Magnitude (Mw)	Longitude (degree, west)	Latitude (degree, north)	Depth (km)	Year	Month	Day	Hour	Minute	Second
0	5	-106.6	35.1	0	1930	12	3	21	36	0
1	5	-106.6	35.1	0	1931	2	5	4	48	0
2	4.5	-106.61	35.1	0	1970	11	28	7	40	12
3	3.5	-106.6	35.1	0	1971	1	4	7	39	7
4	4.7	-106.6	35.1	0	1971	1	4	7	39	7
5	4.08	-107.739	35.258	18	1973	12	24	2	20	15
6	3.4	-107.16	34.55	0	1975	3	7	17	36	9
7	4.68	-108.341	35.844	25	1976	1	5	6	23	33
8	4.28	-108.286	35.915	22	1977	3	5	3	0	55
9	2.18	-107.9	35.27	0	1981	8	14	2	6	57
10	2.68	-107.51	35.105	5	2004	11	24	10	16	38
11	3.44	-107.9	34.48	5	2009	9	23	13	3	14
12	3.5	-107.405	35.235	5	2016	10	20	13	28	2
13	2.48	-107.924	35.228	5	2019	8	10	4	16	45
14	2.78	-108.377	35.956	5	2021	7	4	2	18	36

Catalog: National Earthquake Information Center (NEIC) Magnitude greater than or equal to 2.4

Figure 3-2 ID	Magnitude	Longitude (degree, west)	Latitude (degree, north)	Depth (km)	Year	Month	Day	Hour	Minute	Second	Magnitude Type
0	2.6	-108.026	34.7261	7.989	2025	5	8	10	59	54	ml
1	3.2	-106.7918	35.1777	5.000	2024	9	10	15	36	1	ml
2	3.5	-106.7783	35.2227	6.244	2024	9	10	14	11	46	ml

APPENDIX B
FAULTS WITH QUATERNARY DISPLACEMENT NEAR THE FACILITY

APPENDIX B.1
LIST OF FAULTS WITHIN 100 KILOMETERS OF THE FACILITY THAT MEET NRC MINIMUM CRITERIA

Appendix B.1 List of Faults within 100 Kilometers of the Site

Name of Faults	ID Number	Age of Most Recent Prehistoric Deformation (ya)[1]	Slip-rate (mm/yr)	Fault Length (Km)	Fault Type	Distance from site to surface trace of fault (km)
Cat Mesa fault	2122	<750,000	<0.2	20	Normal	75.9
Cebollita Mesa fault	2140	<15,000	<0.2	13	Normal	74.8
Continental Divide fault	2145	<1,600,000	<0.2	17	Normal	91.8
County Dump fault	2038	<130,000	<0.2	35	Normal	76.5
Coyote Springs fault	2114	<15,000	<0.2	17	Normal	93.4
Intrabasin faults on the Llano de Albuquerque	2121	<750,000	<0.2	101	Normal	66.7
Jemez-San Ysidro fault (Jemez section)	2029a	<1,600,000	<0.2	28	Normal	77.3
Jemez-San Ysidro fault (San Ysidro section)	2029b	<750,000	<0.2	34	Normal	77.3
Jemez-San Ysidro fault (Calabacillas section)	2029c	<15,000	<0.2	34	Normal	70.5
Mesa Prieta faults	1985	<1,600,000	<0.2	12	Normal	47.1
Nacimiento fault (northern section)	2002a	<1,600,000	<0.2	36	Normal	72.3
Nacimiento fault (southern section)	2002b	<750,000	<0.2	45	Normal	72.3
San Felipe fault zone (Santa Ana section)	2030a	<1,600,000	<0.2	44	Normal	93.2
San Felipe fault zone (Algodones section)	2030b	<1,600,000	<0.2	45	Normal	93.3
Sand Hill fault zone	2039	<1,600,000	<0.2	36	Normal	62.2
Santa Fe fault	2123	<1,600,000	<0.2	30	Normal	67.8
unnamed fault of Bonita Canyon	2144	<1,600,000	<0.2	9	Normal	49.3
unnamed faults near Albuquerque Volcanoes	2049	<750,000	<0.2	34	Normal	73.6
unnamed faults near Picuda Peak	2041	<1,600,000	<0.2	16	Normal	78.8
unnamed faults near Star Heights	2048	<750,000	<0.2	18	Normal	78.6
unnamed faults of El Malpais lava field	2146	<1,600,000	<0.2	26	Normal	60.5
unnamed intrabasin faults west of the Rio Puerco	2115	<750,000	<0.2	22	Normal	87.3
Zia fault	2046	<15,000	<0.2	32	Normal	73.7

[1]ya = years ago

APPENDIX B.2
USGS DESCRIPTION OF FAULTS MEETING THE NRC MINIMUM CRITERIA

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

Cat Mesa fault (Class A) No. 2122

Last Review Date: 2016-04-11

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., and Jochems, A.P., compilers, 2016, Fault number 2122, Cat Mesa fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:16 AM.**

Synopsis	The active trace of the Cat Mesa fault extends from south of New Mexico State Highway 6 (west of Los Lunas) northward along the eastern edge of Cat Mesa. At about its midpoint, the Cat Mesa fault splits into two north-trending splays that offset Upper Santa Fe Group sediment and die out near the western edge of the Llano de Albuquerque. The Cat Mesa fault(s) offsets and exposes the late Pliocene Cat Mesa basalt flow along the eastern edge of Cat Mesa. The Cat Mesa basalt flow is interbedded with the upper part of the upper Santa Fe Group, the Ceja Formation, 6–10 m below the Llano de Albuquerque, and is offset about 30 m near the middle of the fault. Early and middle Pleistocene surficial deposits are offset about 17 m (net) across the two fault strands near the northern end of the fault zone. The Cat Mesa fault lies to the west of the late Pleistocene basalts of the Cat Hills, but the Cat Mesa basalt flow may have originated from the volcanic fault and dike system that fed the younger Cat Hills basalt field.
Name comments	The Cat Mesa fault was originally mapped by Kelley (1954 #1222; 1977 #1106) and in more detail by Kelley and Kudo (1978 #1307). Minor modifications were made by Machette (1978 #1223; 1982 #1401), Machette and

	McGimsey (1983 #1024), Maldonado and Atencio (1998 #1778), and Maldonado (2003 #7453). **Fault ID:** Fault no. 3 of Machette (1982 #1401), fault no. 2 of Machette and McGimsey (1983 #1024).
County(s) and State(s)	VALENCIA COUNTY, NEW MEXICO BERNALILLO COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault traces from 1:24,000-scale geologic mapping in the Dalies NW and Rio Puerco 7.5-minute quadrangles (Maldonado and Atencio, 1998 #1778; Maldonado, 2003 #7453) combined with accurate placement of exposed traces using photogrammetric methods. <P>
Geologic setting	The Cat Mesa fault is an intrabasin fault near the western margin of the central Albuquerque-Belen basin. The Cat Mesa fault lies to the west of and does not offset the late Pleistocene basalts of the Cat Hills, but Kelley and Kudo (1978 #1307, fig. 20) inferred that the Cat Mesa basalt flow underlies and probably originated from the fault and dike system that fed the younger Cat Hills basalt field. Thus, the fault may be related to volcanic activity in the vicinity of the Cat Hills volcanic field. <P>
Length (km)	20 km.
Average strike	N0°E
Sense of movement	Normal
Dip Direction	E; W *Comments:* Maldonado and Atencio (1998 #1778) measured a dip of 80° toward the east-northeast where the Cat Mesa fault cuts sediment of the Ceja Formation. <P>

Paleoseismology studies	<P>
Geomorphic expression	The Cat Mesa fault is well expressed where the resistant Cat Mesa basalt flow is exposed in the fault zone. Elsewhere, the fault strands are marked by broad swales on the largely sand-covered Llano de Albuquerque. Machette and McGimsey (1983 #1024) estimated that the Cat Mesa basalt flow is offset about 30 m near the middle of the fault. They also estimated a total of 17 m of offset in early and middle Pleistocene deposits across the two fault strands near the northern end of the fault zone. <P>
Age of faulted surficial deposits	The Cat Mesa fault offsets the Cat Mesa basalt flow, dated at 3.0±0.1 Ma by ⁴⁰Ar/³⁹Ar (Maldonado and Atencio, 1998 #1778). The Cat Mesa basalt flow is interbedded with the upper part of the upper Santa Fe Group, the Pliocene-early Pleistocene Ceja Formation (Machette, 1978 #1223; Maldonado and Atencio, 1998 #1778; Maldonado, 2003 #7453), 6–10 m below the Llano de Albuquerque (Kelley and Kudo, 1978 #1307). The two fault strands near the northern end of the fault zone offset the early Pleistocene (?) Llano de Albuquerque (Machette and McGimsey, 1983 #1024).
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* Machette and McGimsey (1983 #1024) documented offset of the early Pleistocene (?) Llano de Albuquerque. They also speculated that if the Cat Mesa fault is related to structures controlling the basalts of the Cat Hills volcanic field, then there may be late Pleistocene movement on the Cat Mesa fault. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No detailed studies of fault offset or timing are available; low slip-rate category assigned based on evidence that the 3 Ma Cat Mesa basalt is offset about 30 m (Machette and McGimsey, 1983 #1024; Personius and others, 1999 #6930).

Date and Compiler(s)	2016 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#1222 Kelley, V.C., 1954, Tectonic map of a part of the upper Rio Grande area, New Mexico: U.S. Geological Survey Oil and Gas Investigations Map OM-157, 1 sheet, scale 1:190,080. #1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls. #1307 Kelley, V.C., and Kudo, A.M., 1978, Volcanoes and related basalts of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Circular 156, 29 p., 2 pls. #1401 Machette, M.N., 1982, Quaternary and Pliocene faults in the La Jencia and southern part of the Albuquerque-Belen basins, New Mexico—Evidence of fault history from fault-scarp morphology and Quaternary geology, in Grambling, J.A., and Wells, S.G., eds., Albuquerque Country II: New Mexico Geological Society, 33rd Field Conference, November 4-6, 1982, Guidebook, p. 161-169. #1024 Machette, M.N., and McGimsey, R.G., 1983, Map of Quaternary and Pliocene faults in the Socorro and western part of the Fort Sumner 1° x 2° quadrangles, central New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-1465-A, 12 p. pamphlet, 1 sheet, scale 1:250,000. #1223 Machette, M.N., compiler, 1978, Preliminary geologic map of the Socorro 1° by 2° quadrangle, central New Mexico: U.S. Geological Survey Open-File Report 78-607, 1 sheet, scale 1:250,000. #7453 Maldonado, F., 2003, Geologic map of the Rio Puerco quadrangle, Bernalillo and Valencia Counties, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-2397, scale 1:24,000. #1778 Maldonado, F., and Atencio, A., 1998, Preliminary geologic map of the Dalies northwest quadrangle, Bernalillo County, New Mexico: U.S. Geological Survey Open-File Report 97-741, 1 sheet, scale 1:24000. #6930 Personius, S.F., Machette, M.N., and Kelson, K.I., 1999, Quaternary faults in the Albuquerque area—An update, in Pazzaglia, F.J., and Lucas, S.G., eds., Albuquerque geology: New Mexico Geological Society 50th Annual Field Conference, Guidebook, September 22–25, p. 189–200.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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Cebollita Mesa fault (Class A) No. 2140

Last Review Date: 2016-04-22

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Machette, M.N., and Jochems, A.P., compilers, 2016, Fault number 2140, Cebollita Mesa fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:18 AM.**

Synopsis	The Cebollita Mesa fault has seemingly young (<15 ka) movement, which is anomalous in the sense that there are few mapped Quaternary faults in this region, and in the Colorado Plateaus Province in general. However, field studies have shown that the fault has been recurrently active in the late Quaternary. Single-event scarps on the fault are about 2–2.5 m high, whereas older, late (?) Pleistocene, alluvium has compound (multiple-event) scarps as much as 8 m high. No dating has been conducted to refine the timing of last movement, slip rate, or recurrence interval for this down-to-the-west normal fault.
Name comments	This Quaternary fault was named by Levish and others (1992 #1715) for Cebollita Mesa, a Pliocene basalt-covered mesa located about 8 km east and northeast of the fault. The fault was first shown by Machette (1978 #1223) on the geologic map of the Socorro 1° x 2° quadrangle, but was overlooked by Machette and McGimsey (1983 #1024) in their later fault compilation. Maxwell (1986 #1720) made the first detailed geologic map that showed the fault, whereas Levish (1992 #1715) characterized its late Quaternary history as part of a dam hazards study. The fault is mapped for about 13 km across the toe slope of dissected Cretaceous bedrock hills. It extends from the north side

	of Bonine Canyon on the south, north past Head Windmill and New Mexico State Highway 117. About 1 km north of the highway, the fault disappears beneath a young basalt flow.
County(s) and State(s)	CIBOLA COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Trace from approximately 1:100,000-scale geologic map of Levish and others (1992 #1715) and 1:62,500-scale geologic map of Maxwell (1986 #1720) combined with accurate placement using photogrammetric methods. <P>
Geologic setting	The fault offsets the toe slope of dissected Cretaceous bedrock hills west of Cebollita Mesa. To the north, the fault disappears beneath a late Holocene basalt flow, but may continue further as suggested by as much as 300 m of down-to-the-west displacement on two normal faults imaged by shallow seismic-reflection profiling (Kelly and Reynolds, 1989 #1738). The Cebollita Mesa fault is subparallel to (but west of) similarly oriented normal faults that Maxwell (1986 #1720) maps as cutting Pliocene basalts of Cebollita Mesa. <P>
Length (km)	13 km.
Average strike	N4°E
Sense of movement	Normal *Comments:* As mapped by Maxwell (1986 #1720) and seen in natural exposures by Levish and others (1992 #1715). <P>
Dip Direction	W

	Comments: Although not mentioned by Levish and others (1992 #1715), the faults exposed in natural exposure have high-angle (near vertical) dips near the surface (Dan Levish, oral commun., 1988). <P>
Paleoseismology studies	<P>
Geomorphic expression	The fault forms a north-trending, left-stepping series of three en echelon scarps. Levish and others (1992 #1715) measured four scarp profiles: one (P-1) on the northern strand and three (P-2 to P-4) on the southern half of the southern strand. These profiles document single-event scarps of about 2.2–2.5 m height (1.9–2.0 m surface offset) and compound (multiple-event) scarps of about 6.0–8.5 m height (5.2–7.5 m surface offset). All four of the profiled scarps have modest maximum scarp-slope angles of 10–16°, but they are formed on relatively fine-grained, easily eroded sediment. Analysis of this data by Levish and others (1992 #1715) suggested that the younger scarps are late Pleistocene or Holocene in age, whereas as the larger scarps have morphology indicative of late Pleistocene movement. The scarp data suggests that the morphometric data from the younger scarps (P-3 and P-4) are similar to the Drum Mountains scarps (early Holocene) and the Bonneville shoreline (~17.5–18 ka). Conversely, the compound scarps have nearly identical maximum scarp-slope angles as the single-event scarps, suggesting that the steepness of all the scarps is controlled by the younger (<15 ka) event. <P>
Age of faulted surficial deposits	Maxwell (1986 #1720) mapped the faults as offsetting fine-grained Quaternary alluvium derived from Cretaceous sedimentary rock to the east. The smaller scarps are formed on alluvium of the lowest fluvial terrace, whereas the compound scarps are on alluvium that forms the next highest fluvial terrace. These deposits are likely to be latest or late Pleistocene in age (<130 ka). Levish and others (1992 #1715) reported that the scarps are locally muted (buried) by eolian sand. No studies or detailed mapping have been conducted to refine the age of the Quaternary sediment that are offset by the fault. To the north of New Mexico State Highway 117, the fault disappears beneath the McCartys basalt flow, which is estimated to be of late Holocene age, 2.4–3.9 ka (Laughlin and others, 1994 #7439; Maxwell, 1986 # 1720; Dunbar and Phillips, 2004 #7424).
Historic earthquake	
Most recent prehistoric deformation	latest Quaternary (<15 ka) *Comments:* Timing of most recent surface faulting based on scarp-morphology data (Levish and others, 1992

	#1715) that is consistent with the continuity of the scarps, and expression on the lowest of the fluvial terraces of local streams that cross the scarps. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* It appears that the slip rate probably falls in the less than 0.2 mm/yr category because the 1.9–2.0 m of offset from the most recent event was the result of strain accumulation over 15–120 k.y.
Date and Compiler(s)	2016 Michael N. Machette, U.S. Geological Survey, Retired Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources

References	#7424 Dunbar, N.W., and Phillips, F.M., 2004, Cosmogenic ³⁶Cl ages of lava flows in the Zuni-Bandera volcanic field, north-central New Mexico, U.S.A., in Cather, S.M., McIntosh, W.C., and Kelley, S.A., eds., Tectonics, geochronology, and volcanism in the Southern Rocky Mountains and Rio Grande Rift: New Mexico Bureau of Geology and Mineral Resources Bulletin 160, p. 309–317. #1738 Kelly, T.E., and Reynolds, C.B., 1989, Structural geology of the Malpais Valley, San Rafael, New Mexico, in Anderson, O.J., Lucas, S.G., Love, D.W., and Cather, S.M., eds., Southern Colorado Plateau: New Mexico Geological Society, 40th Field Conference, September 28-October 1, 1989, Guidebook, p. 119-121. #7439 Laughlin, A.W., Poths, J., Healey, H.A., Reneau, S., and WoldeGabriel, G., 1994, Dating of Quaternary basalts using the cosmogenic ³He and ¹⁴C methods with implications for excess ⁴⁰Ar: Geology, v. 22, p. 135–138. #1715 Levish, D.R., Vetter, U.R., Ake, J.P., and Piety, L.A., 1992, Seismotectonic study for Black Rock Dam, Bureau of Indian Affairs, Pueblo of Zuni, New Mexico: Bureau of Reclamation Seismotectonic Report 92-3, 62 p. #1024 Machette, M.N., and McGimsey, R.G., 1983, Map of Quaternary and Pliocene faults in the Socorro and western part of the Fort Sumner 1° x 2° quadrangles, central New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-1465-A, 12 p. pamphlet, 1 sheet, scale 1:250,000. #1223 Machette, M.N., compiler, 1978, Preliminary geologic map of the Socorro 1° by 2° quadrangle, central New Mexico: U.S. Geological Survey Open-File Report 78-607, 1 sheet, scale 1:250,000. #1720 Maxwell, C.H., 1986, Geologic map of El Malpais Lava Field and surrounding areas, Cibola County, New Mexico: U.S. Geological Survey Miscellaneous Investigations Map I-1595, 1 sheet, scale 1:62,500.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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Continental Divide fault (Class B) No. 2145

Last Review Date: 2016-04-22

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Machette, M.N., and Jochems, A.P., compilers, 2016, Fault number 2145, Continental Divide fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:19 AM.**

Synopsis	Little is known about this northeast-trending suspect fault; it reportedly forms a low but prominent scarp on Quaternary basalts of the North Plains lava field. The trend of the feature is parallel to a string of eruptive basalt cones that occupy the center of the field, which suggests that movement on the fault may be controlled by volcanism and deeper-seated crustal structures. No detailed studies have been conducted to determine the timing of movement or amount of offset of the basalt. Some authors have suggested that the scarp may be the result of volcanic processes, but its association with a mapped bedrock fault supports an interpretation of a tectonic origin.
Name comments	This suspect fault extends along the Continental Divide from about 3 km south of New Mexico State Highway 36 to 5 km north of Peñasco Lakes. Although unnamed by Anderson (1986 #1281), who first mapped it, Levish and others (1992 #1715) named it for its near coincidence with the Continental Divide.

County(s) and State(s)	CIBOLA COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Trace from 1:100,000-scale geologic map of the Fence Lake quadrangle compiled by Anderson (1986 #1281) and 1:24,000-scale geologic map of the Techado 7.5' quadrangle (Arkell, 1984 #7422) combined with accurate placement using photogrammetric methods. <P>
Geologic setting	This northeast-trending feature appears to offset the southern part of the North Plains lava field and is parallel to eruptive basalt cones that occupy the center of the field. These cones mark the southwestern trace of the Jemez lineament, which is one of many northeast-trending crustal structures that control the location of young volcanism within and outside of the northern Rio Grande rift in New Mexico. The southern end of the feature is mapped as cutting the Miocene (?) Fence Lake Formation (Anderson, 1986 #1281). If this association is not a spatial coincidence, it would support a tectonic origin. <P>
Length (km)	17 km.
Average strike	N20°E
Sense of movement	Normal *Comments:* As reported by Anderson (1986 #1281). <P>
Dip Direction	SE *Comments:* Although no dips are reported, the general direction is inferred from a southeast-facing escarpment. <P>

Paleoseismology studies	<P>
Geomorphic expression	Fault forms a scarp of 2–3 m height (Orin Anderson, written commun., 1997) on basalts of the North Plains lava field. Levish and others (1992 #1715) argued that the scalloped appearance of the escarpment suggests it is a volcanic flow margin and not a fault. <P>
Age of faulted surficial deposits	This feature appears to offset Quaternary basalts according to Anderson (1986 #1281). The Jaralosa Draw lobe (flow), which extends west from the North Plains lava field and has also been called the Fence Lake flow, has a K-Ar age of 1.38±0.29 Ma (Laughlin and West, 1976 #7420). Other basalt flows in the North Plains field have returned Ar-Ar ages of approximately 0.6-0.7 Ma (Laughlin and others, 1993 #7421), consistent with the seemingly young appearance of cinder cones such as at Chimney Hill.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Timing poorly controlled. Based on presence of scarp on early to perhaps middle Quaternary basalt. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip rate estimated from presence of scarp of 2–3 m height (Orin Anderson, written commun., 1997) on early to perhaps middle Quaternary basalt.
Date and Compiler(s)	2016 Michael N. Machette, U.S. Geological Survey, Retired Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources

References	#1281 Anderson, O.J., compiler, 1986, Geologic map of Fence Lake, New Mexico 1:100,000 metric sheet: New Mexico Bureau of Mines and Mineral Resources Open-File Report 220, 4 p. pamphlet, 4 sheets, scale 1:100,000. #7422 Arkell, B., 1984, Geology and coal resources of the Techado quadrangle, Catron and Cibola Counties, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 221, 21 p., 2 pl., scale 1:24,000. #7420 Laughlin, A.W., and West, F.G., 1976, The Zuni Mountains, New Mexico, as a potential dry hot rock geothermal energy site: U.S. Energy Research and Development Administration, Los Alamos Scientific Laboratories Informal Report LA-3197-MS, 13 p. #7421 Laughlin, A.W., Perry, F.V., Damon, P.E., Shafiqullah, M., WoldeGabriel, G., McIntosh, W., Harrington, C.D., Wells, S.G., and Drakos, P.G., 1993, Geochronology of Mount Taylor, Cebollita Mesa, and Zuni-Bandera volcanic fields, Cibola County, New Mexico: New Mexico Geology, v. 16, no. 4, p. 81–92. #1715 Levish, D.R., Vetter, U.R., Ake, J.P., and Piety, L.A., 1992, Seismotectonic study for Black Rock Dam, Bureau of Indian Affairs, Pueblo of Zuni, New Mexico: Bureau of Reclamation Seismotectonic Report 92-3, 62 p.

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Quaternary Fault and Fold Database of the United States

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County Dump fault (Class A) No. 2038

Last Review Date: 2015-02-19

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Haller, K.M., Personius, S.F., Olig, S.S., and McCalpin, J.P., compilers, 2015, Fault number 2038, County Dump fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:19 AM.**

Synopsis	The County Dump fault is a down-to-the-east, north-trending normal fault located in the northern part of the Albuquerque-Belen basin. The fault offsets deposits of the upper Santa Fe Group, well-developed calcic soils of the Llano de Albuquerque, and about 155-ka basalt of the Albuquerque Volcanoes volcanic field. Repeated surface-faulting in the past 1 m.y. is expressed as a subdued, 24-m-high, up to 800-m-wide fault scarp across the Llano de Albuquerque and was first recognized during early geologic work in the region. An exposure of the fault at the now abandoned Bernalillo County landfill (dump) has been described in two detailed studies addressing the history of surface rupture. The most recent study used thermoluminescence (TL) ages and detailed soils analyses to constrain the time of the most recent surface-faulting event on the County Dump fault at 24 ka.
Name comments	The County Dump fault was originally mapped and named by Lambert (1968 #1396) for a down-to-the-east normal fault exposed at the now abandoned Bernalillo County landfill site, located about 1.5 km north of Interstate 40. Kelley (1977 #1106) renamed this structure the Nine Mile fault and included a down-to-the west fault south of Interstate 40 that was originally mapped by Lambert (1968 #1396). Machette (1982 #1401) used the name

	"Bernalillo County Dump fault" for this structure, but most workers since Kelley (1977 #1106) have used either "County Dump fault" (Machette, 1978 #1402; Hawley and Haase, 1992 #1304) or "Nine Mile fault zone" (Hawley and Whitworth, 1996 #1303) when referring to this structure. Cather and others (1997 #1763) called the northern end of the County Dump fault the "Centipede fault" in the Sky Village SE quadrangle. Herein we use the name "County Dump fault" as originally named by Lambert (1968 #1396) for the entire fault zone, because the "Nine mile fault" as mapped by Kelley (1977 #1106) and Hawley and Whitworth (1996 #1303) contains faults with both down-to-the-east and down-to-the-west displacements. **Fault ID:** Fault no. 2 of Machette (1982 #1401), fault no. 1 of Machette and McGimsey (1983 #1024).
County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO BERNALILLO COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* The trace of the County Dump fault is from Lambert (1968 #1396), Machette (1978 #1402), Cather and others (1997 #1763), air photo mapping by S.F. Personius (unpublished data, 1997), and high-resolution aeromagnetic data (U.S. Geological Survey and SIAL Geosciences Inc., 1997 #1722; Grauch and Millegan, 1998 #1721). <P>
Geologic setting	The County Dump fault is one of several north-trending intrabasin faults in the northern part of the Albuquerque-Belen basin. The fault also forms the western margin of a broad graben that confines some basalt flows of the Albuquerque Volcanoes volcanic field. The spatial association of the fault with the volcanic field may suggest a possible relationship with magmatic activity. <P>
Length (km)	35 km.
Average strike	N5°E

Sense of movement	Normal
Dip	75°–85° E. *Comments:* Dip measurements are from near-surface fault exposures at the abandoned Bernalillo County landfill site (Lambert, 1968 #1396; Machette, 1978 #1402; McCalpin, 1997 #1767). <P>
Paleoseismology studies	The fault is well exposed in the northwest corner of the now abandoned Bernallilo County landfill. Here, the exposed County Dump fault offsets sands and gravels assigned to the Upper Buff or Ceja members of the Santa Fe Formation (Bryan and McCann, 1937 #1288; Kelley, 1977 #1106), which are now included in the Sierra Ladrones Formation of the upper Santa Fe Group (Hawley and others, 1991 #1302). The upper part of these rocks may be early Pleistocene in age. The fault also cuts the Llano de Albuquerque, an extensive Pleistocene surface formed on the Santa Fe Group. <P> Site 2038-1. Results from an early study of the natural exposure suggest that buried soils on colluvial deposits as young as 20–120 ka were deposited in response to large offsets (Machette, 1978 #1402). <P> Site 2038-2. The exposure at Bernalillo County landfill was re-excavated to address why previous estimates of displacement were so large and whether artificial exposures of the section might better reveal small scarp-derived colluvial deposits resulting from smaller displacement events. Six backhoe trenches that exposed the hanging wall deposits to a depth of 19–21 m below the surface were excavated for this study (McCalpin, 1997 #1767; McCalpin and others, 2006 #693). Interpretation of the exposures suggest that perhaps as many as 14 earthquakes occurred on the County Dump fault since the abandonment of the Llano de Albuquerque at 1.8-0.8 Ma (Connell and others, 2013 #7235); the timing of surface ruptures were constrained by thermoluminescence (TL) ages and quantitative analysis of soil properties developed on colluvial deposits deposited adjacent to the County Dump fault. Based on a number of assumptions, the mean vertical displacement in the past 14 events at this location is 1.2±0.6 m; it is not known if mean displacement at this location is a representative average for the fault or not (McCalpin and others, 2006 #693). <P>
Geomorphic expression	The County Dump fault is discontinuously exposed in upper Santa Fe Group sediment along the eastern Llano de Albuquerque. A broad, sand-covered, 24-m-high fault scarp, which is 800 m wide with maximum scarp-slope angle of 3.5° (McCalpin and others, 2006 #6931), marks the trace of the fault where it crosses the Llano de Albuquerque north of the Bernalillo County landfill exposure. The scarp is asymmetrical; the upper (erosional) part between the fault and scarp crest comprises only 25 percent of total scarp width. This asymmetry is used to substantiate the

	interpretation that large amount of deposition has occurred on the hanging wall since active fluvial deposition on the Llano de Albuquerque ceased. Further north, the County Dump fault skirts the western margin of the Albuquerque Volcanoes volcanic field, and extends northward as a broad escarpment on upper Santa Fe Group sediment and eroded remnants of the Llano de Albuquerque. South of the Bernalillo County dump exposure, the fault is exposed in upper Santa Fe Group sediment before ending a few kilometers south of Interstate Highway 40. <P>
Age of faulted surficial deposits	At the surface, the County Dump fault is in sands and gravels assigned to the Upper Buff or Ceja members of the Santa Fe Formation (Bryan and McCann, 1937 #1288; Kelley, 1977 #1106), which are now included in the Sierra Ladrones Formation of the upper Santa Fe Group (Hawley and others, 1991 #1302). Fault scarps are on the Llano de Albuquerque (1.8 Ma based on 40Ar/39Ar dating, Connell and others, 2013 #7235), an extensive early Pleistocene surface formed at the top of the Santa Fe Group and basalts dated at about155 ka of the Albuquerque Volcanoes volcanic field (Geissman and others, 1990 #1297; Peate and others, 1996 #1411).
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* McCalpin and others (2006 #6931) report evidence of a possible 24-ka earthquake that only produced warping of near-surface sand deposits. In addition, thermoluminescence (TL) ages suggest that the additional surface-rupturing earthquakes occurred at 39 ka and 59 ka. Therefore, two and possibly three earthquakes have occurred in the late Quaternary. Machette (1978 #1402) suggested a similar time of 20 ka for the latest significant earthquake on the County Dump fault based on regional rate of pedogenic calcium carbonate accumulation. <P>
Recurrence interval	41 k.y. (<300 ka) *Comments:* McCalpin and others (2006 #6931) used thermoluminescence (TL) ages and quantitative soils analysis to estimate the timing of 14 earthquakes. Six thermoluminescence (TL) samples ranging from 4 ka (at the surface) to greater than 293 ka (8.3 m below the surface) constrain the age of the uppermost colluvial wedges; the age of older soils (8.3–17.3 m below the surface) was estimated based on accumulation rate of pedogenic calcium carbonate of 0.26 g CaCO³ per thousand years, based on data from the upper part of the section. Recurrence intervals range from 4 to 202 k.y. and average 40.8 k.y.; a better constrained average of 29.5±11 k.y. is

	indicated if the longest and shortest intervals are not considered. The three most recent faulting events can be reconstructed from relationships in the highest trench and yielded ages of about 24 ka (0.4 m vertical displacement), 40–45 ka (0.35 m vertical displacement), and 75–80 ka (< 3.5 m vertical displacement). The earlier investigation by Machette (1978 #1402) provided average recurrence intervals of 90–190 ka because fewer faulting events were identified.
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category assigned based on vertical-displacement rates from trenching at site 2038-2 described in McCalpin and others (2006 #6931), who suggest the vertical-displacement rate has not been constant over the past 1.6 m.y. However, the long-term and short-term (from the past two earthquakes) vertical-displacement rates are similar. Vertical-displacement rate for the County Dump fault at the Bernalillo County landfill can be constrained by the 24 m of far-field surface offset and the estimated 1–1.6 Ma age of the Llano de Albuquerque, resulting in a possible range in vertical-displacement rate of 0.015–0.024 mm/yr (McCalpin and others, 2006 #6931). The vertical-displacement rate would be lower and better constrained if the age for the Llano based on Connell and others (2013 #7235) were considered. McCalpin and others (2006 #6931) present a similar short-term vertical rate of 0.018 mm/yr based on cumulative offset in the past two earthquakes of 0.75 m.
Date and Compiler(s)	2015 Kathleen M. Haller, U.S. Geological Survey Stephen F. Personius, U.S. Geological Survey Susan S. Olig, URS Corporation James P. McCalpin, GEO-HAZ Consulting, Inc.
References	#1288 Bryan, K., and McCann, F.T., 1937, The Ceja del Rio Puerco—A border feature of the Basin and Range province in New Mexico, Part I, Stratigraphy and structure: Journal of Geology, v. 45, p. 801-828. #1763 Cather, S.M., Connell, S.D., Heynekamp, M.R., and Goodwin, L.B., 1997, Geology of the Arroyo de las Calabacillas [Sky Village SE] 7.5-minute quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 9, 8 p. pamphlet, 1 sheet, scale 1:24,000. #7235 Connell, S.D., Smith, G.A., Geissman, J.W., and McIntosh, W.C., 2013, Climatic controls on nonmarine depositional sequences in the Albuquerque Basin, Rio Grande rift, north-central New Mexico, in Hudson, M.R., and Grauch, V.J.S., eds., New perspectives on Rio Grande rift basins—From tectonics to groundwater: Geological Society of America Special Paper 494, p. 383–425, doi:10.1130/2013.2494(15) #1297 Geissman, J.W., Brown, L., Turrin, B.D., McFadden, L.D., and Harlan, S.S., 1990, Brunhes chron excursion/polarity episode recorded during the late Pleistocene, Albuquerque Volcanoes,

New Mexico, USA: Geophysical Journal International, v. 102, p. 73-88.

#1721 Grauch, V.J.S., and Millegan, P.S., 1998, Mapping intrabasinal faults from high-resolution aeromagnetic data: The Leading Edge, v. 17, p. 53-55.

#1304 Hawley, J.W., and Haase, C.S., compilers, 1992, Hydrogeologic framework of the northern Albuquerque basin: New Mexico Bureau of Mines and Mineral Resources Open-File Report 387, 1 pl., scale 1:100,000.

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#1302 Hawley, J.W., Love, D.W., Betancourt, J.L., Turner, R.M., and Tharnstrom, S., 1991, Quaternary and Neogene landscape evolution—A transect across the Colorado Plateau and Basin and Range provinces in west-central and central New Mexico, in Julian, B., and Zidek, J., eds., Field guide to geologic excursions in New Mexico and adjacent areas of Texas and Colorado: New Mexico Bureau of Mines and Mineral Resources Bulletin 137, p. 105-148.

#1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls.

#1396 Lambert, P.W., 1968, Quaternary stratigraphy of the Albuquerque area, New Mexico: Albuquerque, University of New Mexico, unpublished Ph.D. dissertation, 329 p., 3 pl., scale 1:48,000.

#1402 Machette, M.N., 1978, Dating Quaternary faults in the southwestern United States by using buried calcic paleosols: U.S. Geological Survey Journal of Research, v. 6, no. 3, p. 369-381.

#1401 Machette, M.N., 1982, Quaternary and Pliocene faults in the La Jencia and southern part of the Albuquerque-Belen basins, New Mexico—Evidence of fault history from fault-scarp morphology and Quaternary geology, in Grambling, J.A., and Wells, S.G., eds., Albuquerque Country II: New Mexico Geological Society, 33rd Field Conference, November 4-6, 1982, Guidebook, p. 161-169.

#1767 McCalpin, J.P., 1997, Paleoseismicity of Quaternary faults near Albuquerque, New Mexico: Technical report to U.S. Geological Survey, under Contract 1434-HQ-96-GR-02751, 18 p.

#6931 McCalpin, J.P., Olig, S.S., Harrison, J.B.J., and Berger, G.W., 2006, Quaternary faulting and soil formation on the County Dump fault, Albuquerque, New Mexico: New Mexico Bureau of Geology and Mineral Resources Circular 212, 36 p.

#1411 Peate, D.W., Chen, J.H., Wasserburg, G.J., Papanastassiou, D.A., and Geissman, J.W., 1996, 238U-230Th dating of a geomagnetic excursion in Quaternary basalts of the Albuquerque Volcanoes Field, New Mexico (USA): Geophysical Research Letters, v. 23, p. 2271-2274.

#1722 U.S. Geological Survey, and SIAL Geosciences, Inc., 1997, Description of digital aeromagnetic data collected north and west of Albuquerque, New Mexico: U.S. Geological Survey Open-File Report 97-286, 40 p.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

Coyote Springs fault (Class A) No. 2114

Last Review Date: 2016-03-30

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., and Jochems, A.P., compilers, 2016, Fault number 2114, Coyote Springs fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:20 AM.**

Synopsis	The Coyote Springs fault (and the Santa Fe [2123] and Loma Pelada [2113] faults to the north and south, respectively) form the active southwestern margin of the Rio Grande rift. Specifically, the Coyote Springs fault forms the southwestern margin of the Belen sub-basin of the Albuquerque basin. Offsets of 12–15 m in lower and middle Pleistocene deposits and 1–3 m in upper Pleistocene deposits indicate recurrent Quaternary movement along the Coyote Springs fault. At its southern end, clear evidence of Quaternary faulting dies out at Mariano Draw, and at its northern end, fault scarps die out about 5 km north of Arroyo Monte Largo.
Name comments	Originally named the Coyote fault by Kelley (1977 #1106), this fault was renamed the Coyote Springs fault by Machette (1982 #1401) and Machette and McGimsey (1983 #1024), after Coyote Spring, which is located near the southwest corner of the Comanche Ranch 7.5-minute quadrangle. The fault is still referred to as the Coyote fault in places (e.g., Grauch and Connell, 2013 #7268), but it should not be confused with the Coyote fault [2128] that forms the western boundary of the Manzanita Mountains on the southeast side of the Belen sub-basin (Personius and others, 1999 #6930). Thus, we retain the name Coyote Springs fault. The fault extends from the southern end of the

	Santa Fe fault [2123] to the northern end of the Loma Pelada fault [2113] along the northeastern margin of the Sierra Ladrones. **Fault ID:** Fault no. 6 of Machette (1982 #1401), fault no. 5 of Machette and McGimsey (1983 #1024).
County(s) and State(s)	VALENCIA COUNTY, NEW MEXICO SOCORRO COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Fault traces from Machette and McGimsey (1983 #1024) at1:250,00 scale on topographic base map. <P>
Geologic setting	The Coyote Springs fault forms the active southwestern margin of the Belen sub-basin of the Albuquerque basin in the Rio Grande rift (Grauch and Connell, 2013 #7268), with the apparent deactivation of the Comanche fault to the west (Kelley, 1977 #1106). Seismic reflection and 3D geophysical studies support Kelley's assumption that a shallow shelf or bench (Monte Largo bench) underlies the piedmont area between the Coyote Springs and Comanche faults (Russell and Snelson, 1994 #1186; Grauch and Connell, 2013 #7268). <P>
Length (km)	17 km.
Average strike	N21°W
Sense of movement	Normal
Dip	15–17° E. *Comments:* Near the surface the fault probably has a relatively high angle (60°) dip. However, Russell and Snelson (1994 #1186) reported a very shallow dip of 15–17° E for the fault at about 5 km depth based on seismic reflection data. There is some controversy about the listric (shallow curving) nature of faults in the Albuquerque basin. <P>

Paleoseismology studies	<P>
Geomorphic expression	Prominent, but discontinuous (eroded) fault scarps are present on surficial deposits along the central part of the Coyote Springs fault, whereas the youngest scarps are found at the southern end of the fault. Machette (1982) and Machette and McGimsey (1983 #1024) measured offsets of 12–15 m in lower and middle Pleistocene deposits, and 1–3 m in upper Pleistocene deposits. Morphometric studies of the small scarps suggested possible early Holocene or latest Pleistocene ruptures (Machette and McGimsey, 1983 #1024). <P>
Age of faulted surficial deposits	The Coyote Springs fault offsets alluvial-fan deposits of early and middle Pleistocene age as much as 12–15 m along its northern part, and middle and late Pleistocene age along its southern part (Machette and McGimsey, 1983 #1024; Read and others, 2007 #7473).
Historic earthquake	
Most recent prehistoric deformation	latest Quaternary (<15 ka) *Comments:* Fault scarp morphology studies by Machette and McGimsey (1983 #1024) indicate possible latest Pleistocene or early Holocene movement on the southern part of the Coyote Springs fault north of Mariano Draw. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category assigned based on fault scarp data from Machette (1982 #1401) and Machette and McGimsey (1983 #1024) which indicates offsets of 1–3 m in late Pleistocene (10–150 ka) alluvium and as much as 12–15 m in middle to early Quaternary deposits.

Date and Compiler(s)	2016 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#7268 Grauch, V.J.S., and Connell, S.D., 2013, New perspectives on the geometry of the Albuquerque basin, Rio Grande rift, New Mexico: Insights from geophysical models of rift-fill thickness, in Hudson, M.R., and Grauch, V.J.S., eds., New perspectives on Rio Grande rift basins—From tectonics to groundwater: Geological Society of America Special Paper 494, p. 427–462, doi:10.1130/2013.2494(16). #1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls. #1401 Machette, M.N., 1982, Quaternary and Pliocene faults in the La Jencia and southern part of the Albuquerque-Belen basins, New Mexico—Evidence of fault history from fault-scarp morphology and Quaternary geology, in Grambling, J.A., and Wells, S.G., eds., Albuquerque Country II: New Mexico Geological Society, 33rd Field Conference, November 4-6, 1982, Guidebook, p. 161-169. #1024 Machette, M.N., and McGimsey, R.G., 1983, Map of Quaternary and Pliocene faults in the Socorro and western part of the Fort Sumner 1° x 2° quadrangles, central New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-1465-A, 12 p. pamphlet, 1 sheet, scale 1:250,000. #6930 Personius, S.F., Machette, M.N., and Kelson, K.I., 1999, Quaternary faults in the Albuquerque area—An update, in Pazzaglia, F.J., and Lucas, S.G., eds., Albuquerque geology: New Mexico Geological Society 50th Annual Field Conference, Guidebook, September 22–25, p. 189–200. #7473 Read, A.S., Cather, S.M., Chamberlin, R.M., Connell, S.D., Hook, S.C., and Karlstrom, K.E., 2007, Preliminary geologic map of the Ladron Peak quadrangle, Socorro County, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-File Geologic Map 142, scale 1:24,000. #1186 Russell, L.R., and Snelson, S., 1994, Structure and tectonics of the Albuquerque basin segment of the Rio Grande rift—Insights from reflection seismic data, in Keller, G.R., and Cather, S.M., eds., Basins of the Rio Grande rift—Structure, stratigraphy, and tectonic setting: Geological Society of America Special Paper 291, p. 83–112.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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Intrabasin faults on the Llano de Albuquerque (Class A) No. 2121

Last Review Date: 2016-05-24

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Jochems, A.P., and Personius, S.F., compilers, 2016, Fault number 2121, Intrabasin faults on the Llano de Albuquerque, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:20 AM.**

Synopsis	These faults are mostly expressed by short faults that offset the early Pleistocene Llano de Albuquerque geomorphic surface. They are collected together as a group for the express purpose of description. Most of these intrabasin faults are partly to nearly completely covered by eolian sand, but on air photographs these features are marked by linear scarps, aligned drainages, and in some cases aligned ephemeral ponds. Quaternary displacement is unknown for most of these faults, but a few have scarps up to 3–12 m high. Some of these faults may be related to volcanic activity, such as those associated with the Wind Mesa and Los Lunas volcanic centers.
Name comments	This group of north-trending normal faults forms a series of horsts and grabens on the Llano de Albuquerque, west of Albuquerque. A thick cover of eolian sand covers most of the Llano de Albuquerque, which has led to varying orientations and configurations of mapped faults in this area (Kelley, 1977 #1106; Kelley and Kudo, 1978 #1307; Machette, 1982 #1401; Machette and McGimsey, 1983 #1024; Hawley and Haase, 1992 #1304; Wong and others, 1995 #1155; Hawley and Whitworth, 1996 #1303; Shroba and others, 2003 #7459; Thompson and others, 2009 #7460). Named faults include several strands of the West Mesa and Cat Mesa [2122] fault zones (Wong and others,

	1995 #1155; Hawley and Whitworth, 1996 #1303), the Atrisco fault (Hawley and Haase, 1992 #1304), and the Lost Horizon and Wind Mesa faults (Connell, 2008 #7454). We exclude all but the Cat Mesa fault [2122] as specific fault names until more detailed mapping and fault studies are conducted.
County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO SOCORRO COUNTY, NEW MEXICO BERNALILLO COUNTY, NEW MEXICO VALENCIA COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault traces compiled from 1:24,000-scale mapping of Love and others (1998 #7457), Maldonado and Atencio (1998 #1777, 1998 #1778), Love (1999 #7456), Maldonado, 2003 (#7453), Rawling (2003 #7458), Shroba and others (2003 #7459), McCraw and others (2006 #7255), and Thompson and others (2009 #7460). Additional traces from unpublished 1:24,000-scale mapping of Isleta 7.5-minute quadrangle by Love and others and 1:50,000-scale mapping of Albuquerque metropolitan area by Connell (2008 #7454). All traces compiled digitally and accurately placed using photogrammetric methods. Original fault traces digitized from Machette and McGimsey (1983 #1024) with supplemental geophysical data from Grauch and Millegan (1998 #1721) and U.S. Geological Survey and SIAL Geosciences Inc. (1997 #1722). The area is covered by thick sequences of eolian sand, so most fault strands are subdued and others may be obscured. <P>
Geologic setting	This group of intrabasin faults forms a broad zone within the Albuquerque-Belen basin of the Rio Grande rift. <P>
Length (km)	101 km.
Average strike	N3°E
Sense of movement	Normal
Dip Direction	E; W

Paleoseismology studies	<P>
Geomorphic expression	These faults are marked by subdued, discontinuously exposed, mostly sand covered scarps on the Llano de Albuquerque. East of El Rincon (an erosional embayment into the Llano), these structures form an anastomosing group of horsts and grabens that are marked by linear scarps, aligned drainages, and aligned ephemeral ponds (Shroba and others, 2003 #7459; Connell, 2008 #7454; Thompson and others, 2009 #7460). Some of the down-to-the-west faults have linear ponds along their bases, apparently caused by damming of the prevailing east-southeast-flowing drainages. Machette and McGimsey (1983 #1024) measured offsets of 3–12 m on some of these faults on the Llano de Albuquerque. Included in this dataset are buried faults delineated from high-resolution aeromagnetic data (U.S. Geological Survey and SIAL Geosciences Inc., 1997 #1722; Grauch and Millegan, 1998 #1721; Grauch, 1999 #7241). Most of these faults are buried only by a thin (less than 10 m) cover of eolian sediment and probably cut deposits and soils associated with Llano de Albuquerque (Shroba and others, 2003 #7459; Thompson and others, 2009 #7460). However, it is possible that some do not cut post-Pliocene strata. <P>
Age of faulted surficial deposits	These faults offset the early Pleistocene Llano de Albuquerque. This diachronous surface overlies deposits spanning the interval from approximately 1.8–0.8 Ma (Connell and others, 2000 #7455; Connell and others, 2013 #7235).
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* Some of these faults offset the early Pleistocene Llano de Albuquerque surface as much as 12 m (Machette and McGimsey, 1983 #1024); these data indicate a recurrent history of faulting that in some cases probably extended at least into the middle Pleistocene following abandonment of the Llano de Albuquerque surface. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr

	Comments: Low slip-rate category assigned based on offsets of 3–12 m of the early Pleistocene (~1.8-0.8 Ma) Llano de Albuquerque (Machette and McGimsey, 1983 #1024; Connell and others, 2013 #7235).
Date and Compiler(s)	2016 Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources Stephen F. Personius, U.S. Geological Survey
References	#7454 Connell, S.D., 2008, Geologic map of the Albuquerque-Rio Rancho metropolitan area and vicinity, Bernalillo and Sandoval Counties, New Mexico: New Mexico Bureau of Geology and Mineral Resources Geologic Map 78, scale 1:50,000. #7455 Connell, S.D., Love, D.W., Maldonado, F., Jackson, P.B., McIntosh, W.C., and Eppes, M.C., 2000, Is the top of the Santa Fe Group diachronous in the Albuquerque Basin? [abs.], in Cole, J.C., ed., Middle Rio Grande basin study—Proceedings of the Fourth Annual Workshop, Albuquerque, New Mexico, February 15–16, 2000: U.S. Geological Survey Open-File Report 00-488, p. 18–20. #7235 Connell, S.D., Smith, G.A., Geissman, J.W., and McIntosh, W.C., 2013, Climatic controls on nonmarine depositional sequences in the Albuquerque Basin, Rio Grande rift, north-central New Mexico, in Hudson, M.R., and Grauch, V.J.S., eds., New perspectives on Rio Grande rift basins—From tectonics to groundwater: Geological Society of America Special Paper 494, p. 383–425, doi:10.1130/2013.2494(15) #7241 Grauch, V.J.S., 1999, Principal features of high resolution aeromagnetic data collected near Albuquerque, New Mexico, in Pazzaglia, F.J., and Lucas, S.G., eds., Albuquerque Geology: New Mexico Geological Society Guidebook 50, p. 115–118. #1721 Grauch, V.J.S., and Millegan, P.S., 1998, Mapping intrabasinal faults from high-resolution aeromagnetic data: The Leading Edge, v. 17, p. 53-55. #1304 Hawley, J.W., and Haase, C.S., compilers, 1992, Hydrogeologic framework of the northern Albuquerque basin: New Mexico Bureau of Mines and Mineral Resources Open-File Report 387, 1 pl., scale 1:100,000. #1303 Hawley, J.W., and Whitworth, T.M., compilers, 1996, Hydrogeology of potential recharge areas for the basin- and valley-fill aquifer systems, and hydrogeochemical modeling of proposed artificial recharge of the upper Santa Fe aquifer, northern Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 402-D, 575 p. #1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls. #1307 Kelley, V.C., and Kudo, A.M., 1978, Volcanoes and related basalts of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Circular 156, 29 p., 2 pls. #7456 Love, D.W., 1999, Geologic map of the Veguita 7.5-minute quadrangle, Valencia and Socorro Counties, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 28, scale 1:24,000. #7457 Love, D.W., Maldonado, F., Hallett, B., Panter, K., Reynolds, C., McIntosh, W., and Dunbar, N., 1998, Geology of the Dalies 7.5-minute quadrangle, Bernalillo and

Valencia Counties, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 21, scale 1:24,000.

#1401 Machette, M.N., 1982, Quaternary and Pliocene faults in the La Jencia and southern part of the Albuquerque-Belen basins, New Mexico—Evidence of fault history from fault-scarp morphology and Quaternary geology, in Grambling, J.A., and Wells, S.G., eds., Albuquerque Country II: New Mexico Geological Society, 33rd Field Conference, November 4-6, 1982, Guidebook, p. 161-169.

#1024 Machette, M.N., and McGimsey, R.G., 1983, Map of Quaternary and Pliocene faults in the Socorro and western part of the Fort Sumner 1° x 2° quadrangles, central New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-1465-A, 12 p. pamphlet, 1 sheet, scale 1:250,000.

#7453 Maldonado, F., 2003, Geologic map of the Rio Puerco quadrangle, Bernalillo and Valencia Counties, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-2397, scale 1:24,000.

#1777 Maldonado, F., and Atencio, A., 1998, Preliminary geologic map of the Wind Mesa quadrangle, Bernalillo County, New Mexico: U.S. Geological Survey Open-File Report 97-740, 1 sheet, scale 1:24,000.

#1778 Maldonado, F., and Atencio, A., 1998, Preliminary geologic map of the Dalies northwest quadrangle, Bernalillo County, New Mexico: U.S. Geological Survey Open-File Report 97-741, 1 sheet, scale 1:24000.

#7255 McCraw, D.J., Love, D.W., and Connell, S.D., 2006, Geologic map of the Abeytas quadrangle, Socorro County, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-File Geologic Map 121, scale 1:24,000.

#7458 Rawling, G.C., 2003, Geologic map of the Belen 7.5-minute quadrangle, Valencia County, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-File Geologic Map 80, scale 1:24,000.

#7459 Shroba, R.R., Thompson, R.A., Schmidt, D.L., Personius, S.F., Maldonado, F., and Brandt, T.R., 2003, Geologic map of the La Mesita Negra SE quadrangle, Bernalillo County, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-2416, scale 1:24,000.

#7460 Thompson, R.A., Shroba, R.R., Menges, C., Schmidt, D.L., Personius, S.F., and Brandt, T.R., 2009, Geologic map of the Volcanoes quadrangle, Bernalillo and Sandoval Counties, New Mexico: U.S. Geological Survey Scientific Investigations Map SIM-3083, scale 1:24,000.

#1722 U.S. Geological Survey, and SIAL Geosciences, Inc., 1997, Description of digital aeromagnetic data collected north and west of Albuquerque, New Mexico: U.S. Geological Survey Open-File Report 97-286, 40 p.

#1155 Wong, I., Kelson, K., Olig, S., Kolbe, T., Hemphill-Haley, M., Bott, J., Green, R., Kanakari, H., Sawyer, J., Silva, W., Stark, C., Haraden, C., Fenton, C., Unruh, J., Gardner, J., Reneau, S., and House, L., 1995, Seismic hazards evaluation of the Los Alamos National Laboratory: Technical report to Los Alamos National Laboratory, Los Alamos, New Mexico, February 24, 1995, 3 volumes, 12 pls., 16 appen.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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Jemez-San Ysidro fault, Calabacillas section (Class A) No. 2029c

Last Review Date: 2015-02-20

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Koning, D.J., Haller, K.M., and Jochems, A.P., compilers, 2015, Fault number 2029c, Jemez-San Ysidro fault, Calabacillas section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:21 AM.**

Synopsis	**General:** The Jemez-San Ysidro fault is a steeply east-dipping normal fault that, in part, forms the active western margin of the Rio Grande rift south of the Valles caldera. The fault is divided into sections on the basis of a 45° change in fault strike at the latitude of Cañones and evidence for young (Holocene) rupture along its southern section. The northern, northeast-striking section of the fault (Jemez section) is aligned with northeast-striking faults within the collapsed center of the Valles caldera and the Embudo fault, and is coincident with the Jemez Lineament. The central fault (San Ysidro section) merges with the southern fault (Calabacillas section) about 7 km south of the town of San Ysidro. **Sections:** This fault has 3 sections. The Jemez-San Ysidro fault consists of a northeast-striking fault (the Jemez fault of Goff and Kron, 1980 #1099), and north-striking faults along the northwestern margin of the Albuquerque basin (the Jemez and San Ysidro faults of Woodward, 1987 #1130). The boundary between the northern (Jemez) and central (San Ysidro) sections is placed at the 45° change in fault strike near Cañones. The boundary between the central and southern (Calabacillas) sections is near Arroyo Piedra Parada, 7 km south of San Ysidro. These sections

	are distinguished primarily on the basis of younger demonstrated displacement on the Calabacillas section, a prominent down-to-the-east normal fault that offsets the west side of the Llano de Albuquerque along the western margin of the Rio Grande rift.
Name comments	**General:** The Jemez-San Ysidro fault extends from the latitude of the Albuquerque Volcanoes north to the southern rim of the Valles caldera near Highway 4. As used herein, the Jemez-San Ysidro fault includes the northeast-striking faults referred to as the Jemez fault zone by Goff and Kron (1980 #1099) and Goff and others (1981 #1182), the north-striking Sierrita fault of Woodward and DuChene (1975 #1131), Aldrich (1986 #1084), and Woodward (1987 #1130); the north-striking San Ysidro fault of Woodward and Ruetschilling (1976 #1133), Hawley and Galusha (1978 #1103), and Woodward (1987 #1130); and the north-striking Calabacillas fault of Bryan and McCann (1937 #1288, fig. 4), Wright (1946 #1427) and Cather and others (1997 #1763). All of these faults are grouped together herein because of lateral continuity (Wong and others, 1995 #1155; Koning and others, 1998 #7375). **Section:** Part of the Calabacillas fault was originally mapped by Bryan and McCann (1937 #1288, fig. 4), and later described in detail by Wright (1946 #1427) in the Volcano Ranch 7.5 minute quadrangle. The fault was mapped and named in the Sky Village SE (now Arroyo de las Calabacillas) quadrangle by Cather and others (1997 #1763). Wright (1946 #1427, p. 426-428), Kelley and others (1976 #1380), and Kelley (1977 #1106) included the Calabacillas fault with the Sand Hill fault zone [2039], which is located 1–2 km to the west. However, detailed mapping indicates that the Calabacillas fault does not intersect the Sand Hill fault zone [2039] at the surface, but rather trends northeastward to the north and southeastward to the south of the exposures described by Wright (1946 #1427). At its northern end, the Calabacillas fault appears to join with the San Ysidro section near Arroyo Piedra Parada (Woodward and Ruetschilling, 1976 #1133; Koning and others, 1998 #7375). Connell (2008 #7454) and Grauch and Connell (2013 #7268) use the name San Ysidro fault for the entire fault zone south of the Rio Jemez, including all of what herein is named the Calabacillas section.
County(s) and State(s)	BERNALILLO COUNTY, NEW MEXICO SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale.

	Comments: The location of the fault is compiled from 1:24,000-scale mapping of the Cerro Conejo (previously Sky Village NE) quadrangle (Koning and others, 1998 #7375), the Arroyo de las Calabacillas (previously Sky Village SE) quadrangle (Cather and others, 1997 #1763), and the Volcanoes (previously Volcano Ranch) quadrangle (Thompson and others, 2009 #7460). The fault location is also evident in high-resolution aeromagnetic data (U.S. Geological Survey and SIAL Geosciences Inc., 1997 #1722; Grauch and Millegan, 1998 #1721) <P>
Geologic setting	The Jemez-San Ysidro fault forms the northwestern margin of the Albuquerque basin, although the amount of Quaternary vertical separation is less than that along other rift-margin faults. Aldrich (1986 #1084) stated that the fault was the western margin of the Rio Grande rift during the Oligocene, and that activity later stepped eastward to the Pajarito fault zone [2008]. Wong and others (1995 #1155) and House and Hartse (1995 #1160) identified seismicity aligned along the northern part of the fault. <P>
Length (km)	This section is 34 km of a total fault length of 92 km.
Average strike	N2°W (for section) versus N14°E (for whole fault)
Sense of movement	Normal
Dip	60° E to near vertical *Comments:* Dip measurement from Wright (1946 #1427, plate 8). McCalpin and others (2011 #7183) depict an exposure of the near-vertical main fault in a trench near the southern end of the fault. <P>
Paleoseismology studies	Site 2029-1. Two trenches were excavated 3 km north of the southern end of the fault (McCalpin and others, 2011 #7183). In the eastern trench, across a 5.3-m-high antithetic scarp, details of faulting are overprinted by stage IV soil carbonate that engulfs 4.5 m of exposed section, which bottoms in the Pliocene–Pleistocene (?) Santa Fe Group. McCalpin and others (2011 #7183) could distinguish five major depositional units, but the section was not sampled for dating. The western 60-m-long trench crosses a 27-m-high down-to-the-east fault scarp. The trench exposes Santa Fe Group only in the bottom of the exposed footwall. The interpretation of four prehistorical surface-faulting earthquakes is derived from observed vertical displacement of correlated buried soils and the six infrared-stimulated luminescence (IRSL) dates that are in correct stratigraphic order, substantiated by two fine-silt thermoluminescence (TL) ages, ranging from 14 ka to 219 ka. The IRSL dates were used to constrain the mean rate

	of secondary-carbonate accumulation in the soils to estimate the timing of the four surface ruptures interpreted at the site. <P>
Geomorphic expression	The Calabacillas fault forms broad, dissected fault scarps across the Llano de Albuquerque and is exposed in upper Santa Fe Group sediments at several locations where it crosses the Ceja del Rio Puerco. The northeast-trending part of the fault zone was mapped by Kelley and others (1976 #1380), Kelley (1977 #1106), Cather and others (1997 #1763), and Koning and others (1998 #7375); this northeast-striking part is marked by scattered displaced pediment remnants across the dissected surface of the Llano de Albuquerque. Wright (1946 #1427) reports 45-m-high scarps on the Llano; McCalpin and others (2011 #7183) describe the broad fault scarps as being 10–30 m high and having surface angles typically less than 5 degrees. <P>
Age of faulted surficial deposits	Kelley (1977 #1106) described minor offsets of pediment remnants on the northeast-trending section of the fault north of the Ceja del Rio Puerco exposures. The ages of these offset deposits are unknown, but they concluded that most are probably early and middle (?) Pleistocene in age. McCalpin and others (2011 #7183) reported displacement of buried soils dated to the middle and late Pleistocene.
Historic earthquake	
Most recent prehistoric deformation	latest Quaternary (<15 ka) *Comments:* Based on trenching near the southern end of the fault, the most recent surface rupture occurred 14 k.y. ago (McCalpin and others, 2011 #7183). This age is assigned to the entire length of the fault, which is supported by the nine post-Llano de Albuquerque fault-scarp-derived colluvial and soil deposits adjacent to this structure described by Machette (1978 #1402) and Machette and others (1997 #1403). <P>
Recurrence interval	9–20 k.y. (<55ka) *Comments:* Based on six infrared-stimulated luminescence (IRSL) dates and one soil calcium-carbonate date, the timing of the most recent four surface-faulting events on the southern part of the fault is 14 ka, 23 ka, 35 ka, and 55 ka (McCalpin and others, 2011 #7183). The last four surface-rupturing earthquakes are not evenly spaced in time and individual recurrence intervals are between 9 k.y. and 20 k.y. McCalpin and others (2011 #7183) suggest that activity on the rift-bounding faults alternates and the east-dipping faults have been more active from the middle

	Pleistocene to present than the west-dipping faults. Soils developed on the colluvial wedges in the Ceja del Rio Puerco exposures also have extensive carbonate development (Machette and others, 1997 #1403), which indicates that a substantial amount of time is recorded in these deposits.
Slip-rate category	Less than 0.2 mm/yr *Comments:* McCalpin and others (2011 #7183) report a long-term vertical-displacement rate of 0.027–0.054 mm/yr based on the 27-m-high scarp on the Llano de Albuquerque surface, assumed to be 0.5–1 Ma. Later work by Connell and others (2013 #7235) indicated that the Llano de Albuquerque surface is 0.8-1.8 Ma, which would decrease these long-term vertical-displacement rates. McCalpin and others (2011 #7183) further report vertical-displacement rates derived from each of the four recent earthquakes, which range from 0.011 to 0.028 mm/yr; although they acknowledge that vertical displacement at this site is likely smaller than that to the north. Displacement on the nearby antithetic fault (5.3 m) is not reported or removed from the vertical displacement referenced above; therefore, the reported vertical-displacement rates include maximum displacement for each event at this site. At a different location, Wright (1946 #1427) described about 45 m of accumulated fault-derived colluvial deposits on the downthrown block. All of these data suggest the Calabacillas section deforms at a rate lower than 0.2 mm/yr.
Date and Compiler(s)	2015 Daniel J. Koning, New Mexico Bureau of Geology & Mineral Resources Kathleen M. Haller, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
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U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

Jemez-San Ysidro fault, Jemez section (Class A) No. 2029a

Last Review Date: 2016-06-26

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Jochems, A.P., Kelson, K.I., and Personius, S.F., compilers, 2016, Fault number 2029a, Jemez-San Ysidro fault, Jemez section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:21 AM.**

Synopsis

General: The Jemez-San Ysidro fault is a steeply east-dipping normal fault that, in part, forms the active western margin of the Rio Grande rift south of the Valles caldera. The fault is divided into sections on the basis of a 45° change in fault strike at the latitude of Cañones and evidence for young (Holocene) rupture along its southern section. The northern, northeast-striking section of the fault (Jemez section) is aligned with northeast-striking faults within the collapsed center of the Valles caldera and the Embudo fault, and is coincident with the Jemez Lineament. The central fault (San Ysidro section) merges with the southern fault (Calabacillas section) about 7 km south of the town of San Ysidro.

Sections: This fault has 3 sections. The Jemez-San Ysidro fault consists of a northeast-striking fault (the Jemez fault of Goff and Kron, 1980 #1099), and north-striking faults along the northwestern margin of the Albuquerque basin (the Jemez and San Ysidro faults of Woodward, 1987 #1130). The boundary between the northern (Jemez) and central (San Ysidro) sections is placed at the 45° change in fault strike near Cañones. The boundary between the central and southern (Calabacillas) sections is near Arroyo Piedra Parada, 7 km south of San Ysidro. These sections are distinguished primarily on the basis of younger demonstrated displacement on the Calabacillas section, a

	prominent down-to-the-east normal fault that offsets the west side of the Llano de Albuquerque along the western margin of the Rio Grande rift.
Name comments	**General:** The Jemez-San Ysidro fault extends from the latitude of the Albuquerque Volcanoes north to the southern rim of the Valles caldera near Highway 4. As used herein, the Jemez-San Ysidro fault includes the northeast-striking faults referred to as the Jemez fault zone by Goff and Kron (1980 #1099) and Goff and others (1981 #1182), the north-striking Sierrita fault of Woodward and DuChene (1975 #1131), Aldrich (1986 #1084), and Woodward (1987 #1130); the north-striking San Ysidro fault of Woodward and Ruetschilling (1976 #1133), Hawley and Galusha (1978 #1103), and Woodward (1987 #1130); and the north-striking Calabacillas fault of Bryan and McCann (1937 #1288, fig. 4), Wright (1946 #1427) and Cather and others (1997 #1763). All of these faults are grouped together herein because of lateral continuity (Wong and others, 1995 #1155; Koning and others, 1998 #7375). **Section:** This part of the Jemez-San Ysidro fault was named the Jemez section by Wong and others (1995 #1155). The section extends from Highway 4 near Jemez Falls in the Jemez Mountains, southwest to Crow Springs, about 5 km west of Cañones. Smith (2004 #7529) connected this fault with the Cañones fault [2003].
County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	SOUTHERN ROCKY MOUNTAINS COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Detailed geologic maps are available at a scale of 1:24,000 along the entire Jemez fault (Woodward and others, 1977 #1132), which was originally compiled and synthesized by Woodward (1987 #1130). More recent 1:24,000-scale maps include those of Osburn and others (2002 #7528) and Kelley and others (2003 #7527). Maps of selected parts of the fault are given by Goff and Kron (1980 #1099) at a scale of 1:12,000, and by Goff and Shevenell (1987 #1476) at a scale of 1:66,667. <P>
Geologic setting	The Jemez-San Ysidro fault forms the northwestern margin of the Albuquerque basin, although the amount of Quaternary vertical separation is less than that along other rift-margin faults. Aldrich (1986 #1084) stated that the fault was the western margin of the Rio Grande rift during the Oligocene, and that activity later stepped eastward to

	the Pajarito fault zone [2008]. Wong and others (1995 #1155) and House and Hartse (1995 #1160) identified seismicity aligned along the northern part of the fault. <P>
Length (km)	This section is 28 km of a total fault length of 92 km.
Average strike	N41°E (for section) versus N14°E (for whole fault)
Sense of movement	Normal
Dip Direction	V *Comments:* The Jemez fault appears to be near vertical at the surface and in the shallow subsurface based on the relatively straight traces across rugged topography. Microseismicity in the vicinity of the Jemez fault appears to be aligned along a near-vertical zone, with a slight westerly dip (L. House, unpublished data, 1993). However, as a rift-margin fault, the Jemez fault probably dips to the east (Woodward and Ruetschilling, 1976 #1133). Wong and others (1995 #1155) considered dip values of 80° W, 90°, and 80° E, without a preferred dip to constrain the fault's geometry for seismic source characterization. <P>
Paleoseismology studies	<P>
Geomorphic expression	The Jemez section is marked by a prominent southeast-facing scarp across Virgin Mesa, which is underlain by the 1.2–1.3 Ma Tshirege Member of the Bandelier Tuff. Goff and Shevenell (1987 #1476) note a 15-m-high fault scarp on older travertine deposits near Soda Dam. <P>
Age of faulted surficial deposits	The youngest faulted bedrock is the 1.2–1.3 Ma Tshirege Member of the Bandelier Tuff. Tafoya (2012 #7530) obtained U-series ages of 210 ka and younger for calcite growth in the Jemez fault. These ages could relate to fault reactivation or infilling of younger sediment.
Historic earthquake	
Most recent prehistoric	undifferentiated Quaternary (<1.6 Ma)

deformation	*Comments:* The timing of the most-recent event is unknown. Prominent geomorphic expression across Virgin Mesa, displaced upper Bandelier Tuff suggest Quaternary deformation (Wong and others, 1995 #1155). Tafoya's (2012 #7530) U-series ages (<210 ka) on calcite growth in the Jemez fault allow for the possibility of middle or late Quaternary activity. Alternatively, the calcite growth may reflect younger geomorphic phenomena associated with fluvial deposition and incision. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Assigned slip rate category based on 12 m of separation of 1.2–1.3 Ma Tshirege Member of the Bandelier Tuff along the Jemez fault (Woodward, 1987 #1130) and 50 m of separation of the same unit along the fault reported by Goff and Shevenell (1987 #1476) and Goff and others (1989 #1098).
Date and Compiler(s)	2016 Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources Keith I. Kelson, William Lettis & Associates, Inc. Stephen F. Personius, U.S. Geological Survey
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#1131 Woodward, L.A., and DuChene, H.R., 1975, Geometry of the Sierrita fault and its bearing on tectonic development of the Rio Grande rift, New

	Mexico: Geology, v. 3, p. 114–116. #1133 Woodward, L.A., and Ruetschilling, R.L., 1976, Geology of San Ysidro quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Geologic Map 37, 1 sheet, scale 1:24,000. #1132 Woodward, L.A., DuChene, H.R., and Martinez, R., 1977, Geology of Gilman quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Geologic Map 45, scale 1:24,000. #1427 Wright, H.E., Jr., 1946, Tertiary and Quaternary geology of the lower Rio Puerco area, New Mexico: Geological Society of America Bulletin, v. 57, p. 383-456.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

Jemez-San Ysidro fault, San Ysidro section (Class A) No. 2029b

Last Review Date: 2015-02-20

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Kelson, K.I., Personius, S.F., Haller, K.M., Koning, D.J., and Jochems, A.P., compilers, 2015, Fault number 2029b, Jemez-San Ysidro fault, San Ysidro section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:21 AM.**

Synopsis

General: The Jemez-San Ysidro fault is a steeply east-dipping normal fault that, in part, forms the active western margin of the Rio Grande rift south of the Valles caldera. The fault is divided into sections on the basis of a 45° change in fault strike at the latitude of Cañones and evidence for young (Holocene) rupture along its southern section. The northern, northeast-striking section of the fault (Jemez section) is aligned with northeast-striking faults within the collapsed center of the Valles caldera and the Embudo fault, and is coincident with the Jemez Lineament. The central fault (San Ysidro section) merges with the southern fault (Calabacillas section) about 7 km south of the town of San Ysidro.

Sections: This fault has 3 sections. The Jemez-San Ysidro fault consists of a northeast-striking fault (the Jemez fault of Goff and Kron, 1980 #1099), and north-striking faults along the northwestern margin of the Albuquerque basin (the Jemez and San Ysidro faults of Woodward, 1987 #1130). The boundary between the northern (Jemez) and central (San Ysidro) sections is placed at the 45° change in fault strike near Cañones. The boundary between the central and southern (Calabacillas) sections is near Arroyo Piedra Parada, 7 km south of San Ysidro. These sections

	are distinguished primarily on the basis of younger demonstrated displacement on the Calabacillas section, a prominent down-to-the-east normal fault that offsets the west side of the Llano de Albuquerque along the western margin of the Rio Grande rift.
Name comments	**General:** The Jemez-San Ysidro fault extends from the latitude of the Albuquerque Volcanoes north to the southern rim of the Valles caldera near Highway 4. As used herein, the Jemez-San Ysidro fault includes the northeast-striking faults referred to as the Jemez fault zone by Goff and Kron (1980 #1099) and Goff and others (1981 #1182), the north-striking Sierrita fault of Woodward and DuChene (1975 #1131), Aldrich (1986 #1084), and Woodward (1987 #1130); the north-striking San Ysidro fault of Woodward and Ruetschilling (1976 #1133), Hawley and Galusha (1978 #1103), and Woodward (1987 #1130); and the north-striking Calabacillas fault of Bryan and McCann (1937 #1288, fig. 4), Wright (1946 #1427) and Cather and others (1997 #1763). All of these faults are grouped together herein because of lateral continuity (Wong and others, 1995 #1155; Koning and others, 1998 #7375). **Section:** This part of the Jemez-San Ysidro fault was named the San Ysidro section by Wong and others (1995 #1155). The section extends from Crow Springs, about 5 km west of Cañones on the north to near Arroyo Piedra Parada, 7 km south of San Ysidro, where it joins with the Calabacillas section (e.g., Kelley, 1977 #1106; correlation implied by fault name convention of Koning and others, 1998 #7375; Connell, 2008 #7454).
County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE SOUTHERN ROCKY MOUNTAINS COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Detailed geologic maps at a scale of 1:24,000 are available along the entire fault trace (Woodward and Ruetschilling, 1976 #1133; 1977 #1132), which are compiled and synthesized by Woodward (1987 #1130). Formento-Trigilio (1997 #1377) and Formento-Trigilio and others (1998 #7249) mapped Quaternary deposits and faults near Jemez Pueblo and San Ysidro at 1:24,000 scale. Additional detailed mapping of parts of the fault zone can be found in Koning and others (1998 #7375), Minor and Hudson (2006 #7246), and Caine and Minor (2009 #7244). <P>

Geologic setting	The Jemez-San Ysidro fault forms the northwestern margin of the Albuquerque basin, although the amount of Quaternary vertical separation is less than that along other rift-margin faults. Aldrich (1986 #1084) stated that the fault was the western margin of the Rio Grande rift during the Oligocene, and that activity later stepped eastward to the Pajarito fault zone [2008]. Wong and others (1995 #1155) and House and Hartse (1995 #1160) identified seismicity aligned along the northern part of the fault. <P>
Length (km)	This section is 34 km of a total fault length of 92 km.
Average strike	N2°W (for section) versus N14°E (for whole fault)
Sense of movement	Normal *Comments:* Woodward and DuChene (1975 #1131) characterize movement along the fault as dominantly dip-slip with a minor right-slip component. Down-to-the-east normal displacement is consistent with the occurrence of Tertiary rift-fill sediments (Zia Sand Formation) on the east faulted against Precambrian rocks on the west (Woodward, 1987 #1130). <P>
Dip	58°–70° E. *Comments:* Hudson and others (2008 #7245) report the fault dips eastward at 58° to 70° based on magnetic susceptibility studies. Caine and Minor (2009 #7244) report variable oblique slip along strike based on slickenline data; the variation is controlled by the geometry of the fault, which is interpreted to have an average dip of 66° to the east (Caine and Minor, 2009 #7244). Advances in interpreting fault dip from aeromagnetic expression will improve the fault's three-dimensional geometry in the future. <P>
Paleoseismology studies	<P>
Geomorphic expression	Moderate geomorphic expression in bedrock is apparent on aerial photography, as a result of juxtaposition of different rock types and differential erosion. Short fault scarps and fault exposures in middle and late Pleistocene alluvial deposits have been mapped on several strands of the San Ysidro section near Jemez Pueblo and San Ysidro near the southern end of the fault (Formento-Trigilio and Pazzaglia, 1996 #1295; Formento-Trigilio, 1997 #1377;

	Formento-Trigilio and others, 1998 #7249). They measured offsets of 2–11 m on middle Pleistocene alluvial deposits along several strands of the fault. The numerous subparallel faults identified from high-resolution aeromagnetic data (Grauch and Hudson, 2007 #7243) are not included because of lack of reported recognized surface expression. <P>
Age of faulted surficial deposits	The youngest faulted bedrock mapped along the San Ysidro section is the Miocene Zia Sand Formation (Woodward and Ruetschilling, 1976 #1133; 1987 #1130). Formento-Trigilio and Pazzaglia (1996 #1295), Formento-Trigilio (1997 #1377), and Formento-Trigilio and others (1998 #7294) map and describe fault scarps on fluvial and alluvial-fan deposits in the Jemez River drainage. The clearest evidence of faulting is found in deposits that contain the Lava Creek B ash; these sediments were deposited about 620 ka (Izett and Wilcox, 1982 #1708; Sarna-Wojcicki and others, 1987 #1707). Formento-Trigilio and Pazzaglia (1996 #1295) and Formento-Trigilio (1997 #1377) also described probable offset of a 100–200 ka terrace strath; some offset deposits along the San Ysidro section may be late Pleistocene in age.
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* The timing of the most-recent event is unknown. Formento-Trigilio and Pazzaglia (1996 #1295) and Formento-Trigilio (1997 #1377) found offsets in 620-ka alluvial deposits, and probable faulting of a middle- to late-Pleistocene (100–200 ka) fluvial terrace. These relations indicate that the San Ysidro section has been active in middle and probably late Pleistocene time. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Formento-Trigilio and Pazzaglia (1996 #1295) and Formento-Trigilio (1997 #1377) measured offsets of as much as 6–11 m on several strands of the San Ysidro section in alluvial deposits containing the 620 ka Lava Creek B ash; these data support a low long-term slip rate.

Date and Compiler(s)	2015 Keith I. Kelson, William Lettis & Associates, Inc. Stephen F. Personius, U.S. Geological Survey Kathleen M. Haller, U.S. Geological Survey Daniel J. Koning, New Mexico Bureau of Geology & Mineral Resources Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
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#1130 Woodward, L.A., 1987, Geology and mineral resources of Sierra Nacimiento and vicinity, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 42, 84 p., 1 pl., scale 1:100,000.

#1131 Woodward, L.A., and DuChene, H.R., 1975, Geometry of the Sierrita fault and its bearing on tectonic development of the Rio Grande rift, New Mexico: Geology, v. 3, p. 114–116.

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	1:24,000. #1132 Woodward, L.A., DuChene, H.R., and Martinez, R., 1977, Geology of Gilman quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Geologic Map 45, scale 1:24,000. #1427 Wright, H.E., Jr., 1946, Tertiary and Quaternary geology of the lower Rio Puerco area, New Mexico: Geological Society of America Bulletin, v. 57, p. 383-456.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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Mesa Prieta faults (Class A) No. 1985

Last Review Date: 2016-01-01

citation for this record: Jochems, A.P., compiler, 2016, Fault number 1985, Mesa Prieta faults, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:22 AM.

Synopsis	
Name comments	
County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* <P>
Geologic setting	<P>
Length (km)	12 km.

Average strike	
Sense of movement	Normal
Dip Direction	NW; SE
Paleoseismology studies	<P>
Geomorphic expression	<P>
Age of faulted surficial deposits	
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr
Date and Compiler(s)	2016 Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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Nacimiento fault, northern section (Class A) No. 2002a

Last Review Date: 2015-12-14

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Kelson, K.I., Jochems, A.P., and Personius, S.F., compilers, 2015, Fault number 2002a, Nacimiento fault, northern section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:22 AM.**

Synopsis

General: The Nacimiento fault is an east-dipping fault bordering the Nacimiento uplift, an 80-km-long, 10- to 16-km-wide uplift related to Laramide deformation. The fault merges with the Gallina fault to the north, and dies out to the south into a broad anticline. The relatively high level of contemporary microseismicity within the Sierra Nacimiento may be related to deformation in the hanging wall of the fault. Detailed mapping along the southern part of the fault shows several short normal faults with both down-to-the-east and down-to-the-west displacements in Quaternary deposits. Down-to-the-east displacements may indicate normal reactivation of the Nacimiento reverse fault in the late Quaternary.

Sections: This fault has 2 sections. Woodward (1987 #1130) mapped the Nacimiento and Pajarito faults along the western margin of the Sierra Nacimiento. He noted the lack of continuity between these faults in the vicinity of San Miguel Canyon (section boundary), about 3 km southeast of the village of San Miguel. North of San Miguel Canyon, the fault generally has a lower dip and is a thrust fault, whereas south of San Miguel Canyon the fault is a high-angle reverse fault. Wong and others (1995 #1155) considered potential fault-rupture scenarios that included

	rupture on either a northern section or a southern section, and on both sections together. These sections are considered separately here.
Name comments	**General:** The Nacimiento fault extends from Red Mesa, 7 km west of San Ysidro on the south, to the northern end of Sierra Nacimiento, 7 km northeast of Regina. The Nacimiento fault forms the western margin of the Laramide Nacimiento uplift. As used herein, the Nacimiento fault includes the Nacimiento and Pajarito faults of Woodward (1987 #1130), to avoid confusion with the Pajarito fault [2008] along the western margin of the Rio Grande rift near Los Alamos. **Section:** This part of the Nacimiento fault was defined as the northern section by Wong and others (1995 #1155). The northern section extends from San Miguel Canyon about 3 km southeast of the village of San Miguel to the northern end of Sierra Nacimiento, 7 km northeast of Regina.
County(s) and State(s)	RIO ARRIBA COUNTY, NEW MEXICO SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Detailed geologic maps at a scale of 1:24,000 are available along the entire fault trace; 1:24,000 maps covering the northern section are those of Woodward and others (1972 #7292; 1973 #7293) and Merrick and Woodward (1982 #7291). These maps are compiled and synthesized by Woodward (1987 #1130). The location of the fault was digitized at 1:24,000 scale using photogrammetry to accurately map its trace from these maps. The fault was also mapped by Renick (1931 #1140) at a scale of 1:125,000 and by Wood and Northrop (1946 #1143) at a scale of about 1:95,000. <P>
Geologic setting	The Nacimiento fault is high-angle and over much of its geologic history a west-vergent reverse fault. The Nacimiento uplift is a north-south elongated structural block that lies west of the Jemez Mountains and forms the eastern margin of the San Juan Basin of the Colorado Plateau. Structural relief of the uplift formed during Laramide deformation, with shortening taking place via folding and reverse movement along the Nacimiento fault. The fault is west of the western margin of the Rio Grande rift. Quaternary normal faulting near Arroyo Peñasco

	documented by Formento-Trigilio and Pazzaglia (1996 #1295), Formento-Trigilio (1997 #1377), and Formento-Trigilio and Pazzaglia (1998 #2847) may indicate normal reactivation of the Nacimiento reverse fault. The relatively high level of contemporary microseismicity within the Sierra Nacimiento supports the interpretation of Quaternary deformation in the hanging wall of the fault (Wong and others, 1995 #1155; House and Hartse, 1995 #1160). <P>
Length (km)	This section is 36 km of a total fault length of 82 km.
Average strike	N3°E (for section) versus N1°W (for whole fault)
Sense of movement	Normal *Comments:* West-vergent thrusting occurred during Laramide deformation. Sense of movement associated with contemporary microseismicity is unknown, but normal backslip may be likely in the present extensional regime. <P>
Dip	45°–60° E. *Comments:* Bedrock exposures of the fault noted by Woodward (1987 #1130) provide near-surface data on fault dip. Woodward (1987 #1130) speculates that the fault steepens with depth, although there are no published deep structural data for the fault. <P>
Paleoseismology studies	<P>
Geomorphic expression	Prominent west-facing range front of the Sierra Nacimiento is coincident with the Nacimiento fault. Baltz (1967 #1167) did not find geomorphic evidence of late Quaternary movement. Formento-Trigilio and Pazzaglia (1998 #2847) described low to moderate scarps on middle to late Pleistocene terrace and pediment-fan surfaces along the southern section <P>
Age of faulted surficial deposits	Youngest faulted bedrock is Cretaceous in age, although there are little or no data on the presence or absence of displaced late Quaternary deposits along the northern section. Manley and others (1987 #1119) map undisplaced Quaternary gravel across the fault trace at Rito de los Pinos, about 10 km northeast of the town of Cuba.

Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Timing of most-recent event on northern section unknown. Prominent geomorphic expression along the range front and possible association with contemporary microseismicity suggest late Quaternary activity (Wong and others, 1995 #1155; House and Hartse, 1995 #1160). <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category assigned based on the lack of evidence for Quaternary displacement along the northern section.
Date and Compiler(s)	2015 Keith I. Kelson, William Lettis & Associates, Inc. Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources Stephen F. Personius, U.S. Geological Survey
References	#1167 Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous and Tertiary rocks east-central San Juan Basin New Mexico: U.S. Geological Survey Professional Paper 552, 99 p., 1 pl., scale 1:377,000. #1377 Formento-Trigilio, M.L., 1997, The tectonic geomorphology and long-term landscape evolution of the southern Sierra Nacimiento, northern New Mexico: Albuquerque, University of New Mexico, unpublished M.S. thesis, 201 p., 1 pl., scale 1:24,000. #1295 Formento-Trigilio, M.L., and Pazzaglia, F.J., 1996, Quaternary stratigraphy, tectonic geomorphology and long-term landscape evolution of the southern Sierra Nacimiento, in Goff, F., Kues, B.S., Rogers, M.A., McFadden, L.D., and Gardner, J.N., eds., The Jemez Mountains region: New Mexico Geological Society, 47th Field Conference, September 25-28, 1996, Guidebook, p. 335-345. #2847 Formento-Trigilio, M.L., and Pazzaglia, F.J., 1998, Tectonic geomorphology of the Sierra Nacimiento—Traditional and new techniques in assessing long-term landscape evolution in the southern Rocky Mountains: Journal of Geology, v. 106, p. 433-453. #1160 House, L., and Hartse, H., 1995, Seismicity and faults in northern New Mexico, in Bauer, P.W., Kues, B.S., Dunbar, N.W., Karlstrom, K.E., and Harrison, B.,

eds., Geology of the Santa Fe region, New Mexico: New Mexico Geological Society, 46th Field Conference, September 27-30, 1995, Guidebook, p. 135–137.

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#6930 Personius, S.F., Machette, M.N., and Kelson, K.I., 1999, Quaternary faults in the Albuquerque area—An update, in Pazzaglia, F.J., and Lucas, S.G., eds., Albuquerque geology: New Mexico Geological Society 50th Annual Field Conference, Guidebook, September 22–25, p. 189–200.

#1140 Renick, B.C., 1931, Geology and ground-water resources of western Sandoval County, New Mexico: U.S. Geological Survey Water-Supply Paper 620, 117 p., 10 pls.

#1155 Wong, I., Kelson, K., Olig, S., Kolbe, T., Hemphill-Haley, M., Bott, J., Green, R., Kanakari, H., Sawyer, J., Silva, W., Stark, C., Haraden, C., Fenton, C., Unruh, J., Gardner, J., Reneau, S., and House, L., 1995, Seismic hazards evaluation of the Los Alamos National Laboratory: Technical report to Los Alamos National Laboratory, Los Alamos, New Mexico, February 24, 1995, 3 volumes, 12 pls., 16 appen.

#1143 Wood, G.H., Jr., and Northrop, S.A., 1946, Geology of the Nacimiento Mountains, San Pedro Mountain, and adjacent plateaus in parts of Sandoval and Rio Arriba Counties, New Mexico: U.S. Geological Survey Oil and Gas Investigations Map 57, scale 1:95,000.

#1130 Woodward, L.A., 1987, Geology and mineral resources of Sierra Nacimiento and vicinity, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 42, 84 p., 1 pl., scale 1:100,000.

#7293 Woodward, L.A., Anderson, J.B., Kaufman, W.H., and Reed, R.K., 1973, Geologic map and sections of San Pablo quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Geologic Map 26, scale 1:24,000.

#7292 Woodward, L.A., McLelland, D., and Kaufman, W.H., 1972, Geologic map of Cuba quadrangle: New Mexico Bureau of Mines and Mineral Resources Geologic Map 25, scale 1:24,000.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

Nacimiento fault, southern section (Class A) No. 2002b

Last Review Date: 2015-12-14

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Kelson, K.I., Jochems, A.P., and Personius, S.F., compilers, 2015, Fault number 2002b, Nacimiento fault, southern section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:23 AM.**

Synopsis

General: The Nacimiento fault is an east-dipping fault bordering the Nacimiento uplift, an 80-km-long, 10- to 16-km-wide uplift related to Laramide deformation. The fault merges with the Gallina fault to the north, and dies out to the south into a broad anticline. The relatively high level of contemporary microseismicity within the Sierra Nacimiento may be related to deformation in the hanging wall of the fault. Detailed mapping along the southern part of the fault shows several short normal faults with both down-to-the-east and down-to-the-west displacements in Quaternary deposits. Down-to-the-east displacements may indicate normal reactivation of the Nacimiento reverse fault in the late Quaternary.

Sections: This fault has 2 sections. Woodward (1987 #1130) mapped the Nacimiento and Pajarito faults along the western margin of the Sierra Nacimiento. He noted the lack of continuity between these faults in the vicinity of San Miguel Canyon (section boundary), about 3 km southeast of the village of San Miguel. North of San Miguel Canyon, the fault generally has a lower dip and is a thrust fault, whereas south of San Miguel Canyon the fault is a high-angle reverse fault. Wong and others (1995 #1155) considered potential fault-rupture scenarios that included

	rupture on either a northern section or a southern section, and on both sections together. These sections are considered separately here.
Name comments	**General:** The Nacimiento fault extends from Red Mesa, 7 km west of San Ysidro on the south, to the northern end of Sierra Nacimiento, 7 km northeast of Regina. The Nacimiento fault forms the western margin of the Laramide Nacimiento uplift. As used herein, the Nacimiento fault includes the Nacimiento and Pajarito faults of Woodward (1987 #1130), to avoid confusion with the Pajarito fault [2008] along the western margin of the Rio Grande rift near Los Alamos. **Section:** This part of the Nacimiento fault was defined as the southern section by Wong and others (1995 #1155). The southern section extends from U.S. Highway 44 about 7 km west of the village of San Ysidro, northward to San Miguel Canyon about 3 km southeast of the village of San Miguel.
County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Detailed geologic maps at a scale of 1:24,000 are available along the entire fault trace; 1:24,000 maps covering the southern section include those of Woodward and Schumacher (1973 #7295) and Woodward and others (1973 #7293; 1977 #1132). These maps are compiled and synthesized by Woodward (1987 #1130). In addition, detailed mapping of Quaternary deposits at 1:24,000 scale at the southern end of the fault has been completed by Formento-Trigilio and Pazzaglia (1996 #1295), Formento-Trigilio (1997 #1377), and Formento-Trigilio and others (1998 #7294). The location of the fault was digitized at 1:24,000 scale using photogrammetry to accurately map its trace from these maps. The fault also was mapped by Renick(1931 #1140) at a scale of 1:125,000, by Wood and Northrop (1946 #1143) at a scale of about 1:95,000, and by Baltz (1967 #1167) at a scale of 1:63,360. <P>
Geologic setting	The Nacimiento fault is high-angle and over much of its geologic history a west-vergent reverse fault. The Nacimiento uplift is a north-south elongated structural block that lies west of the Jemez Mountains and forms the

	eastern margin of the San Juan Basin of the Colorado Plateau. Structural relief of the uplift formed during Laramide deformation, with shortening taking place via folding and reverse movement along the Nacimiento fault. The fault is west of the western margin of the Rio Grande rift. Quaternary normal faulting near Arroyo Peñasco documented by Formento-Trigilio and Pazzaglia (1996 #1295), Formento-Trigilio (1997 #1377), and Formento-Trigilio and Pazzaglia (1998 #2847) may indicate normal reactivation of the Nacimiento reverse fault. The relatively high level of contemporary microseismicity within the Sierra Nacimiento supports the interpretation of Quaternary deformation in the hanging wall of the fault (Wong and others, 1995 #1155; House and Hartse, 1995 #1160). <P>
Length (km)	This section is 45 km of a total fault length of 82 km.
Average strike	N4°W (for section) versus N1°W (for whole fault)
Sense of movement	Normal *Comments:* West-vergent reverse faulting occurred during Laramide deformation on the Nacimiento fault (Woodward, 1987 #1130). Sense of movement associated with contemporary microseismicity is unknown, but down-to-the-east and down-to-the-west Quaternary normal faults have been mapped by Formento-Trigilio and Pazzaglia (1996 #1295), Formento-Trigilio (1997 #1377), and Koning and others (1998 #7375) near Arroyo Peñasco and Cañada de las Milpas at the southern end of the fault. The down-to-the-west normal faults are in the footwall of the Nacimiento reverse fault, but the down-to-the-east Quaternary movement on one fault strand may be interpreted as normal backslip on a splay of the reverse fault (Formento-Trigilio and Pazzaglia, 1996 #1295; Formento-Trigilio, 1997 #1377). <P>
Dip	75°–90° E. *Comments:* Bedrock exposures of the fault noted by Woodward (1987 #1130) provide near-surface data on fault dip. Although exposures of the main trace of the Laramide Nacimiento fault clearly show steep east dips, west dipping synthetic and antithetic faults are locally present (Woodward, 1987 #1130). Formento-Trigilio and Pazzaglia (1996 #1295) and Formento-Trigilio (1997 #1377) mapped several normal faults in Quaternary deposits with both east and west dips near Arroyo Peñasco at the southern end of the Nacimiento fault. Woodward (1987 #1130) speculated that the fault steepens with depth, although no published subsurface structural data are available to confirm this interpretation. <P>

Paleoseismology studies	Formento-Trigilio and Pazzaglia (1996 #1295), Formento-Trigilio (1997 #1377), and Formento-Trigilio and others (1998 #7294) mapped Quaternary deposits and faults in detail near Arroyo Peñasco at the southern end of the Nacimiento fault. Most of the Quaternary faults mapped by these workers dip west, opposite to the dip of the bedrock fault mapped by Woodward (1987 #1130) in the area. These faults are as much as 2 km long and are marked by scarps up to 17 m high, although some of this apparent displacement may be related to landsliding in the underlying Triassic shale bedrock. Down-to-the-east Quaternary displacement of 4.2 m of travertine-cemented alluvium on one fault strand on the north rim of Arroyo Peñasco may either represent normal reactivation on a trace of the Nacimiento reverse fault mapped by Woodward (1987 #1130), or is an antithetic splay to the down-to-the-west faults mapped further east by Formento-Trigilio and Pazzaglia (1996 #1295) and Formento-Trigilio (1997 #1377). <P>
Geomorphic expression	The prominent west-facing range front of the Sierra Nacimiento is coincident with the Nacimiento fault. Baltz (1967 #1167) did not identify geomorphic evidence of late Quaternary activity, but Formento-Trigilio and Pazzaglia (1996 #1295) and Formento-Trigilio (1997 #1377) discuss evidence of multiple fault strands with Quaternary displacement along the southern end of the Sierra Nacimiento near Arroyo Peñasco. Scarps on middle to late Pleistocene terrace and pediment-fan surfaces in this area are up to 4.2 m high (Formento-Trigilio and Pazzaglia, 1998 #2847). <P>
Age of faulted surficial deposits	Although the youngest faulted bedrock mapped along the Nacimiento fault is Cretaceous in age (Woodward, 1987 #1130), Formento-Trigilio and Pazzaglia (1996 #1295) and Formento-Trigilio (1997 #1377) map fault scarps and infer displacements from geomorphic data in late Pleistocene alluvial deposits near Arroyo Peñasco at the southern end of the Nacimiento fault. Uranium-series ages on faulted, travertine-cemented alluvium indicate the faulted alluvium was deposited between about 270 ka and about 60 ka (Formento-Trigilio, 1997 #1377).
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* Timing of most-recent event is from uranium-series dating of faulted travertine-cemented alluvium by Formento-Trigilio (1997 #1377) that bracket the age of the offset alluvium between about 270 ka and 60 ka. <P>

Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Wong and others (1995 #1155) conservatively estimated a range in slip rate of 0.01 to 0.23 mm/yr for the Nacimiento fault, with a preferred value of 0.02 mm/yr, based on analysis of slip rates on analogous faults in the Rio Grande rift (Formento-Trigilio and Pazzaglia, 1996 #1295; Formento-Trigilio, 1997 #1377). A rate of up to 0.07 mm/yr may be permissible depending on the age of displaced travertine-cemented alluvium (Personius and others, 1999 #6930).
Date and Compiler(s)	2015 Keith I. Kelson, William Lettis & Associates, Inc. Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources Stephen F. Personius, U.S. Geological Survey
References	#1167 Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous and Tertiary rocks east-central San Juan Basin New Mexico: U.S. Geological Survey Professional Paper 552, 99 p., 1 pl., scale 1:377,000. #1377 Formento-Trigilio, M.L., 1997, The tectonic geomorphology and long-term landscape evolution of the southern Sierra Nacimiento, northern New Mexico: Albuquerque, University of New Mexico, unpublished M.S. thesis, 201 p., 1 pl., scale 1:24,000. #1295 Formento-Trigilio, M.L., and Pazzaglia, F.J., 1996, Quaternary stratigraphy, tectonic geomorphology and long-term landscape evolution of the southern Sierra Nacimiento, in Goff, F., Kues, B.S., Rogers, M.A., McFadden, L.D., and Gardner, J.N., eds., The Jemez Mountains region: New Mexico Geological Society, 47th Field Conference, September 25-28, 1996, Guidebook, p. 335-345. #2847 Formento-Trigilio, M.L., and Pazzaglia, F.J., 1998, Tectonic geomorphology of the Sierra Nacimiento—Traditional and new techniques in assessing long-term landscape evolution in the southern Rocky Mountains: Journal of Geology, v. 106, p. 433-453. #7294 Formento-Trigilio, M.L., Toya, C., and Pazzaglia, F.J., 1998, Quaternary geologic map of the San Ysidro quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Geologic Map 18Q, scale 1:24,000 #1160 House, L., and Hartse, H., 1995, Seismicity and faults in northern New Mexico, in Bauer, P.W., Kues, B.S., Dunbar, N.W., Karlstrom, K.E., and Harrison, B., eds., Geology of the Santa Fe region, New Mexico: New Mexico Geological Society, 46th Field Conference, September 27-30, 1995, Guidebook, p. 135–137. #7375 Koning, D.J., Pederson, J., Pazzaglia, F.J., and Cather, S.M., 1998, Geology of the Cerro Conejo (Sky Village NE) 7.5-minute quadrangle, Sandoval County,

New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Geologic Map 45, scale 1:24,000.

#6930 Personius, S.F., Machette, M.N., and Kelson, K.I., 1999, Quaternary faults in the Albuquerque area—An update, in Pazzaglia, F.J., and Lucas, S.G., eds., Albuquerque geology: New Mexico Geological Society 50th Annual Field Conference, Guidebook, September 22–25, p. 189–200.

#1140 Renick, B.C., 1931, Geology and ground-water resources of western Sandoval County, New Mexico: U.S. Geological Survey Water-Supply Paper 620, 117 p., 10 pls.

#1155 Wong, I., Kelson, K., Olig, S., Kolbe, T., Hemphill-Haley, M., Bott, J., Green, R., Kanakari, H., Sawyer, J., Silva, W., Stark, C., Haraden, C., Fenton, C., Unruh, J., Gardner, J., Reneau, S., and House, L., 1995, Seismic hazards evaluation of the Los Alamos National Laboratory: Technical report to Los Alamos National Laboratory, Los Alamos, New Mexico, February 24, 1995, 3 volumes, 12 pls., 16 appen.

#1143 Wood, G.H., Jr., and Northrop, S.A., 1946, Geology of the Nacimiento Mountains, San Pedro Mountain, and adjacent plateaus in parts of Sandoval and Rio Arriba Counties, New Mexico: U.S. Geological Survey Oil and Gas Investigations Map 57, scale 1:95,000.

#1130 Woodward, L.A., 1987, Geology and mineral resources of Sierra Nacimiento and vicinity, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 42, 84 p., 1 pl., scale 1:100,000.

#7293 Woodward, L.A., Anderson, J.B., Kaufman, W.H., and Reed, R.K., 1973, Geologic map and sections of San Pablo quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Geologic Map 26, scale 1:24,000.

#7295 Woodward, L.A., and Schumacher, O.L., 1973, Geologic map and sections of La Ventana quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Geologic Map 28, scale 1:24,000.

#1132 Woodward, L.A., DuChene, H.R., and Martinez, R., 1977, Geology of Gilman quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Geologic Map 45, scale 1:24,000.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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San Felipe fault zone, Algodones section (Class A) No. 2030b

Last Review Date: 2016-06-28

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., Kelson, K.I., and Jochems, A.P., compilers, 2016, Fault number 2030b, San Felipe fault zone, Algodones section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:29 AM.**

Synopsis	**General:** The San Felipe fault zone is a broad zone of normal faults that offset basalts of the San Felipe volcanic field and underlying Santa Fe Group sedimentary rocks. The fault zone is best expressed where individual fault strands offset the volcanic tablelands of Santa Ana Mesa. The fault zone is primarily a graben, centered on the westernmost of two north-trending eruptive centers in the volcanic field. This structure, the San Felipe graben, is bound on the west by the down-to-the-east Luce and Santa Ana faults, and on the east by the down-to-the-west Algodones fault. Most of these faults offset the 2.4–2.6 Ma basalt flows of the San Felipe volcanic field. Average displacements on most faults are 15–30 m, although some of the larger structures, such as the Luce fault, have as much as 90–120 m of vertical displacement. **Sections:** This fault has 2 sections. Wong and others (1995 #1155) used the polarity of faults in the San Felipe fault zone to delineate two sections: down-to-the-east faults that form the western margin of the San Felipe graben (Santa Ana and Luce faults) are included in the Santa Ana section, and down-to-the-west faults that form the eastern margin of the graben (Algodones fault) are include in the Algodones section. They assumed that one of

	these sections is a "master fault" that controls both sections, but they did not have enough subsurface data to support either scenario.
Name comments	**General:** This complex of numerous, generally north-trending normal faults near Santa Ana Mesa was first mapped in detail by Soister (1952 #1418). Kelley (1954 #1222) followed Soister's mapping closely in his compilation, and applied the name San Felipe fault zone to these structures. Later maps by Smith and others (1970 #1125), Kelley (1977 #1106), and Kelley and Kudo (1978 #1307) show similar fault patterns. Kelley (1977 #1106) named many of the more prominent structures in the zone, such as the Santa Ana, Luce, Cocida, and Algodones faults and the San Felipe graben. In their compilation, Wong and others (1995 #1155) used the name "San Felipe fault zone". **Section:** The Algodones section includes the Algodones fault of Kelley (1977 #1106) and numerous smaller displacement down-to-the-west faults that form the east flank of the San Felipe graben. Some strands of the Algodones section of the San Felipe fault zone have been projected southward across the Rio Grande and connected with parts of the Valley View fault (Kelley, 1977 #1106; Wong and others, 1995 #1155), but detailed mapping by Connell (1995 #1291), Connell and others (1995 #1764), and Cather and Connell (1998 #7435) shows that strands of the Valley View fault trend northeasterly at their northern ends and probably do not connect with the San Felipe fault zone.
County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault locations are good where faults cut volcanic rocks, but locations are poor in the less resistant Santa Fe Group rocks. Fault traces are from 1:24,000-scale maps of Cather and Connell (1998 #7435), Connell (1998 #7502), Smith and Kuhle (1998 #1771), Chamberlin and others (1999 #7524), and Personius (2002 #7526). A.P. Jochems used photogrammetric methods to accurately place fault traces in some locations. <P>
Geologic setting	The San Felipe fault zone is located in the western part of the Santo Domingo basin of the Rio Grande rift as defined by Smith and others (2001 #7438). The Santo Domingo basin links the en echelon Albuquerque and Española

	basins, and kinematic and paleostress evidence suggests that the basin functions as a relay that began to narrow in Plio-Pleistocene time (Minor and others, 2013 #7437). The fault zone forms a north-trending graben within the San Felipe volcanic field. Although Wong and others (1995 #1155) conclude that this graben is a minor sub-basin within the Rio Grande rift, the narrowing of the fault zone within the volcanic field indicates that the geometry of the fault zone may be in part controlled by volcanic activity (for example, van Wyk de Vries and Merle, 1996 #1422). <P>
Length (km)	This section is 45 km of a total fault length of 48 km.
Average strike	N7°W (for section) versus N1°E (for whole fault)
Sense of movement	Normal
Dip	64–74° W *Comments:* Dips of 64–74° are reported for west-dipping faults belonging to the Algodones section of the San Felipe fault zone (Connell, 1998 #7502; Personius, 2002 #7526). In addition, Connell (1998 #7502) reported a dip of 77° toward the east along one of the few east-dipping strands in the Algodones section 1.5 km northwest of Canjilon Hill in the Bernalillo 7.5-minute quadrangle <P>
Paleoseismology studies	<P>
Geomorphic expression	The Algodones fault and other faults that cut the basalt flows of the San Felipe volcanic field are well preserved as escarpments covered by basalt talus. Where these structures are located in Santa Fe Group rocks, fault expression is poor. Soister (1952 #1418) and Kelley (1977 #1106) measured average displacements of 15–30 m in basalts on most structures in the San Felipe fault zone, and as much as 90–120 m on larger structures such as the Luce fault in the Santa Ana section. <P>
Age of faulted surficial deposits	Faults in the Algodones section offset the 2.4-2.6 Ma (Bachman and Mehnert, 1978 #1265; Smith and Kuhle, 1998 #1771) basalts of the San Felipe volcanic field and underlying Santa Fe Group sedimentary rocks. Soister (1952 #1418) describes offset of his early Pleistocene Mesita Alta gravel and surface, which overlies San Felipe basalt flows in several places.

Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* No detailed studies of the age of most recent movement have been conducted. However, early Pleistocene gravels are offset locally and 90–120 m of post-San Felipe basalt (2.4-2.6 Ma) displacement has occurred. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Wong and others (1995 #1155) calculated long-term slip rates of 0.01–0.04 mm/yr based on 90–120 m of displacement that has occurred on the Luce fault since deposition of the San Felipe basalt (2.4-2.6 Ma) and similar data. They also concluded that it is likely that some of the major faults within the San Felipe fault zone act as independent rupture segments, but could not rule out the possibility that some faults rupture together.
Date and Compiler(s)	2016 Stephen F. Personius, U.S. Geological Survey Keith I. Kelson, William Lettis & Associates, Inc. Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#1265 Bachman, G.O., and Mehnert, H.H., 1978, New K-Ar dates and the late Pliocene to Holocene geomorphic history of the central Rio Grande region, New Mexico: Geological Society of America Bulletin, v. 89, p. 283-292. #7435 Cather, S.M., and Connell, S.D., 1998, Geologic map of the San Felipe Pueblo quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 19, scale 1:24,000. #1764 Cather, S.M., Connell, S.D., Karlstrom, K.E., Ilg, B., Menne, B., Bauer, P.W., and Andronicus, C., 1996, Geology of the Placitas SE 7.5-minute quadrangle, Sandoval County, central New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Digital Map OF-DM 2, 26 p. pamphlet, 1 sheet, scale 1:24,000. #7524 Chamberlin, R.M., Pazzaglia, F.J., Wegmann, K.W., and Smith, G.A., 1999, Geologic map of the Loma Creston 7.5-minute quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 25, scale 1:24,000. #1291 Connell, S.D., 1995, Quaternary geology and

geomorphology of the Sandia Mountains piedmont, Bernalillo and Sandoval Counties, central New Mexico: Riverside, University of California, unpublished M.S. thesis, 414 p., 3 pls.

#7502 Connell, S.D., 1998, Geology of the Bernalillo quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 16, scale 1:24,000.

#1222 Kelley, V.C., 1954, Tectonic map of a part of the upper Rio Grande area, New Mexico: U.S. Geological Survey Oil and Gas Investigations Map OM-157, 1 sheet, scale 1:190,080.

#1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls.

#1307 Kelley, V.C., and Kudo, A.M., 1978, Volcanoes and related basalts of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Circular 156, 29 p., 2 pls.

#7437 Minor, S.A., Hudson, M.R., Caine, J.S., and Thompson, R.A., 2013, Oblique transfer of extensional strain between basins of the middle Rio Grande rift, New Mexico—Fault kinematic and paleostress constrains, in Hudson, M.R., and Grauch, V.J.S., eds., New perspectives on Rio Grande rift basins: From Tectonics to Groundwater: Geological Society of America Special Paper 494, p. 345–382.

#7526 Personius, S.F., 2002, Geologic map of the Santa Ana Pueblo quadrangle, Sandoval County, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-2405, scale 1:24,000.

#1771 Smith, G.A., and Kuhle, A.J., 1998, Geologic map of the Santo Domingo Southwest quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map OF-DM 26, 1 sheet, scale 1:24,000.

#7438 Smith, G.A., McIntosh, W.C., and Kuhle, A.J., 2001, Sedimentologic and geomorphic evidence for seesaw subsidence of the Santo Domingo accommodation-zone basin, Rio Grande rift, New Mexico: Geological Society of America Bulletin, v. 113, no. 5, p. 561–574.

#1125 Smith, R.L., Bailey, R.A., and Ross, C.S., 1970, Geologic map of the Jemez Mountains, New Mexico: U.S. Geological Survey Miscellaneous Investigations Map I-571, 1 sheet, scale 1:125,000.

#1418 Soister, P.E., 1952, Geology of Santa Ana Mesa and adjoining areas, Sandoval County, New Mexico: Albuquerque, University of New Mexico, unpublished M.S. thesis, 126 p., 2 pls., scale 1:62,500.

#1422 van Wyk de Vries, B., and Merle, O., 1996, The effects of volcanic constructs on rift fault patterns: Geology, v. 24, p. 643-646.

#1155 Wong, I., Kelson, K., Olig, S., Kolbe, T., Hemphill-Haley, M., Bott, J., Green, R., Kanakari, H., Sawyer, J., Silva, W., Stark, C., Haraden, C., Fenton, C., Unruh, J., Gardner, J., Reneau, S., and House, L., 1995, Seismic hazards evaluation of the Los Alamos National Laboratory: Technical report to Los Alamos National Laboratory, Los Alamos, New Mexico, February 24, 1995, 3 volumes, 12 pls., 16 appen.

U.S. Geological Survey - Earthquake Hazards Program

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San Felipe fault zone, Santa Ana section (Class A) No. 2030a

Last Review Date: 2016-06-28

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., Jochems, A.P., and Kelson, K.I., compilers, 2016, Fault number 2030a, San Felipe fault zone, Santa Ana section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:29 AM.**

Synopsis	**General:** The San Felipe fault zone is a broad zone of normal faults that offset basalts of the San Felipe volcanic field and underlying Santa Fe Group sedimentary rocks. The fault zone is best expressed where individual fault strands offset the volcanic tablelands of Santa Ana Mesa. The fault zone is primarily a graben, centered on the westernmost of two north-trending eruptive centers in the volcanic field. This structure, the San Felipe graben, is bound on the west by the down-to-the-east Luce and Santa Ana faults, and on the east by the down-to-the-west Algodones fault. Most of these faults offset the 2.4–2.6 Ma basalt flows of the San Felipe volcanic field. Average displacements on most faults are 15–30 m, although some of the larger structures, such as the Luce fault, have as much as 90–120 m of vertical displacement. **Sections:** This fault has 2 sections. Wong and others (1995 #1155) used the polarity of faults in the San Felipe fault zone to delineate two sections: down-to-the-east faults that form the western margin of the San Felipe graben (Santa Ana and Luce faults) are included in the Santa Ana section, and down-to-the-west faults that form the eastern margin of the graben (Algodones fault) are include in the Algodones section. They assumed that one of

	these sections is a "master fault" that controls both sections, but they did not have enough subsurface data to support either scenario.
Name comments	**General:** This complex of numerous, generally north-trending normal faults near Santa Ana Mesa was first mapped in detail by Soister (1952 #1418). Kelley (1954 #1222) followed Soister's mapping closely in his compilation, and applied the name San Felipe fault zone to these structures. Later maps by Smith and others (1970 #1125), Kelley (1977 #1106), and Kelley and Kudo (1978 #1307) show similar fault patterns. Kelley (1977 #1106) named many of the more prominent structures in the zone, such as the Santa Ana, Luce, Cocida, and Algodones faults and the San Felipe graben. In their compilation, Wong and others (1995 #1155) used the name "San Felipe fault zone". **Section:** The Santa Ana section includes the Santa Ana, Luce, and Cocida faults of Kelley (1977 #1106), the Tamaya fault of Personius (2002 #7526), and numerous smaller displacements, generally down-to-the-east faults that form the west flank of the San Felipe graben. This section also includes an unnamed, west-dipping fault of uncertain origin about 8 km west of the main fault zone (Pazzaglia and others, 1997 #7525).
County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE SOUTHERN ROCKY MOUNTAINS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault locations are good where faults cut volcanic rocks, but locations are poor in the less resistant Santa Fe Group rocks. Fault traces are from 1:24,000-scale maps of Pazzaglia and others (1997 #7525), Connell (1998 #7502), Chamberlin and others (1999 #7524), Personius (2002 #7526), and Kempter and others (2007 #7429). <P>
Geologic setting	The San Felipe fault zone is located in the western part of the Santo Domingo basin of the Rio Grande rift as defined by Smith and others (2001 #7438). The Santo Domingo basin links the en echelon Albuquerque and Española basins, and kinematic and paleostress evidence suggests that the basin functions as a relay that began to narrow in Plio-Pleistocene time (Minor and others, 2013 #7437). The fault zone forms a north-trending graben within the San Felipe volcanic field. Although Wong and others (1995 #1155) conclude that this graben is a minor sub-basin within

	the Rio Grande rift, the narrowing of the fault zone within the volcanic field indicates that the geometry of the fault zone may be in part controlled by volcanic activity (for example, van Wyk de Vries and Merle, 1996 #1422). <P>
Length (km)	This section is 44 km of a total fault length of 48 km.
Average strike	N5°E (for section) versus N1°E (for whole fault)
Sense of movement	Normal
Dip	60°E–90° *Comments:* An exposed section of the Luce fault along highway 44 west of Bernalillo yielded an east dip of 82° (Kelley, 1977 #1106). Connell (1998 #7502) reported east dips of 67–80° on the Luce fault in the Bernalillo 7.5-minute quadrangle, and Chamberlin and others (1999 #7524) reported east to southeast dips of 65–70° for the Cocida fault near Borrego Canyon in the Loma Creston quadrangle. Reported dips for the Santa Ana fault range from 65–80° toward the east or southeast (Chamberlin and others, 1999 #7524). Numerous fault exposures in Santa Fe Group rocks in the Santa Ana Pueblo quadrangle have dips of 45–85°E (Personius, 2002 #7526). <P>
Paleoseismology studies	<P>
Geomorphic expression	The Luce and other faults that cut the basalt flows of the San Felipe volcanic field are well preserved as escarpments covered by basalt talus. The Santa Ana fault and other faults that are only located in Santa Fe Group rocks are poorly expressed, except where they are marked in places by clastic dikes (Soister, 1952 #1418) or strongly cemented zones (Minor and Hudson, 2006 #7246). Soister (1952 #1418) and Kelley (1977 #1106) measured average displacements of 15–30 m in basalts on most structures in the fault zone, and as much as 90–120 m on larger structures such as the Luce fault. <P>
Age of faulted surficial deposits	Faults in the Santa Ana section offset the 2.4-2.6 Ma (Bachman and Mehnert, 1978 #1265; Smith and Kuhle, 1998 #1771) basalts of the San Felipe volcanic field and underlying Santa Fe Group sedimentary rocks. Soister (1952 #1418) describes offset of his early Pleistocene Mesita Alta gravel and surface, which overlies San Felipe basalt flows in several places.

Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* No detailed studies of the age of most recent movement have been conducted. However, 90–120 m of post-San Felipe basalt displacement on some structures in this fault zone indicates a history of recurrent fault movements that probably continued at least into the early Pleistocene. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Wong and others (1995 #1155) estimated slip rates of 0.01–0.04 mm/yr based on 90–120 m of displacement that has occurred on the Luce fault since deposition of the San Felipe basalt (2.4–2.6 Ma) and similar data. They also concluded that it is likely that some of the major faults within the San Felipe fault zone act as independent rupture segments, but could not rule out the possibility that some faults rupture together.
Date and Compiler(s)	2016 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources Keith I. Kelson, William Lettis & Associates, Inc.
References	#1265 Bachman, G.O., and Mehnert, H.H., 1978, New K-Ar dates and the late Pliocene to Holocene geomorphic history of the central Rio Grande region, New Mexico: Geological Society of America Bulletin, v. 89, p. 283-292. #7524 Chamberlin, R.M., Pazzaglia, F.J., Wegmann, K.W., and Smith, G.A., 1999, Geologic map of the Loma Creston 7.5-minute quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 25, scale 1:24,000. #7502 Connell, S.D., 1998, Geology of the Bernalillo quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 16, scale 1:24,000. #1222 Kelley, V.C., 1954, Tectonic map of a part of the upper Rio Grande area, New Mexico: U.S. Geological Survey Oil and Gas Investigations Map OM-157, 1 sheet, scale 1:190,080. #1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls. #1307 Kelley, V.C., and Kudo, A.M., 1978, Volcanoes and related basalts of

Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Circular 156, 29 p., 2 pls.

#7429 Kempter, K., Osburn, G.R., Kelley, S., Rampey, M., Ferguson, C., and Gardner, J., 2007, Preliminary geologic map of the Bear Springs Peak quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-File Geologic Map 74, scale 1:24,000.

#7246 Minor, S.A., and Hudson, M.R., 2006, Regional survey of structural properties and cementation patterns of fault zones in the northern part of the Albuquerque Basin, New Mexico—Implications for ground-water flow: U.S. Geological Survey Professional Paper 1719, 32 p.

#7437 Minor, S.A., Hudson, M.R., Caine, J.S., and Thompson, R.A., 2013, Oblique transfer of extensional strain between basins of the middle Rio Grande rift, New Mexico—Fault kinematic and paleostress constrains, in Hudson, M.R., and Grauch, V.J.S., eds., New perspectives on Rio Grande rift basins: From Tectonics to Groundwater: Geological Society of America Special Paper 494, p. 345–382.

#7525 Pazzaglia, F.J., Pederson, J.L., Garcia, A.F., Koning, D.J., Formento-Trigilio, M.L., and Toya, C., 1997, Geologic map of the Jemez Pueblo 7.5-minute quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 14, scale 1:24,000.

#7526 Personius, S.F., 2002, Geologic map of the Santa Ana Pueblo quadrangle, Sandoval County, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-2405, scale 1:24,000.

#1771 Smith, G.A., and Kuhle, A.J., 1998, Geologic map of the Santo Domingo Southwest quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map OF-DM 26, 1 sheet, scale 1:24,000.

#7438 Smith, G.A., McIntosh, W.C., and Kuhle, A.J., 2001, Sedimentologic and geomorphic evidence for seesaw subsidence of the Santo Domingo accommodation-zone basin, Rio Grande rift, New Mexico: Geological Society of America Bulletin, v. 113, no. 5, p. 561–574.

#1125 Smith, R.L., Bailey, R.A., and Ross, C.S., 1970, Geologic map of the Jemez Mountains, New Mexico: U.S. Geological Survey Miscellaneous Investigations Map I-571, 1 sheet, scale 1:125,000.

#1418 Soister, P.E., 1952, Geology of Santa Ana Mesa and adjoining areas, Sandoval County, New Mexico: Albuquerque, University of New Mexico, unpublished M.S. thesis, 126 p., 2 pls., scale 1:62,500.

#1422 van Wyk de Vries, B., and Merle, O., 1996, The effects of volcanic constructs on rift fault patterns: Geology, v. 24, p. 643-646.

#1155 Wong, I., Kelson, K., Olig, S., Kolbe, T., Hemphill-Haley, M., Bott, J., Green, R., Kanakari, H., Sawyer, J., Silva, W., Stark, C., Haraden, C., Fenton, C., Unruh, J., Gardner, J., Reneau, S., and House, L., 1995, Seismic hazards evaluation of the Los Alamos National Laboratory: Technical report to Los Alamos National Laboratory, Los Alamos, New Mexico, February 24, 1995, 3 volumes, 12 pls., 16 appen.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

Sand Hill fault zone (Class A) No. 2039

Last Review Date: 2016-06-28

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., and Jochems, A.P., compilers, 2016, Fault number 2039, Sand Hill fault zone, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:29 AM.**

Synopsis	The down-to-the-east Sand Hill fault zone extends from about 9 km south of the Sandoval-Bernalillo County line, northward along the Ceja del Rio Puerco to the vicinity of Cañada de las Milpas. Very little is known about the Quaternary history of the Sand Hill fault zone other than that it cuts probable early Pleistocene sand and gravel of the upper Santa Fe Group and is buried by younger surficial deposits. This fault zone is one of several north-trending faults that form the active western boundary of the Rio Grande rift in the northern part of the Albuquerque-Belen basin.
Name comments	The Sand Hill fault zone was first named, mapped, and described by Bryan and McCann (1937 #1288), has subsequently been mapped in various degrees of detail by Wright (1946 #1427), Kelley and others (1976 #1380, fig. 19), and Kelley (1954 #1222; 1977 #1106), and has more recently been mapped in detail in the Arroyo de las Calabacillas (previously Sky Village SE), Benavidez Ranch, Cerro Conejo (previously Sky Village NE), and The Volcanoes 7.5-minute quadrangles (Cather and others, 1997 #1763; Koning and others, 1998 #7375; Thompson and others, 2009 #7460; Koning and Jochems, 2014 #7507). As originally mapped by Bryan and McCann (1937 #1288),

	the Sand Hill fault zone extended about 10 km along the western edge of the Llano de Albuquerque. Bryan and McCann (1937 #1288) and Wright (1946 #1427) mapped the southern end of the Sand Hill fault zone 3–5 km south of the Bernalillo-Sandoval County line; Bryan and McCann (1937 #1288) state that the fault is covered by Pleistocene and younger alluvium southward. Kelley (1977 #1106, p. 48) used stratigraphic arguments to extend the Sand Hill fault zone a minimum of 12 km further south. Similarly at the north end, Kelley and others (1976 #1380, fig. 19) and Kelley (1977 #1106, p. 48) extended the Sand Hill fault zone along a northeast-trending splay across the Llano de Albuquerque. Kelley (1977 #1106, p. 48) also suggests that some of the down-to-the-east displacement associated with the Sand Hill fault zone is taken up by the Garcia and Tenorio faults, which extend northward another 23 km along the western edge of the Llano. Mapping in the Arroyo de las Calabacillas 7.5-minute quadrangle (Cather and others, 1997 #1763) shows that the Sand Hill fault zone does not trend northeastward across the Llano de Albuquerque, but rather continues northward along the Ceja del Rio Puerco to the vicinity of Cañada de las Milpas in the Cerro Conejo quadrangle (Koning and others, 1998 #7375). Wright (1946 #1427) included in the Sand Hill fault zone a northwest-trending (N20°W) down-to-the-east fault that is 1–2 km east of the Sand Hill fault zone. However, the trend of this fault, Wright's detailed description of a thick sequence of tectonically-derived sediment on the downthrown block, and mapping in the Arroyo de las Calabacillas 7.5-minute quadrangle (Cather and others, 1997 #1763) all indicate that this eastern fault strand is distinct from the Sand Hill fault zone and thus is mapped as a separate structure (Calabacillas section of the Jemez-San Ysidro fault [2029c]) in this compilation.
County(s) and State(s)	BERNALILLO COUNTY, NEW MEXICO SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS BASIN AND RANGE
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault traces are from 1:24,000-scale maps by Cather and others (1997 #1763), Koning and others (1998 #7375), Thompson and others (2009 #7460), and Koning and Jochems (2014 #7507), as well as unpublished air-photo mapping by A.P. Jochems. <P>

Geologic setting	The Sand Hill fault zone is one of several north-trending faults that form the active western boundary of the Rio Grande rift in the northern part of the Albuquerque-Belen basin. <P>
Length (km)	36 km.
Average strike	N6°E
Sense of movement	Normal
Dip	54°–82° E. *Comments:* Fault dips are from surface exposures (Wright, 1946 #1427, plate 8; Cather and others, 1997 #1763; Thompson and others, 2009 #7460; Koning and Jochems, 2014 #7507). <P>
Paleoseismology studies	<P>
Geomorphic expression	The fault is well expressed as linear breaks in slope in the eroded Santa Fe Group badlands below the western edge of the Llano de Albuquerque. Bryan and McCann (1937 #1288) noted that their northernmost strand has been injected by a sand dike that is more erosion resistant than the surrounding rocks; Wright (1946 #1427) stated that all strands of the Sand Hill fault are marked by sand dikes. In places, preferential cementation related to groundwater flow has formed prominent wall- or finger-like features in the fault zone (Mozley and Goodwin, 1995 #7508). No fault scarps on surficial deposits have been described, suggesting a lack of recency to the faulting. <P>
Age of faulted surficial deposits	The trace of the Sand Hill fault zone as originally mapped by Bryan and McCann (1937 #1288) lies entirely within the Upper Buff Member of the Santa Fe Formation, which is roughly correlative with the Ceja Formation of the Upper Santa Fe Group (Kelley, 1977 #1106; Hawley and others, 1991 #1302; Connell, 2008 #7506). In places the upper part of these deposits is early Pleistocene in age. No faulting of younger surficial deposits has been described.
Historic earthquake	

Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* The only deposits documented as offset by the Sand Hill fault zone are early Pleistocene to Pliocene in age. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No detailed studies of fault offset or age of offset deposits are available; slip rate estimate is based on lack of fault scarps and low rates of slip on other faults in this part of the Rio Grande rift.
Date and Compiler(s)	2016 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#1288 Bryan, K., and McCann, F.T., 1937, The Ceja del Rio Puerco—A border feature of the Basin and Range province in New Mexico, Part I, Stratigraphy and structure: Journal of Geology, v. 45, p. 801-828. #1763 Cather, S.M., Connell, S.D., Heynekamp, M.R., and Goodwin, L.B., 1997, Geology of the Arroyo de las Calabacillas [Sky Village SE] 7.5-minute quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 9, 8 p. pamphlet, 1 sheet, scale 1:24,000. #7506 Connell, S.D., 2008, Refinements to the stratigraphic nomenclature of the Santa Fe Group, northwestern Albuquerque Basin, New Mexico: New Mexico Geology, v. 30, p. 14–35. #1302 Hawley, J.W., Love, D.W., Betancourt, J.L., Turner, R.M., and Tharnstrom, S., 1991, Quaternary and Neogene landscape evolution—A transect across the Colorado Plateau and Basin and Range provinces in west-central and central New Mexico, in Julian, B., and Zidek, J., eds., Field guide to geologic excursions in New Mexico and adjacent areas of Texas and Colorado: New Mexico Bureau of Mines and Mineral Resources Bulletin 137, p. 105-148. #1222 Kelley, V.C., 1954, Tectonic map of a part of the upper Rio Grande area, New Mexico: U.S. Geological Survey Oil and Gas Investigations Map OM-157, 1 sheet, scale 1:190,080. #1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls. #1380 Kelley, V.C., Woodward, L.A., Kudo, A.M., and Callender, J.F., 1976, Guidebook to Albuquerque basin of the Rio Grande rift, New Mexico: New Mexico Bureau of Mines and Mineral

Resources Circular 153, 31 p.

#7507 Koning, D.J., and Jochems, A.P., 2014, Geologic map of the Benavidez Ranch 7.5-minute quadrangle, Bernalillo and Sandoval Counties, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-File Geologic Map 234, scale 1:24,000.

#7375 Koning, D.J., Pederson, J., Pazzaglia, F.J., and Cather, S.M., 1998, Geology of the Cerro Conejo (Sky Village NE) 7.5-minute quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Geologic Map 45, scale 1:24,000.

#1400 Machette, M.N., 1978, Geologic map of the San Acacia quadrangle, Socorro County, New Mexico: U.S. Geological Survey Geologic quadrangle Map GQ-1415, 1 sheet, scale 1:24,000.

#7508 Mozley, P.S., and Goodwin, L.B., 1995, Patterns of cementation along a Cenozoic normal fault: A record of paleoflow orientations: Geology, v. 23, p. 539-542.

#7460 Thompson, R.A., Shroba, R.R., Menges, C., Schmidt, D.L., Personius, S.F., and Brandt, T.R., 2009, Geologic map of the Volcanoes quadrangle, Bernalillo and Sandoval Counties, New Mexico: U.S. Geological Survey Scientific Investigations Map SIM-3083, scale 1:24,000.

#1427 Wright, H.E., Jr., 1946, Tertiary and Quaternary geology of the lower Rio Puerco area, New Mexico: Geological Society of America Bulletin, v. 57, p. 383-456.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

Santa Fe fault (Class A) No. 2123

Last Review Date: 2015-12-21

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., and Jochems, A.P., compilers, 2015, Fault number 2123, Santa Fe fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:30 AM.**

Synopsis	The Santa Fe fault forms the western margin of the Rio Grande rift in the central Albuquerque-Belen basin. The fault has been quite active in the Pliocene and early Pleistocene, based on offset of upper Santa Fe Group (Sierra Ladrones Formation) sediment. Other indirect evidence of Quaternary offset includes differences in the elevation of the "Ortiz surface" across the fault trace and the geometry of spring deposits found along the fault. However, no scarps on surficial deposits have been observed along the trace of the Santa Fe fault.
Name comments	The Santa Fe fault forms part of the western margin of the Rio Grande rift and the Albuquerque basin (Machette, 1982 #1401; Machette and McGimsey, 1983 #1024). The structure was originally named the Carrizo fault by Wright (1946 #1427), was later renamed the Santa Fe fault by Kelley and Wood (1946 #1379), and was included on subsequent compilations (Kelley, 1954 #1222; Kelley, 1977 #1106). The Santa Fe fault places Pliocene to early Pleistocene (Lozinsky and Tedford, 1991 #1399) sediment of the Sierra Ladrones Formation down-to-the-east against older rocks (Machette and McGimsey, 1983 #1024; Ricketts and Karlstrom, 2014 #7300).

	Fault ID: Fault no. 2 of Machette (1982 #1401), fault no. 1 of Machette and McGimsey (1983 #1024).
County(s) and State(s)	VALENCIA COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* No scarps on surficial deposits have been observed; the fault had been shown as dashed along most of its trace on published maps until mapping was completed along much of its trace by Ricketts and Karlstrom (2014 #7300). Fault location is taken from this 1:24,000 map. <P>
Geologic setting	The Santa Fe fault forms the western margin of the Rio Grande rift and the Albuquerque basin; this structure separates the rift from the edge of the Colorado Plateau to the west. <P>
Length (km)	30 km.
Average strike	N4°E
Sense of movement	Normal
Dip	45°–80° E *Comments:* Dip data are from Wright (1946 #1427), Callender and Zilinski, (1976 #1289), Russell and Snelson (1994 #1186), and Ricketts and Karlstrom (2014 #7300). <P>
Paleoseismology studies	<P>

Geomorphic expression	No scarps have been recognized on surficial deposits along the Santa Fe fault, but the fault forms a bedrock escarpment along the northern half of its trace. <P>
Age of faulted surficial deposits	The Santa Fe fault offsets Pliocene to early Pleistocene (Lozinsky and Tedford, 1991 #1399) sediment of the Sierra Ladrones Formation down-to-the-east against older rocks (Machette and McGimsey, 1983 #1024; Ricketts and Karlstrom, 2014 #7300. Other indirect evidence of Quaternary offset includes differences in the elevation of the Pliocene (?) Ortiz surface across the fault trace (Kelley and others, 1976 #1380; Kelley, 1977 #1106, p. 28) and the geometry of spring deposits found along the fault (Callender and Zilinski, 1976 #1289).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Timing estimate is based on offset of Pliocene-Pleistocene Sierra Ladrones Formation sediment (Machette and McGimsey, 1983 #1024; Ricketts and Karlstrom, 2014 #7300). <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No detailed studies of fault offset or age of offset deposits are available; low slip-rate category is assigned based on about 30 m offset of 3.7-Ma basalt (Bachman and Mehnert, 1978 #1265) at the mouth of Arroyo Comanche (Kelley, 1977 #1106; Bachman and Mehnert, 1978 #1265).
Date and Compiler(s)	2015 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#1265 Bachman, G.O., and Mehnert, H.H., 1978, New K-Ar dates and the late Pliocene to Holocene geomorphic history of the central Rio Grande region, New Mexico: Geological Society of America Bulletin, v. 89, p. 283-292. #1289 Callender, J.F., and Zilinski, R.E., Jr., 1976, Kinematics of Tertiary and Quaternary deformation along the

eastern edge of the Lucero uplift, central New Mexico, in Woodward, L.A., and Northrop, S.A., eds., Tectonics and mineral resources of southwestern North America: New Mexico Geological Society Special Publication 6, p. 53-61.

#1222 Kelley, V.C., 1954, Tectonic map of a part of the upper Rio Grande area, New Mexico: U.S. Geological Survey Oil and Gas Investigations Map OM-157, 1 sheet, scale 1:190,080.

#1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls.

#1379 Kelley, V.C., and Wood, G.H., Jr., 1946, Geology of the Lucero uplift, Valencia, Socorro, and Bernalillo Counties, New Mexico: U.S. Geological Survey Oil and Gas Investigations Map 47, 1 sheet, scale 1:63,360.

#1380 Kelley, V.C., Woodward, L.A., Kudo, A.M., and Callender, J.F., 1976, Guidebook to Albuquerque basin of the Rio Grande rift, New Mexico: New Mexico Bureau of Mines and Mineral Resources Circular 153, 31 p.

#1399 Lozinsky, R.P., and Tedford, R.H., 1991, Geology and paleontology of the Santa Fe Group, southwestern Albuquerque basin, Valencia County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Bulletin 132, 35 p., 3 pls., scale 1:24,000.

#1401 Machette, M.N., 1982, Quaternary and Pliocene faults in the La Jencia and southern part of the Albuquerque-Belen basins, New Mexico—Evidence of fault history from fault-scarp morphology and Quaternary geology, in Grambling, J.A., and Wells, S.G., eds., Albuquerque Country II: New Mexico Geological Society, 33rd Field Conference, November 4-6, 1982, Guidebook, p. 161-169.

#1024 Machette, M.N., and McGimsey, R.G., 1983, Map of Quaternary and Pliocene faults in the Socorro and western part of the Fort Sumner 1° x 2° quadrangles, central New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-1465-A, 12 p. pamphlet, 1 sheet, scale 1:250,000.

#7300 Ricketts, J.W., and Karlstrom, K.E., 2014, Geologic map of the South Garcia SE 7.5-minute quadrangle, Valencia County, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-File Geologic Map 246, scale 1:24,000.

#1186 Russell, L.R., and Snelson, S., 1994, Structure and tectonics of the Albuquerque basin segment of the Rio Grande rift—Insights from reflection seismic data, in Keller, G.R., and Cather, S.M., eds., Basins of the Rio Grande rift—Structure, stratigraphy, and tectonic setting: Geological Society of America Special Paper 291, p. 83–112.

#1427 Wright, H.E., Jr., 1946, Tertiary and Quaternary geology of the lower Rio Puerco area, New Mexico: Geological Society of America Bulletin, v. 57, p. 383-456.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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unnamed fault of Bonita Canyon (Class B) No. 2144

Last Review Date: 2016-04-22

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Machette, M.N., and Jochems, A.P., compilers, 2016, Fault number 2144, unnamed fault of Bonita Canyon, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:30 AM.**

Synopsis	Fault scarp-like features have been mapped on the late Quaternary Twin Craters and El Calderon basalt flows of El Malpais lava field. The associated fault may represent reactivation of a bedrock fault that is concealed in Bonita Canyon, but which must juxtapose Precambrian rock on the west against Paleozoic rock on the east. However, similar mapped features within El Malpais lava field are considered by Levish and others (1992 #1715) to be related to volcanic processes. No detailed study of the fault has been conducted to confirm its origin or document the amount of vertical displacement that may be associated with it. Thus, the feature is herein considered to be of suspect origin.

Name comments	This fault was first mapped by Maxwell (1986 #1720). Levish and others (1992 #1715) characterized it a non-tectonic feature related to volcanic processes as part of a regional reconnaissance for a dam-hazards study. Levish and others (1992 #1715) referred to it as one of the faults in the Zuni-Bandera volcanic field. This fault forms a north-trending scarp (?) across the Twin Craters and El Calderon lava flows south of Bonita Canyon. The scarp is located at the south end of Cerritos de Jaspe (a prominent, west-facing ridge), which is just east of Bonita Canyon.
County(s) and State(s)	CIBOLA COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Trace from 1:62,500-scale geologic map of Maxwell (1986 #1720) combined with accurate placement using photogrammetric methods. <P>
Geologic setting	The fault is in Quaternary (undifferentiated) basalt flows according to the mapping of Maxwell (1986 #1720). It trends north on the basalts, and northwest up Bonita Canyon where it juxtaposes Precambrian rock on the west against Paleozoic rock on the east (Timmons and Cikoski, 2012 #7426). <P>
Length (km)	9 km.
Average strike	N11°W
Sense of movement	Normal *Comments:* Mapping by Maxwell (1986 #1720) and Timmons and Cikoski (2012 #7426) indicates that Paleozoic bedrock is down-dropped on the eastern side of the fault relative to Precambrian bedrock along a northern (concealed) extension of the fault. Conversely, where the fault crosses the El Calderon flow it appears to form a west-facing scarp. On the basis of this observation and similarity to other Cenozoic faults in the region, we infer that the fault has normal dip slip movement. <P>

Dip Direction	Unknown
Paleoseismology studies	<P>
Geomorphic expression	The fault forms a 2-km-long north-trending scarp (?) on basaltic lava flows (Maxwell, 1986 #1720). Levish and others (1992 #1715) suggested that the fault is related to volcanic processes and is not of tectonic origin. No measurements of any vertical displacement have been made across the fault to confirm the amount or direction of possible movement. <P>
Age of faulted surficial deposits	Maxwell (1986 #1720) mapped the fault as offsetting the Twin Craters lava flow, dated at approximately 17_19 ka using radiocarbon and surface cosmogenic techniques (Laughlin and WoldeGabriel, 1997 #7425; Dunbar and Phillips, 2004 #7424). In addition, just south of New Mexico State Highway 53 the fault is mapped as crossing a small tongue of El Calderon flow, dated at 115–120 ka using paleomagnetic constraints (Cascadden and others, 1997 #7423).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* The fault scarp-like features are present on two Quaternary basalt flows dated at approximately 17–19 and 115–120 ka (Cascadden and others, 1997 #7423; Laughlin and WoldeGabriel, 1997 #7425; Dunbar and Phillips, 2004 #7424). <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No measurement of offset across the fault has been reported. The fault does not appear to form a high or even moderate (>5 m) scarp on aerial photographs. Thus, it seems reasonable that slip rates associated with this suspect fault would be in the low slip-rate category (<0.2 mm/yr).

Date and Compiler(s)	2016 Michael N. Machette, U.S. Geological Survey, Retired Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#7423 Cascadden, T.E., Geissman, J.W., Kudo, A.M., and Laughlin, A.W., 1997, El Calderon cinder cone and related basalt flows, in Mabery, K., compiler, Natural History of El Malpais National Monument: New Mexico Bureau of Mines and Mineral Resources Bulletin 156, p. 41-–51. #7424 Dunbar, N.W., and Phillips, F.M., 2004, Cosmogenic ³⁶Cl ages of lava flows in the Zuni-Bandera volcanic field, north-central New Mexico, U.S.A., in Cather, S.M., McIntosh, W.C., and Kelley, S.A., eds., Tectonics, geochronology, and volcanism in the Southern Rocky Mountains and Rio Grande Rift: New Mexico Bureau of Geology and Mineral Resources Bulletin 160, p. 309–317. #7425 Laughlin, A.W., and WoldeGabriel, G., 1997, Dating the Zuni-Bandera volcanic field, in Mabery, K., compiler, Natural History of El Malpais National Monument: New Mexico Bureau of Mines and Mineral Resources Bulletin 156, p. 25–29. #1715 Levish, D.R., Vetter, U.R., Ake, J.P., and Piety, L.A., 1992, Seismotectonic study for Black Rock Dam, Bureau of Indian Affairs, Pueblo of Zuni, New Mexico: Bureau of Reclamation Seismotectonic Report 92-3, 62 p. #1720 Maxwell, C.H., 1986, Geologic map of El Malpais Lava Field and surrounding areas, Cibola County, New Mexico: U.S. Geological Survey Miscellaneous Investigations Map I-1595, 1 sheet, scale 1:62,500. #7426 Timmons, J.M., and Cikoski, C.T., 2012, Geologic map of the San Rafael quadrangle, Cibola County, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-File Geologic Map 232, scale 1:24,000.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

unnamed faults near Albuquerque Volcanoes (Class A) No. 2049

Last Review Date: 2016-06-26

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: Personius, S.F., and Jochems, A.P., compilers, 2016, Fault number 2049, unnamed faults near Albuquerque Volcanoes, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:31 AM.

Synopsis	Several unnamed north-trending normal faults are located near the Albuquerque Volcanoes. The basaltic volcanic field associated with the volcanoes is apparently confined in a broad graben, defined on the west by the down-to-the-east County Dump fault [2038] and on the east by the down-to-the-west East Paradise fault zone [2040]. Between these two flanking faults there is a series of smaller fault blocks and grabens. Most of these faults appear to be buried by basalt flows dated at about 155 ka. However, these faults can be mapped beneath the flows because most are marked by linear breaks in slope, indicating that preexisting fault scarps disrupted the flows during emplacement. The extent of some buried faults are also evident in high resolution aeromagnetic data. At least two faults are marked by more pronounced linear scarps that indicate small (1–2 m) post-basalt (155–218 ka) movements: a short down-to-the-east fault located between the East [2040] and West Paradise [2042] fault zones clearly offsets basalt in two places along the eastern edge of the volcanic field, and a longer north-trending down-to-the-west fault marked by small scarps in basalt bisects the volcanic field west of the West Paradise fault. This fault may have been the source of the 1978–1979 earthquake swarm near the Albuquerque Volcanoes. Latest movements on both the County Dump [2038] and East Paradise [2040] faults also post-date basalt emplacement.
Name comments	This group of structures is a series of north-trending normal faults on the east side of the Albuquerque Volcanoes. Some of these faults are included in the West Mesa fault zone of Wong and others (1995 #1155) and Hawley and Whitworth (1996 #1303).
County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO BERNALILLO COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault traces from 1:24,000-scale maps of Connell and others (1998 #7490), Shroba and others (2003 #7459), and Thompson and others (2009 #7460). The locations of some traces beneath the volcanic field are based on high-resolution aeromagnetic data (U.S. Geological Survey and SIAL Geosciences Inc., 1997 #1722; Grauch and Millegan, 1998 #1721). <P>

Geologic setting	These structures are intrabasin faults in the central part of the Albuquerque-Belen basin of the Rio Grande rift. The broad graben that confines the Albuquerque Volcanoes volcanic field suggests that movement on some faults may be associated with magmatic activity. Recent seismicity may be associated with one of these intrabasin structures. An earthquake swarm in 1978–1979 near the southwestern margin of the volcanic field yielded a composite fault-plane solution with a preferred nodal plane striking N. 5° E. and dipping 74° W. (Jaksha and others, 1981 #1760). This fault plane projects to the surface very near the surface trace of an unnamed, 20 km long fault that lies 0.5 km east of the Albuquerque Volcanoes cinder cones. Northeast of the cinder cones, this fault is marked by small scarps on basalt that indicate post-basalt displacement. The County Dump fault [2038] is located between the surface trace of this fault and the surface projection of the earthquake 1978–1979 earthquake swarm, suggesting that the County Dump may sole into the fault at depth. <P>
Length (km)	34 km.
Average strike	N5°W
Sense of movement	Normal
Dip Direction	E; W
Paleoseismology studies	<P>
Geomorphic expression	Outside of the volcanic field, these faults are well expressed as eroded fault scarps on sediment of the upper Santa Fe Group and overlying surficial deposits. Within the Albuquerque Volcanoes volcanic field, these faults are marked by linear breaks in slope and minor fault scarps. Most breaks in slope along these faults appear to be preexisting scarps that disrupted the flow of basalt during eruptions to the west. At least two faults are marked by more pronounced linear scarps that indicate small post-basalt movements. Most of the fault traces in the volcanic field have been partly covered by eolian sand. <P>
Age of faulted surficial deposits	At least two of these faults offset the basalt of the Albuquerque Volcanoes volcanic field; these rocks have been dated by several methods at about 155–218 ka (Geissman and others, 1990 #1297; Peate and others, 1996 #1411;

	Singer and others, 2008 #7492). Most of the faults cut sediment of the upper Santa Fe Group and surficial deposits that predate emplacement of the basalts.
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* At least two faults in this group offset the 155–218-ka basalts of the Albuquerque Volcanoes volcanic field, indicating probable late Pleistocene displacement. Most of the other faults have most recent movements that predate 155–218 ka. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Two of these structures offset the 155–218-ka basalts of the Albuquerque Volcanoes volcanic field by about 1–2 m, which suggests a low slip rate.
Date and Compiler(s)	2016 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#7490 Connell, S.D., Allen, B.D., Hawley, J.W., and Shroba, R.R., 1998, Geology of the Albuquerque West 7.5-minute quadrangle, Bernalillo County, New Mexico: New Mexico Bureau of Mines and Mineral Open-File Geologic Map 17, scale 1:24,000. #1297 Geissman, J.W., Brown, L., Turrin, B.D., McFadden, L.D., and Harlan, S.S., 1990, Brunhes chron excursion/polarity episode recorded during the late Pleistocene, Albuquerque Volcanoes, New Mexico, USA: Geophysical Journal International, v. 102, p. 73-88. #1721 Grauch, V.J.S., and Millegan, P.S., 1998, Mapping intrabasinal faults from high-resolution aeromagnetic data: The Leading Edge, v. 17, p. 53-55. #1303 Hawley, J.W., and Whitworth, T.M., compilers, 1996, Hydrogeology of potential recharge areas for the basin- and valley-fill aquifer systems, and hydrogeochemical modeling of proposed artificial recharge of the upper Santa Fe aquifer, northern Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 402-D, 575 p. #1760 Jaksha, L.H., Locke, J., and Gebhart, H.J., 1981, Microearthquakes

near the Albuquerque volcanoes, New Mexico: Geological Society of America Bulletin, v. 92, p. 31-36.

#1411 Peate, D.W., Chen, J.H., Wasserburg, G.J., Papanastassiou, D.A., and Geissman, J.W., 1996, 238U-230Th dating of a geomagnetic excursion in Quaternary basalts of the Albuquerque Volcanoes Field, New Mexico (USA): Geophysical Research Letters, v. 23, p. 2271-2274.

#7459 Shroba, R.R., Thompson, R.A., Schmidt, D.L., Personius, S.F., Maldonado, F., and Brandt, T.R., 2003, Geologic map of the La Mesita Negra SE quadrangle, Bernalillo County, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-2416, scale 1:24,000.

#7492 Singer, B.S., Jicha, B.R., Kirby, B.T., Geissman, J.W., Herrero-Bervera, E., 2008, ⁴⁰Ar/³⁹Ar dating links Albuquerque Volcanoes to the Pringle Falls excursion and the Geomagnetic Instability Time Scale: Earth and Planetary Science Letters, v. 267, p. 584–595.

#7460 Thompson, R.A., Shroba, R.R., Menges, C., Schmidt, D.L., Personius, S.F., and Brandt, T.R., 2009, Geologic map of the Volcanoes quadrangle, Bernalillo and Sandoval Counties, New Mexico: U.S. Geological Survey Scientific Investigations Map SIM-3083, scale 1:24,000.

#1722 U.S. Geological Survey, and SIAL Geosciences, Inc., 1997, Description of digital aeromagnetic data collected north and west of Albuquerque, New Mexico: U.S. Geological Survey Open-File Report 97-286, 40 p.

#1155 Wong, I., Kelson, K., Olig, S., Kolbe, T., Hemphill-Haley, M., Bott, J., Green, R., Kanakari, H., Sawyer, J., Silva, W., Stark, C., Haraden, C., Fenton, C., Unruh, J., Gardner, J., Reneau, S., and House, L., 1995, Seismic hazards evaluation of the Los Alamos National Laboratory: Technical report to Los Alamos National Laboratory, Los Alamos, New Mexico, February 24, 1995, 3 volumes, 12 pls., 16 appen.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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unnamed faults near Picuda Peak (Class A) No. 2041

Last Review Date: 2016-06-26

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., and Jochems, A.P., compilers, 2016, Fault number 2041, unnamed faults near Picuda Peak, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:32 AM.**

Synopsis	Near Picuda Peak there is a group of down-to-the-east and down-to-the-west, north trending normal faults that offset coarse gravels and underlying sands of the upper Santa Fe Group. Most of these faults trend to the northeast at their southern ends near Picuda Peak; further north, they trend generally north. Detailed mapping of the nearly complete exposures of the Santa Fe Group section in the Rincones de Zia show very closely spaced normal faults, most of which have displacements of only a few meters. These faults generally offset the uppermost coarse gravel of the Upper Santa Fe Group by a few tens of meters.
Name comments	This group of faults are herein named for their proximity to Picuda Peak. Some faults near Picuda Peak were previously described by Black and Hiss (1974 #1287) and Kelley (1977 #1106). These structures were mapped in detail by Manley (1978 #1404) in the Bernalillo NW 7.5-minute quadrangle and by Personius and others (2000 #1413) in the Loma Machete quadrangle.

County(s) and State(s)	SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault traces are from 1:24,000-scale mapping of Manley (1978 #1404) in the Bernalillo NW quadrangle and Personius and others (2000 #1413) in the Loma Machete quadrangle. <P>
Geologic setting	Near Picuda Peak there is a group of down-to-the-east and down-to-the-west, north trending intrabasin faults near the northern margin of the Albuquerque-Belen basin in the Rio Grande rift. In previous publications, these faults were located near the crest of the Ziana anticline (Black and Hiss, 1974 #1287; Kelley and others, 1976 #1380; Kelley, 1977 #1106), but work by Personius and others (2000 #1413) indicates that opposing dips in the region that were thought to be the expression of a large fold may instead be related to intense normal faulting and block rotation. <P>
Length (km)	10 km.
Average strike	N2°E
Sense of movement	Normal
Dip	43–75° E., 47–87° W. *Comments:* Numerous fault exposures indicate that these faults are usually steeply dipping (Personius and others, 2000 #1413). <P>
Paleoseismology studies	<P>

Geomorphic expression	Most faults form narrow topographic ridges and valleys that correlate with sense of fault displacement. Topographic expression is lost, but numerous fault exposures and juxtaposed bedrock mark these faults in the badlands of the Rincones de Zia. <P>
Age of faulted surficial deposits	The ages of offset deposits are poorly known, but the uppermost sand and gravel of the upper Santa Fe Group in this area are thought to be early Pleistocene in age (Personius and others, 2000 #1413).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* The unnamed faults near Picuda Peak offset early Pleistocene sediments of the upper Santa Fe Group a few tens of meters but do not appear to offset younger surficial deposits (Personius and others, 2000 #1413). <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Offsets of early Pleistocene gravels across individual faults are probably no more than 20–30 m.
Date and Compiler(s)	2016 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#1287 Black, B.A., and Hiss, W.L., 1974, Structure and stratigraphy in the vicinity of the Shell Oil Co. Santa Fe Pacific No. 1 test well, southern Sandoval County, New Mexico, in Siemers, C.T., Woodward, L.A., and Callender, J.F., eds., Ghost Ranch central-northern New Mexico: New Mexico Geological Society, 25th Field Conference, October 10-12, 1974, Guidebook, p. 365-370. #1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls. #1380 Kelley, V.C., Woodward, L.A., Kudo, A.M., and Callender, J.F., 1976, Guidebook to Albuquerque basin of

	the Rio Grande rift, New Mexico: New Mexico Bureau of Mines and Mineral Resources Circular 153, 31 p. #1404 Manley, K., 1978, Geologic map of Bernalillo NW quadrangle, Sandoval County, New Mexico: U.S. Geological Survey Geologic quadrangle Map GQ-1446, 1 sheet, scale 1:24,000. #1413 Personius, S.F., Machette, M.N., and Stone, B.D., 2000, Preliminary geologic map of the Loma Machete quadrangle, Sandoval County, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-2334, scale 1:24,000.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

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unnamed faults near Star Heights (Class A) No. 2048

Last Review Date: 2016-06-26

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., and Jochems, A.P., compilers, 2016, Fault number 2048, unnamed faults near Star Heights, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:32 AM.**

Synopsis	This group of north-trending, mostly down-to-the-east normal faults offsets upper Santa Fe Group sediments, the Llano de Albuquerque, and younger piedmont deposits near the neighborhood of Star Heights. Individual faults have displaced upper Santa Fe Group sediments of a few tens of meters, 15–20 m of the Llano de Albuquerque, and 5–10 m in probable middle Pleistocene piedmont deposits.
Name comments	These north-trending normal faults include parts of the Star Heights fault of Kelley (1977 #1106) and Hawley and Whitworth (1996 #1303). Detailed mapping by Cather and others (1997 #1763), Personius and others (2000 #1413), and Thompson and others (2009 #7460) indicate that the Star Heights fault mapped by Kelley (1977 #1106) and Hawley and Whitworth (1996 #1303) includes parts of at least two separate faults, so this name has been abandoned.
County(s) and State(s)	BERNALILLO COUNTY, NEW MEXICO SANDOVAL COUNTY, NEW MEXICO

Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault traces from 1:24,000-scale mapping of Cather and others (1997 #1763), Personius and others (2000 #1413), and Thompson and others (2009 #7460) supplemented with additional photogrammetric analysis by Jochems. The locations of some fault traces are based on high-resolution aeromagnetic data (U.S. Geological Survey and SIAL Geosciences Inc., 1997 #1722; Grauch and Millegan, 1998 #1721). <P>
Geologic setting	These structures are intrabasin faults in the northern part of the Albuquerque-Belen basin of the Rio Grande rift. <P>
Length (km)	18 km.
Average strike	N5°E
Sense of movement	Normal
Dip	70° E. *Comments:* Dip data are from Personius and others (2000 #1413). <P>
Paleoseismology studies	<P>
Geomorphic expression	These faults offset upper Santa Fe Group sediment, form broad scarps on the Llano de Albuquerque, and form steeper, smaller scarps on younger piedmont deposits. <P>
Age of faulted surficial deposits	These faults offset early Plio-Pleistocene upper Santa Fe Group sediment, the early Pleistocene Llano de Albuquerque, and younger piedmont deposits (Personius and others, 2000 #1413). The faulted piedmont deposits are characterized by well-developed (stage III) calcic soils, so they probably are middle Pleistocene in age.

Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* Some of these structures offset the early Pleistocene Llano de Albuquerque 15–20 m and middle Pleistocene piedmont deposits 5–10 m; these data indicate a history of recurrent movement that, in some cases, possibly extend into the late Pleistocene. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Inferred low slip rate is based on presence of broad scarps on the Llano de Albuquerque that offset the surface 15–20 m.
Date and Compiler(s)	2016 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#1763 Cather, S.M., Connell, S.D., Heynekamp, M.R., and Goodwin, L.B., 1997, Geology of the Arroyo de las Calabacillas [Sky Village SE] 7.5-minute quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 9, 8 p. pamphlet, 1 sheet, scale 1:24,000. #1721 Grauch, V.J.S., and Millegan, P.S., 1998, Mapping intrabasinal faults from high-resolution aeromagnetic data: The Leading Edge, v. 17, p. 53-55. #1303 Hawley, J.W., and Whitworth, T.M., compilers, 1996, Hydrogeology of potential recharge areas for the basin- and valley-fill aquifer systems, and hydrogeochemical modeling of proposed artificial recharge of the upper Santa Fe aquifer, northern Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 402-D, 575 p. #1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls. #1413 Personius, S.F., Machette, M.N., and Stone, B.D., 2000, Preliminary geologic map of the Loma Machete quadrangle, Sandoval County, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-2334, scale 1:24,000. #7460 Thompson, R.A., Shroba, R.R., Menges, C., Schmidt, D.L., Personius, S.F., and Brandt, T.R., 2009,

	Geologic map of the Volcanoes quadrangle, Bernalillo and Sandoval Counties, New Mexico: U.S. Geological Survey Scientific Investigations Map SIM-3083, scale 1:24,000. #1722 U.S. Geological Survey, and SIAL Geosciences, Inc., 1997, Description of digital aeromagnetic data collected north and west of Albuquerque, New Mexico: U.S. Geological Survey Open-File Report 97-286, 40 p.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

unnamed faults of El Malpais lava field (Class B) No. 2146

Last Review Date: 2016-04-22

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Machette, M.N., and Jochems, A.P., compilers, 2016, Fault number 2146, unnamed faults of El Malpais lava field, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:32 AM.**

Synopsis	These three groups of suspect faults form numerous fissures and cracks in early Quaternary basalt flows of El Malpais lava field. They may include pressure ridges and collapsed lava tubes that give the expression of tectonic activity, but could be related to volcanic processes. Thus, these features are considered to be of suspect origin. No detailed studies of the features have been conducted to confirm their origin or document the amount of vertical displacement, if any, that may be associated with them.
Name comments	These faults were first mapped by Maxwell (1986 #1720); additional structures were mapped to the west by Baldridge and others (1989 #1741). Levish and others (1992 #1715), as part of a regional reconnaissance for a dam-hazards study, characterized them as non-tectonic features related to volcanic processes. Levish and others (1992 #1715) referred to the features as "Faults in the Zuni-Bandera volcanic field". The faults form four groups on El Malpais lava field. The southern group trends north across the North Plains, the main (longest) feature of which is named La Rendija. The southern extent of these faults is approximately 10 km south of the map area of Maxwell (1986 #1720). The northwestern group is comprised of two short north-northeast trending faults and associated

	fissure-like features located about 3 km south and southwest of Hoya de Cibola (Maxwell, 1986 #1720). The northeastern group is comprised of four short faults that trend north to northeast; they are located about 5 km southeast of Cerro Encierro.
County(s) and State(s)	CIBOLA COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault traces are shown on 1:62,500-scale geologic map of Maxwell (1986 #1720) and a small-scale (approximately 1:400,000 scale) geologic map of Baldridge and others (1989 #1741). Extensions of the fault features west of Maxwell's mapping are shown on 1:100,000-scale geologic map of Anderson (1986 #1281). Fault traces were recompiled and digitized at 1:24,000 scale using photogrammetric methods. <P>
Geologic setting	These fault-like features are present on Quaternary (undifferentiated) basalt flows according to the mapping of Maxwell (1986 #1720). They trend north and northeast and may be related to westward directed extension or to the NE-trending Jemez lineament. Levish and others (1992 #1715) characterized the faults as non-tectonic features related to volcanic processes. <P>
Length (km)	26 km.
Average strike	N7°E
Sense of movement	Normal *Comments:* As mapped by Maxwell (1986 #1720), although most of the features are fissures that may not correspond to vertical displacement. <P>
Dip Direction	W; NW; SE

	Comments: As reported by Maxwell (1986 #1720). <P>
Paleoseismology studies	<P>
Geomorphic expression	The faults (?) form short north- and northeast-trending en echelon scarps (?), fissures, and open crevices in lava flows (Maxwell, 1986 #1720). Levish and others (1992 #1715) suggested that the faults are fissures, cracks, pressure ridges, and collapsed lava tubes that give the expression of tectonic activity, but are in fact related to volcanic processes. <P>
Age of faulted surficial deposits	Maxwell (1986 #1720) mapped the faults as having offset Quaternary basalts that have reported K-Ar ages as old as and 1.38±0.29 Ma and Ar-Ar ages as young as 0.593±0.086 Ma (Laughlin and West, 1976 #7420; Laughlin and others, 1993 #7421). These dates suggest that the older (undifferentiated) basalts flows (Qb) span the early to middle Quaternary.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* The features are present on basalts flows (Qb) of early to possibly middle Quaternary age. However, Maxwell (1986 #1720) suggested that the southern group of features (La Rendija) is Holocene in age because the crevices are not filled with alluvium, thus suggesting very recent formation of the features. In addition, he suggested that the numerous small fault scarps (?) on unconsolidated alluvium at the eastern edge of North Plains are also young. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No measurements of offset across the features have been reported. If the features are really faults of Holocene age (Maxwell, 1986 #1720) and have substantial (>10 m) offset, they could have a slip rate that exceeds 0.2 mm/yr. However, the features are formed on an early to middle Quaternary landscape; thus, the recurrence

	interval for accumulating stress prior to the most recent faulting (suspect) event could be 750 k.y. or more. It therefore seems reasonable that slip rates associated with these suspect faults would be in the lowest slip-rate category.
Date and Compiler(s)	2016 Michael N. Machette, U.S. Geological Survey, Retired Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#1281 Anderson, O.J., compiler, 1986, Geologic map of Fence Lake, New Mexico 1:100,000 metric sheet: New Mexico Bureau of Mines and Mineral Resources Open-File Report 220, 4 p. pamphlet, 4 sheets, scale 1:100,000. #1741 Baldridge, W.S., Perry, F.V., Vaniman, D.T., Nealey, L.D., Leavy, B.D., Laughlin, A.W., Kyle, P., Bartov, Y., Steinitz, G., and Gladney, E.S., 1989, Excursion 8A—Magmatism associated with lithospheric extension—Middle to late Cenozoic magmatism of the southeastern Colorado Plateau and central Rio Grande rift, New Mexico and Arizona, in Chapin, C.E., and Zidek, J., eds., Field excursions to volcanic terranes in the Western United States, v. I, Southern Rocky Mountain region: New Mexico Bureau of Mines and Mineral Resources Memoir 46, p. 187-202. #7420 Laughlin, A.W., and West, F.G., 1976, The Zuni Mountains, New Mexico, as a potential dry hot rock geothermal energy site: U.S. Energy Research and Development Administration, Los Alamos Scientific Laboratories Informal Report LA-3197-MS, 13 p. #7421 Laughlin, A.W., Perry, F.V., Damon, P.E., Shafiqullah, M., WoldeGabriel, G., McIntosh, W., Harrington, C.D., Wells, S.G., and Drakos, P.G., 1993, Geochronology of Mount Taylor, Cebollita Mesa, and Zuni-Bandera volcanic fields, Cibola County, New Mexico: New Mexico Geology, v. 16, no. 4, p. 81–92. #1715 Levish, D.R., Vetter, U.R., Ake, J.P., and Piety, L.A., 1992, Seismotectonic study for Black Rock Dam, Bureau of Indian Affairs, Pueblo of Zuni, New Mexico: Bureau of Reclamation Seismotectonic Report 92-3, 62 p. #1720 Maxwell, C.H., 1986, Geologic map of El Malpais Lava Field and surrounding areas, Cibola County, New Mexico: U.S. Geological Survey Miscellaneous Investigations Map I-1595, 1 sheet, scale 1:62,500.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

unnamed intrabasin faults west of the Rio Puerco (Class A) No. 2115

Last Review Date: 2016-03-30

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., and Jochems, A.P., compilers, 2016, Fault number 2115, unnamed intrabasin faults west of the Rio Puerco, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:33 AM.**

Synopsis	These intrabasin faults east of the Coyote Springs fault [2114] in the southwest Albuquerque basin of the Rio Grande rift are mostly expressed as short fault scarps in deposits of the upper Santa Fe Group Sierra Ladrones Formation; some have offsets of 3–20 m in middle Pleistocene alluvium. Most of the faults are partly to nearly completely buried by eolian sand.
Name comments	This group of structures consists of numerous short to relatively long, generally isolated, north-trending faults within the Belen sub-basin of the Albuquerque basin west of the Rio Puerco that were mapped by Machette (1982 #1401), Machette and McGimsey (1983 #1024), and Love and Young (1983 #1723). Some of these faults were previously mapped and named by Kelley (1977 #1106), including the east-down Gabaldon fault, the northern part of which was mapped by Lozinsky and Tedford (1991 #1339).
County(s) and State(s)	SOCORRO COUNTY, NEW MEXICO VALENCIA COUNTY, NEW MEXICO

Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Fault traces compiled using photogrammetric methods and previous mapping of Machette and McGimsey (1983 #1024) at 1:250,000 scale and Lozinsky and Tedford (1991 #1339) at 1:24,000 scale. <P>
Geologic setting	These faults dip to the east and west, and form a broad zone within the active part of the Belen sub-basin of the Albuquerque basin, west of the Rio Puerco. The longest fault (~27 km) in this group of structures (Gabaldon fault of Kelley, 1977 #1106) is thought to be an east-down listric fault at depth based on 2D geophysical modeling and well data (Grauch and Connell, 2013 #7268). <P>
Length (km)	22 km.
Average strike	N7°W
Sense of movement	Normal
Dip Direction	E; W *Comments:* Grauch and Connell (2013 #7268) show the longest east-down fault in this group of structures as a relatively shallow listric fault based on 2D geophysical modeling and well data. <P>
Paleoseismology studies	<P>
Geomorphic expression	These faults are marked by subdued, discontinuously preserved scarps that are mostly covered by eolian sand within the western part of the Belen sub-basin. Machette and McGimsey (1983 #1024) measured offsets of 3–20 m in middle Pleistocene alluvium. <P>

Age of faulted surficial deposits	These faults offset lower Pleistocene sediment of the upper Santa Fe Group Sierra Ladrones Formation, and early and middle Pleistocene alluvium (Machette, 1978 #1223; Machette and McGimsey, 1983 #1024).
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* No deposits younger than middle Pleistocene (150–750 ka) have been shown to be offset by these faults, but the 3–20 m offsets measured by Machette and McGimsey (1983 #1024) indicate a recurrent history of movement that in some cases probably extended into the late Pleistocene. <P>
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category assigned based on offsets of 3–20 m of middle Pleistocene (150–750 ka) alluvium (Machette and McGimsey, 1983 #1024).
Date and Compiler(s)	2016 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#7268 Grauch, V.J.S., and Connell, S.D., 2013, New perspectives on the geometry of the Albuquerque basin, Rio Grande rift, New Mexico: Insights from geophysical models of rift-fill thickness, in Hudson, M.R., and Grauch, V.J.S., eds., New perspectives on Rio Grande rift basins—From tectonics to groundwater: Geological Society of America Special Paper 494, p. 427–462, doi:10.1130/2013.2494(16). #1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls. #1723 Love, D.W., and Young, J.D., 1983, Progress report on the late Cenozoic geologic evolution of the lower Rio Puerco, in Chapin, C.E., and Callender, J.F., eds., Socorro region II: New Mexico Geological Society, 34th Field Conference, October 13-15, 1983, Guidebook, p. 277-284. #1399 Lozinsky, R.P., and Tedford, R.H., 1991, Geology and paleontology of the Santa Fe Group, southwestern Albuquerque basin, Valencia County, New

	Mexico: New Mexico Bureau of Mines and Mineral Resources Bulletin 132, 35 p., 3 pls., scale 1:24,000. #1401 Machette, M.N., 1982, Quaternary and Pliocene faults in the La Jencia and southern part of the Albuquerque-Belen basins, New Mexico—Evidence of fault history from fault-scarp morphology and Quaternary geology, in Grambling, J.A., and Wells, S.G., eds., Albuquerque Country II: New Mexico Geological Society, 33rd Field Conference, November 4-6, 1982, Guidebook, p. 161-169. #1024 Machette, M.N., and McGimsey, R.G., 1983, Map of Quaternary and Pliocene faults in the Socorro and western part of the Fort Sumner 1° x 2° quadrangles, central New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-1465-A, 12 p. pamphlet, 1 sheet, scale 1:250,000. #1223 Machette, M.N., compiler, 1978, Preliminary geologic map of the Socorro 1° by 2° quadrangle, central New Mexico: U.S. Geological Survey Open-File Report 78-607, 1 sheet, scale 1:250,000.

U.S. Geological Survey - Earthquake Hazards Program

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

Zia fault (Class A) No. 2046

Last Review Date: 2015-04-13

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Personius, S.F., and Haller, K.M., compilers, 2015, Fault number 2046, Zia fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 08/27/2025 11:33 AM.**

Synopsis	The down-to-the-east Zia fault offsets Santa Fe Group sediment exposed in the Zia badlands, on the Llano de Albuquerque, and in younger Quaternary deposits. Upper Santa Fe Group sediment may have been offset about 60 m across the Zia fault since early Quaternary time.
Name comments	The Zia fault is one of several north-trending normal faults named by Kelley (1977 #1106) in the Zia badlands in the northern part of the Albuquerque-Belen basin. Galusha (1966 #1296), G.O. Bachman (unpublished mapping, 1975) and Manley (1978 #1404) mapped the northern end of the Zia fault in the Sky Village NE and Bernalillo NW quadrangles, respectively. Galusha (1966 #1296) and Manley (1978 #1404) used the name Rincon fault in the Bernalillo NW quadrangle, but we retain the name Zia fault herein due to apparent common usage in recent publications (Wong and others, 1995 #1155; Hawley and Whitworth, 1996 #1303). Recent mapping (Hawley and Whitworth, 1996 #1303; Cather and others, 1997 #1763; Connell, 2008 #7454) extends the Zia fault much further south than the original trace of the fault as mapped by Kelley (1977 #1106).

County(s) and State(s)	BERNALILLO COUNTY, NEW MEXICO SANDOVAL COUNTY, NEW MEXICO
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault trace from Manley (1978 #1404) in the Bernalillo NW quadrangle, G.O. Bachman (unpubl. mapping, 1975) in the Sky Village NE quadrangle, Cather and others (1997 #1763) in the Sky Village SE quadrangle, and unpublished air photo mapping by the compiler (1997) in the Sky Village NE, Sky Village SE, and Volcano Ranch quadrangles, all recompiled at 1:100,000 scale on a topographic base map. The fault location is also evident in high-resolution aeromagnetic data (U.S. Geological Survey and SIAL Geosciences Inc., 1997 #1722; Grauch and Millegan, 1998 #1721). <P> The southern trace of the Zia fault is open to interpretation. Cather and others (1997 #1763) mapped the Zia fault as a queried trace with a southward strike along the eastern margin of the Sky Village SE (now Arroyo de las Calabacillas) 7.5-minute quadrangle. However, the compiler used the mapping of Hawley and Whitworth (1996 #1303), airphoto analysis (S.F. Personius, unpubl. mapping, 1997), and geophysical data (U.S. Geological Survey and SIAL Geosciences Inc., 1997 #1722; Grauch and Millegan, 1998 #1721) to infer a more southwestward trace of the Zia fault across the Sky Village SE quadrangle. The latter trace is used in the compilation because the fault appears to have better topographic expression, and thus may have younger movement. <P>
Geologic setting	The Zia fault is one of several down-to-the-east intrabasin faults in the northern part of the Albuquerque-Belen basin. <P>
Length (km)	32 km.
Average strike	N15°E
Sense of movement	Normal

Dip Direction	E
Paleoseismology studies	Site 2046-1. Referred to as the Zia trench site is located near the southern rim of Ceja de-Rio Jemez (the northern limit of the Llano de Albuquerque geomorphic surface). McCalpin and Harrison (2001 #6924) excavated three trenches at this site in order to better observe the stratigraphy. The middle trench crosses the steepest, highest part of the fault scarp and reveals evidence for at least 5 faulting events. Displacement in these events ranged from 0.6 to 2.6 m, with an average of 1.3 m. The study includes two independent age estimates from soil-carbonate accumulation and luminescence ages. Soil-carbonate age estimates are preferred because the thermoluminescence ages (56–416 ka) were deemed unreliable because all dates are in an inverted stratigraphic order. The soils in the upper 3 m of the trench required 10–32 k.y. to form, and the strong soils at the base of the trench required an additional 32 k.y. <P>
Geomorphic expression	The Zia fault is well exposed in Santa Fe Group sediment in the Zia badlands north of the Llano de Albuquerque. Farther south, the fault forms broad, dissected fault scarps across the Llano de Albuquerque and on younger surficial deposits. <P>
Age of faulted surficial deposits	Manley (1978 #1404) described minor (0.5 m) offset of middle or upper (?) Pleistocene alluvium by the Zia fault in the Bernalillo NW quadrangle. Kelly (1997 #1106) estimated approximately 60 m of throw in Upper Santa Fe Group sediment (Pliocene to early Pleistocene) across the Zia fault. In most places, the Zia fault offsets the early Pleistocene Llano de Albuquerque surface and middle (?) Pleistocene surficial deposits.
Historic earthquake	
Most recent prehistoric deformation	latest Quaternary (<15 ka) *Comments:* McCalpin and Harrison (2001 #6924) conclude that the most recent surface rupture at the trench site occurred about 11 ka as inferred from soil-carbonate age estimates. Furthermore, the most recent event is older than the Holocene unconformity that occurred about 2,380–2,740 cal. yr BP. <P>
Recurrence interval	10–21 k.y. (<119 ka)

	Comments: McCalpin and Harrison (2001 #6924) base their estimate of long-term average recurrence by assuming five events have occurred since the formation of buried soils 5 and 6, which have a soil-carbonate age estimate of greater than 63 ka and an optically stimulated luminescence (OSL) age of 119 ka. McCalpin and Harrison (2001 #6924) suggest that if the most recent event occurred at 11 ka, then the four preceding recurrence cycles spanned 52–108 k.y., which results in an average recurrence interval of 10–21 k.y.
Slip-rate category	Less than 0.2 mm/yr *Comments:* The five events inferred from the middle trench have a cumulative down-to-the-east vertical displacement of 6.5 m, which occurred over the past 63-119 ka. McCalpin and Harrison (2001 #6924) suggest that the resulting average long-term vertical displacement rate is 0.055–0.1 mm/yr.
Date and Compiler(s)	2015 Stephen F. Personius, U.S. Geological Survey Kathleen M. Haller, U.S. Geological Survey
References	#1763 Cather, S.M., Connell, S.D., Heynekamp, M.R., and Goodwin, L.B., 1997, Geology of the Arroyo de las Calabacillas [Sky Village SE] 7.5-minute quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Geologic Map 9, 8 p. pamphlet, 1 sheet, scale 1:24,000. #7454 Connell, S.D., 2008, Geologic map of the Albuquerque-Rio Rancho metropolitan area and vicinity, Bernalillo and Sandoval Counties, New Mexico: New Mexico Bureau of Geology and Mineral Resources Geologic Map 78, scale 1:50,000. #1296 Galusha, T., 1966, The Zia Sand Formation, new early to medial Miocene beds in New Mexico: American Museum Novitates 2271, 12 p. #1721 Grauch, V.J.S., and Millegan, P.S., 1998, Mapping intrabasinal faults from high-resolution aeromagnetic data: The Leading Edge, v. 17, p. 53-55. #1303 Hawley, J.W., and Whitworth, T.M., compilers, 1996, Hydrogeology of potential recharge areas for the basin- and valley-fill aquifer systems, and hydrogeochemical modeling of proposed artificial recharge of the upper Santa Fe aquifer, northern Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 402-D, 575 p. #1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls. #1404 Manley, K., 1978, Geologic map of Bernalillo NW quadrangle, Sandoval County, New Mexico: U.S. Geological Survey Geologic quadrangle Map GQ-1446, 1 sheet, scale 1:24,000. #6924 McCalpin, J.P., and Harrison, J.B.J., 2001, Paleoseismicity of Quaternary faults near Albuquerque, New Mexico: Final Technical Report, Second Year, to U.S. Geological Survey for Contract 99HQGR0056, 58 p. #1722 U.S. Geological Survey, and SIAL Geosciences, Inc., 1997, Description of digital

	aeromagnetic data collected north and west of Albuquerque, New Mexico: U.S. Geological Survey Open-File Report 97-286, 40 p. #1155 Wong, I., Kelson, K., Olig, S., Kolbe, T., Hemphill-Haley, M., Bott, J., Green, R., Kanakari, H., Sawyer, J., Silva, W., Stark, C., Haraden, C., Fenton, C., Unruh, J., Gardner, J., Reneau, S., and House, L., 1995, Seismic hazards evaluation of the Los Alamos National Laboratory: Technical report to Los Alamos National Laboratory, Los Alamos, New Mexico, February 24, 1995, 3 volumes, 12 pls., 16 appen.

APPENDIX C
DETERMINISTIC ANALYSES

APPENDIX C.1
DETERMINISTIC EZ-FRISK SOFTWARE INPUT

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*********************************************
*****              EZ-FRISK              *****
***** SEISMIC HAZARD ANALYSIS DEFINITION *****
*****               FUGRO                *****
*****        WALNUT CREEK, CA  USA       *****
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PROGRAM VERSION
  EZ-FRISK 8.11 Build 019

ANALYSIS TITLE:
  Mt Taylor Deterministic

ANALYSIS TYPE:
  Single Site Analysis

SITE COORDINATES
  Latitude 35.3409
  Longitude -107.635

INTENSITY TYPE: Spectral Response @ 5% Damping

HAZARD DEAGGREGATION
  Status: ON
  Deagregation Scenario 1
    Period: PGA
    Amplitude: 0.0001 Acceleration (g)
  Bin Configuration
    Magnitude
      Scale: Moment Magnitude
      Lowest Value: 5 Mw
      Highest Value: 9 Mw
      Bin Size: 0.1
    Distance
      Lowest Value: 0 km
      Highest Value: 102.5 km
      Bin Size: 2.5 km
    Epsilon
      Lowest Value: -2.2
      Highest Value: 4.2
      Bin Size: 0.2

SOIL AMPLIFICATION
  Method: Do not use soil amplification

ATTENUATION EQUATION SITE PARAMETERS
  Depth[Vs=1,000m/s] (m): 5
  Depth[Vs=1000m/s] (m): -1
  Estimate Z1 from Vs30 for CY NGA: 1
  Regional Code: Default
  Subduction Zone Setting: Unknown
  Vs30 (m/s): 1200
  Vs30 Is Measured: 0
  Z25 (km): 0.79

AMPLITUDES - Acceleration (g)
  0.0001
  0.001
  0.01
  0.02
  0.05
  0.07
  0.1
  0.2
  0.3
  0.4
  0.5
  0.7
  1
  2
  3

PERIODS (s)
  PGA
  0.05
  0.1
  0.2
  0.3
  0.4
  0.5
  0.75
  1
  2
  3
  4

DETERMINISTIC FRACTILES
  0.5
  0.84

PLOTTING PARAMETERS
  Period at which to plot PGA: 0.0001

CALCULATIONAL PARAMETERS
  Fault Seismic Sources -
    Maximum inclusion distance   :   1000 km
    Down dip integration increment   :   1 km
    Horizontal integration increment   :   1 km
    Number rupture length per earthquake :   1
  Subduction Interface Seismic Sources -
    Maximum inclusion distance   :   1000 km
    Down dip integration increment   :   5 km
    Horizontal integration increment   :   20 km
    Number rupture length per earthquake :   1
  Subduction Slab Seismic Sources -
    Maximum inclusion distance   :   300 km
    Down dip integration increment   :   5 km
    Horizontal integration increment   :   20 km

```
    Number rupture length per earthquake :   1
  Area Seismic Sources -
    Maximum inclusion distance           :   200 km
    Vertical integration increment       :   3 km
    Number of rupture azimuths           :   3
    Minimum epicentral distance step     :   0.5 km
    Maximum epicentral distance step     :   10 km
  Gridded Seismic Sources -
    Maximum inclusion distance            :   1000 km
    Default number of rupture azimuths    :   20
    Maximum distance for default azimuths :   40 km
    Minimum distance for one azimuth      :   150
    Use binned calcuations if possible    :   true
    Bins per decade in distance (km)      :   20
  All Seismic Sources -
    Magnitude integration step           :   0.1 M
    Apply magnitude scaling              :   NO
    Include near-source directivity      :   NO

ATTENUATION EQUATIONS

  Name: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Database: C:\Program Files (x86)\EZ-FRISK 8.11\Files\standard.bin-
attendb
  Base: Abrahamson-et al 2014 NGA West 2
  Truncation Type: USGS 2008 NSHM Truncation
  Truncation Value: 3
  Magnitude Scale: Moment Magnitude
  Distance Type: Distance To Rupture

  Name: Boore-et al (2014) NGA West 2 USGS 2014
  Database: C:\Program Files (x86)\EZ-FRISK 8.11\Files\standard.bin-
attendb
  Base: Boore-et al 2014 NGA West 2
  Truncation Type: USGS 2008 NSHM Truncation
  Truncation Value: 3
  Magnitude Scale: Moment Magnitude
  Distance Type: Horizontal Distance To Rupture

  Name: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Database: C:\Program Files (x86)\EZ-FRISK 8.11\Files\standard.bin-
attendb
  Base: Campbell-Bozorgnia 2014 NGA West 2
  Truncation Type: USGS 2008 NSHM Truncation
  Truncation Value: 3
  Magnitude Scale: Moment Magnitude
  Distance Type: Distance To Rupture

  Name: Chiou-Youngs (2014) NGA West 2 USGS 2014
  Database: C:\Program Files (x86)\EZ-FRISK 8.11\Files\standard.bin-
attendb
  Base: Chiou-Youngs 2014 NGA West 2
  Truncation Type: USGS 2008 NSHM Truncation
  Truncation Value: 3
```

Magnitude Scale: Moment Magnitude
Distance Type: Distance To Rupture

SEISMIC SOURCE SUMMARY TABLE

Closest Deterministic Fault Source	Distance	Magnitude	Mechanism	Dip Angle	Dips To	Site Region Lies
Random Earthquake	15.08	6.3000	Normal	60.0000	NE	Mt Taylor Deterministic S
Cat Mesa fault	75.81	6.6000	Normal	80.0000	W	Mt Taylor Deterministic NW
Cebollita Mesa fault	74.73	6.3000	Normal	60.0000	W	Mt Taylor Deterministic NE
Continental Divide fault	91.78	6.5000	Normal	60.0000	NW	Mt Taylor Deterministic NE
County Dump fault [2038]	76.49	6.8900	Normal	35-65	E	USGS 2014 New Mexico W
Coyote Springs fault	93.39	6.5000	Normal	60.0000	SW	Mt Taylor Deterministic NW
Intrabasin faults on the Llano de Albuquerque	66.68	7.5000	Normal	60.0000	W	Mt Taylor Deterministic W
Jemez-San Ysidro fault [2029ab]	77.22	7.0900	Normal	35-65	E	USGS 2014 New Mexico W
Calabacillas fault [2035]	70.51	6.8300	Normal	35-65	E	USGS 2014 New Mexico W
Mesa Prieta faults	47.03	6.3000	Normal	60.0000	W	Mt Taylor Deterministic W
Nacimiento fault [2002ab]	72.26	7.3000	Normal	35-65	E	USGS 2014 New Mexico W
San Felipe fault zone [2030a]	93.19	6.9700	Normal	35-65	E	USGS 2014 New Mexico W
San Felipe fault zone (Algodones section)	93.26	7.0000	Normal	60.0000	W	Mt Taylor Deterministic W
Sand Hill fault zone	62.14	6.9000	Normal	60.0000	W	Mt Taylor Deterministic W
Santa Fe fault	67.75	6.8000	Normal	60.0000	W	Mt Taylor Deterministic NW
unnamed fault of Bonita Canyon	49.31	6.1000	Normal	60.0000	W	Mt Taylor Deterministic NE
unnamed faults near Albuquerque Volcanoes	73.56	6.9000	Normal	60.0000	W	Mt Taylor Deterministic W
unnamed faults near Picuda Peak	78.77	6.4000	Normal	60.0000	W	Mt Taylor Deterministic W
unnamed faults near Star Heights	78.52	6.5000	Normal	70.0000	W	Mt Taylor Deterministic W
unnamed faults of El Malpais lava field	60.42	6.7000	Normal	60.0000	W	Mt Taylor Deterministic NE
unnamed intrabasin faults west of the Rio Puerco	87.25	6.6000	Normal	60.0000	W	Mt Taylor Deterministic NW

Zia fault [2046] USGS 2014 New Mexico
73.70 6.8400 Normal 35-65 E W

SEISMIC SOURCES

Name: Random Earthquake
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 6.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
60	60	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	1	Slip	2.000e-02	6.200000	6.400000	0.000000	6.300000	0.120000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.4750	-107.6100
35.4760	-107.6110

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: Cat Mesa fault
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal

Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 6.6

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
80	80	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	1	Slip	2.000e-02	6.300000	6.900000	0.000000	6.600000	0.120000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.0060	-106.8960
34.7350	-106.9260

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: Cebollita Mesa fault
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 6.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
60	60	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2

```
          Normal         1        Slip   2.000e-02  6.000000  6.600000
0.000000  6.300000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    34.7310  -107.9810
    34.6100  -107.9750

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

*****************************************

Name: Continental Divide fault
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.5

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
          Normal         1        Slip   2.000e-02  6.200000  6.800000
0.000000  6.500000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
```

```
    34.7820  -108.3780
    34.6090  -108.4870

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

*****************************************

Name: County Dump fault [2038]
Region: USGS 2014 New Mexico
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK
USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
 ------ Start Nested Sources forCounty Dump fault [2038] -------
Name: 2038 County Dump fault (dip 35)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.89

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          90        35         0     0.001        15

Magnitude Recurrence Distributions:
       ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
          Normal  0.013334    Activity   4.132e-05  6.450000  6.930000
2.300000  6.690000  0.120000  0.010000 10.000000
          Normal  0.040002    Activity   4.132e-05  6.650000  7.130000
2.300000  6.890000  0.120000  0.010000 10.000000
          Normal  0.013334    Activity   4.132e-05  6.850000  7.330000
2.300000  7.090000  0.120000  0.010000 10.000000
     Exponential  0.006666    Activity   5.043e-05  6.500000  6.690000
1.842068  0.000000  0.000000  0.000000  0.000000
     Exponential  0.019998    Activity   8.751e-05  6.500000  6.890000
1.842068  0.000000  0.000000  0.000000  0.000000
     Exponential  0.006666    Activity   1.132e-04  6.500000  7.090000
1.842068  0.000000  0.000000  0.000000  0.000000
          Normal  0.106666    Activity   4.095e-05  6.450000  6.930000
2.300000  6.690000  0.120000  0.010000 10.000000
          Normal  0.319998    Activity   4.095e-05  6.650000  7.130000
2.300000  6.890000  0.120000  0.010000 10.000000
```

Normal	0.106666	Activity	4.095e-05	6.850000	7.330000	2.300000
7.090000	0.120000	0.010000	10.000000			
Exponential	0.053334	Activity	5.003e-05	6.500000	6.690000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.160002	Activity	8.682e-05	6.500000	6.890000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.053334	Activity	1.123e-04	6.500000	7.090000	1.842068
0.000000	0.000000	0.000000	0.000000			
Normal	0.013334	Activity	4.951e-05	6.450000	6.930000	2.300000
6.690000	0.120000	0.010000	10.000000			
Normal	0.040002	Activity	4.951e-05	6.650000	7.130000	2.300000
6.890000	0.120000	0.010000	10.000000			
Normal	0.013334	Activity	4.951e-05	6.850000	7.330000	2.300000
7.090000	0.120000	0.010000	10.000000			
Exponential	0.006666	Activity	6.051e-05	6.500000	6.690000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.019998	Activity	1.050e-04	6.500000	6.890000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.006666	Activity	1.358e-04	6.500000	7.090000	1.842068
0.000000	0.000000	0.000000	0.000000			

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--

```
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.0085  -106.7757
    35.1051  -106.7841
    35.1830  -106.7825
    35.2448  -106.8003
    35.2807  -106.7828
    35.3260  -106.7499

Name: 2038 County Dump fault (dip 50)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.60000000
Deterministic Magnitude: 6.89

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          90        50         0     0.001        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal  0.013334    Activity   4.132e-05  6.450000  6.930000
2.300000  6.690000  0.120000  0.010000 10.000000
           Normal  0.040002    Activity   4.132e-05  6.650000  7.130000
2.300000  6.890000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   4.132e-05  6.850000  7.330000
2.300000  7.090000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   5.043e-05  6.500000  6.690000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   8.751e-05  6.500000  6.890000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   1.132e-04  6.500000  7.090000
1.842068  0.000000  0.000000  0.000000  0.000000
           Normal  0.106666    Activity   4.095e-05  6.450000  6.930000
2.300000  6.690000  0.120000  0.010000 10.000000
           Normal  0.319998    Activity   4.095e-05  6.650000  7.130000
2.300000  6.890000  0.120000  0.010000 10.000000
           Normal  0.106666    Activity   4.095e-05  6.850000  7.330000
2.300000  7.090000  0.120000  0.010000 10.000000
      Exponential  0.053334    Activity   5.003e-05  6.500000  6.690000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.160002    Activity   8.682e-05  6.500000  6.890000
1.842068  0.000000  0.000000  0.000000  0.000000
```

Exponential	0.053334	Activity	1.123e-04	6.500000	7.090000	1.842068
0.000000	0.000000	0.000000	0.000000			
Normal	0.013334	Activity	4.951e-05	6.450000	6.930000	2.300000
6.690000	0.120000	0.010000	10.000000			
Normal	0.040002	Activity	4.951e-05	6.650000	7.130000	2.300000
6.890000	0.120000	0.010000	10.000000			
Normal	0.013334	Activity	4.951e-05	6.850000	7.330000	2.300000
7.090000	0.120000	0.010000	10.000000			
Exponential	0.006666	Activity	6.051e-05	6.500000	6.690000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.019998	Activity	1.050e-04	6.500000	6.890000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.006666	Activity	1.358e-04	6.500000	7.090000	1.842068
0.000000	0.000000	0.000000	0.000000			

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.0085	-106.7757
35.1051	-106.7841
35.1830	-106.7825
35.2448	-106.8003
35.2807	-106.7828
35.3260	-106.7499

Name: 2038 County Dump fault (dip 65)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.89

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	65	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	4.132e-05	6.450000	6.930000	2.300000	6.690000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	4.132e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	4.132e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	5.043e-05	6.500000	6.690000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	8.751e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	1.132e-04	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	4.095e-05	6.450000	6.930000	2.300000	6.690000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	4.095e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	4.095e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	5.003e-05	6.500000	6.690000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	8.682e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	1.123e-04	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	4.951e-05	6.450000	6.930000	2.300000	6.690000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	4.951e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000

	Normal	0.013334	Activity	4.951e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
	Exponential	0.006666	Activity	6.051e-05	6.500000	6.690000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.019998	Activity	1.050e-04	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.006666	Activity	1.358e-04	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.0085	-106.7757
35.1051	-106.7841
35.1830	-106.7825

```
    35.2448  -106.8003
    35.2807  -106.7828
    35.3260  -106.7499

 ------ End Nested Sources for County Dump fault [2038] -------

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

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Name: Coyote Springs fault
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 6.5

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
          Normal         1        Slip   2.000e-02  6.200000  6.800000
0.000000  6.500000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    34.6210  -107.1060
    34.4710  -107.0050

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
```

```
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

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Name: Intrabasin faults on the Llano de Albuquerque
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 7.5

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
       ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
         Normal         1        Slip   2.000e-02  7.200000  7.800000
0.000000  7.500000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.1810  -106.8520
    34.4930  -106.8350

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

****************************************

Name: Jemez-San Ysidro fault [2029ab]
Region: USGS 2014 New Mexico
Category:Composite Seismic Source
```

Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
------ Start Nested Sources forJemez-San Ysidro fault [2029ab] -------
Name: 2029ab Jemez-San Ysidro fault (dip 35)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 7.09

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	35	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.815e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.815e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.815e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	4.237e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	5.479e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	6.339e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	1.582e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	1.582e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	1.582e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	3.687e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	4.768e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	5.516e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	2.420e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	2.420e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	2.420e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	5.650e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	7.306e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000

Exponential 0.006666 Activity 8.452e-05 6.500000 7.290000
1.842068 0.000000 0.000000 0.000000 0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.4204	-106.7887
35.4846	-106.7821
35.5444	-106.7889
35.5588	-106.7854
35.5980	-106.7870
35.6099	-106.7896
35.6472	-106.8137
35.6645	-106.8166
35.6864	-106.8126

35.7072 -106.7940
35.7251 -106.7645
35.7443 -106.7555
35.7529 -106.7401
35.7737 -106.7198
35.7876 -106.6880
35.8181 -106.6576
35.8332 -106.6346

Name: 2029ab Jemez-San Ysidro fault (dip 50)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.60000000
Deterministic Magnitude: 7.09

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.815e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.815e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.815e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	4.237e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	5.479e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	6.339e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	1.582e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	1.582e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	1.582e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	3.687e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	4.768e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	5.516e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	2.420e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	2.420e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	2.420e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000

Exponential	0.006666	Activity	5.650e-05	6.500000	6.890000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.019998	Activity	7.306e-05	6.500000	7.090000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.006666	Activity	8.452e-05	6.500000	7.290000	1.842068	0.000000
0.000000	0.000000	0.000000					

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.4204	-106.7887
35.4846	-106.7821
35.5444	-106.7889
35.5588	-106.7854
35.5980	-106.7870

```
    35.6099  -106.7896
    35.6472  -106.8137
    35.6645  -106.8166
    35.6864  -106.8126
    35.7072  -106.7940
    35.7251  -106.7645
    35.7443  -106.7555
    35.7529  -106.7401
    35.7737  -106.7198
    35.7876  -106.6880
    35.8181  -106.6576
    35.8332  -106.6346

Name: 2029ab Jemez-San Ysidro fault (dip 65)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 7.09

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          90        65         0     0.001        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal  0.013334    Activity   1.815e-05  6.650000  7.130000
2.300000  6.890000  0.120000  0.010000 10.000000
           Normal  0.040002    Activity   1.815e-05  6.850000  7.330000
2.300000  7.090000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   1.815e-05  7.050000  7.530000
2.300000  7.290000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   4.237e-05  6.500000  6.890000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   5.479e-05  6.500000  7.090000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   6.339e-05  6.500000  7.290000
1.842068  0.000000  0.000000  0.000000  0.000000
           Normal  0.106666    Activity   1.582e-05  6.650000  7.130000
2.300000  6.890000  0.120000  0.010000 10.000000
           Normal  0.319998    Activity   1.582e-05  6.850000  7.330000
2.300000  7.090000  0.120000  0.010000 10.000000
           Normal  0.106666    Activity   1.582e-05  7.050000  7.530000
2.300000  7.290000  0.120000  0.010000 10.000000
      Exponential  0.053334    Activity   3.687e-05  6.500000  6.890000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.160002    Activity   4.768e-05  6.500000  7.090000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.053334    Activity   5.516e-05  6.500000  7.290000
1.842068  0.000000  0.000000  0.000000  0.000000
           Normal  0.013334    Activity   2.420e-05  6.650000  7.130000
2.300000  6.890000  0.120000  0.010000 10.000000
```

```
           Normal  0.040002    Activity   2.420e-05  6.850000  7.330000
2.300000  7.090000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   2.420e-05  7.050000  7.530000
2.300000  7.290000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   5.650e-05  6.500000  6.890000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   7.306e-05  6.500000  7.090000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   8.452e-05  6.500000  7.290000
1.842068  0.000000  0.000000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.4204  -106.7887
```

```
    35.4846  -106.7821
    35.5444  -106.7889
    35.5588  -106.7854
    35.5980  -106.7870
    35.6099  -106.7896
    35.6472  -106.8137
    35.6645  -106.8166
    35.6864  -106.8126
    35.7072  -106.7940
    35.7251  -106.7645
    35.7443  -106.7555
    35.7529  -106.7401
    35.7737  -106.7198
    35.7876  -106.6880
    35.8181  -106.6576
    35.8332  -106.6346

 ------ End Nested Sources for Jemez-San Ysidro fault [2029ab] -------

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

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Name: Calabacillas fault [2035]
Region: USGS 2014 New Mexico
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK
USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
 ------ Start Nested Sources forCalabacillas fault [2035] -------
Name: 2035 Calabacillas fault (dip 35)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.83

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          90        35         0     0.001        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
```

	Normal	0.013334	Activity	1.984e-04	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000
	Normal	0.040002	Activity	1.984e-04	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000
	Normal	0.013334	Activity	1.984e-04	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000
	Exponential	0.006666	Activity	1.770e-04	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.019998	Activity	3.787e-04	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.006666	Activity	5.181e-04	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000
	Normal	0.106666	Activity	8.097e-06	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000
	Normal	0.319998	Activity	8.097e-06	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000
	Normal	0.106666	Activity	8.097e-06	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000
	Exponential	0.053334	Activity	7.248e-06	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.160002	Activity	1.550e-05	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.053334	Activity	2.121e-05	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000
	Normal	0.013334	Activity	9.028e-06	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000
	Normal	0.040002	Activity	9.028e-06	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000
	Normal	0.013334	Activity	9.028e-06	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000
	Exponential	0.006666	Activity	8.047e-06	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.019998	Activity	1.721e-05	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.006666	Activity	2.355e-05	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--

Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--		
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--		
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--		
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--		
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--		
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--		
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--		
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--		
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--		
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--		
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--		

Trace Coordinates:

Latitude	Longitude
35.1404	-106.8390
35.2034	-106.8526
35.2416	-106.8654
35.2671	-106.8632
35.3315	-106.8350
35.4192	-106.7898

Name: 2035 Calabacillas fault (dip 50)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.60000000
Deterministic Magnitude: 6.83

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.984e-04	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.984e-04	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.984e-04	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000

Exponential	0.006666	Activity	1.770e-04	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000		
Exponential	0.019998	Activity	3.787e-04	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000		
Exponential	0.006666	Activity	5.181e-04	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000		
Normal	0.106666	Activity	8.097e-06	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000		
Normal	0.319998	Activity	8.097e-06	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000		
Normal	0.106666	Activity	8.097e-06	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000		
Exponential	0.053334	Activity	7.248e-06	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000		
Exponential	0.160002	Activity	1.550e-05	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000		
Exponential	0.053334	Activity	2.121e-05	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000		
Normal	0.013334	Activity	9.028e-06	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000		
Normal	0.040002	Activity	9.028e-06	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000		
Normal	0.013334	Activity	9.028e-06	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000		
Exponential	0.006666	Activity	8.047e-06	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000		
Exponential	0.019998	Activity	1.721e-05	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000		
Exponential	0.006666	Activity	2.355e-05	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000		

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.1404	-106.8390
35.2034	-106.8526
35.2416	-106.8654
35.2671	-106.8632
35.3315	-106.8350
35.4192	-106.7898

Name: 2035 Calabacillas fault (dip 65)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.83

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	65	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.984e-04	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.984e-04	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.984e-04	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	1.770e-04	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	3.787e-04	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	5.181e-04	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000

	Normal	0.106666	Activity	8.097e-06	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000
	Normal	0.319998	Activity	8.097e-06	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000
	Normal	0.106666	Activity	8.097e-06	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000
	Exponential	0.053334	Activity	7.248e-06	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.160002	Activity	1.550e-05	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.053334	Activity	2.121e-05	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000
	Normal	0.013334	Activity	9.028e-06	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000
	Normal	0.040002	Activity	9.028e-06	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000
	Normal	0.013334	Activity	9.028e-06	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000
	Exponential	0.006666	Activity	8.047e-06	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.019998	Activity	1.721e-05	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000
	Exponential	0.006666	Activity	2.355e-05	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--

```
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.1404  -106.8390
    35.2034  -106.8526
    35.2416  -106.8654
    35.2671  -106.8632
    35.3315  -106.8350
    35.4192  -106.7898

 ------ End Nested Sources for Calabacillas fault [2035] -------

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

*****************************************

Name: Mesa Prieta faults
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.3

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
          Normal         1        Slip   2.000e-02  6.000000  6.600000
0.000000  6.300000  0.120000  0.000000  0.000000
```

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.5190	-107.0400
35.4360	-107.0760

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: Nacimiento fault [2002ab]
Region: USGS 2014 New Mexico
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
------ Start Nested Sources forNacimiento fault [2002ab] -------
Name: 2002ab Nacimiento fault (dip 35)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	35	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.041e-04	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.041e-04	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.041e-04	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	3.949e-04	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000

Exponential	0.019998	Activity	4.551e-04	6.500000	7.300000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.006666	Activity	4.968e-04	6.500000	7.500000	1.842068	0.000000
0.000000	0.000000	0.000000					
Normal	0.106666	Activity	1.182e-05	6.860000	7.340000	2.300000	7.100000
0.120000	0.010000	10.000000					
Normal	0.319998	Activity	1.182e-05	7.060000	7.540000	2.300000	7.300000
0.120000	0.010000	10.000000					
Normal	0.106666	Activity	1.182e-05	7.260000	7.740000	2.300000	7.500000
0.120000	0.010000	10.000000					
Exponential	0.053334	Activity	4.483e-05	6.500000	7.100000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.160002	Activity	5.167e-05	6.500000	7.300000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.053334	Activity	5.640e-05	6.500000	7.500000	1.842068	0.000000
0.000000	0.000000	0.000000					
Normal	0.013334	Activity	1.815e-05	6.860000	7.340000	2.300000	7.100000
0.120000	0.010000	10.000000					
Normal	0.040002	Activity	1.815e-05	7.060000	7.540000	2.300000	7.300000
0.120000	0.010000	10.000000					
Normal	0.013334	Activity	1.815e-05	7.260000	7.740000	2.300000	7.500000
0.120000	0.010000	10.000000					
Exponential	0.006666	Activity	6.868e-05	6.500000	7.100000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.019998	Activity	7.916e-05	6.500000	7.300000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.006666	Activity	8.640e-05	6.500000	7.500000	1.842068	0.000000
0.000000	0.000000	0.000000					

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--

Trace Coordinates:

Latitude	Longitude
35.4853	-106.8574
35.5849	-106.8557
35.6246	-106.8577
35.6777	-106.8687
35.7441	-106.8701
35.7740	-106.8782
35.7902	-106.8878
35.8244	-106.8941
35.8730	-106.8830
35.8874	-106.8885
35.8967	-106.8886
35.9087	-106.8936
35.9475	-106.8926
35.9999	-106.9014
36.0348	-106.8992
36.0541	-106.9073
36.0739	-106.9093
36.0917	-106.9093
36.1155	-106.9015
36.1908	-106.9112
36.1985	-106.9056
36.2198	-106.9021

Name: 2002ab Nacimiento fault (dip 50)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.60000000
Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.041e-04	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.041e-04	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.041e-04	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	3.949e-04	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	4.551e-04	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	4.968e-04	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	1.182e-05	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	1.182e-05	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	1.182e-05	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	4.483e-05	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	5.167e-05	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	5.640e-05	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	1.815e-05	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.815e-05	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.815e-05	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	6.868e-05	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	7.916e-05	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	8.640e-05	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--

Trace Coordinates:

Latitude	Longitude
35.4853	-106.8574
35.5849	-106.8557
35.6246	-106.8577
35.6777	-106.8687
35.7441	-106.8701
35.7740	-106.8782
35.7902	-106.8878
35.8244	-106.8941
35.8730	-106.8830
35.8874	-106.8885
35.8967	-106.8886
35.9087	-106.8936
35.9475	-106.8926
35.9999	-106.9014
36.0348	-106.8992
36.0541	-106.9073
36.0739	-106.9093
36.0917	-106.9093
36.1155	-106.9015
36.1908	-106.9112
36.1985	-106.9056
36.2198	-106.9021

Name: 2002ab Nacimiento fault (dip 65)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal

Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	65	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.041e-04	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.041e-04	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.041e-04	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	3.949e-04	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	4.551e-04	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	4.968e-04	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	1.182e-05	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	1.182e-05	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	1.182e-05	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	4.483e-05	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	5.167e-05	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	5.640e-05	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	1.815e-05	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.815e-05	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.815e-05	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	6.868e-05	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	7.916e-05	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	8.640e-05	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--

Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--

Trace Coordinates:

Latitude	Longitude
35.4853	-106.8574
35.5849	-106.8557
35.6246	-106.8577
35.6777	-106.8687
35.7441	-106.8701
35.7740	-106.8782
35.7902	-106.8878
35.8244	-106.8941
35.8730	-106.8830
35.8874	-106.8885
35.8967	-106.8886
35.9087	-106.8936
35.9475	-106.8926
35.9999	-106.9014
36.0348	-106.8992
36.0541	-106.9073
36.0739	-106.9093

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    36.0917  -106.9093
    36.1155  -106.9015
    36.1908  -106.9112
    36.1985  -106.9056
    36.2198  -106.9021

 ------ End Nested Sources for Nacimiento fault [2002ab] -------

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

*****************************************

Name: San Felipe fault zone [2030a]
Region: USGS 2014 New Mexico
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK
USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
 ------ Start Nested Sources forSan Felipe fault zone [2030a] -------
Name: 2030a San Felipe fault zone (dip 35)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.97

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          90        35         0     0.001        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal  0.013334    Activity   3.667e-05  6.530000  7.010000
2.300000  6.770000  0.120000  0.010000 10.000000
           Normal  0.040002    Activity   3.667e-05  6.730000  7.210000
2.300000  6.970000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   3.667e-05  6.930000  7.410000
2.300000  7.170000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   6.049e-05  6.500000  6.770000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   8.942e-05  6.500000  6.970000
1.842068  0.000000  0.000000  0.000000  0.000000
```

Exponential	0.006666	Activity	1.094e-04	6.500000	7.170000	1.842068	0.000000	0.000000	0.000000	0.000000	
Normal	0.106666	Activity	4.114e-05	6.530000	7.010000	2.300000	6.770000	0.120000	0.010000	10.000000	
Normal	0.319998	Activity	4.114e-05	6.730000	7.210000	2.300000	6.970000	0.120000	0.010000	10.000000	
Normal	0.106666	Activity	4.114e-05	6.930000	7.410000	2.300000	7.170000	0.120000	0.010000	10.000000	
Exponential	0.053334	Activity	6.791e-05	6.500000	6.770000	1.842068	0.000000	0.000000	0.000000	0.000000	
Exponential	0.160002	Activity	1.004e-04	6.500000	6.970000	1.842068	0.000000	0.000000	0.000000	0.000000	
Exponential	0.053334	Activity	1.229e-04	6.500000	7.170000	1.842068	0.000000	0.000000	0.000000	0.000000	
Normal	0.013334	Activity	5.863e-05	6.530000	7.010000	2.300000	6.770000	0.120000	0.010000	10.000000	
Normal	0.040002	Activity	5.863e-05	6.730000	7.210000	2.300000	6.970000	0.120000	0.010000	10.000000	
Normal	0.013334	Activity	5.863e-05	6.930000	7.410000	2.300000	7.170000	0.120000	0.010000	10.000000	
Exponential	0.006666	Activity	9.678e-05	6.500000	6.770000	1.842068	0.000000	0.000000	0.000000	0.000000	
Exponential	0.019998	Activity	1.431e-04	6.500000	6.970000	1.842068	0.000000	0.000000	0.000000	0.000000	
Exponential	0.006666	Activity	1.751e-04	6.500000	7.170000	1.842068	0.000000	0.000000	0.000000	0.000000	

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.3121	-106.6081
35.3270	-106.6074
35.3567	-106.5956
35.3788	-106.5946
35.4247	-106.6022
35.4578	-106.6165
35.4795	-106.6103
35.5200	-106.6145
35.5312	-106.6112
35.5464	-106.5983
35.5640	-106.5927
35.5981	-106.5979
35.6192	-106.5958
35.6399	-106.6049
35.6641	-106.6000
35.6832	-106.5846

Name: 2030a San Felipe fault zone (dip 50)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.60000000
Deterministic Magnitude: 6.97

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	3.667e-05	6.530000	7.010000	2.300000	6.770000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	3.667e-05	6.730000	7.210000	2.300000	6.970000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	3.667e-05	6.930000	7.410000	2.300000	7.170000	0.120000	0.010000	10.000000

```
      Exponential  0.006666    Activity   6.049e-05  6.500000  6.770000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   8.942e-05  6.500000  6.970000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   1.094e-04  6.500000  7.170000
1.842068  0.000000  0.000000  0.000000  0.000000
           Normal  0.106666    Activity   4.114e-05  6.530000  7.010000
2.300000  6.770000  0.120000  0.010000 10.000000
           Normal  0.319998    Activity   4.114e-05  6.730000  7.210000
2.300000  6.970000  0.120000  0.010000 10.000000
           Normal  0.106666    Activity   4.114e-05  6.930000  7.410000
2.300000  7.170000  0.120000  0.010000 10.000000
      Exponential  0.053334    Activity   6.791e-05  6.500000  6.770000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.160002    Activity   1.004e-04  6.500000  6.970000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.053334    Activity   1.229e-04  6.500000  7.170000
1.842068  0.000000  0.000000  0.000000  0.000000
           Normal  0.013334    Activity   5.863e-05  6.530000  7.010000
2.300000  6.770000  0.120000  0.010000 10.000000
           Normal  0.040002    Activity   5.863e-05  6.730000  7.210000
2.300000  6.970000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   5.863e-05  6.930000  7.410000
2.300000  7.170000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   9.678e-05  6.500000  6.770000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   1.431e-04  6.500000  6.970000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   1.751e-04  6.500000  7.170000
1.842068  0.000000  0.000000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
```

Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.3121	-106.6081
35.3270	-106.6074
35.3567	-106.5956
35.3788	-106.5946
35.4247	-106.6022
35.4578	-106.6165
35.4795	-106.6103
35.5200	-106.6145
35.5312	-106.6112
35.5464	-106.5983
35.5640	-106.5927
35.5981	-106.5979
35.6192	-106.5958
35.6399	-106.6049
35.6641	-106.6000
35.6832	-106.5846

Name: 2030a San Felipe fault zone (dip 65)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.97

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	65	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	3.667e-05	6.530000	7.010000	2.300000	6.770000	0.120000	0.010000	10.000000

	Normal	0.040002	Activity	3.667e-05	6.730000	7.210000	2.300000	6.970000	0.120000	0.010000	10.000000	
	Normal	0.013334	Activity	3.667e-05	6.930000	7.410000	2.300000	7.170000	0.120000	0.010000	10.000000	
	Exponential	0.006666	Activity	6.049e-05	6.500000	6.770000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.019998	Activity	8.942e-05	6.500000	6.970000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.006666	Activity	1.094e-04	6.500000	7.170000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Normal	0.106666	Activity	4.114e-05	6.530000	7.010000	2.300000	6.770000	0.120000	0.010000	10.000000	
	Normal	0.319998	Activity	4.114e-05	6.730000	7.210000	2.300000	6.970000	0.120000	0.010000	10.000000	
	Normal	0.106666	Activity	4.114e-05	6.930000	7.410000	2.300000	7.170000	0.120000	0.010000	10.000000	
	Exponential	0.053334	Activity	6.791e-05	6.500000	6.770000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.160002	Activity	1.004e-04	6.500000	6.970000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.053334	Activity	1.229e-04	6.500000	7.170000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Normal	0.013334	Activity	5.863e-05	6.530000	7.010000	2.300000	6.770000	0.120000	0.010000	10.000000	
	Normal	0.040002	Activity	5.863e-05	6.730000	7.210000	2.300000	6.970000	0.120000	0.010000	10.000000	
	Normal	0.013334	Activity	5.863e-05	6.930000	7.410000	2.300000	7.170000	0.120000	0.010000	10.000000	
	Exponential	0.006666	Activity	9.678e-05	6.500000	6.770000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.019998	Activity	1.431e-04	6.500000	6.970000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.006666	Activity	1.751e-04	6.500000	7.170000	1.842068	0.000000	0.000000	0.000000	0.000000	

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--

```
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.3121  -106.6081
    35.3270  -106.6074
    35.3567  -106.5956
    35.3788  -106.5946
    35.4247  -106.6022
    35.4578  -106.6165
    35.4795  -106.6103
    35.5200  -106.6145
    35.5312  -106.6112
    35.5464  -106.5983
    35.5640  -106.5927
    35.5981  -106.5979
    35.6192  -106.5958
    35.6399  -106.6049
    35.6641  -106.6000
    35.6832  -106.5846

 ------ End Nested Sources for San Felipe fault zone [2030a] -------

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

*****************************************
```

Name: San Felipe fault zone (Algodones section)
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
60	60	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	1	Slip	2.000e-02	6.700000	7.300000	0.000000	7.000000	0.120000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.5690	-106.4950
35.3340	-106.5250

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: Sand Hill fault zone
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.9

Fault Profile Parameters:

```
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal         1        Slip   2.000e-02  6.600000  7.200000
0.000000  6.900000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.4440  -106.8690
    35.1400  -106.8840

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

****************************************

Name: Santa Fe fault
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.8

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal         1        Slip   2.000e-02  6.500000  7.100000
0.000000  6.800000  0.120000  0.000000  0.000000

Rupture Length Parameters
```

```
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    34.8880  -107.0530
    34.6360  -107.1040

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

*****************************************

Name: unnamed fault of Bonita Canyon
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.1

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal         1        Slip   2.000e-02  5.800000  6.400000
0.000000  6.100000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    34.9800  -107.9510
    34.9250  -107.9400

Attenuation Equations for Source:
```

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: unnamed faults near Albuquerque Volcanoes
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 6.9

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
60	60	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	1	Slip	2.000e-02	6.600000	7.200000	0.000000	6.900000	0.120000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.2180	-106.7620
35.0650	-106.7500

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: unnamed faults near Picuda Peak
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.4

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
60	60	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	1	Slip	2.000e-02	6.100000	6.700000	0.000000	6.400000	0.120000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.4270	-106.6850
35.2830	-106.6880

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: unnamed faults near Star Heights
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 6.5

Fault Profile Parameters:

```
        Dip1      Dip2    Depth1    Depth2    Depth3
          70        70         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal         1        Slip   2.000e-02  6.200000  6.800000
0.000000  6.500000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.3510  -106.7250
    35.1680  -106.7160

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

****************************************

Name: unnamed faults of El Malpais lava field
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.7

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal         1        Slip   2.000e-02  6.400000  7.000000
0.000000  6.700000  0.120000  0.000000  0.000000

Rupture Length Parameters
```

```
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    34.8880  -108.0030
    34.5720  -108.1560

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

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Name: unnamed intrabasin faults west of the Rio Puerco
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 6.6

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
          Normal         1        Slip   2.000e-02  6.300000  6.900000
0.000000  6.600000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    34.7190  -106.9930
    34.4700  -106.9620

Attenuation Equations for Source:
```

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: Zia fault [2046]
Region: USGS 2014 New Mexico
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
------ Start Nested Sources forZia fault [2046] -------
Name: 2046 Zia fault (dip 35)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.84

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	35	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	4.384e-05	6.400000	6.880000	2.300000	6.640000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	4.384e-05	6.600000	7.080000	2.300000	6.840000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	4.384e-05	6.800000	7.280000	2.300000	7.040000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	4.160e-05	6.500000	6.640000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	8.517e-05	6.500000	6.840000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	1.153e-04	6.500000	7.040000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	4.356e-05	6.400000	6.880000	2.300000	6.640000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	4.356e-05	6.600000	7.080000	2.300000	6.840000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	4.356e-05	6.800000	7.280000	2.300000	7.040000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	4.127e-05	6.500000	6.640000	1.842068	0.000000	0.000000	0.000000	0.000000

```
      Exponential  0.160002    Activity   8.450e-05  6.500000  6.840000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.053334    Activity   1.144e-04  6.500000  7.040000
1.842068  0.000000  0.000000  0.000000  0.000000
           Normal  0.013334    Activity   5.268e-05  6.400000  6.880000
2.300000  6.640000  0.120000  0.010000 10.000000
           Normal  0.040002    Activity   5.268e-05  6.600000  7.080000
2.300000  6.840000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   5.268e-05  6.800000  7.280000
2.300000  7.040000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   4.992e-05  6.500000  6.640000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   1.022e-04  6.500000  6.840000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   1.384e-04  6.500000  7.040000
1.842068  0.000000  0.000000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
```

Length and width -3.220000 0.690000 0.220000 -3.220000 0.690000 0.220000 -- -- --

Trace Coordinates:

Latitude	Longitude
35.1892	-106.8434
35.2802	-106.8231
35.3228	-106.7957
35.3473	-106.7841
35.3751	-106.7784
35.4006	-106.7624
35.4706	-106.7481

Name: 2046 Zia fault (dip 50)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.60000000
Deterministic Magnitude: 6.84

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	4.384e-05	6.400000	6.880000	2.300000	6.640000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	4.384e-05	6.600000	7.080000	2.300000	6.840000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	4.384e-05	6.800000	7.280000	2.300000	7.040000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	4.160e-05	6.500000	6.640000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	8.517e-05	6.500000	6.840000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	1.153e-04	6.500000	7.040000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	4.356e-05	6.400000	6.880000	2.300000	6.640000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	4.356e-05	6.600000	7.080000	2.300000	6.840000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	4.356e-05	6.800000	7.280000	2.300000	7.040000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	4.127e-05	6.500000	6.640000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	8.450e-05	6.500000	6.840000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	1.144e-04	6.500000	7.040000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	5.268e-05	6.400000	6.880000	2.300000	6.640000	0.120000	0.010000	10.000000

```
           Normal  0.040002    Activity   5.268e-05  6.600000  7.080000
2.300000  6.840000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   5.268e-05  6.800000  7.280000
2.300000  7.040000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   4.992e-05  6.500000  6.640000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   1.022e-04  6.500000  6.840000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   1.384e-04  6.500000  7.040000
1.842068  0.000000  0.000000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.1892  -106.8434
```

35.2802 -106.8231
35.3228 -106.7957
35.3473 -106.7841
35.3751 -106.7784
35.4006 -106.7624
35.4706 -106.7481

Name: 2046 Zia fault (dip 65)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.84

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	65	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	4.384e-05	6.400000	6.880000	2.300000	6.640000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	4.384e-05	6.600000	7.080000	2.300000	6.840000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	4.384e-05	6.800000	7.280000	2.300000	7.040000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	4.160e-05	6.500000	6.640000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	8.517e-05	6.500000	6.840000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	1.153e-04	6.500000	7.040000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	4.356e-05	6.400000	6.880000	2.300000	6.640000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	4.356e-05	6.600000	7.080000	2.300000	6.840000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	4.356e-05	6.800000	7.280000	2.300000	7.040000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	4.127e-05	6.500000	6.640000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	8.450e-05	6.500000	6.840000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	1.144e-04	6.500000	7.040000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	5.268e-05	6.400000	6.880000	2.300000	6.640000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	5.268e-05	6.600000	7.080000	2.300000	6.840000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	5.268e-05	6.800000	7.280000	2.300000	7.040000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	4.992e-05	6.500000	6.640000	1.842068	0.000000	0.000000	0.000000	0.000000

```
      Exponential  0.019998    Activity   1.022e-04  6.500000  6.840000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   1.384e-04  6.500000  7.040000
1.842068  0.000000  0.000000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.1892  -106.8434
    35.2802  -106.8231
    35.3228  -106.7957
    35.3473  -106.7841
    35.3751  -106.7784
    35.4006  -106.7624
    35.4706  -106.7481
```

------ End Nested Sources for Zia fault [2046] -------

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

MAGNITUDE CONVERSIONS

This analysis does not require any magnitude conversions.
Note: Your analysis may indirectly use magnitude conversions that are not listed here.

Echo File Creation Time: 14:08:38 Thursday, September 18, 2025

APPENDIX C.2
DETERMINISTIC RESULTS

Appendix C.2 Results of Deterministic Hazard Analysis

Name of Faults	ID Number	Age of Most Recent Prehistoric Deformation (ya)[1]	Slip-rate (mm/yr)	Fault Length (Km)	Fault Type	Distance from site to surface trace of fault (km)	MCE[2,3]	PGA									
								Lognormal Mean		Arahamson-et al (2014)		Borre-et al (2014)		Campbell-Bozorgnia (2014)		Chiou-Youngs (2014)	
								Mean	Mean +1SD	Mean	Mean +1SD	Mean	Mean +1SD	Mean	Mean +1SD	Mean	Mean +1SD
Random Earthquake	-	-	-	-	-	15.1	6.3	0.09	0.17	0.09	0.16	0.09	0.16	0.12	0.21	0.08	0.14
Cat Mesa fault	2122	<750,000	<0.2	20	Normal	75.9	6.6	0.02	0.04	0.02	0.04	0.02	0.03	0.02	0.04	0.02	0.03
Cebollita Mesa fault	2140	<15,000	<0.2	13	Normal	74.8	6.3	0.01	0.03	0.01	0.03	0.02	0.03	0.02	0.03	0.01	0.02
Continental Divide fault	2145	<1,600,000	<0.2	17	Normal	91.8	6.5	0.01	0.02	0.01	0.02	0.01	0.02	0.02	0.03	0.01	0.02
County Dump fault[(3)]	2038	<130,000	<0.2	35	Normal	76.5	6.89	0.02	0.04	0.02	0.05	0.02	0.04	0.03	0.05	0.02	0.04
Coyote Springs fault	2114	<15,000	<0.2	17	Normal	93.4	6.5	0.01	0.02	0.01	0.02	0.01	0.02	0.02	0.03	0.01	0.02
Intrabasin faults on the Llano de Albuquerque	2121	<750,000	<0.2	101	Normal	66.7	7.5	0.04	0.08	0.05	0.09	0.04	0.07	0.05	0.09	0.04	0.08
Jemez-San Ysidro fault (Jemez section)[(3)]	2029a	<1,600,000	<0.2	28	Normal	77.3	7.09	0.03	0.05	0.03	0.05	0.03	0.05	0.03	0.06	0.03	0.04
Jemez-San Ysidro fault (San Ysidro section)[(3)]	2029b	<750,000	<0.2	34	Normal	77.3	7.09										
Jemez-San Ysidro fault (Calabacillas section)[(3)]	2029c	<15,000	<0.2	34	Normal	70.5	6.83	0.03	0.05	0.03	0.05	0.02	0.04	0.03	0.05	0.02	0.04
Mesa Prieta faults	1985	<1,600,000	<0.2	12	Normal	47.1	6.3	0.03	0.05	0.02	0.05	0.03	0.05	0.03	0.06	0.02	0.04
Nacimiento fault (northern section)[(3)]	2002a	<1,600,000	<0.2	36	Normal	72.3	7.30	0.03	0.06	0.04	0.07	0.03	0.06	0.04	0.07	0.03	0.06
Nacimiento fault (southern section)[(3)]	2002b	<750,000	<0.2	45	Normal	72.3	7.30										
San Felipe fault zone (Santa Ana section)[(3)]	2030a	<1,600,000	<0.2	44	Normal	93.2	6.97	0.02	0.04	0.02	0.04	0.02	0.03	0.02	0.04	0.02	0.03
San Felipe fault zone (Algodones section)	2030b	<1,600,000	<0.2	45	Normal	93.3	7.0	0.02	0.04	0.02	0.04	0.02	0.03	0.02	0.04	0.02	0.03
Sand Hill fault zone	2039	<1,600,000	<0.2	36	Normal	62.2	6.9	0.03	0.06	0.03	0.06	0.03	0.05	0.04	0.07	0.03	0.05
Santa Fe fault	2123	<1,600,000	<0.2	30	Normal	67.8	6.8	0.03	0.05	0.03	0.05	0.03	0.05	0.03	0.06	0.02	0.04
unnamed fault of Bonita Canyon	2144	<1,600,000	<0.2	9	Normal	49.3	6.1	0.02	0.04	0.02	0.04	0.02	0.04	0.03	0.05	0.02	0.03
unnamed faults near Albuquerque Volcanoes	2049	<750,000	<0.2	34	Normal	73.6	6.9	0.03	0.05	0.03	0.05	0.02	0.04	0.03	0.05	0.02	0.04
unnamed faults near Picuda Peak	2041	<1,600,000	<0.2	16	Normal	78.8	6.4	0.02	0.03	0.01	0.03	0.02	0.03	0.02	0.04	0.01	0.02
unnamed faults near Star Heights	2048	<750,000	<0.2	18	Normal	78.6	6.5	0.02	0.03	0.02	0.03	0.02	0.03	0.02	0.04	0.01	0.02
unnamed faults of El Malpais lava field	2146	<1,600,000	<0.2	26	Normal	60.5	6.7	0.03	0.05	0.03	0.05	0.03	0.05	0.03	0.06	0.02	0.04
unnamed intrabasin faults west of the Rio Puerco	2115	<750,000	<0.2	22	Normal	87.3	6.6	0.02	0.03	0.02	0.03	0.02	0.03	0.02	0.04	0.01	0.02
Zia fault[(3)]	2046	<15,000	<0.2	32	Normal	73.7	6.84	0.02	0.04	0.02	0.05	0.02	0.04	0.03	0.05	0.02	0.04

[1]ya = years ago

[2]Wells and Coopersmith (1994)

[3]The parameters included in the EZ Frisk program from the USGS Hazard mapping used for analysis

Deterministic Spectra Results using EZ-FRISK 8.11 Build 019

Largest Amplitudes of Ground Motions Considering All Sources Calculated using Weighted Mean of Attenuation Equations
Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	9.248e-02	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.05	1.448e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.1	1.997e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.2	1.987e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.3	1.529e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.4	1.192e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.5	9.607e-02	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.75	6.452e-02	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
1	4.625e-02	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
2	2.025e-02	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
3	1.229e-02	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
4	9.177e-03	7.50 Mw	66.71	Mt Taylor	Deterministic Intrabasin faults on the Llano de Albuquerque

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	1.695e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.05	2.768e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.1	3.937e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.2	3.815e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.3	2.935e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.4	2.308e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.5	1.886e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake

0.75	1.301e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
1	9.416e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
2	4.145e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
3	2.515e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
4	1.851e-02	7.50 Mw	66.71	Mt Taylor Deterministic Intrabasin faults on the Llano de Albuquerque	

Largest Amplitudes of Ground Motions Considering Sources Calculated with Abrahamson-et al (2014) NGA West 2 USGS 2014
Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	8.560e-02	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake
0.05	1.112e-01	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake
0.1	1.690e-01	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake
0.2	1.680e-01	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake
0.3	1.250e-01	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake
0.4	9.558e-02	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake
0.5	7.845e-02	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake
0.75	5.106e-02	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake
1	3.775e-02	7.50 Mw	66.71	Mt Taylor Deterministic	Intrabasin faults on the Llano de Albuquerque
2	2.364e-02	7.50 Mw	66.71	Mt Taylor Deterministic	Intrabasin faults on the Llano de Albuquerque
3	1.730e-02	7.50 Mw	66.71	Mt Taylor Deterministic	Intrabasin faults on the Llano de Albuquerque
4	1.270e-02	7.50 Mw	66.71	Mt Taylor Deterministic	Intrabasin faults on the Llano de Albuquerque

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	1.642e-01	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake
0.05	2.150e-01	6.30 Mw	15.09	Mt Taylor Deterministic	Random Earthquake

0.1	3.321e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.2	3.342e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.3	2.517e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.4	1.940e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.5	1.606e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.75	1.058e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
1	7.872e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
2	4.950e-02	7.50 Mw	66.71	Mt Taylor Deterministic Intrabasin faults on the Llano de Albuquerque	
3	3.591e-02	7.50 Mw	66.71	Mt Taylor Deterministic Intrabasin faults on the Llano de Albuquerque	
4	2.614e-02	7.50 Mw	66.71	Mt Taylor Deterministic Intrabasin faults on the Llano de Albuquerque	

Largest Amplitudes of Ground Motions Considering Sources Calculated with Boore-et al (2014) NGA West 2 USGS 2014
Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	8.586e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.05	1.307e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.1	1.803e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.2	2.075e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.3	1.626e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.4	1.261e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.5	9.983e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.75	6.853e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
1	5.002e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
2	2.062e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
3	1.373e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
4	1.025e-02	7.50 Mw	66.71	Mt Taylor Deterministic Intrabasin faults on the Llano de Albuquerque	

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	1.567e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.05	2.574e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.1	3.648e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.2	3.848e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.3	2.970e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.4	2.328e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.5	1.886e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.75	1.343e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
1	9.959e-02	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
2	4.137e-02	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
3	2.777e-02	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
4	2.072e-02	7.50 Mw	66.71	Mt Taylor	Deterministic Intrabasin faults on the Llano de Albuquerque

Largest Amplitudes of Ground Motions Considering Sources Calculated with Campbell-Bozorgnia (2014) NGA West 2 USGS 2014

Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	1.183e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.05	2.044e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.1	2.594e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.2	2.386e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.3	1.850e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.4	1.452e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake
0.5	1.158e-01	6.30 Mw	15.09	Mt Taylor	Deterministic Random Earthquake

0.75	7.848e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
1	5.536e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
2	2.357e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
3	1.375e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
4	9.487e-03	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	2.123e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.05	3.872e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.1	5.153e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.2	4.541e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.3	3.504e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.4	2.768e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.5	2.243e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.75	1.593e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
1	1.133e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
2	4.781e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
3	2.793e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
4	1.872e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	

Largest Amplitudes of Ground Motions Considering Sources Calculated with Chiou-Youngs (2014) NGA West 2 USGS 2014

Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	8.015e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.05	1.330e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	

0.1	1.902e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.2	1.809e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.3	1.392e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.4	1.102e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.5	9.024e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.75	6.000e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
1	4.210e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
2	1.634e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
3	8.738e-03	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
4	5.425e-03	7.50 Mw	66.71	Mt Taylor Deterministic Intrabasin faults on the Llano de Albuquerque	

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance(km)	Region	Controlling Source
PGA	1.448e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.05	2.478e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.1	3.626e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.2	3.529e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.3	2.750e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.4	2.195e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.5	1.809e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
0.75	1.211e-01	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
1	8.502e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
2	3.294e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
3	1.751e-02	6.30 Mw	15.09	Mt Taylor Deterministic Random Earthquake	
4	1.074e-02	7.50 Mw	66.71	Mt Taylor Deterministic Intrabasin faults on the Llano de Albuquerque	

Largest Amplitudes of Ground Motions for Each Source

Source: Random Earthquake
Region: Mt Taylor Deterministic
  Closest Distance: 15.09 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.30 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	9.248e-02	8.560e-02	8.586e-02	1.183e-01	8.015e-02
0.05	1.448e-01	1.112e-01	1.307e-01	2.044e-01	1.330e-01
0.1	1.997e-01	1.690e-01	1.803e-01	2.594e-01	1.902e-01
0.2	1.987e-01	1.680e-01	2.075e-01	2.386e-01	1.809e-01
0.3	1.529e-01	1.250e-01	1.626e-01	1.850e-01	1.392e-01
0.4	1.192e-01	9.558e-02	1.261e-01	1.452e-01	1.102e-01
0.5	9.607e-02	7.845e-02	9.983e-02	1.158e-01	9.024e-02
0.75	6.452e-02	5.106e-02	6.853e-02	7.848e-02	6.000e-02
1	4.625e-02	3.751e-02	5.002e-02	5.536e-02	4.210e-02
2	2.025e-02	2.046e-02	2.062e-02	2.357e-02	1.634e-02
3	1.229e-02	1.295e-02	1.373e-02	1.375e-02	8.738e-03
4	8.305e-03	8.491e-03	1.004e-02	9.487e-03	5.200e-03

  Fractile: 0.84
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	1.695e-01	1.642e-01	1.567e-01	2.123e-01	1.448e-01
0.05	2.768e-01	2.150e-01	2.574e-01	3.872e-01	2.478e-01
0.1	3.937e-01	3.321e-01	3.648e-01	5.153e-01	3.626e-01
0.2	3.815e-01	3.342e-01	3.848e-01	4.541e-01	3.529e-01
0.3	2.935e-01	2.517e-01	2.970e-01	3.504e-01	2.750e-01
0.4	2.308e-01	1.940e-01	2.328e-01	2.768e-01	2.195e-01
0.5	1.886e-01	1.606e-01	1.886e-01	2.243e-01	1.809e-01
0.75	1.301e-01	1.058e-01	1.343e-01	1.593e-01	1.211e-01
1	9.416e-02	7.872e-02	9.959e-02	1.133e-01	8.502e-02
2	4.145e-02	4.366e-02	4.137e-02	4.781e-02	3.294e-02
3	2.515e-02	2.740e-02	2.777e-02	2.793e-02	1.751e-02
4	1.680e-02	1.782e-02	2.030e-02	1.872e-02	1.038e-02

Source: Cat Mesa fault
Region: Mt Taylor Deterministic
  Closest Distance: 75.85 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.60 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	1.961e-02	1.853e-02	1.907e-02	2.448e-02	1.635e-02
0.05	2.815e-02	2.293e-02	2.623e-02	3.837e-02	2.507e-02
0.1	3.658e-02	3.182e-02	3.577e-02	4.577e-02	3.296e-02

0.2	3.847e-02	3.403e-02	4.376e-02	4.427e-02	3.182e-02
0.3	3.288e-02	2.948e-02	3.638e-02	3.977e-02	2.589e-02
0.4	2.723e-02	2.592e-02	2.898e-02	3.264e-02	2.137e-02
0.5	2.283e-02	2.303e-02	2.328e-02	2.689e-02	1.812e-02
0.75	1.628e-02	1.623e-02	1.625e-02	1.977e-02	1.288e-02
1	1.182e-02	1.215e-02	1.198e-02	1.361e-02	9.556e-03
2	5.878e-03	7.110e-03	5.516e-03	6.485e-03	4.400e-03
3	3.794e-03	4.665e-03	3.920e-03	3.983e-03	2.610e-03
4	2.670e-03	3.114e-03	3.069e-03	2.851e-03	1.647e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	3.568e-02	3.521e-02	3.481e-02	4.393e-02	2.876e-02
0.05	5.343e-02	4.390e-02	5.167e-02	7.267e-02	4.549e-02
0.1	7.162e-02	6.193e-02	7.239e-02	9.092e-02	6.124e-02
0.2	7.326e-02	6.706e-02	8.118e-02	8.426e-02	6.053e-02
0.3	6.263e-02	5.882e-02	6.646e-02	7.534e-02	4.993e-02
0.4	5.238e-02	5.215e-02	5.352e-02	6.224e-02	4.159e-02
0.5	4.457e-02	4.672e-02	4.398e-02	5.210e-02	3.550e-02
0.75	3.270e-02	3.334e-02	3.185e-02	4.013e-02	2.550e-02
1	2.400e-02	2.527e-02	2.386e-02	2.785e-02	1.900e-02
2	1.202e-02	1.505e-02	1.107e-02	1.315e-02	8.804e-03
3	7.749e-03	9.788e-03	7.928e-03	8.091e-03	5.191e-03

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       4      5.393e-03      6.479e-03      6.206e-03      5.625e-03
3.261e-03



Source: Cebollita Mesa fault
Region: Mt Taylor Deterministic
  Closest Distance: 74.77 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.30 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS
2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS
2014

       1          2              3              4              5
6
     PGA      1.497e-02      1.339e-02      1.554e-02      1.895e-02
1.199e-02
    0.05      2.143e-02      1.658e-02      2.159e-02      2.914e-02
1.841e-02
     0.1      2.843e-02      2.305e-02      3.018e-02      3.635e-02
2.413e-02
     0.2      3.052e-02      2.418e-02      3.781e-02      3.654e-02
2.354e-02
     0.3      2.596e-02      2.052e-02      3.127e-02      3.279e-02
1.927e-02
     0.4      2.114e-02      1.778e-02      2.469e-02      2.614e-02
1.595e-02
     0.5      1.749e-02      1.559e-02      1.965e-02      2.120e-02
1.352e-02
    0.75      1.225e-02      1.058e-02      1.356e-02      1.533e-02
9.515e-03
       1      8.732e-03      7.770e-03      9.897e-03      1.030e-02
6.958e-03
       2      4.002e-03      4.392e-03      4.236e-03      4.390e-03
2.991e-03
       3      2.456e-03      2.763e-03      2.849e-03      2.530e-03
1.681e-03
       4      1.673e-03      1.788e-03      2.129e-03      1.761e-03
1.015e-03

  Fractile: 0.84
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS
2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
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Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.743e-02	2.569e-02	2.837e-02	3.400e-02	2.166e-02
0.05	4.101e-02	3.207e-02	4.252e-02	5.518e-02	3.429e-02
0.1	5.614e-02	4.530e-02	6.107e-02	7.220e-02	4.600e-02
0.2	5.843e-02	4.810e-02	7.013e-02	6.955e-02	4.592e-02
0.3	4.966e-02	4.131e-02	5.713e-02	6.211e-02	3.807e-02
0.4	4.083e-02	3.609e-02	4.559e-02	4.984e-02	3.178e-02
0.5	3.430e-02	3.190e-02	3.712e-02	4.109e-02	2.711e-02
0.75	2.470e-02	2.192e-02	2.658e-02	3.112e-02	1.920e-02
1	1.779e-02	1.631e-02	1.970e-02	2.109e-02	1.405e-02
2	8.201e-03	9.374e-03	8.499e-03	8.904e-03	6.029e-03
3	5.029e-03	5.847e-03	5.761e-03	5.140e-03	3.368e-03
4	3.389e-03	3.753e-03	4.304e-03	3.475e-03	2.025e-03

Source: Continental Divide fault
Region: Mt Taylor Deterministic
Closest Distance: 91.82 km
Amplitude Units: Acceleration (g)
Magnitude: 6.50 Mw
Fractile: 0.50
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	1.364e-02	1.250e-02	1.326e-02	1.732e-02	1.147e-02

0.05	1.918e-02	1.527e-02	1.778e-02	2.653e-02	1.714e-02
0.1	2.462e-02	2.069e-02	2.439e-02	3.140e-02	2.201e-02
0.2	2.656e-02	2.232e-02	3.108e-02	3.132e-02	2.153e-02
0.3	2.334e-02	1.991e-02	2.650e-02	2.898e-02	1.799e-02
0.4	1.966e-02	1.804e-02	2.136e-02	2.410e-02	1.514e-02
0.5	1.664e-02	1.624e-02	1.725e-02	2.007e-02	1.302e-02
0.75	1.202e-02	1.144e-02	1.213e-02	1.505e-02	9.435e-03
1	8.736e-03	8.511e-03	8.970e-03	1.039e-02	7.071e-03
2	4.306e-03	4.976e-03	4.086e-03	4.867e-03	3.293e-03
3	2.744e-03	3.230e-03	2.852e-03	2.944e-03	1.951e-03
4	1.910e-03	2.141e-03	2.202e-03	2.080e-03	1.218e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.482e-02	2.383e-02	2.419e-02	3.108e-02	2.017e-02
0.05	3.642e-02	2.934e-02	3.502e-02	5.025e-02	3.109e-02
0.1	4.835e-02	4.040e-02	4.975e-02	6.237e-02	4.088e-02
0.2	5.060e-02	4.412e-02	5.771e-02	5.961e-02	4.096e-02
0.3	4.446e-02	3.984e-02	4.841e-02	5.489e-02	3.469e-02
0.4	3.781e-02	3.639e-02	3.945e-02	4.595e-02	2.946e-02
0.5	3.250e-02	3.305e-02	3.257e-02	3.888e-02	2.551e-02
0.75	2.414e-02	2.357e-02	2.378e-02	3.055e-02	1.868e-02
1	1.774e-02	1.776e-02	1.786e-02	2.127e-02	1.406e-02

2	8.805e-03	1.056e-02	8.197e-03	9.872e-03	6.589e-03
3	5.606e-03	6.798e-03	5.767e-03	5.981e-03	3.879e-03
4	3.859e-03	4.468e-03	4.452e-03	4.104e-03	2.413e-03

Source: County Dump fault [2038]
Region: USGS 2014 New Mexico
  Closest Distance: 76.53 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.89 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.424e-02	2.444e-02	2.228e-02	2.884e-02	2.140e-02
0.05	3.458e-02	3.022e-02	3.024e-02	4.514e-02	3.273e-02
0.1	4.438e-02	4.190e-02	4.024e-02	5.221e-02	4.318e-02
0.2	4.613e-02	4.553e-02	4.832e-02	4.918e-02	4.149e-02
0.3	3.989e-02	4.011e-02	4.050e-02	4.519e-02	3.374e-02
0.4	3.338e-02	3.568e-02	3.262e-02	3.737e-02	2.786e-02
0.5	2.833e-02	3.205e-02	2.646e-02	3.115e-02	2.364e-02
0.75	2.053e-02	2.329e-02	1.870e-02	2.321e-02	1.692e-02
1	1.509e-02	1.770e-02	1.394e-02	1.609e-02	1.264e-02
2	7.947e-03	1.067e-02	6.894e-03	8.163e-03	6.065e-03
3	5.382e-03	7.403e-03	5.170e-03	5.205e-03	3.750e-03
4	3.928e-03	5.181e-03	4.236e-03	3.832e-03	2.463e-03

  Fractile: 0.84
  Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	4.402e-02	4.600e-02	4.067e-02	5.176e-02	3.764e-02
0.05	6.544e-02	5.734e-02	5.955e-02	8.549e-02	5.938e-02
0.1	8.655e-02	8.082e-02	8.144e-02	1.037e-01	8.023e-02
0.2	8.777e-02	8.892e-02	8.962e-02	9.360e-02	7.893e-02
0.3	7.599e-02	7.933e-02	7.398e-02	8.560e-02	6.506e-02
0.4	6.422e-02	7.116e-02	6.024e-02	7.126e-02	5.421e-02
0.5	5.528e-02	6.447e-02	4.998e-02	6.036e-02	4.632e-02
0.75	4.117e-02	4.746e-02	3.664e-02	4.712e-02	3.349e-02
1	3.059e-02	3.653e-02	2.775e-02	3.294e-02	2.514e-02
2	1.623e-02	2.239e-02	1.383e-02	1.656e-02	1.213e-02
3	1.097e-02	1.541e-02	1.045e-02	1.057e-02	7.458e-03
4	7.924e-03	1.069e-02	8.564e-03	7.561e-03	4.877e-03

Source: Coyote Springs fault
Region: Mt Taylor Deterministic
Closest Distance: 93.44 km
Amplitude Units: Acceleration (g)
Magnitude: 6.50 Mw
Fractile: 0.50
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	1.329e-02	1.218e-02	1.292e-02	1.682e-02	1.123e-02
0.05	1.865e-02	1.485e-02	1.729e-02	2.571e-02	1.675e-02
0.1	2.390e-02	2.008e-02	2.371e-02	3.036e-02	2.146e-02
0.2	2.584e-02	2.169e-02	3.030e-02	3.036e-02	2.101e-02
0.3	2.278e-02	1.941e-02	2.591e-02	2.821e-02	1.760e-02
0.4	1.923e-02	1.765e-02	2.091e-02	2.350e-02	1.484e-02
0.5	1.630e-02	1.592e-02	1.690e-02	1.961e-02	1.278e-02
0.75	1.179e-02	1.122e-02	1.190e-02	1.475e-02	9.276e-03
1	8.577e-03	8.351e-03	8.804e-03	1.019e-02	6.960e-03
2	4.232e-03	4.887e-03	4.016e-03	4.777e-03	3.249e-03
3	2.698e-03	3.174e-03	2.803e-03	2.889e-03	1.926e-03
4	1.878e-03	2.105e-03	2.164e-03	2.041e-03	1.203e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.418e-02	2.320e-02	2.359e-02	3.019e-02	1.976e-02
0.05	3.542e-02	2.853e-02	3.405e-02	4.869e-02	3.039e-02
0.1	4.694e-02	3.920e-02	4.840e-02	6.031e-02	3.987e-02
0.2	4.925e-02	4.286e-02	5.637e-02	5.779e-02	3.997e-02
0.3	4.338e-02	3.885e-02	4.733e-02	5.343e-02	3.393e-02
0.4	3.698e-02	3.560e-02	3.862e-02	4.482e-02	2.888e-02
0.5	3.183e-02	3.239e-02	3.191e-02	3.799e-02	2.503e-02

0.75	2.369e-02	2.313e-02	2.332e-02	2.994e-02	1.836e-02
1	1.741e-02	1.743e-02	1.753e-02	2.087e-02	1.384e-02
2	8.655e-03	1.037e-02	8.056e-03	9.690e-03	6.501e-03
3	5.511e-03	6.678e-03	5.668e-03	5.869e-03	3.830e-03
4	3.794e-03	4.391e-03	4.376e-03	4.026e-03	2.382e-03

Source: Intrabasin faults on the Llano de Albuquerque
Region: Mt Taylor Deterministic
  Closest Distance: 66.71 km
  Amplitude Units: Acceleration (g)
  Magnitude: 7.50 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	4.438e-02	4.692e-02	4.020e-02	4.766e-02	4.274e-02
0.05	6.352e-02	5.847e-02	5.445e-02	7.537e-02	6.579e-02
0.1	8.064e-02	8.228e-02	6.913e-02	8.249e-02	8.867e-02
0.2	8.169e-02	9.076e-02	7.788e-02	7.334e-02	8.476e-02
0.3	7.066e-02	8.014e-02	6.502e-02	6.914e-02	6.833e-02
0.4	5.954e-02	7.095e-02	5.300e-02	5.806e-02	5.614e-02
0.5	5.117e-02	6.406e-02	4.365e-02	4.948e-02	4.751e-02
0.75	3.785e-02	4.850e-02	3.139e-02	3.763e-02	3.388e-02
1	2.839e-02	3.775e-02	2.387e-02	2.664e-02	2.528e-02
2	1.623e-02	2.364e-02	1.359e-02	1.542e-02	1.226e-02
3	1.179e-02	1.730e-02	1.140e-02	1.064e-02	7.841e-03

4 9.177e-03 1.270e-02 1.025e-02 8.331e-03
5.425e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS
2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS
2014

1	2	3	4	5	6
PGA	8.052e-02	8.801e-02	7.338e-02	8.552e-02	7.517e-02
0.05	1.200e-01	1.106e-01	1.072e-01	1.428e-01	1.194e-01
0.1	1.567e-01	1.582e-01	1.399e-01	1.639e-01	1.647e-01
0.2	1.555e-01	1.767e-01	1.445e-01	1.396e-01	1.613e-01
0.3	1.349e-01	1.580e-01	1.188e-01	1.310e-01	1.317e-01
0.4	1.147e-01	1.411e-01	9.787e-02	1.107e-01	1.093e-01
0.5	9.997e-02	1.285e-01	8.244e-02	9.587e-02	9.309e-02
0.75	7.587e-02	9.852e-02	6.151e-02	7.639e-02	6.706e-02
1	5.750e-02	7.767e-02	4.753e-02	5.454e-02	5.027e-02
2	3.314e-02	4.950e-02	2.726e-02	3.128e-02	2.453e-02
3	2.404e-02	3.591e-02	2.305e-02	2.161e-02	1.559e-02
4	1.851e-02	2.614e-02	2.072e-02	1.644e-02	1.074e-02

Source: Jemez-San Ysidro fault [2029ab]
Region: USGS 2014 New Mexico
Closest Distance: 77.26 km
Amplitude Units: Acceleration (g)
Magnitude: 7.09 Mw
Fractile: 0.50
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS
2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.785e-02	2.851e-02	2.515e-02	3.223e-02	2.551e-02
0.05	3.959e-02	3.522e-02	3.386e-02	5.037e-02	3.889e-02
0.1	5.038e-02	4.878e-02	4.431e-02	5.702e-02	5.142e-02
0.2	5.201e-02	5.353e-02	5.244e-02	5.274e-02	4.933e-02
0.3	4.530e-02	4.766e-02	4.416e-02	4.925e-02	4.014e-02
0.4	3.816e-02	4.272e-02	3.581e-02	4.093e-02	3.317e-02
0.5	3.261e-02	3.864e-02	2.924e-02	3.440e-02	2.818e-02
0.75	2.389e-02	2.861e-02	2.082e-02	2.587e-02	2.024e-02
1	1.769e-02	2.194e-02	1.564e-02	1.802e-02	1.518e-02
2	9.630e-03	1.345e-02	8.123e-03	9.540e-03	7.406e-03
3	6.692e-03	9.531e-03	6.321e-03	6.242e-03	4.675e-03
4	5.001e-03	6.836e-03	5.343e-03	4.685e-03	3.141e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	5.052e-02	5.346e-02	4.591e-02	5.784e-02	4.486e-02
0.05	7.481e-02	6.661e-02	6.668e-02	9.540e-02	7.057e-02
0.1	9.807e-02	9.379e-02	8.967e-02	1.133e-01	9.554e-02
0.2	9.893e-02	1.042e-01	9.727e-02	1.004e-01	9.385e-02

0.3	8.633e-02	9.397e-02	8.067e-02	9.328e-02	7.739e-02
0.4	7.342e-02	8.494e-02	6.614e-02	7.806e-02	6.455e-02
0.5	6.364e-02	7.748e-02	5.523e-02	6.665e-02	5.521e-02
0.75	4.787e-02	5.811e-02	4.080e-02	5.252e-02	4.006e-02
1	3.583e-02	4.514e-02	3.114e-02	3.688e-02	3.018e-02
2	1.966e-02	2.816e-02	1.630e-02	1.935e-02	1.482e-02
3	1.364e-02	1.978e-02	1.278e-02	1.268e-02	9.298e-03
4	1.008e-02	1.407e-02	1.080e-02	9.244e-03	6.220e-03

Source: Calabacillas fault [2035]
Region: USGS 2014 New Mexico
  Closest Distance: 70.54 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.83 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.553e-02	2.583e-02	2.376e-02	3.035e-02	2.218e-02
0.05	3.669e-02	3.210e-02	3.263e-02	4.779e-02	3.423e-02
0.1	4.747e-02	4.490e-02	4.368e-02	5.583e-02	4.548e-02
0.2	4.924e-02	4.839e-02	5.216e-02	5.277e-02	4.363e-02
0.3	4.206e-02	4.194e-02	4.330e-02	4.778e-02	3.523e-02
0.4	3.495e-02	3.677e-02	3.465e-02	3.943e-02	2.893e-02
0.5	2.949e-02	3.275e-02	2.800e-02	3.276e-02	2.444e-02
0.75	2.120e-02	2.356e-02	1.967e-02	2.422e-02	1.735e-02

1	1.555e-02	1.785e-02	1.461e-02	1.683e-02 1.289e-02
2	8.067e-03	1.066e-02	7.091e-03	8.439e-03 6.078e-03
3	5.415e-03	7.344e-03	5.258e-03	5.346e-03 3.712e-03
4	3.904e-03	5.017e-03	4.265e-03	3.919e-03 2.416e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	4.639e-02	4.872e-02	4.337e-02	5.447e-02	3.901e-02
0.05	6.947e-02	6.101e-02	6.426e-02	9.052e-02	6.210e-02
0.1	9.264e-02	8.677e-02	8.840e-02	1.109e-01	8.450e-02
0.2	9.372e-02	9.468e-02	9.676e-02	1.004e-01	8.299e-02
0.3	8.016e-02	8.311e-02	7.910e-02	9.050e-02	6.793e-02
0.4	6.724e-02	7.348e-02	6.400e-02	7.520e-02	5.629e-02
0.5	5.756e-02	6.599e-02	5.288e-02	6.348e-02	4.788e-02
0.75	4.254e-02	4.809e-02	3.854e-02	4.918e-02	3.434e-02
1	3.152e-02	3.691e-02	2.909e-02	3.445e-02	2.563e-02
2	1.648e-02	2.242e-02	1.422e-02	1.712e-02	1.216e-02
3	1.105e-02	1.531e-02	1.063e-02	1.086e-02	7.382e-03
4	7.877e-03	1.037e-02	8.623e-03	7.732e-03	4.784e-03

Source: Mesa Prieta faults
Region: Mt Taylor Deterministic
Closest Distance: 47.05 km
Amplitude Units: Acceleration (g)
Magnitude: 6.30 Mw

Fractile: 0.50
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.745e-02	2.490e-02	2.973e-02	3.312e-02	2.206e-02
0.05	4.072e-02	3.152e-02	4.329e-02	5.266e-02	3.541e-02
0.1	5.525e-02	4.568e-02	6.048e-02	6.651e-02	4.834e-02
0.2	5.759e-02	4.674e-02	7.189e-02	6.556e-02	4.617e-02
0.3	4.661e-02	3.731e-02	5.712e-02	5.575e-02	3.627e-02
0.4	3.700e-02	3.050e-02	4.420e-02	4.420e-02	2.908e-02
0.5	3.010e-02	2.594e-02	3.485e-02	3.556e-02	2.407e-02
0.75	2.058e-02	1.726e-02	2.372e-02	2.506e-02	1.631e-02
1	1.463e-02	1.268e-02	1.719e-02	1.702e-02	1.164e-02
2	6.567e-03	7.050e-03	7.208e-03	7.287e-03	4.723e-03
3	4.014e-03	4.425e-03	4.842e-03	4.218e-03	2.569e-03
4	2.737e-03	2.861e-03	3.603e-03	2.951e-03	1.534e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	5.033e-02	4.777e-02	5.426e-02	5.944e-02	3.985e-02

0.05	7.798e-02	6.096e-02	8.527e-02	9.974e-02	6.597e-02
0.1	1.091e-01	8.976e-02	1.224e-01	1.321e-01	9.217e-02
0.2	1.103e-01	9.296e-02	1.334e-01	1.248e-01	9.008e-02
0.3	8.918e-02	7.512e-02	1.043e-01	1.056e-01	7.166e-02
0.4	7.145e-02	6.192e-02	8.162e-02	8.429e-02	5.796e-02
0.5	5.902e-02	5.308e-02	6.582e-02	6.891e-02	4.827e-02
0.75	4.151e-02	3.577e-02	4.647e-02	5.086e-02	3.291e-02
1	2.979e-02	2.661e-02	3.422e-02	3.483e-02	2.350e-02
2	1.345e-02	1.505e-02	1.446e-02	1.478e-02	9.522e-03
3	8.219e-03	9.365e-03	9.792e-03	8.569e-03	5.148e-03
4	5.543e-03	6.004e-03	7.284e-03	5.822e-03	3.062e-03

Source: Nacimiento fault [2002ab]
Region: USGS 2014 New Mexico
  Closest Distance: 72.30 km
  Amplitude Units: Acceleration (g)
  Magnitude: 7.30 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	3.497e-02	3.665e-02	3.134e-02	3.899e-02	3.290e-02
0.05	4.982e-02	4.546e-02	4.222e-02	6.121e-02	5.038e-02
0.1	6.327e-02	6.344e-02	5.437e-02	6.804e-02	6.721e-02
0.2	6.468e-02	6.987e-02	6.282e-02	6.167e-02	6.436e-02
0.3	5.622e-02	6.204e-02	5.274e-02	5.798e-02	5.212e-02

0.4	4.741e-02	5.534e-02	4.290e-02	4.845e-02	4.295e-02
0.5	4.067e-02	5.005e-02	3.519e-02	4.101e-02	3.642e-02
0.75	2.996e-02	3.754e-02	2.519e-02	3.101e-02	2.609e-02
1	2.235e-02	2.903e-02	1.905e-02	2.178e-02	1.953e-02
2	1.251e-02	1.802e-02	1.037e-02	1.208e-02	9.549e-03
3	8.905e-03	1.300e-02	8.389e-03	8.134e-03	6.099e-03
4	6.796e-03	9.445e-03	7.322e-03	6.244e-03	4.174e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	6.344e-02	6.873e-02	5.720e-02	6.997e-02	5.786e-02
0.05	9.411e-02	8.597e-02	8.315e-02	1.159e-01	9.141e-02
0.1	1.230e-01	1.220e-01	1.100e-01	1.352e-01	1.249e-01
0.2	1.231e-01	1.360e-01	1.165e-01	1.174e-01	1.224e-01
0.3	1.072e-01	1.223e-01	9.634e-02	1.098e-01	1.005e-01
0.4	9.130e-02	1.100e-01	7.923e-02	9.238e-02	8.358e-02
0.5	7.941e-02	1.004e-01	6.647e-02	7.946e-02	7.136e-02
0.75	6.006e-02	7.626e-02	4.937e-02	6.296e-02	5.165e-02
1	4.527e-02	5.972e-02	3.792e-02	4.458e-02	3.884e-02
2	2.554e-02	3.772e-02	2.081e-02	2.451e-02	1.910e-02
3	1.815e-02	2.698e-02	1.696e-02	1.652e-02	1.213e-02
4	1.371e-02	1.944e-02	1.480e-02	1.232e-02	8.266e-03

Source: San Felipe fault zone [2030a]
Region: USGS 2014 New Mexico
  Closest Distance: 93.24 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.97 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	1.984e-02	2.006e-02	1.803e-02	2.293e-02	1.835e-02
0.05	2.763e-02	2.447e-02	2.373e-02	3.497e-02	2.736e-02
0.1	3.473e-02	3.309e-02	3.126e-02	3.921e-02	3.537e-02
0.2	3.667e-02	3.664e-02	3.841e-02	3.744e-02	3.418e-02
0.3	3.277e-02	3.361e-02	3.307e-02	3.604e-02	2.837e-02
0.4	2.807e-02	3.105e-02	2.707e-02	3.036e-02	2.380e-02
0.5	2.423e-02	2.848e-02	2.218e-02	2.580e-02	2.045e-02
0.75	1.794e-02	2.110e-02	1.588e-02	1.981e-02	1.495e-02
1	1.330e-02	1.609e-02	1.194e-02	1.383e-02	1.134e-02
2	7.194e-03	9.864e-03	6.098e-03	7.162e-03	5.651e-03
3	4.936e-03	6.925e-03	4.643e-03	4.600e-03	3.578e-03
4	3.644e-03	4.938e-03	3.859e-03	3.398e-03	2.382e-03

  Fractile: 0.84
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	3.600e-02	3.766e-02	3.291e-02	4.114e-02	3.228e-02
0.05	5.223e-02	4.632e-02	4.674e-02	6.624e-02	4.964e-02
0.1	6.777e-02	6.367e-02	6.381e-02	7.789e-02	6.571e-02
0.2	6.978e-02	7.139e-02	7.143e-02	7.127e-02	6.502e-02
0.3	6.243e-02	6.633e-02	6.041e-02	6.827e-02	5.471e-02
0.4	5.400e-02	6.178e-02	4.999e-02	5.790e-02	4.632e-02
0.5	4.728e-02	5.715e-02	4.189e-02	4.999e-02	4.008e-02
0.75	3.596e-02	4.289e-02	3.112e-02	4.022e-02	2.960e-02
1	2.694e-02	3.314e-02	2.377e-02	2.830e-02	2.255e-02
2	1.468e-02	2.067e-02	1.223e-02	1.453e-02	1.131e-02
3	1.006e-02	1.439e-02	9.388e-03	9.344e-03	7.115e-03
4	7.348e-03	1.017e-02	7.802e-03	6.704e-03	4.717e-03

Source: San Felipe fault zone (Algodones section)
Region: Mt Taylor Deterministic
  Closest Distance: 93.31 km
  Amplitude Units: Acceleration (g)
  Magnitude: 7.00 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.045e-02	2.058e-02	1.874e-02	2.338e-02	1.908e-02
0.05	2.848e-02	2.510e-02	2.469e-02	3.567e-02	2.845e-02
0.1	3.577e-02	3.394e-02	3.244e-02	3.987e-02	3.682e-02

0.2	3.770e-02	3.763e-02	3.967e-02	3.796e-02	3.553e-02
0.3	3.370e-02	3.458e-02	3.411e-02	3.664e-02	2.948e-02
0.4	2.887e-02	3.197e-02	2.792e-02	3.088e-02	2.471e-02
0.5	2.493e-02	2.935e-02	2.288e-02	2.624e-02	2.123e-02
0.75	1.847e-02	2.181e-02	1.639e-02	2.019e-02	1.550e-02
1	1.371e-02	1.666e-02	1.233e-02	1.409e-02	1.176e-02
2	7.444e-03	1.024e-02	6.338e-03	7.344e-03	5.858e-03
3	5.126e-03	7.209e-03	4.852e-03	4.734e-03	3.708e-03
4	3.796e-03	5.152e-03	4.051e-03	3.507e-03	2.474e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	3.708e-02	3.859e-02	3.420e-02	4.196e-02	3.356e-02
0.05	5.382e-02	4.747e-02	4.862e-02	6.757e-02	5.163e-02
0.1	6.975e-02	6.525e-02	6.617e-02	7.919e-02	6.840e-02
0.2	7.170e-02	7.327e-02	7.369e-02	7.224e-02	6.760e-02
0.3	6.418e-02	6.817e-02	6.232e-02	6.939e-02	5.683e-02
0.4	5.553e-02	6.357e-02	5.157e-02	5.888e-02	4.809e-02
0.5	4.863e-02	5.886e-02	4.322e-02	5.085e-02	4.159e-02
0.75	3.702e-02	4.430e-02	3.212e-02	4.099e-02	3.069e-02
1	2.776e-02	3.427e-02	2.455e-02	2.883e-02	2.338e-02
2	1.519e-02	2.143e-02	1.271e-02	1.490e-02	1.172e-02
3	1.044e-02	1.496e-02	9.812e-03	9.617e-03	7.375e-03

4	7.653e-03	1.060e-02	8.191e-03	6.919e-03	4.899e-03

Source: Sand Hill fault zone
Region: Mt Taylor Deterministic
  Closest Distance: 62.17 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.90 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	3.152e-02	3.191e-02	2.999e-02	3.638e-02	2.779e-02
0.05	4.574e-02	3.990e-02	4.176e-02	5.787e-02	4.343e-02
0.1	5.955e-02	5.653e-02	5.569e-02	6.751e-02	5.846e-02
0.2	6.119e-02	6.067e-02	6.510e-02	6.319e-02	5.579e-02
0.3	5.158e-02	5.181e-02	5.338e-02	5.657e-02	4.456e-02
0.4	4.257e-02	4.474e-02	4.253e-02	4.673e-02	3.628e-02
0.5	3.580e-02	3.957e-02	3.432e-02	3.883e-02	3.047e-02
0.75	2.564e-02	2.850e-02	2.407e-02	2.862e-02	2.139e-02
1	1.882e-02	2.166e-02	1.789e-02	1.995e-02	1.580e-02
2	9.811e-03	1.295e-02	8.769e-03	1.017e-02	7.348e-03
3	6.635e-03	8.986e-03	6.585e-03	6.505e-03	4.464e-03
4	4.856e-03	6.304e-03	5.390e-03	4.811e-03	2.917e-03

  Fractile: 0.84
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	5.723e-02	6.003e-02	5.473e-02	6.528e-02	4.888e-02
0.05	8.659e-02	7.569e-02	8.225e-02	1.096e-01	7.880e-02
0.1	1.161e-01	1.090e-01	1.127e-01	1.341e-01	1.086e-01
0.2	1.164e-01	1.185e-01	1.207e-01	1.203e-01	1.061e-01
0.3	9.826e-02	1.024e-01	9.752e-02	1.072e-01	8.592e-02
0.4	8.187e-02	8.920e-02	7.855e-02	8.910e-02	7.061e-02
0.5	6.983e-02	7.957e-02	6.483e-02	7.523e-02	5.969e-02
0.75	5.141e-02	5.804e-02	4.716e-02	5.810e-02	4.235e-02
1	3.814e-02	4.470e-02	3.561e-02	4.084e-02	3.141e-02
2	2.003e-02	2.719e-02	1.759e-02	2.063e-02	1.470e-02
3	1.353e-02	1.870e-02	1.332e-02	1.321e-02	8.879e-03
4	9.794e-03	1.301e-02	1.090e-02	9.492e-03	5.777e-03

Source: Santa Fe fault
Region: Mt Taylor Deterministic
Closest Distance: 67.79 km
Amplitude Units: Acceleration (g)
Magnitude: 6.80 Mw
Fractile: 0.50
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.652e-02	2.652e-02	2.526e-02	3.135e-02	2.295e-02

0.05	3.829e-02	3.302e-02	3.497e-02	4.955e-02	3.560e-02
0.1	4.976e-02	4.639e-02	4.697e-02	5.817e-02	4.750e-02
0.2	5.152e-02	4.979e-02	5.580e-02	5.504e-02	4.546e-02
0.3	4.372e-02	4.284e-02	4.601e-02	4.946e-02	3.656e-02
0.4	3.616e-02	3.730e-02	3.667e-02	4.076e-02	2.991e-02
0.5	3.041e-02	3.309e-02	2.956e-02	3.379e-02	2.520e-02
0.75	2.177e-02	2.369e-02	2.069e-02	2.492e-02	1.779e-02
1	1.592e-02	1.792e-02	1.534e-02	1.727e-02	1.317e-02
2	8.188e-03	1.065e-02	7.367e-03	8.603e-03	6.128e-03
3	5.455e-03	7.266e-03	5.432e-03	5.423e-03	3.700e-03
4	3.918e-03	4.934e-03	4.383e-03	3.965e-03	2.392e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	4.819e-02	5.006e-02	4.610e-02	5.625e-02	4.036e-02
0.05	7.254e-02	6.284e-02	6.887e-02	9.385e-02	6.460e-02
0.1	9.714e-02	8.973e-02	9.504e-02	1.155e-01	8.825e-02
0.2	9.807e-02	9.752e-02	1.035e-01	1.048e-01	8.649e-02
0.3	8.330e-02	8.495e-02	8.406e-02	9.369e-02	7.050e-02
0.4	6.957e-02	7.460e-02	6.773e-02	7.773e-02	5.821e-02
0.5	5.935e-02	6.673e-02	5.582e-02	6.546e-02	4.938e-02
0.75	4.368e-02	4.838e-02	4.055e-02	5.058e-02	3.521e-02
1	3.229e-02	3.707e-02	3.054e-02	3.536e-02	2.618e-02

2	1.673e-02	2.242e-02	1.478e-02	1.745e-02	1.226e-02
3	1.113e-02	1.516e-02	1.098e-02	1.102e-02	7.359e-03
4	7.907e-03	1.021e-02	8.861e-03	7.822e-03	4.737e-03

Source: unnamed fault of Bonita Canyon
Region: Mt Taylor Deterministic
  Closest Distance: 49.34 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.10 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.117e-02	1.905e-02	2.354e-02	2.570e-02	1.640e-02
0.05	3.109e-02	2.407e-02	3.425e-02	3.985e-02	2.617e-02
0.1	4.269e-02	3.477e-02	4.861e-02	5.186e-02	3.551e-02
0.2	4.528e-02	3.516e-02	5.899e-02	5.268e-02	3.430e-02
0.3	3.635e-02	2.782e-02	4.496e-02	4.544e-02	2.717e-02
0.4	2.806e-02	2.264e-02	3.264e-02	3.509e-02	2.188e-02
0.5	2.270e-02	1.912e-02	2.554e-02	2.800e-02	1.813e-02
0.75	1.527e-02	1.240e-02	1.697e-02	1.953e-02	1.219e-02
1	1.065e-02	8.986e-03	1.204e-02	1.300e-02	8.590e-03
2	4.502e-03	4.875e-03	4.755e-03	5.075e-03	3.305e-03
3	2.643e-03	2.966e-03	3.070e-03	2.789e-03	1.747e-03
4	1.759e-03	1.873e-03	2.232e-03	1.913e-03	1.019e-03

  Fractile: 0.84
  Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	3.908e-02	3.679e-02	4.296e-02	4.613e-02	3.042e-02
0.05	5.996e-02	4.686e-02	6.746e-02	7.548e-02	5.005e-02
0.1	8.490e-02	6.875e-02	9.838e-02	1.030e-01	6.948e-02
0.2	8.717e-02	7.036e-02	1.094e-01	1.003e-01	6.863e-02
0.3	6.989e-02	5.636e-02	8.214e-02	8.606e-02	5.500e-02
0.4	5.453e-02	4.625e-02	6.027e-02	6.692e-02	4.466e-02
0.5	4.477e-02	3.938e-02	4.824e-02	5.425e-02	3.721e-02
0.75	3.096e-02	2.585e-02	3.326e-02	3.965e-02	2.509e-02
1	2.179e-02	1.897e-02	2.397e-02	2.660e-02	1.762e-02
2	9.253e-03	1.047e-02	9.539e-03	1.029e-02	6.716e-03
3	5.429e-03	6.313e-03	6.209e-03	5.665e-03	3.528e-03
4	3.573e-03	3.955e-03	4.513e-03	3.774e-03	2.050e-03

Source: unnamed faults near Albuquerque Volcanoes
Region: Mt Taylor Deterministic
Closest Distance: 73.60 km
Amplitude Units: Acceleration (g)
Magnitude: 6.90 Mw
Fractile: 0.50
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.586e-02	2.591e-02	2.422e-02	3.036e-02	2.293e-02
0.05	3.703e-02	3.211e-02	3.309e-02	4.768e-02	3.525e-02
0.1	4.767e-02	4.472e-02	4.404e-02	5.520e-02	4.672e-02
0.2	4.940e-02	4.849e-02	5.244e-02	5.189e-02	4.478e-02
0.3	4.247e-02	4.247e-02	4.368e-02	4.748e-02	3.626e-02
0.4	3.543e-02	3.756e-02	3.508e-02	3.924e-02	2.983e-02
0.5	3.000e-02	3.364e-02	2.842e-02	3.268e-02	2.525e-02
0.75	2.169e-02	2.442e-02	2.003e-02	2.432e-02	1.797e-02
1	1.593e-02	1.857e-02	1.493e-02	1.684e-02	1.339e-02
2	8.372e-03	1.118e-02	7.375e-03	8.567e-03	6.369e-03
3	5.672e-03	7.764e-03	5.540e-03	5.471e-03	3.915e-03
4	4.150e-03	5.453e-03	4.544e-03	4.034e-03	2.567e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	4.694e-02	4.876e-02	4.420e-02	5.449e-02	4.033e-02
0.05	7.009e-02	6.092e-02	6.517e-02	9.031e-02	6.395e-02
0.1	9.296e-02	8.624e-02	8.913e-02	1.097e-01	8.681e-02
0.2	9.398e-02	9.469e-02	9.728e-02	9.876e-02	8.519e-02
0.3	8.090e-02	8.397e-02	7.980e-02	8.993e-02	6.991e-02
0.4	6.814e-02	7.489e-02	6.478e-02	7.484e-02	5.805e-02
0.5	5.853e-02	6.764e-02	5.368e-02	6.332e-02	4.946e-02

0.75	4.349e-02	4.974e-02	3.926e-02	4.937e-02	3.557e-02
1	3.228e-02	3.831e-02	2.971e-02	3.448e-02	2.663e-02
2	1.709e-02	2.346e-02	1.480e-02	1.738e-02	1.274e-02
3	1.157e-02	1.616e-02	1.120e-02	1.111e-02	7.785e-03
4	8.370e-03	1.125e-02	9.187e-03	7.960e-03	5.084e-03

Source: unnamed faults near Picuda Peak
Region: Mt Taylor Deterministic
  Closest Distance: 78.81 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.40 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	1.557e-02	1.393e-02	1.584e-02	1.980e-02	1.269e-02
0.05	2.226e-02	1.720e-02	2.183e-02	3.065e-02	1.938e-02
0.1	2.922e-02	2.376e-02	3.026e-02	3.753e-02	2.531e-02
0.2	3.121e-02	2.518e-02	3.780e-02	3.724e-02	2.462e-02
0.3	2.671e-02	2.169e-02	3.145e-02	3.350e-02	2.021e-02
0.4	2.196e-02	1.904e-02	2.496e-02	2.707e-02	1.677e-02
0.5	1.829e-02	1.684e-02	1.995e-02	2.210e-02	1.425e-02
0.75	1.292e-02	1.161e-02	1.385e-02	1.612e-02	1.011e-02
1	9.281e-03	8.582e-03	1.015e-02	1.094e-02	7.454e-03
2	4.389e-03	4.921e-03	4.459e-03	4.873e-03	3.303e-03
3	2.742e-03	3.143e-03	3.055e-03	2.879e-03	1.892e-03

4	1.889e-03	2.058e-03	2.319e-03	2.021e-03 1.158e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.843e-02	2.664e-02	2.891e-02	3.553e-02	2.262e-02
0.05	4.245e-02	3.314e-02	4.300e-02	5.804e-02	3.563e-02
0.1	5.749e-02	4.654e-02	6.124e-02	7.455e-02	4.764e-02
0.2	5.959e-02	4.992e-02	7.012e-02	7.088e-02	4.744e-02
0.3	5.097e-02	4.354e-02	5.745e-02	6.345e-02	3.945e-02
0.4	4.232e-02	3.853e-02	4.609e-02	5.162e-02	3.302e-02
0.5	3.578e-02	3.436e-02	3.769e-02	4.283e-02	2.825e-02
0.75	2.601e-02	2.398e-02	2.713e-02	3.273e-02	2.021e-02
1	1.887e-02	1.796e-02	2.020e-02	2.239e-02	1.494e-02
2	8.984e-03	1.047e-02	8.946e-03	9.884e-03	6.633e-03
3	5.609e-03	6.633e-03	6.178e-03	5.849e-03	3.776e-03
4	3.821e-03	4.306e-03	4.689e-03	3.988e-03	2.302e-03

Source: unnamed faults near Star Heights
Region: Mt Taylor Deterministic
Closest Distance: 78.56 km
Amplitude Units: Acceleration (g)
Magnitude: 6.50 Mw
Fractile: 0.50
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	1.726e-02	1.572e-02	1.701e-02	2.213e-02	1.416e-02
0.05	2.475e-02	1.941e-02	2.338e-02	3.460e-02	2.163e-02
0.1	3.223e-02	2.683e-02	3.213e-02	4.166e-02	2.830e-02
0.2	3.413e-02	2.860e-02	3.981e-02	4.071e-02	2.743e-02
0.3	2.921e-02	2.477e-02	3.316e-02	3.646e-02	2.244e-02
0.4	2.417e-02	2.182e-02	2.640e-02	2.986e-02	1.859e-02
0.5	2.021e-02	1.937e-02	2.116e-02	2.452e-02	1.580e-02
0.75	1.437e-02	1.352e-02	1.474e-02	1.798e-02	1.124e-02
1	1.039e-02	1.006e-02	1.084e-02	1.234e-02	8.323e-03
2	5.060e-03	5.833e-03	4.880e-03	5.752e-03	3.775e-03
3	3.218e-03	3.778e-03	3.405e-03	3.486e-03	2.204e-03
4	2.241e-03	2.498e-03	2.626e-03	2.469e-03	1.371e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	3.141e-02	2.996e-02	3.105e-02	3.970e-02	2.491e-02
0.05	4.702e-02	3.728e-02	4.604e-02	6.553e-02	3.925e-02
0.1	6.318e-02	5.238e-02	6.502e-02	8.274e-02	5.257e-02
0.2	6.500e-02	5.652e-02	7.384e-02	7.748e-02	5.218e-02

0.3	5.562e-02	4.957e-02	6.058e-02	6.906e-02	4.328e-02
0.4	4.647e-02	4.403e-02	4.875e-02	5.694e-02	3.618e-02
0.5	3.946e-02	3.941e-02	3.998e-02	4.751e-02	3.095e-02
0.75	2.887e-02	2.785e-02	2.888e-02	3.650e-02	2.224e-02
1	2.109e-02	2.098e-02	2.158e-02	2.526e-02	1.655e-02
2	1.035e-02	1.238e-02	9.789e-03	1.167e-02	7.553e-03
3	6.575e-03	7.949e-03	6.886e-03	7.081e-03	4.383e-03
4	4.527e-03	5.213e-03	5.309e-03	4.872e-03	2.714e-03

Source: unnamed faults of El Malpais lava field
Region: Mt Taylor Deterministic
  Closest Distance: 60.45 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.70 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.774e-02	2.784e-02	2.643e-02	3.334e-02	2.335e-02
0.05	4.041e-02	3.487e-02	3.705e-02	5.310e-02	3.661e-02
0.1	5.305e-02	4.953e-02	5.019e-02	6.325e-02	4.921e-02
0.2	5.484e-02	5.254e-02	5.952e-02	6.022e-02	4.709e-02
0.3	4.586e-02	4.424e-02	4.862e-02	5.298e-02	3.760e-02
0.4	3.760e-02	3.780e-02	3.848e-02	4.353e-02	3.059e-02
0.5	3.139e-02	3.314e-02	3.086e-02	3.591e-02	2.565e-02
0.75	2.223e-02	2.336e-02	2.146e-02	2.616e-02	1.795e-02

1	1.621e-02	1.758e-02	1.583e-02	1.822e-02	1.320e-02
2	8.154e-03	1.030e-02	7.393e-03	8.907e-03	6.011e-03
3	5.330e-03	6.833e-03	5.351e-03	5.559e-03	3.577e-03
4	3.790e-03	4.597e-03	4.247e-03	4.034e-03	2.282e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	5.047e-02	5.272e-02	4.823e-02	5.984e-02	4.107e-02
0.05	7.663e-02	6.656e-02	7.296e-02	1.006e-01	6.642e-02
0.1	1.037e-01	9.610e-02	1.016e-01	1.256e-01	9.143e-02
0.2	1.045e-01	1.032e-01	1.104e-01	1.146e-01	8.958e-02
0.3	8.741e-02	8.799e-02	8.882e-02	1.003e-01	7.249e-02
0.4	7.236e-02	7.582e-02	7.106e-02	8.302e-02	5.952e-02
0.5	6.129e-02	6.704e-02	5.828e-02	6.958e-02	5.026e-02
0.75	4.464e-02	4.785e-02	4.206e-02	5.310e-02	3.554e-02
1	3.289e-02	3.648e-02	3.152e-02	3.730e-02	2.625e-02
2	1.667e-02	2.175e-02	1.483e-02	1.807e-02	1.203e-02
3	1.088e-02	1.430e-02	1.082e-02	1.129e-02	7.114e-03
4	7.651e-03	9.538e-03	8.587e-03	7.959e-03	4.519e-03

Source: unnamed intrabasin faults west of the Rio Puerco
Region: Mt Taylor Deterministic
Closest Distance: 87.30 km
Amplitude Units: Acceleration (g)
Magnitude: 6.60 Mw

Fractile: 0.50
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	1.619e-02	1.519e-02	1.563e-02	2.013e-02	1.380e-02
0.05	2.290e-02	1.862e-02	2.110e-02	3.107e-02	2.079e-02
0.1	2.941e-02	2.540e-02	2.872e-02	3.660e-02	2.693e-02
0.2	3.134e-02	2.745e-02	3.589e-02	3.588e-02	2.615e-02
0.3	2.737e-02	2.439e-02	3.037e-02	3.307e-02	2.164e-02
0.4	2.297e-02	2.197e-02	2.443e-02	2.740e-02	1.808e-02
0.5	1.944e-02	1.976e-02	1.972e-02	2.278e-02	1.547e-02
0.75	1.402e-02	1.404e-02	1.387e-02	1.703e-02	1.115e-02
1	1.021e-02	1.051e-02	1.027e-02	1.173e-02	8.350e-03
2	5.120e-03	6.192e-03	4.768e-03	5.600e-03	3.920e-03
3	3.309e-03	4.070e-03	3.390e-03	3.431e-03	2.344e-03
4	2.327e-03	2.722e-03	2.657e-03	2.449e-03	1.482e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.945e-02	2.886e-02	2.853e-02	3.613e-02	2.427e-02

0.05	4.345e-02	3.566e-02	4.155e-02	5.885e-02	3.773e-02
0.1	5.764e-02	4.944e-02	5.837e-02	7.271e-02	5.003e-02
0.2	5.967e-02	5.409e-02	6.658e-02	6.829e-02	4.974e-02
0.3	5.212e-02	4.865e-02	5.548e-02	6.264e-02	4.172e-02
0.4	4.418e-02	4.419e-02	4.511e-02	5.225e-02	3.519e-02
0.5	3.795e-02	4.009e-02	3.726e-02	4.414e-02	3.032e-02
0.75	2.817e-02	2.884e-02	2.718e-02	3.458e-02	2.208e-02
1	2.073e-02	2.186e-02	2.044e-02	2.402e-02	1.660e-02
2	1.047e-02	1.311e-02	9.565e-03	1.136e-02	7.843e-03
3	6.757e-03	8.541e-03	6.855e-03	6.970e-03	4.661e-03
4	4.700e-03	5.664e-03	5.372e-03	4.831e-03	2.934e-03

Source: Zia fault [2046]
Region: USGS 2014 New Mexico
  Closest Distance: 73.74 km
  Amplitude Units: Acceleration (g)
  Magnitude: 6.84 Mw
  Fractile: 0.50
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.441e-02	2.461e-02	2.261e-02	2.912e-02	2.129e-02
0.05	3.494e-02	3.049e-02	3.088e-02	4.570e-02	3.270e-02
0.1	4.506e-02	4.245e-02	4.128e-02	5.323e-02	4.327e-02
0.2	4.682e-02	4.590e-02	4.952e-02	5.032e-02	4.155e-02
0.3	4.023e-02	4.009e-02	4.131e-02	4.585e-02	3.369e-02

0.4	3.354e-02	3.540e-02	3.315e-02	3.786e-02	2.774e-02
0.5	2.836e-02	3.165e-02	2.682e-02	3.148e-02	2.349e-02
0.75	2.046e-02	2.284e-02	1.888e-02	2.335e-02	1.674e-02
1	1.501e-02	1.732e-02	1.404e-02	1.620e-02	1.247e-02
2	7.818e-03	1.037e-02	6.847e-03	8.134e-03	5.922e-03
3	5.257e-03	7.155e-03	5.087e-03	5.155e-03	3.632e-03
4	3.798e-03	4.909e-03	4.134e-03	3.780e-03	2.368e-03

Fractile: 0.84
Column 1: Spectral Period
Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	4.434e-02	4.638e-02	4.127e-02	5.226e-02	3.744e-02
0.05	6.616e-02	5.795e-02	6.081e-02	8.655e-02	5.933e-02
0.1	8.792e-02	8.201e-02	8.354e-02	1.057e-01	8.039e-02
0.2	8.912e-02	8.979e-02	9.186e-02	9.578e-02	7.905e-02
0.3	7.667e-02	7.941e-02	7.546e-02	8.685e-02	6.495e-02
0.4	6.453e-02	7.071e-02	6.121e-02	7.220e-02	5.398e-02
0.5	5.536e-02	6.375e-02	5.066e-02	6.101e-02	4.603e-02
0.75	4.104e-02	4.661e-02	3.700e-02	4.741e-02	3.314e-02
1	3.043e-02	3.579e-02	2.796e-02	3.316e-02	2.480e-02
2	1.597e-02	2.180e-02	1.374e-02	1.650e-02	1.185e-02
3	1.072e-02	1.491e-02	1.029e-02	1.047e-02	7.223e-03
4	7.663e-03	1.014e-02	8.359e-03	7.458e-03	4.690e-03

APPENDIX D
PROBABILISTIC ANALYSES

APPENDIX D.1
SUMMARY OF PROBABILISTIC CHARACTERISTICS

Appendix D.1 Probabilistic Characteristics of Quaternary Faults and Folds Capable of Generating a PGA of 0.05g or Greater

Name of Faults	ID Number	Age of Most Recent Prehistoric Deformation (ya)[1]	Probability of Activity	Dip[2] (Degrees)	Maximum Seismogenic Depth[2] (km)	Rate of Activity[2] (mm/yr)	MCE[3,4]
Intrabasin faults on the Llano de Albuquerque	2121	<750,000	1	60	15	0.02	7.5
Jemez-San Ysidro fault (Jemez and San Ysidro sections)[(4)]	2029ab	<1,600,000	1	35 (0.2) 50 (0.4) 65 (0.2)	15	(4)	7.09
Jemez-San Ysidro fault (Calabacillas section)[(4)]	2029c	<15,000	1	35 (0.2) 50 (0.4) 65 (0.2)	15	(4)	6.83
Mesa Prieta faults	1985	<1,600,000	0.5	60	15	0.02	6.3
Nacimiento fault (northern and southern sections)[(4)]	2002ab	<1,600,000	1	35 (0.2) 50 (0.4) 65 (0.2)	15	(4)	7.3
Sand Hill fault zone	2039	<1,600,000	0.5	60	15	0.02	6.9
Santa Fe fault	2123	<1,600,000	0.5	60	15	0.02	6.8
unnamed faults near Albuquerque Volcanoes	2049	<750,000	1	60	15	0.02	6.9
unnamed faults of El Malpais lava field	2146	<1,600,000	0.5	60	15	0.02	6.7

1) Years ago
2) Number in parentheses represents weights for each parameter
3) The middle number is the magnitude of the Maximum Credible Earthquake as calculated by Wells and Coppersmith (1994), an additional minimum and maximum of MCE +0.3 and MCE -0.3 are entered for each model in the analysis of the fault to account for standard error in their equation.
4) The parameters included in the EZ Frisk program from the USGS Hazard mapping used for analysis.

APPENDIX D.2
PROBABILISTIC EZ-FRISK SOFTWARE INPUT

```
*********************************************
*****              EZ-FRISK              *****
***** SEISMIC HAZARD ANALYSIS DEFINITION *****
*****               FUGRO                *****
*****        WALNUT CREEK, CA  USA       *****
*********************************************
```

PROGRAM VERSION
  EZ-FRISK 8.11 Build 019

ANALYSIS TITLE:
  Mt Taylor - 10,000 yr

ANALYSIS TYPE:
  Single Site Analysis

SITE COORDINATES
  Latitude 35.3409
  Longitude -107.635

INTENSITY TYPE: Spectral Response @ 5% Damping

HAZARD DEAGGREGATION
  Status: ON
  Deagregation Scenario 1
    Period: PGA
    Amplitude: 0.02 Acceleration (g)
  Bin Configuration
    Magnitude
      Scale: Moment Magnitude
      Lowest Value: 4 Mw
      Highest Value: 9 Mw
      Bin Size: 0.1
    Distance
      Lowest Value: 0 km
      Highest Value: 300 km
      Bin Size: 2.5 km
    Epsilon
      Lowest Value: -2.2
      Highest Value: 4.2
      Bin Size: 0.2

SOIL AMPLIFICATION
  Method: Do not use soil amplification

ATTENUATION EQUATION SITE PARAMETERS
  Depth[Vs=1,000m/s] (m): 5
  Depth[Vs=1000m/s] (m): -1
  Estimate Z1 from Vs30 for CY NGA: 1
  Regional Code: Default
  Subduction Zone Setting: Unknown
  Vs30 (m/s): 1200
  Vs30 Is Measured: 0
  Z25 (km): 0.79

AMPLITUDES - Acceleration (g)
  0.0001
  0.001
  0.01
  0.02
  0.05
  0.07
  0.1
  0.2
  0.3
  0.4
  0.5
  0.7
  1
  2
  3

PERIODS (s)
  PGA
  0.05
  0.1
  0.2
  0.3
  0.4
  0.5
  0.75
  1
  2
  3
  4

DETERMINISTIC FRACTILES

PLOTTING PARAMETERS
  Period at which to plot PGA: 0.0001

CALCULATIONAL PARAMETERS
  Fault Seismic Sources -
    Maximum inclusion distance   :   1000 km
    Down dip integration increment   :   1 km
    Horizontal integration increment   :   1 km
    Number rupture length per earthquake :   4
  Subduction Interface Seismic Sources -
    Maximum inclusion distance   :   1000 km
    Down dip integration increment   :   5 km
    Horizontal integration increment   :   20 km
    Number rupture length per earthquake :   1
  Subduction Slab Seismic Sources -
    Maximum inclusion distance   :   1000 km
    Down dip integration increment   :   5 km
    Horizontal integration increment   :   20 km
    Number rupture length per earthquake :   1
  Area Seismic Sources -

```
    Maximum inclusion distance           :   1000 km
    Vertical integration increment       :   3 km
    Number of rupture azimuths           :   3
    Minimum epicentral distance step     :   0.5 km
    Maximum epicentral distance step     :   10 km
  Gridded Seismic Sources -
    Maximum inclusion distance           :   400 km
    Default number of rupture azimuths   :   10
    Maximum distance for default azimuths :   20 km
    Minimum distance for one azimuth     :   70
    Use binned calcuations if possible   :   true
    Bins per decade in distance (km)     :   20
  All Seismic Sources -
    Magnitude integration step           :   0.1 M
    Apply magnitude scaling              :   NO
    Include near-source directivity      :   NO

ATTENUATION EQUATIONS

  Name: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Database: C:\Program Files (x86)\EZ-FRISK 8.11\Files\standard.bin-
attendb
  Base: Abrahamson-et al 2014 NGA West 2
  Truncation Type: USGS 2008 NSHM Truncation
  Truncation Value: 3
  Magnitude Scale: Moment Magnitude
  Distance Type: Distance To Rupture

  Name: Boore-et al (2014) NGA West 2 USGS 2014
  Database: C:\Program Files (x86)\EZ-FRISK 8.11\Files\standard.bin-
attendb
  Base: Boore-et al 2014 NGA West 2
  Truncation Type: USGS 2008 NSHM Truncation
  Truncation Value: 3
  Magnitude Scale: Moment Magnitude
  Distance Type: Horizontal Distance To Rupture

  Name: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Database: C:\Program Files (x86)\EZ-FRISK 8.11\Files\standard.bin-
attendb
  Base: Campbell-Bozorgnia 2014 NGA West 2
  Truncation Type: USGS 2008 NSHM Truncation
  Truncation Value: 3
  Magnitude Scale: Moment Magnitude
  Distance Type: Distance To Rupture

  Name: Chiou-Youngs (2014) NGA West 2 USGS 2014
  Database: C:\Program Files (x86)\EZ-FRISK 8.11\Files\standard.bin-
attendb
  Base: Chiou-Youngs 2014 NGA West 2
  Truncation Type: USGS 2008 NSHM Truncation
  Truncation Value: 3
  Magnitude Scale: Moment Magnitude
  Distance Type: Distance To Rupture
```

SEISMIC SOURCE SUMMARY TABLE

Closest Deterministic Fault Source	Distance	Magnitude	Mechanism	Dip Angle	Dips To	Site Region Lies
CEUS Gridded Source	0.00	0.0000	Strike Slip	90.0000	--	USGS 2014 CEUS Gridded Source Above
Shallow - Extensional Gridded	0.00	8.0000	N|SS	90.0000	--	USGS 2014 WUS Gridded Source Above
Intrabasin faults on the Llano de Albuquerque	66.68	7.5000	Normal	60.0000	W	Mt Taylor Deterministic W
Jemez-San Ysidro fault [2029ab]	77.22	7.0900	Normal	35-65	E	USGS 2014 New Mexico W
Calabacillas fault [2035]	70.51	6.8300	Normal	35-65	E	USGS 2014 New Mexico W
Mesa Prieta faults	47.03	6.3000	Normal	60.0000	W	Mt Taylor Deterministic W
Nacimiento fault [2002ab]	72.26	7.3000	Normal	35-65	E	USGS 2014 New Mexico W
Sand Hill fault zone	62.14	6.9000	Normal	60.0000	W	Mt Taylor Deterministic W
Santa Fe fault	67.75	6.8000	Normal	60.0000	W	Mt Taylor Deterministic NW
unnamed faults near Albuquerque Volcanoes	73.56	6.9000	Normal	60.0000	W	Mt Taylor Deterministic W
unnamed faults of El Malpais lava field	60.42	6.7000	Normal	60.0000	W	Mt Taylor Deterministic NE

SEISMIC SOURCES

Name: CEUS Gridded Source
Region: USGS 2014 CEUS Gridded Source
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
------ Start Nested Sources forCEUS Gridded Source -------
Name: CEUS_adGridded_2014_2zone_Mmax 6.5-6.8
Region: USGS 2014 Central and Eastern US
Category:Gridded
FileType: USGS2008

General Parameters
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.2
Latitude Increment, degrees: 0.1
Longitude Increment, degrees: 0.1
Magnitude Threshold for Weighting: 4.7

```
Earthquake Model Parameters                (Varies point to point?)
  Cell Weight: 1                                    Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                              Yes
  Rate at Minimum Magnitude, events per year: 0     Yes
  Beta: 2.3025
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_adGridded_2014_2zone_Mmax 7.0-7.2
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.2
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters                (Varies point to point?)
  Cell Weight: 1                                    Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                              Yes
  Rate at Minimum Magnitude, events per year: 0     Yes
  Beta: 2.3025
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_adGridded_2014_2zone_Mmax 7.5-7.6
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.2
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters                (Varies point to point?)
  Cell Weight: 1                                    Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                              Yes
```

```
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 2.3025
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_adGridded_2014_2zone_Mmax 8.0
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.2
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1                                  Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                            Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 2.3025
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_adGridded_2014_4zone_Mmax 6.5-6.8
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.2
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1                                  Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                            Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 2.3025
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike
```

Name: CEUS_adGridded_2014_4zone_Mmax 7.0-7.2
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.2
  Latitude Increment, degrees: 0.1
  Longitude Increment, degrees: 0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters (Varies point to point?)
  Cell Weight: 1 Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0 Yes
  Rate at Minimum Magnitude, events per year: 0 Yes
  Beta: 2.3025
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_adGridded_2014_4zone_Mmax 7.5-7.6
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.2
  Latitude Increment, degrees: 0.1
  Longitude Increment, degrees: 0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters (Varies point to point?)
  Cell Weight: 1 Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0 Yes
  Rate at Minimum Magnitude, events per year: 0 Yes
  Beta: 2.3025
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_adGridded_2014_4zone_Mmax 8.0
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters

```
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.2
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1                                  Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                            Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 2.3025
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_fixGridded_2014_2zone_Mmax 6.5-6.8
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.3
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1                                  Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                            Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 2.3025                                    Yes
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_fixGridded_2014_2zone_Mmax 7.0-7.2
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.3
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7
```

```
Earthquake Model Parameters                (Varies point to point?)
  Cell Weight: 1                                    Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                              Yes
  Rate at Minimum Magnitude, events per year: 0     Yes
  Beta: 2.3025                                      Yes
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_fixGridded_2014_2zone_Mmax 7.5-7.6
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.3
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters                (Varies point to point?)
  Cell Weight: 1                                    Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                              Yes
  Rate at Minimum Magnitude, events per year: 0     Yes
  Beta: 2.3025                                      Yes
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_fixGridded_2014_2zone_Mmax 8.0
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.3
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters                (Varies point to point?)
  Cell Weight: 1                                    Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                              Yes
```

```
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 2.3025                                    Yes
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_fixGridded_2014_4zone_Mmax 6.5-6.8
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.3
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1                                  Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                            Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 2.3025                                    Yes
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_fixGridded_2014_4zone_Mmax 7.0-7.2
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.3
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1                                  Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0                            Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 2.3025                                    Yes
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike
```

Name: CEUS_fixGridded_2014_4zone_Mmax 7.5-7.6
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.3
  Latitude Increment, degrees: 0.1
  Longitude Increment, degrees: 0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters (Varies point to point?)
  Cell Weight: 1 Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0 Yes
  Rate at Minimum Magnitude, events per year: 0 Yes
  Beta: 2.3025 Yes
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

Name: CEUS_fixGridded_2014_4zone_Mmax 8.0
Region: USGS 2014 Central and Eastern US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.3
  Latitude Increment, degrees: 0.1
  Longitude Increment, degrees: 0.1
  Magnitude Threshold for Weighting: 4.7

Earthquake Model Parameters (Varies point to point?)
  Cell Weight: 1 Yes
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 4.7
  Maximum Magnitude: 0 Yes
  Rate at Minimum Magnitude, events per year: 0 Yes
  Beta: 2.3025 Yes
  Horizontal Rupture Length, A parameter: -2.0325
  Horizontal Rupture Length, B parameter: 0.5
  Rupture Strike Azimuth Model: Random Strike

 ------ End Nested Sources for CEUS Gridded Source -------

Attenuation Equations for Source:
  Raw Weight Normalized Weight Name
      0.25   0.250000   Abrahamson-et al (2014) NGA West 2 USGS
2014

```
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

****************************************

Name: Shallow - Extensional Gridded
Region: USGS 2014 WUS Gridded Source
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK
USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
 ------ Start Nested Sources forShallow - Extensional Gridded -------
Name: Extensional Gridded, adSm, Tapered_M7.95, Strike Slip
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.0133333
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 8
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, adSm, Tapered_M7.95, Normal
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.0266667
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
```

```
  Fault Mechanism: Normal
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 8
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, adSm, Truncated_M7.5, Char, Normal
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.16
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Normal
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 7                              Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, adSm, Truncated_M7.5, Char, Strike Slip
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.08
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 7                              Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
```

```
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, adSm, Truncated_M7.5, GR, Normal
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.08
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Normal
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 7                                Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, adSm, Truncated_M7.5, GR, Strike Slip
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.04
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 7                                Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, fixSm, Tapered_M7.95, Normal
Region: USGS 2014 Western US
```

Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.04
  Latitude Increment, degrees: 0.1
  Longitude Increment, degrees: 0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Normal
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 8
  Rate at Minimum Magnitude, events per year: 0 Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, fixSm, Tapered_M7.95, Strike Slip
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.02
  Latitude Increment, degrees: 0.1
  Longitude Increment, degrees: 0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 8
  Rate at Minimum Magnitude, events per year: 0 Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, fixSm, Truncated_M7.5, Char, Normal
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.24

```
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Normal
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 7                                Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, fixSm, Truncated_M7.5, Char, Strike Slip
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.12
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 7                                Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, fixSm, Truncated_M7.5, GR, Normal
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.12
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
```

```
  Fault Mechanism: Normal
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 7                              Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

Name: Extensional Gridded, fixSm, Truncated_M7.5, GR, Strike Slip
Region: USGS 2014 Western US
Category:Gridded
  FileType: USGS2008

General Parameters
  Magnitude Scale: Moment Magnitude
  Probability of Activity: 0.06
  Latitude Increment, degrees:   0.1
  Longitude Increment, degrees:  0.1
  Magnitude Threshold for Weighting: 5

Earthquake Model Parameters               (Varies point to point?)
  Cell Weight: 1
  Fault Mechanism: Strike Slip
  Depth to Top of Rupture, km: 5
  Minimum Magnitude: 5
  Maximum Magnitude: 7                              Yes
  Rate at Minimum Magnitude, events per year: 0   Yes
  Beta: 1.842
  Horizontal Rupture Length, A parameter: -3.22
  Horizontal Rupture Length, B parameter: 0.69
  Rupture Strike Azimuth Model: Random Strike

 ------ End Nested Sources for Shallow - Extensional Gridded -------

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

*****************************************

Name: Intrabasin faults on the Llano de Albuquerque
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
```

Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 7.5

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
60	60	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	1	Slip	2.000e-02	7.200000	7.800000	0.000000	7.500000	0.120000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.1810	-106.8520
34.4930	-106.8350

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: Jemez-San Ysidro fault [2029ab]
Region: USGS 2014 New Mexico
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
 ------ Start Nested Sources forJemez-San Ysidro fault [2029ab] -------
Name: 2029ab Jemez-San Ysidro fault (dip 35)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 7.09

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	35	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.815e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.815e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.815e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	4.237e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	5.479e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	6.339e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	1.582e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	1.582e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	1.582e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	3.687e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	4.768e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	5.516e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	2.420e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	2.420e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	2.420e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	5.650e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	7.306e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	8.452e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

```
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
```

Trace Coordinates:

Latitude	Longitude
35.4204	-106.7887
35.4846	-106.7821
35.5444	-106.7889
35.5588	-106.7854
35.5980	-106.7870
35.6099	-106.7896
35.6472	-106.8137
35.6645	-106.8166
35.6864	-106.8126
35.7072	-106.7940
35.7251	-106.7645
35.7443	-106.7555
35.7529	-106.7401
35.7737	-106.7198
35.7876	-106.6880
35.8181	-106.6576
35.8332	-106.6346

Name: 2029ab Jemez-San Ysidro fault (dip 50)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude

Probability of Activity: 0.60000000
Deterministic Magnitude: 7.09

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.815e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.815e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.815e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	4.237e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	5.479e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	6.339e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	1.582e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	1.582e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	1.582e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	3.687e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	4.768e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	5.516e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	2.420e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	2.420e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	2.420e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	5.650e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	7.306e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	8.452e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--

```
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.4204  -106.7887
    35.4846  -106.7821
    35.5444  -106.7889
    35.5588  -106.7854
    35.5980  -106.7870
    35.6099  -106.7896
    35.6472  -106.8137
    35.6645  -106.8166
    35.6864  -106.8126
    35.7072  -106.7940
    35.7251  -106.7645
    35.7443  -106.7555
    35.7529  -106.7401
    35.7737  -106.7198
    35.7876  -106.6880
    35.8181  -106.6576
    35.8332  -106.6346

Name: 2029ab Jemez-San Ysidro fault (dip 65)
```

Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 7.09

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	65	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.815e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.815e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.815e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	4.237e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	5.479e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	6.339e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	1.582e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	1.582e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	1.582e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	3.687e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	4.768e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	5.516e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	2.420e-05	6.650000	7.130000	2.300000	6.890000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	2.420e-05	6.850000	7.330000	2.300000	7.090000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	2.420e-05	7.050000	7.530000	2.300000	7.290000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	5.650e-05	6.500000	6.890000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	7.306e-05	6.500000	7.090000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	8.452e-05	6.500000	7.290000	1.842068	0.000000	0.000000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw

Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--

Trace Coordinates:

Latitude	Longitude
35.4204	-106.7887
35.4846	-106.7821
35.5444	-106.7889
35.5588	-106.7854
35.5980	-106.7870
35.6099	-106.7896
35.6472	-106.8137
35.6645	-106.8166
35.6864	-106.8126
35.7072	-106.7940
35.7251	-106.7645
35.7443	-106.7555
35.7529	-106.7401
35.7737	-106.7198
35.7876	-106.6880

```
    35.8181  -106.6576
    35.8332  -106.6346

 ------ End Nested Sources for Jemez-San Ysidro fault [2029ab] -------

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

*****************************************

Name: Calabacillas fault [2035]
Region: USGS 2014 New Mexico
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK
USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
 ------ Start Nested Sources forCalabacillas fault [2035] -------
Name: 2035 Calabacillas fault (dip 35)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.83

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          90        35         0     0.001        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal  0.013334    Activity   1.984e-04  6.390000  6.870000
2.300000  6.630000  0.120000  0.010000 10.000000
           Normal  0.040002    Activity   1.984e-04  6.590000  7.070000
2.300000  6.830000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   1.984e-04  6.790000  7.270000
2.300000  7.030000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   1.770e-04  6.500000  6.630000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   3.787e-04  6.500000  6.830000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   5.181e-04  6.500000  7.030000
1.842068  0.000000  0.000000  0.000000  0.000000
           Normal  0.106666    Activity   8.097e-06  6.390000  6.870000
2.300000  6.630000  0.120000  0.010000 10.000000
```

	Normal	0.319998	Activity	8.097e-06	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000	
	Normal	0.106666	Activity	8.097e-06	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000	
	Exponential	0.053334	Activity	7.248e-06	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.160002	Activity	1.550e-05	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.053334	Activity	2.121e-05	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Normal	0.013334	Activity	9.028e-06	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000	
	Normal	0.040002	Activity	9.028e-06	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000	
	Normal	0.013334	Activity	9.028e-06	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000	
	Exponential	0.006666	Activity	8.047e-06	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.019998	Activity	1.721e-05	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.006666	Activity	2.355e-05	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000	

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--

```
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.1404  -106.8390
    35.2034  -106.8526
    35.2416  -106.8654
    35.2671  -106.8632
    35.3315  -106.8350
    35.4192  -106.7898

Name: 2035 Calabacillas fault (dip 50)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.60000000
Deterministic Magnitude: 6.83

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          90        50         0     0.001        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal  0.013334    Activity   1.984e-04  6.390000  6.870000
2.300000  6.630000  0.120000  0.010000 10.000000
           Normal  0.040002    Activity   1.984e-04  6.590000  7.070000
2.300000  6.830000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   1.984e-04  6.790000  7.270000
2.300000  7.030000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   1.770e-04  6.500000  6.630000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   3.787e-04  6.500000  6.830000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   5.181e-04  6.500000  7.030000
1.842068  0.000000  0.000000  0.000000  0.000000
           Normal  0.106666    Activity   8.097e-06  6.390000  6.870000
2.300000  6.630000  0.120000  0.010000 10.000000
           Normal  0.319998    Activity   8.097e-06  6.590000  7.070000
2.300000  6.830000  0.120000  0.010000 10.000000
           Normal  0.106666    Activity   8.097e-06  6.790000  7.270000
2.300000  7.030000  0.120000  0.010000 10.000000
      Exponential  0.053334    Activity   7.248e-06  6.500000  6.630000
1.842068  0.000000  0.000000  0.000000  0.000000
```

Exponential	0.160002	Activity	1.550e-05	6.500000	6.830000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.053334	Activity	2.121e-05	6.500000	7.030000	1.842068	0.000000
0.000000	0.000000	0.000000					
Normal	0.013334	Activity	9.028e-06	6.390000	6.870000	2.300000	6.630000
0.120000	0.010000	10.000000					
Normal	0.040002	Activity	9.028e-06	6.590000	7.070000	2.300000	6.830000
0.120000	0.010000	10.000000					
Normal	0.013334	Activity	9.028e-06	6.790000	7.270000	2.300000	7.030000
0.120000	0.010000	10.000000					
Exponential	0.006666	Activity	8.047e-06	6.500000	6.630000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.019998	Activity	1.721e-05	6.500000	6.830000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.006666	Activity	2.355e-05	6.500000	7.030000	1.842068	0.000000
0.000000	0.000000	0.000000					

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Length and width -3.220000 0.690000 0.220000 -3.220000 0.690000 0.220000 -- -- --

Trace Coordinates:

Latitude	Longitude
35.1404	-106.8390
35.2034	-106.8526
35.2416	-106.8654
35.2671	-106.8632
35.3315	-106.8350
35.4192	-106.7898

Name: 2035 Calabacillas fault (dip 65)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 6.83

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	65	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.984e-04	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.984e-04	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.984e-04	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	1.770e-04	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	3.787e-04	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.006666	Activity	5.181e-04	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.106666	Activity	8.097e-06	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000
Normal	0.319998	Activity	8.097e-06	6.590000	7.070000	2.300000	6.830000	0.120000	0.010000	10.000000
Normal	0.106666	Activity	8.097e-06	6.790000	7.270000	2.300000	7.030000	0.120000	0.010000	10.000000
Exponential	0.053334	Activity	7.248e-06	6.500000	6.630000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.160002	Activity	1.550e-05	6.500000	6.830000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.053334	Activity	2.121e-05	6.500000	7.030000	1.842068	0.000000	0.000000	0.000000	0.000000
Normal	0.013334	Activity	9.028e-06	6.390000	6.870000	2.300000	6.630000	0.120000	0.010000	10.000000

```
           Normal  0.040002    Activity   9.028e-06  6.590000  7.070000
2.300000  6.830000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   9.028e-06  6.790000  7.270000
2.300000  7.030000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   8.047e-06  6.500000  6.630000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   1.721e-05  6.500000  6.830000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   2.355e-05  6.500000  7.030000
1.842068  0.000000  0.000000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.1404  -106.8390
```

```
    35.2034  -106.8526
    35.2416  -106.8654
    35.2671  -106.8632
    35.3315  -106.8350
    35.4192  -106.7898

 ------ End Nested Sources for Calabacillas fault [2035] -------

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

*****************************************

Name: Mesa Prieta faults
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.3

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
          Normal         1        Slip   2.000e-02  6.000000  6.600000
0.000000  6.300000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.5190  -107.0400
    35.4360  -107.0760

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
```

```
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

****************************************

Name: Nacimiento fault [2002ab]
Region: USGS 2014 New Mexico
Category:Composite Seismic Source
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Regions\EZ-FRISK
USGS2014 Lower 48 v1.00\Files\USGS 2014 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
 ------ Start Nested Sources forNacimiento fault [2002ab] -------
Name: 2002ab Nacimiento fault (dip 35)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 7.3

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          90        35         0     0.001        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal  0.013334    Activity   1.041e-04  6.860000  7.340000
2.300000  7.100000  0.120000  0.010000 10.000000
           Normal  0.040002    Activity   1.041e-04  7.060000  7.540000
2.300000  7.300000  0.120000  0.010000 10.000000
           Normal  0.013334    Activity   1.041e-04  7.260000  7.740000
2.300000  7.500000  0.120000  0.010000 10.000000
      Exponential  0.006666    Activity   3.949e-04  6.500000  7.100000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.019998    Activity   4.551e-04  6.500000  7.300000
1.842068  0.000000  0.000000  0.000000  0.000000
      Exponential  0.006666    Activity   4.968e-04  6.500000  7.500000
1.842068  0.000000  0.000000  0.000000  0.000000
           Normal  0.106666    Activity   1.182e-05  6.860000  7.340000
2.300000  7.100000  0.120000  0.010000 10.000000
           Normal  0.319998    Activity   1.182e-05  7.060000  7.540000
2.300000  7.300000  0.120000  0.010000 10.000000
           Normal  0.106666    Activity   1.182e-05  7.260000  7.740000
2.300000  7.500000  0.120000  0.010000 10.000000
      Exponential  0.053334    Activity   4.483e-05  6.500000  7.100000
1.842068  0.000000  0.000000  0.000000  0.000000
```

Exponential	0.160002	Activity	5.167e-05	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000	
Exponential	0.053334	Activity	5.640e-05	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000	
Normal	0.013334	Activity	1.815e-05	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000	
Normal	0.040002	Activity	1.815e-05	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000	
Normal	0.013334	Activity	1.815e-05	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000	
Exponential	0.006666	Activity	6.868e-05	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000	
Exponential	0.019998	Activity	7.916e-05	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000	
Exponential	0.006666	Activity	8.640e-05	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000	

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Length and width -3.220000 0.690000 0.220000 -3.220000 0.690000
0.220000   --   --   --

Trace Coordinates:

Latitude	Longitude
35.4853	-106.8574
35.5849	-106.8557
35.6246	-106.8577
35.6777	-106.8687
35.7441	-106.8701
35.7740	-106.8782
35.7902	-106.8878
35.8244	-106.8941
35.8730	-106.8830
35.8874	-106.8885
35.8967	-106.8886
35.9087	-106.8936
35.9475	-106.8926
35.9999	-106.9014
36.0348	-106.8992
36.0541	-106.9073
36.0739	-106.9093
36.0917	-106.9093
36.1155	-106.9015
36.1908	-106.9112
36.1985	-106.9056
36.2198	-106.9021

Name: 2002ab Nacimiento fault (dip 50)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.60000000
Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	0.013334	Activity	1.041e-04	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000
Normal	0.040002	Activity	1.041e-04	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000
Normal	0.013334	Activity	1.041e-04	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000
Exponential	0.006666	Activity	3.949e-04	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000
Exponential	0.019998	Activity	4.551e-04	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000

Exponential	0.006666	Activity	4.968e-04	6.500000	7.500000	1.842068
0.000000	0.000000	0.000000	0.000000			
Normal	0.106666	Activity	1.182e-05	6.860000	7.340000	2.300000
7.100000	0.120000	0.010000	10.000000			
Normal	0.319998	Activity	1.182e-05	7.060000	7.540000	2.300000
7.300000	0.120000	0.010000	10.000000			
Normal	0.106666	Activity	1.182e-05	7.260000	7.740000	2.300000
7.500000	0.120000	0.010000	10.000000			
Exponential	0.053334	Activity	4.483e-05	6.500000	7.100000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.160002	Activity	5.167e-05	6.500000	7.300000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.053334	Activity	5.640e-05	6.500000	7.500000	1.842068
0.000000	0.000000	0.000000	0.000000			
Normal	0.013334	Activity	1.815e-05	6.860000	7.340000	2.300000
7.100000	0.120000	0.010000	10.000000			
Normal	0.040002	Activity	1.815e-05	7.060000	7.540000	2.300000
7.300000	0.120000	0.010000	10.000000			
Normal	0.013334	Activity	1.815e-05	7.260000	7.740000	2.300000
7.500000	0.120000	0.010000	10.000000			
Exponential	0.006666	Activity	6.868e-05	6.500000	7.100000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.019998	Activity	7.916e-05	6.500000	7.300000	1.842068
0.000000	0.000000	0.000000	0.000000			
Exponential	0.006666	Activity	8.640e-05	6.500000	7.500000	1.842068
0.000000	0.000000	0.000000	0.000000			

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.4853	-106.8574
35.5849	-106.8557
35.6246	-106.8577
35.6777	-106.8687
35.7441	-106.8701
35.7740	-106.8782
35.7902	-106.8878
35.8244	-106.8941
35.8730	-106.8830
35.8874	-106.8885
35.8967	-106.8886
35.9087	-106.8936
35.9475	-106.8926
35.9999	-106.9014
36.0348	-106.8992
36.0541	-106.9073
36.0739	-106.9093
36.0917	-106.9093
36.1155	-106.9015
36.1908	-106.9112
36.1985	-106.9056
36.2198	-106.9021

Name: 2002ab Nacimiento fault (dip 65)
Region: USGS 2014 New Mexico
Category:Fault
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.20000000
Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	65	0	0.001	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2

	Normal	0.013334	Activity	1.041e-04	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000	
	Normal	0.040002	Activity	1.041e-04	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000	
	Normal	0.013334	Activity	1.041e-04	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000	
	Exponential	0.006666	Activity	3.949e-04	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.019998	Activity	4.551e-04	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.006666	Activity	4.968e-04	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Normal	0.106666	Activity	1.182e-05	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000	
	Normal	0.319998	Activity	1.182e-05	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000	
	Normal	0.106666	Activity	1.182e-05	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000	
	Exponential	0.053334	Activity	4.483e-05	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.160002	Activity	5.167e-05	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.053334	Activity	5.640e-05	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Normal	0.013334	Activity	1.815e-05	6.860000	7.340000	2.300000	7.100000	0.120000	0.010000	10.000000	
	Normal	0.040002	Activity	1.815e-05	7.060000	7.540000	2.300000	7.300000	0.120000	0.010000	10.000000	
	Normal	0.013334	Activity	1.815e-05	7.260000	7.740000	2.300000	7.500000	0.120000	0.010000	10.000000	
	Exponential	0.006666	Activity	6.868e-05	6.500000	7.100000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.019998	Activity	7.916e-05	6.500000	7.300000	1.842068	0.000000	0.000000	0.000000	0.000000	
	Exponential	0.006666	Activity	8.640e-05	6.500000	7.500000	1.842068	0.000000	0.000000	0.000000	0.000000	

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	-3.220000	0.690000	0.220000	-3.220000	0.690000	0.220000	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--	--	--

```
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000
0.001000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --
      Length and width -3.220000  0.690000  0.220000 -3.220000  0.690000
0.220000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.4853  -106.8574
    35.5849  -106.8557
    35.6246  -106.8577
    35.6777  -106.8687
    35.7441  -106.8701
    35.7740  -106.8782
    35.7902  -106.8878
    35.8244  -106.8941
    35.8730  -106.8830
    35.8874  -106.8885
    35.8967  -106.8886
    35.9087  -106.8936
    35.9475  -106.8926
    35.9999  -106.9014
    36.0348  -106.8992
    36.0541  -106.9073
    36.0739  -106.9093
    36.0917  -106.9093
    36.1155  -106.9015
    36.1908  -106.9112
    36.1985  -106.9056
    36.2198  -106.9021

 ------ End Nested Sources for Nacimiento fault [2002ab] -------

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
```

```
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

****************************************

Name: Sand Hill fault zone
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-
ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.9

Fault Profile Parameters:
        Dip1      Dip2    Depth1    Depth2    Depth3
          60        60         0       0.1        15

Magnitude Recurrence Distributions:
        ModelType    Weight    RateType        Rate    MinMag    MaxMag
Beta      Mean     Sigma    Delta1    Delta2
           Normal         1        Slip   2.000e-02  6.600000  7.200000
0.000000  6.900000  0.120000  0.000000  0.000000

Rupture Length Parameters
  Rupture Dimensioning        Al        Bl      Sigl        Aw        Bw
Sigw        Aa        Ba      Sigw
      Length and width  4.000000  0.000000  0.100000  4.000000  0.000000
0.100000        --        --        --

Trace Coordinates:
  Latitude   Longitude
    35.4440  -106.8690
    35.1400  -106.8840

Attenuation Equations for Source:
  Raw Weight  Normalized Weight  Name
      0.25      0.250000          Abrahamson-et al (2014) NGA West 2 USGS
2014
      0.25      0.250000          Boore-et al (2014) NGA West 2 USGS 2014
      0.25      0.250000          Campbell-Bozorgnia (2014) NGA West 2
USGS 2014
      0.25      0.250000          Chiou-Youngs (2014) NGA West 2 USGS
2014

****************************************

Name: Santa Fe fault
Region: Mt Taylor Deterministic
Category:Fault
```

Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.8

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
60	60	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	1	Slip	2.000e-02	6.500000	7.100000	0.000000	6.800000	0.120000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
34.8880	-107.0530
34.6360	-107.1040

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: unnamed faults near Albuquerque Volcanoes
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 6.9

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
60	60	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	1	Slip	2.000e-02	6.600000	7.200000	0.000000	6.900000	0.120000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
35.2180	-106.7620
35.0650	-106.7500

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

Name: unnamed faults of El Malpais lava field
Region: Mt Taylor Deterministic
Category:Fault
Database: C:\Users\dgarcia\AppData\Local\Fugro\EZ-FRISK\Files\user.xml-ssdb
Fault Mechanism: Normal
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 6.7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
60	60	0	0.1	15

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean	Sigma	Delta1	Delta2
Normal	1	Slip	2.000e-02	6.400000	7.000000	0.000000	6.700000	0.120000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa	Ba	Sigw
Length and width	4.000000	0.000000	0.100000	4.000000	0.000000	0.100000	--	--	--

Trace Coordinates:

Latitude	Longitude
34.8880	-108.0030
34.5720	-108.1560

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
0.25	0.250000	Abrahamson-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Boore-et al (2014) NGA West 2 USGS 2014
0.25	0.250000	Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
0.25	0.250000	Chiou-Youngs (2014) NGA West 2 USGS 2014

****

MAGNITUDE CONVERSIONS

This analysis does not require any magnitude conversions.
Note: Your analysis may indirectly use magnitude conversions that are not listed here.

Echo File Creation Time: 13:37:53 Monday, September 22, 2025

APPENDIX D.3
PROBABILISTIC RESULTS

Probabilistic Spectra results for EZ-FRISK 8.11 Build 019

ANNUAL FREQUENCY OF EXCEEDANCE: 2.107e-03
RETURN PERIOD: 474.6
PROBABILITY OF EXCEEDENCE: 10.0% IN 50.0 YEARS
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Mean
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	3.221e-02	3.542e-02	3.142e-02	3.253e-02	2.962e-02
0.05	4.864e-02	4.533e-02	4.809e-02	5.292e-02	4.798e-02
0.1	6.812e-02	6.553e-02	7.097e-02	7.013e-02	6.546e-02
0.2	6.633e-02	6.606e-02	6.668e-02	6.829e-02	6.413e-02
0.3	5.274e-02	5.281e-02	4.827e-02	5.902e-02	5.068e-02
0.4	4.168e-02	4.400e-02	3.698e-02	4.595e-02	4.001e-02
0.5	3.446e-02	3.807e-02	2.999e-02	3.716e-02	3.271e-02
0.75	2.402e-02	2.537e-02	2.134e-02	2.724e-02	2.190e-02
1	1.717e-02	1.862e-02	1.561e-02	1.891e-02	1.558e-02
2	7.695e-03	1.044e-02	6.584e-03	7.387e-03	6.514e-03
3	4.401e-03	5.989e-03	4.309e-03	4.002e-03	3.414e-03
4	3.004e-03	3.756e-03	3.351e-03	2.773e-03	2.148e-03

ANNUAL FREQUENCY OF EXCEEDANCE: 1.026e-03
RETURN PERIOD: 974.8
PROBABILITY OF EXCEEDENCE: 5.0% IN 50.0 YEARS
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Mean
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014

Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	5.520e-02	6.152e-02	5.269e-02	5.580e-02	5.090e-02
0.05	8.401e-02	7.893e-02	8.150e-02	9.218e-02	8.367e-02
0.1	1.180e-01	1.156e-01	1.186e-01	1.213e-01	1.162e-01
0.2	1.125e-01	1.152e-01	1.084e-01	1.144e-01	1.123e-01
0.3	8.747e-02	8.956e-02	7.714e-02	9.652e-02	8.686e-02
0.4	6.871e-02	7.258e-02	5.922e-02	7.467e-02	6.798e-02
0.5	5.636e-02	6.199e-02	4.778e-02	6.035e-02	5.483e-02
0.75	3.800e-02	4.053e-02	3.293e-02	4.298e-02	3.522e-02
1	2.696e-02	2.929e-02	2.427e-02	2.923e-02	2.481e-02
2	1.271e-02	1.661e-02	1.107e-02	1.220e-02	1.096e-02
3	7.598e-03	1.077e-02	7.301e-03	6.769e-03	5.531e-03
4	5.019e-03	6.658e-03	5.589e-03	4.553e-03	3.322e-03

ANNUAL FREQUENCY OF EXCEEDANCE: 4.041e-04
RETURN PERIOD: 2474.9
PROBABILITY OF EXCEEDENCE: 2.0% IN 50.0 YEARS
Column 1: Spectral Period
Column 2: Acceleration (g) for: Mean
Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	1.006e-01	1.121e-01	9.326e-02	1.012e-01	9.412e-02
0.05	1.553e-01	1.449e-01	1.469e-01	1.728e-01	1.570e-01
0.1	2.236e-01	2.215e-01	2.168e-01	2.304e-01	2.264e-01
0.2	2.091e-01	2.186e-01	1.924e-01	2.090e-01	2.167e-01

0.3	1.567e-01	1.622e-01	1.337e-01	1.678e-01	1.631e-01
0.4	1.212e-01	1.264e-01	1.028e-01	1.289e-01	1.257e-01
0.5	9.956e-02	1.068e-01	8.280e-02	1.048e-01	1.013e-01
0.75	6.687e-02	7.048e-02	5.733e-02	7.409e-02	6.409e-02
1	4.724e-02	5.157e-02	4.174e-02	5.090e-02	4.404e-02
2	2.197e-02	2.824e-02	1.870e-02	2.106e-02	1.849e-02
3	1.382e-02	1.864e-02	1.326e-02	1.257e-02	1.025e-02
4	9.757e-03	1.256e-02	1.065e-02	8.652e-03	5.844e-03

ANNUAL FREQUENCY OF EXCEEDANCE: 1.000e-04
RETURN PERIOD: 10000.0
PROBABILITY OF EXCEEDENCE: 0.5% IN 50.0 YEARS
  Column 1: Spectral Period
  Column 2: Acceleration (g) for: Mean
  Column 3: Acceleration (g) for: Abrahamson-et al (2014) NGA West 2 USGS 2014
  Column 4: Acceleration (g) for: Boore-et al (2014) NGA West 2 USGS 2014
  Column 5: Acceleration (g) for: Campbell-Bozorgnia (2014) NGA West 2 USGS 2014
  Column 6: Acceleration (g) for: Chiou-Youngs (2014) NGA West 2 USGS 2014

1	2	3	4	5	6
PGA	2.096e-01	2.360e-01	1.893e-01	2.094e-01	2.013e-01
0.05	3.382e-01	3.129e-01	3.135e-01	3.834e-01	3.443e-01
0.1	4.875e-01	4.824e-01	4.564e-01	5.061e-01	5.047e-01
0.2	4.482e-01	4.756e-01	4.024e-01	4.322e-01	4.839e-01
0.3	3.359e-01	3.483e-01	2.839e-01	3.406e-01	3.666e-01
0.4	2.579e-01	2.634e-01	2.186e-01	2.635e-01	2.837e-01
0.5	2.097e-01	2.170e-01	1.770e-01	2.131e-01	2.264e-01
0.75	1.395e-01	1.407e-01	1.238e-01	1.489e-01	1.420e-01
1	1.009e-01	1.050e-01	9.197e-02	1.056e-01	9.857e-02
2	4.668e-02	5.845e-02	4.032e-02	4.488e-02	3.920e-02

3	2.922e-02	3.772e-02	2.850e-02	2.727e-02	2.085e-02
4	2.090e-02	2.569e-02	2.291e-02	1.954e-02	1.286e-02

APPENDIX D
Technical Memorandum – Frost Depth Analysis

Draft Technical Memorandum

To:	Rio Grande Resources Ltd.	From:	Jason Andrews P.E., Larry Coons P.E.
Company:	Rio Grande Resources Ltd.	Date:	October 9, 2025
EA No.:	111360		
Re:	Mt. Taylor Uranium Mine - Frost Depth Analysis		

1.0 INTRODUCTION

This technical memorandum provides the frost depth analysis and results to support the design of the proposed expanded disposal cell. The radon barrier should be located below the calculated frost depth to protect against freeze-thaw impacts.

2.0 FROST DEPTH ANALYSIS

The frost depth penetration into the final reclamation cover (cover) for the proposed expanded disposal cell was determined using the procedure adopted by the U.S. Department of Energy and accepted by the Nuclear Regulatory Commission (DOE, 1989). The depth of freezing into the cover (depth of frost penetration) is governed by the local climate, soil material and soil moisture content expected during the operational life of the cover. The procedure used includes a computational procedure to predict frost depth which was initially proposed by Berggren (1943). Smith and Rager (2002) apply these previous studies to determine an adequate thickness of a protective soil layer to protect underlying compacted soil. The freezing depth was calculated for a 200-year recurrence interval (0.5% probability of occurrence in any given year).

2.1 Analyzed Final Reclamation Cover Configuration

The following cover system is proposed to overlay the clay layer (radon barrier) and was analyzed for frost penetration. The proposed cover system is presented on Figure D-1.

- 12-inches of rock mulch (erosion protection) consisting of gravel mixed with onsite pediment soils.
- 33-inches of onsite pediment soil (biointrusion and frost protection.)

2.2 Input parameters

Calculations

- ***Step 1 Determine freeze-index parameters.***
  Fifty years of historic temperature data consisting of maximum and minimum daily air temperatures was obtained from Grants, New Mexico Municipal Airport for the main data source, additional alternative data sources included the on-site meteorological station at the Mt. Taylor Mine, and the historical weather records of San Mateo, New Mexico. The historic climate data sources and data used in the calculations are presented in Attachment D1.

  The degree day calculation was used to compute the duration of freeze. The duration of freeze is defined as length of time in days that the cumulative degree day is below freezing (Smith and Rager, 2002). The degree day, defined as the mean daily temperature minus 32 degrees Fahrenheit (freezing point of water) (Smith and Rager, 2002) was calculated and presented in Attachment D1. The cumulative degree-days versus the days in the freeze year are plotted. The cumulative degree day plots are provided in Attachment D2.1 and are used to determine the duration of freeze. The selection of points for the duration of freeze calculation is provided in Attachment D2.2

- ***Step 2 Determine surface temperature correction factor.***
  A surface correction factor, N, is applied to the daily temperature data used to correct for difference between air temperature and ground temperature. A surface correction factor of 0.7 for bare soil was chosen from Table 1 of Smith and Rager (2002).

- ***Step 3 Determine thermal properties.***
  Soil thermal properties: thermal conductivity, heat capacity, and latent heat of fusion are products of empirical relationships between the dry unit weight (pcf) and gravimetric moisture content (%). For the purpose of these calculations, the relationships presented by Bianchini and Gonzalez (2012) were used. The thermal conductivity, volumetric heat capacity and latent heat of fusion for each of the soil types for the respective layer are presented in Table 1 below. The thermal ratio and fusion parameter for each of the soil types are presented in Table 2 below. The parameters presented in Tables 1 and 2 were calculated with the following equations from Bianchini and Gonzalez (2012) presented below.

Thermal conductivity equations:

$$K_f = \frac{0.076(10)^{0.013\gamma_d} + 0.032(10)^{0.013\gamma_d * w}}{12}$$

$$K_u = \frac{(0.07\log(w) + 0.04)(10)^{0.01\gamma_d}}{12}$$

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Where:

K_u = Thermal Conductivity of unfrozen soil
K_f = Thermal Conductivity of frozen soil
γ_d = soil dry unit weight
w = soil water content as percentage

Volumetric heat capacity equation:

$$C_{avg} = \gamma_d(c + 0.75\frac{w}{100})$$

Where:

C_{avg} = Average volumetric heat capacity
γ_d = soil dry unit weight
w = soil water content as percentage
c = specific heat of the soil solids

Volumetric latent heat of fusion equation:

$$L = 144\gamma_d\frac{w}{100}$$

Where:

L= Volumetric latent heat of fusion
γ_d = soil dry unit weight
w = soil water content as percentage

Thermal ratio equation:

$$\alpha = \frac{v_0}{v_s}$$

Where:

α = Thermal Ratio
v_0 =absolute value of the difference between the mean annual temperature below the ground surface and 32° F.
v_s =the term is computed in two different ways in relation to problem analysis.

Term v_s equation:

$$v_s = \frac{nF}{t}$$

Where:

n = conversion factor from air index to surface index
F = air-freezing index

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t = length of the freezing season

Fusion parameter equation:

$$\mu = \frac{C}{L} v_s$$

Where

C= Volumetric Heat Capacity
L = Volumetric latent heat of fusion

Table 1 – Thermal Properties

Layer	Depth (Inches)	Optimum Dry Density (PCF)	Water Content (%)	Dry Density (85% of Proctor) (PCF)	Thermal Conductivity Kf (BTU/ Ft hr °F)	Thermal Conductivity Ku (BTU/ Ft hr °F)	Average Thermal Conductivity (1/2*(Ku+Kf)) (BTU/ Ft hr °F)	Volumetric Heat Capacity (Cavg) (BTU/ft^3 °F)	Latent Heat of Fusion (BTU/ft^3)
Mulch	12	115	10	97.8	0.83	0.87	0.85	23.9	1407.6
Pediment	33	110.7	11	94.1	0.80	0.82	0.81	23.8	1490.46

Table 2 – Thermal Parameters

Layer	Average Temperature (°F)	Freeze Index (Degree-Day)	Duration (Days)	Vs	Vo	Thermal Ratio	Fusion Parameter
Mulch	63.1	927.5	173	3.8	31.1	8.25	0.06
Pediment	63.1	927.5	173	3.8	31.1	8.25	0.06

- ***Step 4 Determine 200-year recurrence interval.***
  NRC, 10 CFR Appendix A to Part 40, Criterion 6, Paragraph 1 states that the design life should be 1,000 years when reasonably achievable and at a minimum, 200 years. As discussed in Smith and Rager (2002) the use of a 200-year recurrence interval for frost depth analysis meets the requirements of 40 Code of Federal Regulations Part 40. Mean annual temperature was calculated for each year in the data set. The mean annual temperature was plotted and projected to develop the mean minimum temperature for 200 years using the method presented in Smith and Rager (2002). The results of this are presented in Attachment D3.1.

  In addition to the mean annual temperature, the frost index and duration of freeze were calculated for each year in the data set as stated in Step 1. These data were plotted and projected to develop the 200-year maximum frost index and duration of freeze using the method presented in Smith and Rager (2002). The results are presented in Attachments D3.2 and D3.3, respectively.

- ***Step 5 Determine freezing depth.***
  To determine the frost depth of 200-year recurrence interval the method for manual solution of the Modberg Equation presented in Bianchini and Gonzalez (2012) was applied using the parameters calculated in Step 4 to determine the depth of the freezing front inside of the cover system. The depth of the freezing front is presented in Attachment D4.

3.0 CONCLUSIONS

The frost penetration depth into the final cover for the 200-year recurrence interval was calculated to be 28 inches. The total thickness of material over the radon barrier is proposed to be 45 inches. Thus, the radon barrier is not anticipated to experience any impacts from freezing.

4.0 REFERENCES

Berggren, W.P. (1943). Prediction of temperature distribution in frozen soils. *Proceedings of the 11th Annual Western Interstate Snow Survey Conference, Trans. Am. Geophys. Union*. 71-77.

Bianchini, A., and C.R. Gonzalez. (2012). *Pavement-Transportation Computer Assisted Structural Engineering (PCASE) Implementation of the Modified Berggren (ModBerg) Equation for Computing the Frost Penetration Depth within Pavement structures*. U.S. Army Corps of Engineers, Engineer Research and Development Center, Geotechnical and Structures Laboratory, ERDC/GSL TR-12-15.

Smith, G.E., and R.E. Rager. (2002). Protective layer design in landfill covers based on frost penetration. *ASCE J. Geotechnical/Geoenvironmental Engineering* 128(9): 794-799.

U.S. Department of Energy (U.S. DOE). (1989). *Technical Approach Document, Revision II, Uranium Mill Tailings Remedial Action Project*, UMTRA-DOE/AL 050425.0002, Albuquerque, New Mexico.

LIST OF FIGURES

Figure D-1 Final Reclamation Cover System

LIST OF ATTACHMENTS

Attachment D1 Historical Temperature Data
Attachment D2 Frost Index Calculations
Attachment D2.1 Cumulative Degree Day Plots
Attachment D2.2 Frost Index Determination
Attachment D3 Determination of Parameters at a 200-year Recurrence Interval
Attachment D3.1 Mean Annual Temperature at 200-year Recurrence Interval
Attachment D3.2 Frost Index at 200-year Recurrence Interval
Attachment D3.3 Duration of Freeze Season at 200-year Recurrence Interval
Attachment D4 Frost Depth Determination

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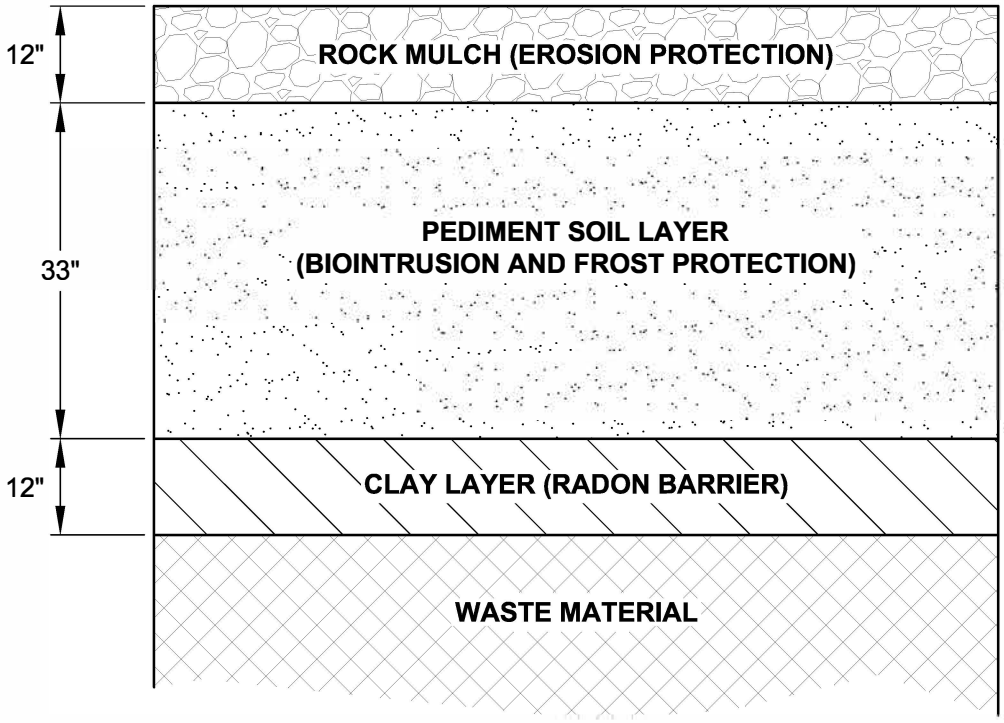
FIGURE



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Project No. 111360

October 2025

Engineering Analytics, Inc.

FIGURE D-1
FINAL RECLAMATION COVER SYSTEM
MT. TAYLOR MINE

ATTACHMENT D1
HISTORICAL TEMPERATURE DATA

Attachment D1 - Summary of Historical Weather Data

Location	Site ID	Distance from Site	Elevation (Mt. Taylor, El 6454 ft)	Start Date	End Date	Missing Data?	Weather Categories Used	Notes
Gallup Municipal Airport, Gallup, NM.	KNMGA19	64 miles	6467 ft	1/1/1975	6/23/2023	• 8/12/2000 – 8/21/2000 • 8/23/2000 – 8/26/2000 • 8/28/2000-8/30/2000 • 2/20/2007-2/25/2007 • 3/1/2014-3/3/2014 • 12/11/2022-01/23/2023 • 9/26/2023-9/30/2023 • 01/25/2024-01/28/2024 • 05/29/2025-06/04/2025	• Temperature • Relative Humidity • Avg Daily Wind Speed • Precipitation	• **Main data source** • Gaps in data filled with Alternative data from Albuquerque, NM .
Albuquerque, NM.	KNMALBUQ1093)	58 miles	5312 ft	2/20/2007	6/04/2025		• Temperature • Relative Humidity • Average Wind Speed • Precipitation	• **Alternative data source** • Used for 5/29/2025-6/4/2025 • 01/26/2025-01/28/2025 • 9/26/2025-9/30/2025 • 12/11/2022-01/23/2023

								• 2/20/2007-2/25/2007 • 2/23/2000-2/28/2000 • •

111360 Mt. Taylor Uranium Mine Grants, NM Municipal Airport Data

Date	Year	MO	Day	Day in frost Year	Minimum Temperature (Deg F)	Maximum Temperature (Deg F)	Average Temperature (Deg F)	Degree Day	Cum. Degree Day
6/1/1975	1975	6	1	1	38	80	59	27	27
6/2/1975	1975	6	2	2	42	83	62.5	30.5	57.5
6/3/1975	1975	6	3	3	48	84	66	34	91.5
6/4/1975	1975	6	4	4	49	82	65.5	33.5	125
6/5/1975	1975	6	5	5	45	83	64	32	157
6/6/1975	1975	6	6	6	47	81	64	32	189
6/7/1975	1975	6	7	7	50	80	65	33	222
6/8/1975	1975	6	8	8	48	79	63.5	31.5	253.5
6/9/1975	1975	6	9	9	43	77	60	28	281.5
6/10/1975	1975	6	10	10	36	77	56.5	24.5	306
6/11/1975	1975	6	11	11	35	75	55	23	329
6/12/1975	1975	6	12	12	40	80	60	28	357
6/13/1975	1975	6	13	13	43	86	64.5	32.5	389.5
6/14/1975	1975	6	14	14	51	85	68	36	425.5
6/15/1975	1975	6	15	15	50	80	65	33	458.5
6/16/1975	1975	6	16	16	51	84	67.5	35.5	494
6/17/1975	1975	6	17	17	53	84	68.5	36.5	530.5
6/18/1975	1975	6	18	18	52	81	66.5	34.5	565
6/19/1975	1975	6	19	19	43	77	60	28	593
6/20/1975	1975	6	20	20	45	74	59.5	27.5	620.5
6/21/1975	1975	6	21	21	43	79	61	29	649.5
6/22/1975	1975	6	22	22	46	84	65	33	682.5
6/23/1975	1975	6	23	23	48	84	66	34	716.5
6/24/1975	1975	6	24	24	52	84	68	36	752.5
6/25/1975	1975	6	25	25	43	83	63	31	783.5
6/26/1975	1975	6	26	26	48	85	66.5	34.5	818
6/27/1975	1975	6	27	27	49	85	67	35	853
6/28/1975	1975	6	28	28	49	88	68.5	36.5	889.5
6/29/1975	1975	6	29	29	52	90	71	39	928.5
6/30/1975	1975	6	30	30	53	91	72	40	968.5
7/1/1975	1975	7	1	31	59	90	74.5	42.5	1011
7/2/1975	1975	7	2	32	62	84	73	41	1052
7/3/1975	1975	7	3	33	53	82	67.5	35.5	1087.5
7/4/1975	1975	7	4	34	56	80	68	36	1123.5
7/5/1975	1975	7	5	35	54	85	69.5	37.5	1161
7/6/1975	1975	7	6	36	52	81	66.5	34.5	1195.5
7/7/1975	1975	7	7	37	51	78	64.5	32.5	1228
7/8/1975	1975	7	8	38	50	79	64.5	32.5	1260.5
7/9/1975	1975	7	9	39	54	80	67	35	1295.5
7/10/1975	1975	7	10	40	59	86	72.5	40.5	1336
7/11/1975	1975	7	11	41	56	81	68.5	36.5	1372.5
7/12/1975	1975	7	12	42	54	81	67.5	35.5	1408
7/13/1975	1975	7	13	43	52	79	65.5	33.5	1441.5
7/14/1975	1975	7	14	44	50	79	64.5	32.5	1474
7/15/1975	1975	7	15	45	49	80	64.5	32.5	1506.5
7/16/1975	1975	7	16	46	55	78	66.5	34.5	1541
7/17/1975	1975	7	17	47	52	76	64	32	1573
7/18/1975	1975	7	18	48	53	81	67	35	1608
7/19/1975	1975	7	19	49	56	84	70	38	1646
7/20/1975	1975	7	20	50	57	82	69.5	37.5	1683.5
7/21/1975	1975	7	21	51	50	84	67	35	1718.5
7/22/1975	1975	7	22	52	50	82	66	34	1752.5
7/23/1975	1975	7	23	53	53	87	70	38	1790.5
7/24/1975	1975	7	24	54	54	90	72	40	1830.5
7/25/1975	1975	7	25	55	49	86	67.5	35.5	1866
7/26/1975	1975	7	26	56	52	79	65.5	33.5	1899.5
7/27/1975	1975	7	27	57	53	78	65.5	33.5	1933
7/28/1975	1975	7	28	58	53	77	65	33	1966
7/29/1975	1975	7	29	59	50	70	60	28	1994
7/30/1975	1975	7	30	60	51	78	64.5	32.5	2026.5
7/31/1975	1975	7	31	61	53	80	66.5	34.5	2061
8/1/1975	1975	8	1	62	53	83	68	36	2097
8/2/1975	1975	8	2	63	55	84	69.5	37.5	2134.5
8/3/1975	1975	8	3	64	52	84	68	36	2170.5
8/4/1975	1975	8	4	65	51	85	68	36	2206.5
8/5/1975	1975	8	5	66	53	84	68.5	36.5	2243
8/6/1975	1975	8	6	67	56	85	70.5	38.5	2281.5
8/7/1975	1975	8	7	68	57	80	68.5	36.5	2318
8/8/1975	1975	8	8	69	56	80	68	36	2354
8/9/1975	1975	8	9	70	54	78	66	34	2388
8/10/1975	1975	8	10	71	53	77	65	33	2421
8/11/1975	1975	8	11	72	47	78	62.5	30.5	2451.5
8/12/1975	1975	8	12	73	53	76	64.5	32.5	2484
8/13/1975	1975	8	13	74	49	73	61	29	2513
8/14/1975	1975	8	14	75	50	79	64.5	32.5	2545.5
8/15/1975	1975	8	15	76	50	83	66.5	34.5	2580
8/16/1975	1975	8	16	77	55	84	69.5	37.5	2617.5
8/17/1975	1975	8	17	78	50	82	66	34	2651.5
8/18/1975	1975	8	18	79	55	83	69	37	2688.5
8/19/1975	1975	8	19	80	50	82	66	34	2722.5
8/20/1975	1975	8	20	81	53	79	66	34	2756.5
8/21/1975	1975	8	21	82	54	70	62	30	2786.5
8/22/1975	1975	8	22	83	53	77	65	33	2819.5
8/23/1975	1975	8	23	84	51	73	62	30	2849.5
8/24/1975	1975	8	24	85	53	87	70	38	2887.5
8/25/1975	1975	8	25	86	48	83	65.5	33.5	2921
8/26/1975	1975	8	26	87	47	82	64.5	32.5	2953.5
8/27/1975	1975	8	27	88	56	81	68.5	36.5	2990
8/28/1975	1975	8	28	89	49	81	65	33	3023
8/29/1975	1975	8	29	90	51	83	67	35	3058
8/30/1975	1975	8	30	91	50	80	65	33	3091

8/31/1975	1975	8	31	92	51	81	66	34	3125
9/1/1975	1975	9	1	93	50	85	67.5	35.5	3160.5
9/2/1975	1975	9	2	94	54	79	66.5	34.5	3195
9/3/1975	1975	9	3	95	53	78	65.5	33.5	3228.5
9/4/1975	1975	9	4	96	54	73	63.5	31.5	3260
9/5/1975	1975	9	5	97	49	69	59	27	3287
9/6/1975	1975	9	6	98	50	63	56.5	24.5	3311.5
9/7/1975	1975	9	7	99	50	69	59.5	27.5	3339
9/8/1975	1975	9	8	100	50	73	61.5	29.5	3368.5
9/9/1975	1975	9	9	101	43	62	52.5	20.5	3389
9/10/1975	1975	9	10	102	42	61	51.5	19.5	3408.5
9/11/1975	1975	9	11	103	40	69	54.5	22.5	3431
9/12/1975	1975	9	12	104	40	59	49.5	17.5	3448.5
9/13/1975	1975	9	13	105	43	67	55	23	3471.5
9/14/1975	1975	9	14	106	44	69	56.5	24.5	3496
9/15/1975	1975	9	15	107	42	69	55.5	23.5	3519.5
9/16/1975	1975	9	16	108	46	70	58	26	3545.5
9/17/1975	1975	9	17	109	48	73	60.5	28.5	3574
9/18/1975	1975	9	18	110	50	73	61.5	29.5	3603.5
9/19/1975	1975	9	19	111	46	73	59.5	27.5	3631
9/20/1975	1975	9	20	112	45	72	58.5	26.5	3657.5
9/21/1975	1975	9	21	113	40	72	56	24	3681.5
9/22/1975	1975	9	22	114	40	70	55	23	3704.5
9/23/1975	1975	9	23	115	42	69	55.5	23.5	3728
9/24/1975	1975	9	24	116	41	68	54.5	22.5	3750.5
9/25/1975	1975	9	25	117	40	69	54.5	22.5	3773
9/26/1975	1975	9	26	118	42	70	56	24	3797
9/27/1975	1975	9	27	119	43	70	56.5	24.5	3821.5
9/28/1975	1975	9	28	120	40	69	54.5	22.5	3844
9/29/1975	1975	9	29	121	41	68	54.5	22.5	3866.5
9/30/1975	1975	9	30	122	40	69	54.5	22.5	3889
10/1/1975	1975	10	1	123	36	76	56	24	3913
10/2/1975	1975	10	2	124	39	71	55	23	3936
10/3/1975	1975	10	3	125	41	72	56.5	24.5	3960.5
10/4/1975	1975	10	4	126	42	68	55	23	3983.5
10/5/1975	1975	10	5	127	42	72	57	25	4008.5
10/6/1975	1975	10	6	128	42	78	60	28	4036.5
10/7/1975	1975	10	7	129	48	73	60.5	28.5	4065
10/8/1975	1975	10	8	130	41	69	55	23	4088
10/9/1975	1975	10	9	131	37	70	53.5	21.5	4109.5
10/10/1975	1975	10	10	132	40	69	54.5	22.5	4132
10/11/1975	1975	10	11	133	41	70	55.5	23.5	4155.5
10/12/1975	1975	10	12	134	39	69	54	22	4177.5
10/13/1975	1975	10	13	135	40	68	54	22	4199.5
10/14/1975	1975	10	14	136	29	56	42.5	10.5	4210
10/15/1975	1975	10	15	137	25	52	38.5	6.5	4216.5
10/16/1975	1975	10	16	138	30	66	48	16	4232.5
10/17/1975	1975	10	17	139	35	66	50.5	18.5	4251
10/18/1975	1975	10	18	140	37	69	53	21	4272
10/19/1975	1975	10	19	141	40	68	54	22	4294
10/20/1975	1975	10	20	142	40	68	54	22	4316
10/21/1975	1975	10	21	143	35	66	50.5	18.5	4334.5
10/22/1975	1975	10	22	144	34	62	48	16	4350.5
10/23/1975	1975	10	23	145	35	61	48	16	4366.5
10/24/1975	1975	10	24	146	15	44	29.5	-2.5	4364
10/25/1975	1975	10	25	147	17	60	38.5	6.5	4370.5
10/26/1975	1975	10	26	148	28	59	43.5	11.5	4382
10/27/1975	1975	10	27	149	29	60	44.5	12.5	4394.5
10/28/1975	1975	10	28	150	34	65	60.5	28.5	4423
10/29/1975	1975	10	29	151	33	69	51	19	4442
10/30/1975	1975	10	30	152	41	68	54.5	22.5	4464.5
10/31/1975	1975	10	31	153	40	61	50.5	18.5	4483
11/1/1975	1975	11	1	154	30	53	41.5	9.5	4492.5
11/2/1975	1975	11	2	155	32	58	45	13	4505.5
11/3/1975	1975	11	3	156	30	61	45.5	13.5	4519
11/4/1975	1975	11	4	157	34	60	47	15	4534
11/5/1975	1975	11	5	158	30	69	49.5	17.5	4551.5
11/6/1975	1975	11	6	159	32	64	48	16	4567.5
11/7/1975	1975	11	7	160	31	67	49	17	4584.5
11/8/1975	1975	11	8	161	33	65	49	17	4601.5
11/9/1975	1975	11	9	162	32	60	46	14	4615.5
11/10/1975	1975	11	10	163	23	64	43.5	11.5	4627
11/11/1975	1975	11	11	164	27	58	42.5	10.5	4637.5
11/12/1975	1975	11	12	165	19	53	36	4	4641.5
11/13/1975	1975	11	13	166	18	58	38	6	4647.5
11/14/1975	1975	11	14	167	17	69	43	11	4658.5
11/15/1975	1975	11	15	168	19	68	43.5	11.5	4670
11/16/1975	1975	11	16	169	15	71	43	11	4681
11/17/1975	1975	11	17	170	10	67	38.5	6.5	4687.5
11/18/1975	1975	11	18	171	11	58	34.5	2.5	4690
11/19/1975	1975	11	19	172	20	44	32	0	4690
11/20/1975	1975	11	20	173	10	45	27.5	-4.5	4685.5
11/21/1975	1975	11	21	174	9	45	27	-5	4680.5
11/22/1975	1975	11	22	175	10	45	27.5	-4.5	4676
11/23/1975	1975	11	23	176	12	56	34	2	4678
11/24/1975	1975	11	24	177	19	54	36.5	4.5	4682.5
11/25/1975	1975	11	25	178	18	47	32.5	0.5	4683
11/26/1975	1975	11	26	179	4	44	24	-8	4675
11/27/1975	1975	11	27	180	10	56	33	1	4676
11/28/1975	1975	11	28	181	29	55	42	10	4686
11/29/1975	1975	11	29	182	10	37	23.5	-8.5	4677.5
11/30/1975	1975	11	30	183	1	36	18.5	-13.5	4664
12/1/1975	1975	12	1	184	8	44	26	-6	4658

12/2/1975	1975	12	2	185	10	46	28	-4	4654
12/3/1975	1975	12	3	186	19	39	29	-3	4651
12/4/1975	1975	12	4	187	18	40	29	-3	4648
12/5/1975	1975	12	5	188	17	45	31	-1	4647
12/6/1975	1975	12	6	189	20	46	33	1	4648
12/7/1975	1975	12	7	190	19	50	34.5	2.5	4650.5
12/8/1975	1975	12	8	191	20	50	35	3	4653.5
12/9/1975	1975	12	9	192	19	56	37.5	5.5	4659
12/10/1975	1975	12	10	193	27	46	36.5	4.5	4663.5
12/11/1975	1975	12	11	194	23	50	36.5	4.5	4668
12/12/1975	1975	12	12	195	24	52	38	6	4674
12/13/1975	1975	12	13	196	6	44	25	-7	4667
12/14/1975	1975	12	14	197	6	25	15.5	-16.5	4650.5
12/15/1975	1975	12	15	198	8	39	23.5	-8.5	4642
12/16/1975	1975	12	16	199	12	49	30.5	-1.5	4640.5
12/17/1975	1975	12	17	200	17	45	31	-1	4639.5
12/18/1975	1975	12	18	201	16	46	31	-1	4638.5
12/19/1975	1975	12	19	202	18	51	34.5	2.5	4641
12/20/1975	1975	12	20	203	18	40	29	-3	4638
12/21/1975	1975	12	21	204	17	37	27	-5	4633
12/22/1975	1975	12	22	205	18	36	27	-5	4628
12/23/1975	1975	12	23	206	7	32	19.5	-12.5	4615.5
12/24/1975	1975	12	24	207	8	31	19.5	-12.5	4603
12/25/1975	1975	12	25	208	6	30	18	-14	4589
12/26/1975	1975	12	26	209	11	39	25	-7	4582
12/27/1975	1975	12	27	210	10	40	25	-7	4575
12/28/1975	1975	12	28	211	14	36	25	-7	4568
12/29/1975	1975	12	29	212	8	26	17	-15	4553
12/30/1975	1975	12	30	213	10	30	20	-12	4541
12/31/1975	1975	12	31	214	11	36	23.5	-8.5	4532.5
1/1/1976	1976	1	1	215	0	23	11.5	-20.5	4512
1/2/1976	1976	1	2	216	0	20	10	-22	4490
1/3/1976	1976	1	3	217	5	30	17.5	-14.5	4475.5
1/4/1976	1976	1	4	218	-10	33	11.5	-20.5	4455
1/5/1976	1976	1	5	219	-5	39	17	-15	4440
1/6/1976	1976	1	6	220	5	39	22	-10	4430
1/7/1976	1976	1	7	221	6	40	23	-9	4421
1/8/1976	1976	1	8	222	10	34	22	-10	4411
1/9/1976	1976	1	9	223	17	44	30.5	-1.5	4409.5
1/10/1976	1976	1	10	224	27	43	35	3	4412.5
1/11/1976	1976	1	11	225	13	39	26	-6	4406.5
1/12/1976	1976	1	12	226	18	40	29	-3	4403.5
1/13/1976	1976	1	13	227	17	40	28.5	-3.5	4400
1/14/1976	1976	1	14	228	16	40	28	-4	4396
1/15/1976	1976	1	15	229	21	41	31	-1	4395
1/16/1976	1976	1	16	230	22	40	31	-1	4394
1/17/1976	1976	1	17	231	20	42	31	-1	4393
1/18/1976	1976	1	18	232	26	48	37	5	4398
1/19/1976	1976	1	19	233	25	47	36	4	4402
1/20/1976	1976	1	20	234	13	43	28	-4	4398
1/21/1976	1976	1	21	235	14	49	31.5	-0.5	4397.5
1/22/1976	1976	1	22	236	21	48	34.5	2.5	4400
1/23/1976	1976	1	23	237	26	49	37.5	5.5	4405.5
1/24/1976	1976	1	24	238	25	44	34.5	2.5	4408
1/25/1976	1976	1	25	239	24	43	33.5	1.5	4409.5
1/26/1976	1976	1	26	240	0	32	16	-16	4393.5
1/27/1976	1976	1	27	241	6	36	21	-11	4382.5
1/28/1976	1976	1	28	242	10	35	22.5	-9.5	4373
1/29/1976	1976	1	29	243	15	40	27.5	-4.5	4368.5
1/30/1976	1976	1	30	244	17	44	30.5	-1.5	4367
1/31/1976	1976	1	31	245	20	48	34	2	4369
2/1/1976	1976	2	1	246	19	57	38	6	4375
2/2/1976	1976	2	2	247	24	51	37.5	5.5	4380.5
2/3/1976	1976	2	3	248	26	52	39	7	4387.5
2/4/1976	1976	2	4	249	32	46	39	7	4394.5
2/5/1976	1976	2	5	250	36	49	42.5	10.5	4405
2/6/1976	1976	2	6	251	35	44	39.5	7.5	4412.5
2/7/1976	1976	2	7	252	26	50	38	6	4418.5
2/8/1976	1976	2	8	253	29	59	44	12	4430.5
2/9/1976	1976	2	9	254	20	56	38	6	4436.5
2/10/1976	1976	2	10	255	23	52	37.5	5.5	4442
2/11/1976	1976	2	11	256	26	48	37	5	4447
2/12/1976	1976	2	12	257	30	57	43.5	11.5	4458.5
2/13/1976	1976	2	13	258	30	59	44.5	12.5	4471
2/14/1976	1976	2	14	259	30	42	36	4	4475
2/15/1976	1976	2	15	260	29	41	35	3	4478
2/16/1976	1976	2	16	261	20	40	30	-2	4476
2/17/1976	1976	2	17	262	20	41	30.5	-1.5	4474.5
2/18/1976	1976	2	18	263	21	39	30	-2	4472.5
2/19/1976	1976	2	19	264	24	50	37	5	4477.5
2/20/1976	1976	2	20	265	17	50	33.5	1.5	4479
2/21/1976	1976	2	21	266	25	37	31	-1	4478
2/22/1976	1976	2	22	267	12	39	25.5	-6.5	4471.5
2/23/1976	1976	2	23	268	19	42	30.5	-1.5	4470
2/24/1976	1976	2	24	269	19	49	34	2	4472
2/25/1976	1976	2	25	270	22	50	36	4	4476
2/26/1976	1976	2	26	271	20	56	38	6	4482
2/27/1976	1976	2	27	272	19	56	37.5	5.5	4487.5
2/28/1976	1976	2	28	273	27	64	45.5	13.5	4501
2/29/1976	1976	2	29	274	30	55	42.5	10.5	4511.5
3/1/1976	1976	3	1	275	29	60	44.5	12.5	4524
3/2/1976	1976	3	2	276	30	50	40	8	4532
3/3/1976	1976	3	3	277	25	55	40	8	4540

3/4/1976	1976	3	4	278	0	46	23	-9	4531
3/5/1976	1976	3	5	279	1	45	23	-9	4522
3/6/1976	1976	3	6	280	0	40	20	-12	4510
3/7/1976	1976	3	7	281	3	39	21	-11	4499
3/8/1976	1976	3	8	282	4	35	19.5	-12.5	4486.5
3/9/1976	1976	3	9	283	4	32	18	-14	4472.5
3/10/1976	1976	3	10	284	9	36	22.5	-9.5	4463
3/11/1976	1976	3	11	285	10	40	25	-7	4456
3/12/1976	1976	3	12	286	26	49	37.5	5.5	4461.5
3/13/1976	1976	3	13	287	29	45	37	5	4466.5
3/14/1976	1976	3	14	288	27	44	35.5	3.5	4470
3/15/1976	1976	3	15	289	13	38	25.5	-6.5	4463.5
3/16/1976	1976	3	16	290	12	39	25.5	-6.5	4457
3/17/1976	1976	3	17	291	22	40	31	-1	4456
3/18/1976	1976	3	18	292	23	45	34	2	4458
3/19/1976	1976	3	19	293	29	46	37.5	5.5	4463.5
3/20/1976	1976	3	20	294	30	49	39.5	7.5	4471
3/21/1976	1976	3	21	295	12	50	31	-1	4470
3/22/1976	1976	3	22	296	15	50	32.5	0.5	4470.5
3/23/1976	1976	3	23	297	20	50	35	3	4473.5
3/24/1976	1976	3	24	298	23	54	38.5	6.5	4480
3/25/1976	1976	3	25	299	37	50	43.5	11.5	4491.5
3/26/1976	1976	3	26	300	32	56	44	12	4503.5
3/27/1976	1976	3	27	301	25	59	42	10	4513.5
3/28/1976	1976	3	28	302	20	56	38	6	4519.5
3/29/1976	1976	3	29	303	19	36	27.5	-4.5	4515
3/30/1976	1976	3	30	304	15	40	27.5	-4.5	4510.5
3/31/1976	1976	3	31	305	23	45	34	2	4512.5
4/1/1976	1976	4	1	306	29	66	47.5	15.5	4528
4/2/1976	1976	4	2	307	39	65	52	20	4548
4/3/1976	1976	4	3	308	34	61	47.5	15.5	4563.5
4/4/1976	1976	4	4	309	20	58	39	7	4570.5
4/5/1976	1976	4	5	310	20	50	35	3	4573.5
4/6/1976	1976	4	6	311	19	51	35	3	4576.5
4/7/1976	1976	4	7	312	18	56	37	5	4581.5
4/8/1976	1976	4	8	313	17	48	32.5	0.5	4582
4/9/1976	1976	4	9	314	30	50	40	8	4590
4/10/1976	1976	4	10	315	32	59	45.5	13.5	4603.5
4/11/1976	1976	4	11	316	35	59	47	15	4618.5
4/12/1976	1976	4	12	317	34	60	47	15	4633.5
4/13/1976	1976	4	13	318	38	69	53.5	21.5	4655
4/14/1976	1976	4	14	319	43	66	54.5	22.5	4677.5
4/15/1976	1976	4	15	320	40	60	50	18	4695.5
4/16/1976	1976	4	16	321	39	57	48	16	4711.5
4/17/1976	1976	4	17	322	30	59	44.5	12.5	4724
4/18/1976	1976	4	18	323	20	45	32.5	0.5	4724.5
4/19/1976	1976	4	19	324	20	40	30	-2	4722.5
4/20/1976	1976	4	20	325	19	42	30.5	-1.5	4721
4/21/1976	1976	4	21	326	18	49	33.5	1.5	4722.5
4/22/1976	1976	4	22	327	27	60	43.5	11.5	4734
4/23/1976	1976	4	23	328	41	69	55	23	4757
4/24/1976	1976	4	24	329	42	67	54.5	22.5	4779.5
4/25/1976	1976	4	25	330	38	69	53.5	21.5	4801
4/26/1976	1976	4	26	331	33	70	51.5	19.5	4820.5
4/27/1976	1976	4	27	332	41	69	55	23	4843.5
4/28/1976	1976	4	28	333	39	69	54	22	4865.5
4/29/1976	1976	4	29	334	36	69	52.5	20.5	4886
4/30/1976	1976	4	30	335	42	68	55	23	4909
5/1/1976	1976	5	1	336	26	69	47.5	15.5	4924.5
5/2/1976	1976	5	2	337	35	70	52.5	20.5	4945
5/3/1976	1976	5	3	338	42	72	57	25	4970
5/4/1976	1976	5	4	339	41	64	52.5	20.5	4990.5
5/5/1976	1976	5	5	340	40	66	53	21	5011.5
5/6/1976	1976	5	6	341	30	65	47.5	15.5	5027
5/7/1976	1976	5	7	342	39	64	51.5	19.5	5046.5
5/8/1976	1976	5	8	343	30	51	40.5	8.5	5055
5/9/1976	1976	5	9	344	31	68	49.5	17.5	5072.5
5/10/1976	1976	5	10	345	32	69	50.5	18.5	5091
5/11/1976	1976	5	11	346	30	68	49	17	5108
5/12/1976	1976	5	12	347	40	70	55	23	5131
5/13/1976	1976	5	13	348	39	74	56.5	24.5	5155.5
5/14/1976	1976	5	14	349	42	79	60.5	28.5	5184
5/15/1976	1976	5	15	350	48	80	64	32	5216
5/16/1976	1976	5	16	351	44	80	62	30	5246
5/17/1976	1976	5	17	352	40	79	59.5	27.5	5273.5
5/18/1976	1976	5	18	353	45	79	62	30	5303.5
5/19/1976	1976	5	19	354	42	74	58	26	5329.5
5/20/1976	1976	5	20	355	43	70	56.5	24.5	5354
5/21/1976	1976	5	21	356	42	70	56	24	5378
5/22/1976	1976	5	22	357	44	69	56.5	24.5	5402.5
5/23/1976	1976	5	23	358	42	70	56	24	5426.5
5/24/1976	1976	5	24	359	47	75	61	29	5455.5
5/25/1976	1976	5	25	360	42	74	58	26	5481.5
5/26/1976	1976	5	26	361	40	72	56	24	5505.5
5/27/1976	1976	5	27	362	42	70	56	24	5529.5
5/28/1976	1976	5	28	363	42	70	56	24	5553.5
5/29/1976	1976	5	29	364	51	79	65	33	5586.5
5/30/1976	1976	5	30	365	49	80	64.5	32.5	5619
5/31/1976	1976	5	31	366	47	76	61.5	29.5	5648.5
6/1/1976	1976	6	1	1	42	84	63	31	31
6/2/1976	1976	6	2	2	51	84	67.5	35.5	66.5
6/3/1976	1976	6	3	3	53	84	68.5	36.5	103
6/4/1976	1976	6	4	4	50	85	67.5	35.5	138.5

6/5/1976	1976	6	5	5	48	85	66.5	34.5	173
6/6/1976	1976	6	6	6	48	76	62	30	203
6/7/1976	1976	6	7	7	53	82	67.5	35.5	238.5
6/8/1976	1976	6	8	8	44	83	63.5	31.5	270
6/9/1976	1976	6	9	9	49	82	65.5	33.5	303.5
6/10/1976	1976	6	10	10	48	82	65	33	336.5
6/11/1976	1976	6	11	11	51	83	67	35	371.5
6/12/1976	1976	6	12	12	43	80	61.5	29.5	401
6/13/1976	1976	6	13	13	40	80	60	28	429
6/14/1976	1976	6	14	14	45	81	63	31	460
6/15/1976	1976	6	15	15	45	74	59.5	27.5	487.5
6/16/1976	1976	6	16	16	44	75	59.5	27.5	515
6/17/1976	1976	6	17	17	40	80	60	28	543
6/18/1976	1976	6	18	18	56	81	68.5	36.5	579.5
6/19/1976	1976	6	19	19	49	84	66.5	34.5	614
6/20/1976	1976	6	20	20	48	87	67.5	35.5	649.5
6/21/1976	1976	6	21	21	54	89	71.5	39.5	689
6/22/1976	1976	6	22	22	59	84	71.5	39.5	728.5
6/23/1976	1976	6	23	23	41	78	59.5	27.5	756
6/24/1976	1976	6	24	24	45	79	62	30	786
6/25/1976	1976	6	25	25	49	79	64	32	818
6/26/1976	1976	6	26	26	50	79	64.5	32.5	850.5
6/27/1976	1976	6	27	27	52	89	70.5	38.5	889
6/28/1976	1976	6	28	28	53	90	71.5	39.5	928.5
6/29/1976	1976	6	29	29	56	89	72.5	40.5	969
6/30/1976	1976	6	30	30	61	84	72.5	40.5	1009.5
7/1/1976	1976	7	1	31	55	84	69.5	37.5	1047
7/2/1976	1976	7	2	32	57	86	71.5	39.5	1086.5
7/3/1976	1976	7	3	33	55	90	72.5	40.5	1127
7/4/1976	1976	7	4	34	58	90	74	42	1169
7/5/1976	1976	7	5	35	53	91	72	40	1209
7/6/1976	1976	7	6	36	56	88	72	40	1249
7/7/1976	1976	7	7	37	55	89	72	40	1289
7/8/1976	1976	7	8	38	56	91	73.5	41.5	1330.5
7/9/1976	1976	7	9	39	57	90	73.5	41.5	1372
7/10/1976	1976	7	10	40	58	90	74	42	1414
7/11/1976	1976	7	11	41	57	90	73.5	41.5	1455.5
7/12/1976	1976	7	12	42	52	85	68.5	36.5	1492
7/13/1976	1976	7	13	43	55	85	70	38	1530
7/14/1976	1976	7	14	44	52	85	68.5	36.5	1566.5
7/15/1976	1976	7	15	45	53	86	69.5	37.5	1604
7/16/1976	1976	7	16	46	56	86	71	39	1643
7/17/1976	1976	7	17	47	56	82	69	37	1680
7/18/1976	1976	7	18	48	57	83	70	38	1718
7/19/1976	1976	7	19	49	56	84	70	38	1756
7/20/1976	1976	7	20	50	57	80	68.5	36.5	1792.5
7/21/1976	1976	7	21	51	50	79	64.5	32.5	1825
7/22/1976	1976	7	22	52	52	80	66	34	1859
7/23/1976	1976	7	23	53	56	72	64	32	1891
7/24/1976	1976	7	24	54	51	81	66	34	1925
7/25/1976	1976	7	25	55	52	76	64	32	1957
7/26/1976	1976	7	26	56	52	78	65	33	1990
7/27/1976	1976	7	27	57	51	81	66	34	2024
7/28/1976	1976	7	28	58	50	76	63	31	2055
7/29/1976	1976	7	29	59	52	77	64.5	32.5	2087.5
7/30/1976	1976	7	30	60	54	86	70	38	2125.5
7/31/1976	1976	7	31	61	53.5	70	61.75	29.75	2155.25
8/1/1976	1976	8	1	62	53	66	59.5	27.5	2182.75
8/2/1976	1976	8	2	63	49	80	64.5	32.5	2215.25
8/3/1976	1976	8	3	64	50	76	63	31	2246.25
8/4/1976	1976	8	4	65	46	68	57	25	2271.25
8/5/1976	1976	8	5	66	48	81	64.5	32.5	2303.75
8/6/1976	1976	8	6	67	49	82	65.5	33.5	2337.25
8/7/1976	1976	8	7	68	58	85	71.5	39.5	2376.75
8/8/1976	1976	8	8	69	50	72	61	29	2405.75
8/9/1976	1976	8	9	70	51	73	62	30	2435.75
8/10/1976	1976	8	10	71	52	80	66	34	2469.75
8/11/1976	1976	8	11	72	50	82	66	34	2503.75
8/12/1976	1976	8	12	73	54	85	69.5	37.5	2541.25
8/13/1976	1976	8	13	74	55	87	71	39	2580.25
8/14/1976	1976	8	14	75	52	83	67.5	35.5	2615.75
8/15/1976	1976	8	15	76	53	82	67.5	35.5	2651.25
8/16/1976	1976	8	16	77	49	83	66	34	2685.25
8/17/1976	1976	8	17	78	60	79	69.5	37.5	2722.75
8/18/1976	1976	8	18	79	52	69	60.5	28.5	2751.25
8/19/1976	1976	8	19	80	53	70	61.5	29.5	2780.75
8/20/1976	1976	8	20	81	52	74	63	31	2811.75
8/21/1976	1976	8	21	82	51	83	67	35	2846.75
8/22/1976	1976	8	22	83	54	82	68	36	2882.75
8/23/1976	1976	8	23	84	52	81	66.5	34.5	2917.25
8/24/1976	1976	8	24	85	50	79	64.5	32.5	2949.75
8/25/1976	1976	8	25	86	49	81	65	33	2982.75
8/26/1976	1976	8	26	87	54	83	68.5	36.5	3019.25
8/27/1976	1976	8	27	88	53	78	65.5	33.5	3052.75
8/28/1976	1976	8	28	89	51	77	64	32	3084.75
8/29/1976	1976	8	29	90	47	79	63	31	3115.75
8/30/1976	1976	8	30	91	47	79	63	31	3146.75
8/31/1976	1976	8	31	92	50	80	65	33	3179.75
9/1/1976	1976	9	1	93	49	78	63.5	31.5	3211.25
9/2/1976	1976	9	2	94	45	75	60	28	3239.25
9/3/1976	1976	9	3	95	48	84	66	34	3273.25
9/4/1976	1976	9	4	96	54	83	68.5	36.5	3309.75
9/5/1976	1976	9	5	97	52	81	66.5	34.5	3344.25

9/6/1976	1976	9	6	98	55	73	64	32	3376.25
9/7/1976	1976	9	7	99	51	74	62.5	30.5	3406.75
9/8/1976	1976	9	8	100	52	76	64	32	3438.75
9/9/1976	1976	9	9	101	53	74	63.5	31.5	3470.25
9/10/1976	1976	9	10	102	49	67	58	26	3496.25
9/11/1976	1976	9	11	103	42	69	55.5	23.5	3519.75
9/12/1976	1976	9	12	104	46	75	60.5	28.5	3548.25
9/13/1976	1976	9	13	105	47	79	63	31	3579.25
9/14/1976	1976	9	14	106	52	78	65	33	3612.25
9/15/1976	1976	9	15	107	50	77	63.5	31.5	3643.75
9/16/1976	1976	9	16	108	49	76	62.5	30.5	3674.25
9/17/1976	1976	9	17	109	48	75	61.5	29.5	3703.75
9/18/1976	1976	9	18	110	49	70	59.5	27.5	3731.25
9/19/1976	1976	9	19	111	48	71	59.5	27.5	3758.75
9/20/1976	1976	9	20	112	45	70	57.5	25.5	3784.25
9/21/1976	1976	9	21	113	46	76	61	29	3813.25
9/22/1976	1976	9	22	114	44	67	55.5	23.5	3836.75
9/23/1976	1976	9	23	115	43	72	57.5	25.5	3862.25
9/24/1976	1976	9	24	116	48	67	57.5	25.5	3887.75
9/25/1976	1976	9	25	117	46	65	55.5	23.5	3911.25
9/26/1976	1976	9	26	118	45	64	54.5	22.5	3933.75
9/27/1976	1976	9	27	119	42	61	51.5	19.5	3953.25
9/28/1976	1976	9	28	120	35	65	50	18	3971.25
9/29/1976	1976	9	29	121	40	70	55	23	3994.25
9/30/1976	1976	9	30	122	41	74	57.5	25.5	4019.75
10/1/1976	1976	10	1	123	45	69	57	25	4044.75
10/2/1976	1976	10	2	124	51	65	58	26	4070.75
10/3/1976	1976	10	3	125	43	64	53.5	21.5	4092.25
10/4/1976	1976	10	4	126	36	66	51	19	4111.25
10/5/1976	1976	10	5	127	38	67	52.5	20.5	4131.75
10/6/1976	1976	10	6	128	30	64	47	15	4146.75
10/7/1976	1976	10	7	129	28	66	47	15	4161.75
10/8/1976	1976	10	8	130	34	69	51.5	19.5	4181.25
10/9/1976	1976	10	9	131	39	75	57	25	4206.25
10/10/1976	1976	10	10	132	36	74	55	23	4229.25
10/11/1976	1976	10	11	133	39	69	54	22	4251.25
10/12/1976	1976	10	12	134	37	67	52	20	4271.25
10/13/1976	1976	10	13	135	35	68	51.5	19.5	4290.75
10/14/1976	1976	10	14	136	36	67	51.5	19.5	4310.25
10/15/1976	1976	10	15	137	38	61	49.5	17.5	4327.75
10/16/1976	1976	10	16	138	25	50	37.5	5.5	4333.25
10/17/1976	1976	10	17	139	24	52	38	6	4339.25
10/18/1976	1976	10	18	140	23	59	41	9	4348.25
10/19/1976	1976	10	19	141	26	60	43	11	4359.25
10/20/1976	1976	10	20	142	30	58	44	12	4371.25
10/21/1976	1976	10	21	143	30	60	45	13	4384.25
10/22/1976	1976	10	22	144	34	59	46.5	14.5	4398.75
10/23/1976	1976	10	23	145	36	55	45.5	13.5	4412.25
10/24/1976	1976	10	24	146	29	57	43	11	4423.25
10/25/1976	1976	10	25	147	28	55	41.5	9.5	4432.75
10/26/1976	1976	10	26	148	24	41	32.5	0.5	4433.25
10/27/1976	1976	10	27	149	27	39	72.5	40.5	4473.75
10/28/1976	1976	10	28	150	22	49	35.5	3.5	4477.25
10/29/1976	1976	10	29	151	28	58	43	11	4488.25
10/30/1976	1976	10	30	152	28	56	42	10	4498.25
10/31/1976	1976	10	31	153	27	52	39.5	7.5	4505.75
11/1/1976	1976	11	1	154	23	59	41	9	4514.75
11/2/1976	1976	11	2	155	29	56	42.5	10.5	4525.25
11/3/1976	1976	11	3	156	30	60	45	13	4538.25
11/4/1976	1976	11	4	157	29	60	44.5	12.5	4550.75
11/5/1976	1976	11	5	158	31	62	46.5	14.5	4565.25
11/6/1976	1976	11	6	159	30	64	47	15	4580.25
11/7/1976	1976	11	7	160	29	66	47.5	15.5	4595.75
11/8/1976	1976	11	8	161	30	60	45	13	4608.75
11/9/1976	1976	11	9	162	25	65	45	13	4621.75
11/10/1976	1976	11	10	163	32	63	47.5	15.5	4637.25
11/11/1976	1976	11	11	164	30	57	43.5	11.5	4648.75
11/12/1976	1976	11	12	165	25	48	36.5	4.5	4653.25
11/13/1976	1976	11	13	166	25	44	34.5	2.5	4655.75
11/14/1976	1976	11	14	167	20	48	34	2	4657.75
11/15/1976	1976	11	15	168	20	40	30	-2	4655.75
11/16/1976	1976	11	16	169	11	40	25.5	-6.5	4649.25
11/17/1976	1976	11	17	170	22	52	37	5	4654.25
11/18/1976	1976	11	18	171	19	51	35	3	4657.25
11/19/1976	1976	11	19	172	26	57	41.5	9.5	4666.75
11/20/1976	1976	11	20	173	27	56	41.5	9.5	4676.25
11/21/1976	1976	11	21	174	31	59	45	13	4689.25
11/22/1976	1976	11	22	175	28	56	42	10	4699.25
11/23/1976	1976	11	23	176	26	49	37.5	5.5	4704.75
11/24/1976	1976	11	24	177	28	50	39	7	4711.75
11/25/1976	1976	11	25	178	25	50	37.5	5.5	4717.25
11/26/1976	1976	11	26	179	29	48	38.5	6.5	4723.75
11/27/1976	1976	11	27	180	-9	32	11.5	-20.5	4703.25
11/28/1976	1976	11	28	181	-10	32	11	-21	4682.25
11/29/1976	1976	11	29	182	-9	30	10.5	-21.5	4660.75
11/30/1976	1976	11	30	183	7	32	19.5	-12.5	4648.25
12/1/1976	1976	12	1	184	9	34	21.5	-10.5	4637.75
12/2/1976	1976	12	2	185	8	35	21.5	-10.5	4627.25
12/3/1976	1976	12	3	186	12	39	25.5	-6.5	4620.75
12/4/1976	1976	12	4	187	0	38	19	-13	4607.75
12/5/1976	1976	12	5	188	-2	19	8.5	-23.5	4584.25
12/6/1976	1976	12	6	189	10	22	16	-16	4568.25
12/7/1976	1976	12	7	190	12	30	21	-11	4557.25

12/8/1976	1976	12	8	191	12	36	24	-8	4549.25
12/9/1976	1976	12	9	192	23	40	31.5	-0.5	4548.75
12/10/1976	1976	12	10	193	9	40	24.5	-7.5	4541.25
12/11/1976	1976	12	11	194	8	32	20	-12	4529.25
12/12/1976	1976	12	12	195	8	39	23.5	-8.5	4520.75
12/13/1976	1976	12	13	196	9	38	23.5	-8.5	4512.25
12/14/1976	1976	12	14	197	10	35	22.5	-9.5	4502.75
12/15/1976	1976	12	15	198	13	36	24.5	-7.5	4495.25
12/16/1976	1976	12	16	199	12	39	25.5	-6.5	4488.75
12/17/1976	1976	12	17	200	16	35	25.5	-6.5	4482.25
12/18/1976	1976	12	18	201	17	37	27	-5	4477.25
12/19/1976	1976	12	19	202	10	39	24.5	-7.5	4469.75
12/20/1976	1976	12	20	203	11	34	22.5	-9.5	4460.25
12/21/1976	1976	12	21	204	12	39	25.5	-6.5	4453.75
12/22/1976	1976	12	22	205	12	40	26	-6	4447.75
12/23/1976	1976	12	23	206	11	34	22.5	-9.5	4438.25
12/24/1976	1976	12	24	207	10	37	23.5	-8.5	4429.75
12/25/1976	1976	12	25	208	10	36	23	-9	4420.75
12/26/1976	1976	12	26	209	11	35	23	-9	4411.75
12/27/1976	1976	12	27	210	8	32	20	-12	4399.75
12/28/1976	1976	12	28	211	9	33	21	-11	4388.75
12/29/1976	1976	12	29	212	10	30	20	-12	4376.75
12/30/1976	1976	12	30	213	11	32	21.5	-10.5	4366.25
12/31/1976	1976	12	31	214	11	32	21.5	-10.5	4355.75
1/1/1977	1977	1	1	215	11	30	20.5	-11.5	4344.25
1/2/1977	1977	1	2	216	10	39	24.5	-7.5	4336.75
1/3/1977	1977	1	3	217	11	36	23.5	-8.5	4328.25
1/4/1977	1977	1	4	218	11	30	20.5	-11.5	4316.75
1/5/1977	1977	1	5	219	10	36	23	-9	4307.75
1/6/1977	1977	1	6	220	10	36	23	-9	4298.75
1/7/1977	1977	1	7	221	-1	25	12	-20	4278.75
1/8/1977	1977	1	8	222	5	25	15	-17	4261.75
1/9/1977	1977	1	9	223	9	30	19.5	-12.5	4249.25
1/10/1977	1977	1	10	224	-10	29	9.5	-22.5	4226.75
1/11/1977	1977	1	11	225	-4	34	15	-17	4209.75
1/12/1977	1977	1	12	226	-9	39	15	-17	4192.75
1/13/1977	1977	1	13	227	-10	35	12.5	-19.5	4173.25
1/14/1977	1977	1	14	228	-10	32	11	-21	4152.25
1/15/1977	1977	1	15	229	-10	32	11	-21	4131.25
1/16/1977	1977	1	16	230	-11	39	14	-18	4113.25
1/17/1977	1977	1	17	231	12	40	26	-6	4107.25
1/18/1977	1977	1	18	232	12	39	25.5	-6.5	4100.75
1/19/1977	1977	1	19	233	13	39	26	-6	4094.75
1/20/1977	1977	1	20	234	12	38	25	-7	4087.75
1/21/1977	1977	1	21	235	22	40	31	-1	4086.75
1/22/1977	1977	1	22	236	20	39	29.5	-2.5	4084.25
1/23/1977	1977	1	23	237	25	37	31	-1	4083.25
1/24/1977	1977	1	24	238	25	39	32	0	4083.25
1/25/1977	1977	1	25	239	12	36	24	-8	4075.25
1/26/1977	1977	1	26	240	15	38	26.5	-5.5	4069.75
1/27/1977	1977	1	27	241	19	37	28	-4	4065.75
1/28/1977	1977	1	28	242	17	40	28.5	-3.5	4062.25
1/29/1977	1977	1	29	243	13	40	26.5	-5.5	4056.75
1/30/1977	1977	1	30	244	13	39	26	-6	4050.75
1/31/1977	1977	1	31	245	18	40	29	-3	4047.75
2/1/1977	1977	2	1	246	21	48	34.5	2.5	4050.25
2/2/1977	1977	2	2	247	20	39	29.5	-2.5	4047.75
2/3/1977	1977	2	3	248	17	37	27	-5	4042.75
2/4/1977	1977	2	4	249	15	35	25	-7	4035.75
2/5/1977	1977	2	5	250	14	32	23	-9	4026.75
2/6/1977	1977	2	6	251	13	30	21.5	-10.5	4016.25
2/7/1977	1977	2	7	252	12	32	22	-10	4006.25
2/8/1977	1977	2	8	253	15	37	26	-6	4000.25
2/9/1977	1977	2	9	254	14	35	24.5	-7.5	3992.75
2/10/1977	1977	2	10	255	19	40	29.5	-2.5	3990.25
2/11/1977	1977	2	11	256	20	40	30	-2	3988.25
2/12/1977	1977	2	12	257	21	44	32.5	0.5	3988.75
2/13/1977	1977	2	13	258	20	49	34.5	2.5	3991.25
2/14/1977	1977	2	14	259	20	49	34.5	2.5	3993.75
2/15/1977	1977	2	15	260	20	49	34.5	2.5	3996.25
2/16/1977	1977	2	16	261	28	50	39	7	4003.25
2/17/1977	1977	2	17	262	29	54	41.5	9.5	4012.75
2/18/1977	1977	2	18	263	29	59	44	12	4024.75
2/19/1977	1977	2	19	264	27	58	42.5	10.5	4035.25
2/20/1977	1977	2	20	265	28	60	44	12	4047.25
2/21/1977	1977	2	21	266	27	61	44	12	4059.25
2/22/1977	1977	2	22	267	11	59	35	3	4062.25
2/23/1977	1977	2	23	268	10	30	20	-12	4050.25
2/24/1977	1977	2	24	269	8	29	18.5	-13.5	4036.75
2/25/1977	1977	2	25	270	12	30	21	-11	4025.75
2/26/1977	1977	2	26	271	10	29	19.5	-12.5	4013.25
2/27/1977	1977	2	27	272	12	39	25.5	-6.5	4006.75
2/28/1977	1977	2	28	273	10	40	25	-7	3999.75
3/1/1977	1977	3	1	274	20	45	32.5	0.5	4000.25
3/2/1977	1977	3	2	275	10	40	25	-7	3993.25
3/3/1977	1977	3	3	276	12	36	24	-8	3985.25
3/4/1977	1977	3	4	277	15	34	24.5	-7.5	3977.75
3/5/1977	1977	3	5	278	18	32	25	-7	3970.75
3/6/1977	1977	3	6	279	12	40	26	-6	3964.75
3/7/1977	1977	3	7	280	15	39	27	-5	3959.75
3/8/1977	1977	3	8	281	18	40	29	-3	3956.75
3/9/1977	1977	3	9	282	19	42	30.5	-1.5	3955.25
3/10/1977	1977	3	10	283	20	40	30	-2	3953.25

3/11/1977	1977	3	11	284	10	39	24.5	-7.5	3945.75
3/12/1977	1977	3	12	285	16	49	32.5	0.5	3946.25
3/13/1977	1977	3	13	286	19	32	25.5	-6.5	3939.75
3/14/1977	1977	3	14	287	19	42	30.5	-1.5	3938.25
3/15/1977	1977	3	15	288	20	42	31	-1	3937.25
3/16/1977	1977	3	16	289	20	45	32.5	0.5	3937.75
3/17/1977	1977	3	17	290	28	49	38.5	6.5	3944.25
3/18/1977	1977	3	18	291	20	46	33	1	3945.25
3/19/1977	1977	3	19	292	19	42	30.5	-1.5	3943.75
3/20/1977	1977	3	20	293	19	48	33.5	1.5	3945.25
3/21/1977	1977	3	21	294	18	46	32	0	3945.25
3/22/1977	1977	3	22	295	20	54	37	5	3950.25
3/23/1977	1977	3	23	296	32	52	42	10	3960.25
3/24/1977	1977	3	24	297	30	49	39.5	7.5	3967.75
3/25/1977	1977	3	25	298	32	50	41	9	3976.75
3/26/1977	1977	3	26	299	28	51	39.5	7.5	3984.25
3/27/1977	1977	3	27	300	32	40	36	4	3988.25
3/28/1977	1977	3	28	301	27	50	38.5	6.5	3994.75
3/29/1977	1977	3	29	302	20	37	28.5	-3.5	3991.25
3/30/1977	1977	3	30	303	16	31	23.5	-8.5	3982.75
3/31/1977	1977	3	31	304	15	30	22.5	-9.5	3973.25
4/1/1977	1977	4	1	305	26	40	33	1	3974.25
4/2/1977	1977	4	2	306	25	42	33.5	1.5	3975.75
4/3/1977	1977	4	3	307	26	43	34.5	2.5	3978.25
4/4/1977	1977	4	4	308	21		21	-11	3967.25
4/5/1977	1977	4	5	309	24		24	-8	3959.25
4/6/1977	1977	4	6	310	25		25	-7	3952.25
4/7/1977	1977	4	7	311	31		31	-1	3951.25
4/8/1977	1977	4	8	312	35		35	3	3954.25
4/9/1977	1977	4	9	313	36		36	4	3958.25
4/10/1977	1977	4	10	314	39	74	56.5	24.5	3982.75
4/11/1977	1977	4	11	315	31	74	52.5	20.5	4003.25
4/12/1977	1977	4	12	316	30	65	47.5	15.5	4018.75
4/13/1977	1977	4	13	317	33	69	51	19	4037.75
4/14/1977	1977	4	14	318	31	67	49	17	4054.75
4/15/1977	1977	4	15	319	35	69	52	20	4074.75
4/16/1977	1977	4	16	320	36	66	31.25	-0.75	4074
4/17/1977	1977	4	17	321	35	62	48.5	16.5	4090.5
4/18/1977	1977	4	18	322	30	55	42.5	10.5	4101
4/19/1977	1977	4	19	323	31	54	42.5	10.5	4111.5
4/20/1977	1977	4	20	324	32	69	50.5	18.5	4130
4/21/1977	1977	4	21	325	41	68	54.5	22.5	4152.5
4/22/1977	1977	4	22	326	30	64	47	15	4167.5
4/23/1977	1977	4	23	327	33	72	52.5	20.5	4188
4/24/1977	1977	4	24	328	41	70	55.5	23.5	4211.5
4/25/1977	1977	4	25	329	36	69	52.5	20.5	4232
4/26/1977	1977	4	26	330	37	73	55	23	4255
4/27/1977	1977	4	27	331	42	74	58	26	4281
4/28/1977	1977	4	28	332	45	72	58.5	26.5	4307.5
4/29/1977	1977	4	29	333	40	73	56.5	24.5	4332
4/30/1977	1977	4	30	334	40	76	58	26	4358
5/1/1977	1977	5	1	335	49	74	61.5	29.5	4387.5
5/2/1977	1977	5	2	336	40	76	58	26	4413.5
5/3/1977	1977	5	3	337	42	75	58.5	26.5	4440
5/4/1977	1977	5	4	338	42	69	55.5	23.5	4463.5
5/5/1977	1977	5	5	339	43	69	56	24	4487.5
5/6/1977	1977	5	6	340	38	70	54	22	4509.5
5/7/1977	1977	5	7	341	39	73	56	24	4533.5
5/8/1977	1977	5	8	342	38	72	55	23	4556.5
5/9/1977	1977	5	9	343	41	74	57.5	25.5	4582
5/10/1977	1977	5	10	344	48	76	62	30	4612
5/11/1977	1977	5	11	345	49	68	58.5	26.5	4638.5
5/12/1977	1977	5	12	346	35	67	51	19	4657.5
5/13/1977	1977	5	13	347	36	72	54	22	4679.5
5/14/1977	1977	5	14	348	43	68	55.5	23.5	4703
5/15/1977	1977	5	15	349	40	64	52	20	4723
5/16/1977	1977	5	16	350	32	60	46	14	4737
5/17/1977	1977	5	17	351	37	67	52	20	4757
5/18/1977	1977	5	18	352	38	70	54	22	4779
5/19/1977	1977	5	19	353	45	70	57.5	25.5	4804.5
5/20/1977	1977	5	20	354	31	75	53	21	4825.5
5/21/1977	1977	5	21	355	36	63	49.5	17.5	4843
5/22/1977	1977	5	22	356	32	69	50.5	18.5	4861.5
5/23/1977	1977	5	23	357	39	70	54.5	22.5	4884
5/24/1977	1977	5	24	358	40	69	54.5	22.5	4906.5
5/25/1977	1977	5	25	359	46	70	58	26	4932.5
5/26/1977	1977	5	26	360	43	70	56.5	24.5	4957
5/27/1977	1977	5	27	361	38	66	52	20	4977
5/28/1977	1977	5	28	362	39	71	55	23	5000
5/29/1977	1977	5	29	363	38	69	53.5	21.5	5021.5
5/30/1977	1977	5	30	364	37	69	53	21	5042.5
5/31/1977	1977	5	31	365	41	74	57.5	25.5	5068
6/1/1977	1977	6	1	1	52	86	69	37	37
6/2/1977	1977	6	2	2	54	83	68.5	36.5	73.5
6/3/1977	1977	6	3	3	56	77	66.5	34.5	108
6/4/1977	1977	6	4	4	48	79	63.5	31.5	139.5
6/5/1977	1977	6	5	5	57	78	67.5	35.5	175
6/6/1977	1977	6	6	6	55	81	68	36	211
6/7/1977	1977	6	7	7	51	80	65.5	33.5	244.5
6/8/1977	1977	6	8	8	50	80	65	33	277.5
6/9/1977	1977	6	9	9	52	81	66.5	34.5	312
6/10/1977	1977	6	10	10	49	82	65.5	33.5	345.5
6/11/1977	1977	6	11	11	51	81	66	34	379.5

6/12/1977	1977	6	12	12	48	84	66	34	413.5
6/13/1977	1977	6	13	13	51	88	69.5	37.5	451
6/14/1977	1977	6	14	14	51	90	70.5	38.5	489.5
6/15/1977	1977	6	15	15	55	89	72	40	529.5
6/16/1977	1977	6	16	16	53	90	71.5	39.5	569
6/17/1977	1977	6	17	17	51	91	71	39	608
6/18/1977	1977	6	18	18	55	88	71.5	39.5	647.5
6/19/1977	1977	6	19	19	57	85	71	39	686.5
6/20/1977	1977	6	20	20	58	87	72.5	40.5	727
6/21/1977	1977	6	21	21	51	81	66	34	761
6/22/1977	1977	6	22	22	54	78	66	34	795
6/23/1977	1977	6	23	23	48	75	61.5	29.5	824.5
6/24/1977	1977	6	24	24	51	74	62.5	30.5	855
6/25/1977	1977	6	25	25	49	81	65	33	888
6/26/1977	1977	6	26	26	52	88	70	38	926
6/27/1977	1977	6	27	27	55	87	71	39	965
6/28/1977	1977	6	28	28	57	91	74	42	1007
6/29/1977	1977	6	29	29	56	88	72	40	1047
6/30/1977	1977	6	30	30	53	91	72	40	1087
7/1/1977	1977	7	1	31	56	88	72	40	1127
7/2/1977	1977	7	2	32	61	90	75.5	43.5	1170.5
7/3/1977	1977	7	3	33	62	91	76.5	44.5	1215
7/4/1977	1977	7	4	34	50	96	73	41	1256
7/5/1977	1977	7	5	35	53	90	71.5	39.5	1295.5
7/6/1977	1977	7	6	36	52	83	67.5	35.5	1331
7/7/1977	1977	7	7	37	55	86	70.5	38.5	1369.5
7/8/1977	1977	7	8	38	56	87	71.5	39.5	1409
7/9/1977	1977	7	9	39	62	85	73.5	41.5	1450.5
7/10/1977	1977	7	10	40	59	86	72.5	40.5	1491
7/11/1977	1977	7	11	41	58	73	65.5	33.5	1524.5
7/12/1977	1977	7	12	42	56	82	69	37	1561.5
7/13/1977	1977	7	13	43	54	80	67	35	1596.5
7/14/1977	1977	7	14	44	57	71	64	32	1628.5
7/15/1977	1977	7	15	45	54	78	66	34	1662.5
7/16/1977	1977	7	16	46	57	80	68.5	36.5	1699
7/17/1977	1977	7	17	47	55	81	68	36	1735
7/18/1977	1977	7	18	48	56	84	70	38	1773
7/19/1977	1977	7	19	49	55	81	68	36	1809
7/20/1977	1977	7	20	50	53	76	64.5	32.5	1841.5
7/21/1977	1977	7	21	51	54	78	66	34	1875.5
7/22/1977	1977	7	22	52	55	80	67.5	35.5	1911
7/23/1977	1977	7	23	53	53	79	66	34	1945
7/24/1977	1977	7	24	54	59	71	65	33	1978
7/25/1977	1977	7	25	55	53	77	65	33	2011
7/26/1977	1977	7	26	56	52	79	65.5	33.5	2044.5
7/27/1977	1977	7	27	57	53	85	69	37	2081.5
7/28/1977	1977	7	28	58	51	83	67	35	2116.5
7/29/1977	1977	7	29	59	55	88	71.5	39.5	2156
7/30/1977	1977	7	30	60	56	88	72	40	2196
7/31/1977	1977	7	31	61	57	90	73.5	41.5	2237.5
8/1/1977	1977	8	1	62	55	90	72.5	40.5	2278
8/2/1977	1977	8	2	63	55	90	72.5	40.5	2318.5
8/3/1977	1977	8	3	64	56	93	74.5	42.5	2361
8/4/1977	1977	8	4	65	60	88	74	42	2403
8/5/1977	1977	8	5	66	59	86	72.5	40.5	2443.5
8/6/1977	1977	8	6	67	58	89	73.5	41.5	2485
8/7/1977	1977	8	7	68	57	88	72.5	40.5	2525.5
8/8/1977	1977	8	8	69	55	86	70.5	38.5	2564
8/9/1977	1977	8	9	70	59	85	72	40	2604
8/10/1977	1977	8	10	71	58	80	69	37	2641
8/11/1977	1977	8	11	72	54	79	66.5	34.5	2675.5
8/12/1977	1977	8	12	73	55	67	61	29	2704.5
8/13/1977	1977	8	13	74	51	75	63	31	2735.5
8/14/1977	1977	8	14	75	59	78	68.5	36.5	2772
8/15/1977	1977	8	15	76	59	70	64.5	32.5	2804.5
8/16/1977	1977	8	16	77	56	70	63	31	2835.5
8/17/1977	1977	8	17	78	59	72	65.5	33.5	2869
8/18/1977	1977	8	18	79	55	70	62.5	30.5	2899.5
8/19/1977	1977	8	19	80	58	78	68	36	2935.5
8/20/1977	1977	8	20	81	53	72	62.5	30.5	2966
8/21/1977	1977	8	21	82	54	79	66.5	34.5	3000.5
8/22/1977	1977	8	22	83	53	79	66	34	3034.5
8/23/1977	1977	8	23	84	54	83	68.5	36.5	3071
8/24/1977	1977	8	24	85	55	84	69.5	37.5	3108.5
8/25/1977	1977	8	25	86	56	81	68.5	36.5	3145
8/26/1977	1977	8	26	87	57	82	69.5	37.5	3182.5
8/27/1977	1977	8	27	88	58	80	69	37	3219.5
8/28/1977	1977	8	28	89	49	78	63.5	31.5	3251
8/29/1977	1977	8	29	90	48	80	64	32	3283
8/30/1977	1977	8	30	91	55	81	68	36	3319
8/31/1977	1977	8	31	92	55	80	67.5	35.5	3354.5
9/1/1977	1977	9	1	93	51	76	63.5	31.5	3386
9/2/1977	1977	9	2	94	57	73	65	33	3419
9/3/1977	1977	9	3	95	52	76	64	32	3451
9/4/1977	1977	9	4	96	55	75	65	33	3484
9/5/1977	1977	9	5	97	54	78	66	34	3518
9/6/1977	1977	9	6	98	51	79	65	33	3551
9/7/1977	1977	9	7	99	53	80	66.5	34.5	3585.5
9/8/1977	1977	9	8	100	54	81	67.5	35.5	3621
9/9/1977	1977	9	9	101	53	82	67.5	35.5	3656.5
9/10/1977	1977	9	10	102	54	79	66.5	34.5	3691
9/11/1977	1977	9	11	103	52	79	65.5	33.5	3724.5
9/12/1977	1977	9	12	104	51	69	60	28	3752.5

9/13/1977	1977	9	13	105	46	70	58	26	3778.5
9/14/1977	1977	9	14	106	42	72	57	25	3803.5
9/15/1977	1977	9	15	107	50	73	61.5	29.5	3833
9/16/1977	1977	9	16	108	46	74	60	28	3861
9/17/1977	1977	9	17	109	51	70	60.5	28.5	3889.5
9/18/1977	1977	9	18	110	41	76	58.5	26.5	3916
9/19/1977	1977	9	19	111	46	78	62	30	3946
9/20/1977	1977	9	20	112	51	76	63.5	31.5	3977.5
9/21/1977	1977	9	21	113	43	75	59	27	4004.5
9/22/1977	1977	9	22	114	46	72	59	27	4031.5
9/23/1977	1977	9	23	115	52	69	60.5	28.5	4060
9/24/1977	1977	9	24	116	45	69	57	25	4085
9/25/1977	1977	9	25	117	46	67	56.5	24.5	4109.5
9/26/1977	1977	9	26	118	47	75	61	29	4138.5
9/27/1977	1977	9	27	119	51	72	61.5	29.5	4168
9/28/1977	1977	9	28	120	52	70	61	29	4197
9/29/1977	1977	9	29	121	46	75	60.5	28.5	4225.5
9/30/1977	1977	9	30	122	54	73	63.5	31.5	4257
10/1/1977	1977	10	1	123	40	68	54	22	4279
10/2/1977	1977	10	2	124	41	69	55	23	4302
10/3/1977	1977	10	3	125	52	72	62	30	4332
10/4/1977	1977	10	4	126	46	70	58	26	4358
10/5/1977	1977	10	5	127	49	74	61.5	29.5	4387.5
10/6/1977	1977	10	6	128	49	71	60	28	4415.5
10/7/1977	1977	10	7	129	49	68	58.5	26.5	4442
10/8/1977	1977	10	8	130	40	66	53	21	4463
10/9/1977	1977	10	9	131	41	65	53	21	4484
10/10/1977	1977	10	10	132	40	64	52	20	4504
10/11/1977	1977	10	11	133	32	64	48	16	4520
10/12/1977	1977	10	12	134	32	60	46	14	4534
10/13/1977	1977	10	13	135	35	66	50.5	18.5	4552.5
10/14/1977	1977	10	14	136	39	67	53	21	4573.5
10/15/1977	1977	10	15	137	38	68	53	21	4594.5
10/16/1977	1977	10	16	138	37	69	53	21	4615.5
10/17/1977	1977	10	17	139	48	68	58	26	4641.5
10/18/1977	1977	10	18	140	40	69	54.5	22.5	4664
10/19/1977	1977	10	19	141	39	70	54.5	22.5	4686.5
10/20/1977	1977	10	20	142	42	67	54.5	22.5	4709
10/21/1977	1977	10	21	143	36	65	50.5	18.5	4727.5
10/22/1977	1977	10	22	144	32	59	45.5	13.5	4741
10/23/1977	1977	10	23	145	36	46	41	9	4750
10/24/1977	1977	10	24	146	34	62	48	16	4766
10/25/1977	1977	10	25	147	36	65	50.5	18.5	4784.5
10/26/1977	1977	10	26	148	37	67	52	20	4804.5
10/27/1977	1977	10	27	149	39	65	52	20	4824.5
10/28/1977	1977	10	28	150	40	63	51.5	19.5	4844
10/29/1977	1977	10	29	151	41	62	51.5	19.5	4863.5
10/30/1977	1977	10	30	152	39	59	49	17	4880.5
10/31/1977	1977	10	31	153	32	56	44	12	4892.5
11/1/1977	1977	11	1	154	21	53	37	5	4897.5
11/2/1977	1977	11	2	155	21	53	37	5	4902.5
11/3/1977	1977	11	3	156	23	52	37.5	5.5	4908
11/4/1977	1977	11	4	157	24	53	38.5	6.5	4914.5
11/5/1977	1977	11	5	158	25	52	38.5	6.5	4921
11/6/1977	1977	11	6	159	26	52	39	7	4928
11/7/1977	1977	11	7	160	28	40	34	2	4930
11/8/1977	1977	11	8	161	28	49	38.5	6.5	4936.5
11/9/1977	1977	11	9	162	20	48	34	2	4938.5
11/10/1977	1977	11	10	163	11	48	29.5	-2.5	4936
11/11/1977	1977	11	11	164	21	48	34.5	2.5	4938.5
11/12/1977	1977	11	12	165	24	53	38.5	6.5	4945
11/13/1977	1977	11	13	166	28	54	41	9	4954
11/14/1977	1977	11	14	167	30	56	43	11	4965
11/15/1977	1977	11	15	168	31	57	44	12	4977
11/16/1977	1977	11	16	169	28	52	40	8	4985
11/17/1977	1977	11	17	170	30	56	43	11	4996
11/18/1977	1977	11	18	171	33	52	42.5	10.5	5006.5
11/19/1977	1977	11	19	172	34	52	43	11	5017.5
11/20/1977	1977	11	20	173	39	49	44	12	5029.5
11/21/1977	1977	11	21	174	35	47	41	9	5038.5
11/22/1977	1977	11	22	175	25	50	37.5	5.5	5044
11/23/1977	1977	11	23	176	28	54	41	9	5053
11/24/1977	1977	11	24	177	29	51	40	8	5061
11/25/1977	1977	11	25	178	25	52	38.5	6.5	5067.5
11/26/1977	1977	11	26	179	31	58	44.5	12.5	5080
11/27/1977	1977	11	27	180	29	51	40	8	5088
11/28/1977	1977	11	28	181	31	41	36	4	5092
11/29/1977	1977	11	29	182	28	39	33.5	1.5	5093.5
11/30/1977	1977	11	30	183	19	40	29.5	-2.5	5091
12/1/1977	1977	12	1	184	17	39	28	-4	5087
12/2/1977	1977	12	2	185	25	49	37	5	5092
12/3/1977	1977	12	3	186	26	50	38	6	5098
12/4/1977	1977	12	4	187	30	54	42	10	5108
12/5/1977	1977	12	5	188	31	55	43	11	5119
12/6/1977	1977	12	6	189	26	50	38	6	5125
12/7/1977	1977	12	7	190	27	52	39.5	7.5	5132.5
12/8/1977	1977	12	8	191	32	52	42	10	5142.5
12/9/1977	1977	12	9	192	31	56	43.5	11.5	5154
12/10/1977	1977	12	10	193	27	57	42	10	5164
12/11/1977	1977	12	11	194	32	59	45.5	13.5	5177.5
12/12/1977	1977	12	12	195	33	58	45.5	13.5	5191
12/13/1977	1977	12	13	196	29	57	43	11	5202
12/14/1977	1977	12	14	197	21	49	35	3	5205

12/15/1977	1977	12	15	198	25	50	37.5	5.5	5210.5
12/16/1977	1977	12	16	199	27	55	41	9	5219.5
12/17/1977	1977	12	17	200	19	50	34.5	2.5	5222
12/18/1977	1977	12	18	201	16	45	30.5	-1.5	5220.5
12/19/1977	1977	12	19	202	17	42	29.5	-2.5	5218
12/20/1977	1977	12	20	203	19	45	32	0	5218
12/21/1977	1977	12	21	204	8	38	23	-9	5209
12/22/1977	1977	12	22	205	7	36	21.5	-10.5	5198.5
12/23/1977	1977	12	23	206	5	40	22.5	-9.5	5189
12/24/1977	1977	12	24	207	5	39	22	-10	5179
12/25/1977	1977	12	25	208	10	38	24	-8	5171
12/26/1977	1977	12	26	209	12	38	25	-7	5164
12/27/1977	1977	12	27	210	30	38	34	2	5166
12/28/1977	1977	12	28	211	32	39	35.5	3.5	5169.5
12/29/1977	1977	12	29	212	32	40	36	4	5173.5
12/30/1977	1977	12	30	213	30	40	35	3	5176.5
12/31/1977	1977	12	31	214	30	40	35	3	5179.5
1/1/1978	1978	1	1	215	30	39	34.5	2.5	5182
1/2/1978	1978	1	2	216	19	40	29.5	-2.5	5179.5
1/3/1978	1978	1	3	217	21	46	33.5	1.5	5181
1/4/1978	1978	1	4	218	20	40	30	-2	5179
1/5/1978	1978	1	5	219	28	44	36	4	5183
1/6/1978	1978	1	6	220	27	42	34.5	2.5	5185.5
1/7/1978	1978	1	7	221	20	40	30	-2	5183.5
1/8/1978	1978	1	8	222	21	40	30.5	-1.5	5182
1/9/1978	1978	1	9	223	22	45	33.5	1.5	5183.5
1/10/1978	1978	1	10	224	29	46	37.5	5.5	5189
1/11/1978	1978	1	11	225	22	40	31	-1	5188
1/12/1978	1978	1	12	226	25	41	33	1	5189
1/13/1978	1978	1	13	227	20	37	28.5	-3.5	5185.5
1/14/1978	1978	1	14	228	21	34	27.5	-4.5	5181
1/15/1978	1978	1	15	229	26	39	32.5	0.5	5181.5
1/16/1978	1978	1	16	230	20	39	29.5	-2.5	5179
1/17/1978	1978	1	17	231	29	37	33	1	5180
1/18/1978	1978	1	18	232	28	35	31.5	-0.5	5179.5
1/19/1978	1978	1	19	233	20	34	27	-5	5174.5
1/20/1978	1978	1	20	234	14	34	24	-8	5166.5
1/21/1978	1978	1	21	235	14	32	23	-9	5157.5
1/22/1978	1978	1	22	236	13	36	24.5	-7.5	5150
1/23/1978	1978	1	23	237	16	37	26.5	-5.5	5144.5
1/24/1978	1978	1	24	238	8	35	21.5	-10.5	5134
1/25/1978	1978	1	25	239	6	36	21	-11	5123
1/26/1978	1978	1	26	240	10	42	26	-6	5117
1/27/1978	1978	1	27	241	12	43	27.5	-4.5	5112.5
1/28/1978	1978	1	28	242	19	39	29	-3	5109.5
1/29/1978	1978	1	29	243	20	40	30	-2	5107.5
1/30/1978	1978	1	30	244	20	42	31	-1	5106.5
1/31/1978	1978	1	31	245	23	40	31.5	-0.5	5106
2/1/1978	1978	2	1	246	29	40	34.5	2.5	5108.5
2/2/1978	1978	2	2	247	21	44	32.5	0.5	5109
2/3/1978	1978	2	3	248	22	44	33	1	5110
2/4/1978	1978	2	4	249	19	42	30.5	-1.5	5108.5
2/5/1978	1978	2	5	250	26	45	35.5	3.5	5112
2/6/1978	1978	2	6	251	27	43	35	3	5115
2/7/1978	1978	2	7	252	31	42	36.5	4.5	5119.5
2/8/1978	1978	2	8	253	30	45	37.5	5.5	5125
2/9/1978	1978	2	9	254	21	42	31.5	-0.5	5124.5
2/10/1978	1978	2	10	255	30	49	39.5	7.5	5132
2/11/1978	1978	2	11	256	9	38	23.5	-8.5	5123.5
2/12/1978	1978	2	12	257	10	30	20	-12	5111.5
2/13/1978	1978	2	13	258	10	27	18.5	-13.5	5098
2/14/1978	1978	2	14	259	11	25	18	-14	5084
2/15/1978	1978	2	15	260	13	39	26	-6	5078
2/16/1978	1978	2	16	261	19	32	25.5	-6.5	5071.5
2/17/1978	1978	2	17	262	11	32	21.5	-10.5	5061
2/18/1978	1978	2	18	263	-6	30	12	-20	5041
2/19/1978	1978	2	19	264	6	32	19	-13	5028
2/20/1978	1978	2	20	265	12	39	25.5	-6.5	5021.5
2/21/1978	1978	2	21	266	21	40	30.5	-1.5	5020
2/22/1978	1978	2	22	267	21	46	33.5	1.5	5021.5
2/23/1978	1978	2	23	268	22	49	35.5	3.5	5025
2/24/1978	1978	2	24	269	25	50	37.5	5.5	5030.5
2/25/1978	1978	2	25	270	26	51	38.5	6.5	5037
2/26/1978	1978	2	26	271	22	50	36	4	5041
2/27/1978	1978	2	27	272	26	49	37.5	5.5	5046.5
2/28/1978	1978	2	28	273	30	40	35	3	5049.5
3/1/1978	1978	3	1	274	30	45	37.5	5.5	5055
3/2/1978	1978	3	2	275	32	45	38.5	6.5	5061.5
3/3/1978	1978	3	3	276	33	44	38.5	6.5	5068
3/4/1978	1978	3	4	277	29	49	39	7	5075
3/5/1978	1978	3	5	278	28	48	38	6	5081
3/6/1978	1978	3	6	279	37	45	41	9	5090
3/7/1978	1978	3	7	280	28	47	37.5	5.5	5095.5
3/8/1978	1978	3	8	281	27	48	37.5	5.5	5101
3/9/1978	1978	3	9	282	29	50	39.5	7.5	5108.5
3/10/1978	1978	3	10	283	30	50	40	8	5116.5
3/11/1978	1978	3	11	284	29	48	38.5	6.5	5123
3/12/1978	1978	3	12	285	28	47	37.5	5.5	5128.5
3/13/1978	1978	3	13	286	25	45	35	3	5131.5
3/14/1978	1978	3	14	287	26	46	36	4	5135.5
3/15/1978	1978	3	15	288	19	44	31.5	-0.5	5135
3/16/1978	1978	3	16	289	20	49	34.5	2.5	5137.5
3/17/1978	1978	3	17	290	28	49	38.5	6.5	5144

3/18/1978	1978	3	18	291	31	50	40.5	8.5	5152.5
3/19/1978	1978	3	19	292	39	66	52.5	20.5	5173
3/20/1978	1978	3	20	293	35	61	48	16	5189
3/21/1978	1978	3	21	294	32	65	48.5	16.5	5205.5
3/22/1978	1978	3	22	295	37	60	48.5	16.5	5222
3/23/1978	1978	3	23	296	34	56	45	13	5235
3/24/1978	1978	3	24	297	33	59	46	14	5249
3/25/1978	1978	3	25	298	29	60	44.5	12.5	5261.5
3/26/1978	1978	3	26	299	36	60	48	16	5277.5
3/27/1978	1978	3	27	300	35	65	50	18	5295.5
3/28/1978	1978	3	28	301	34	69	51.5	19.5	5315
3/29/1978	1978	3	29	302	39	66	52.5	20.5	5335.5
3/30/1978	1978	3	30	303	34	67	50.5	18.5	5354
3/31/1978	1978	3	31	304	36	69	52.5	20.5	5374.5
4/1/1978	1978	4	1	305	28	65	46.5	14.5	5389
4/2/1978	1978	4	2	306	27	59	43	11	5400
4/3/1978	1978	4	3	307	26	58	42	10	5410
4/4/1978	1978	4	4	308	27	57	42	10	5420
4/5/1978	1978	4	5	309	29	58	43.5	11.5	5431.5
4/6/1978	1978	4	6	310	29	60	44.5	12.5	5444
4/7/1978	1978	4	7	311	27	69	48	16	5460
4/8/1978	1978	4	8	312	29	69	49	17	5477
4/9/1978	1978	4	9	313	33	70	51.5	19.5	5496.5
4/10/1978	1978	4	10	314	21	59	40	8	5504.5
4/11/1978	1978	4	11	315	29	57	43	11	5515.5
4/12/1978	1978	4	12	316	29	68	48.5	16.5	5532
4/13/1978	1978	4	13	317	37	69	53	21	5553
4/14/1978	1978	4	14	318	58	66	62	30	5583
4/15/1978	1978	4	15	319	41	64	52.5	20.5	5603.5
4/16/1978	1978	4	16	320	33	66	49.5	17.5	5621
4/17/1978	1978	4	17	321	47	65	56	24	5645
4/18/1978	1978	4	18	322	29	59	44	12	5657
4/19/1978	1978	4	19	323	23	60	41.5	9.5	5666.5
4/20/1978	1978	4	20	324	30	66	48	16	5682.5
4/21/1978	1978	4	21	325	34	65	49.5	17.5	5700
4/22/1978	1978	4	22	326	37	64	50.5	18.5	5718.5
4/23/1978	1978	4	23	327	25	60	42.5	10.5	5729
4/24/1978	1978	4	24	328	30	69	49.5	17.5	5746.5
4/25/1978	1978	4	25	329	38	75	56.5	24.5	5771
4/26/1978	1978	4	26	330	44	74	59	27	5798
4/27/1978	1978	4	27	331	43	76	59.5	27.5	5825.5
4/28/1978	1978	4	28	332	41	74	57.5	25.5	5851
4/29/1978	1978	4	29	333	37	62	49.5	17.5	5868.5
4/30/1978	1978	4	30	334	36	65	50.5	18.5	5887
5/1/1978	1978	5	1	335	37	65	51	19	5906
5/2/1978	1978	5	2	336	38	67	52.5	20.5	5926.5
5/3/1978	1978	5	3	337	22	65	43.5	11.5	5938
5/4/1978	1978	5	4	338	38	62	50	18	5956
5/5/1978	1978	5	5	339	36	59	47.5	15.5	5971.5
5/6/1978	1978	5	6	340	33	60	46.5	14.5	5986
5/7/1978	1978	5	7	341	27	40	33.5	1.5	5987.5
5/8/1978	1978	5	8	342	30	53	41.5	9.5	5997
5/9/1978	1978	5	9	343	29	50	39.5	7.5	6004.5
5/10/1978	1978	5	10	344	35	58	46.5	14.5	6019
5/11/1978	1978	5	11	345	35	59	47	15	6034
5/12/1978	1978	5	12	346	41	61	51	19	6053
5/13/1978	1978	5	13	347	41	69	55	23	6076
5/14/1978	1978	5	14	348	43	70	56.5	24.5	6100.5
5/15/1978	1978	5	15	349	46	72	59	27	6127.5
5/16/1978	1978	5	16	350	40	79	59.5	27.5	6155
5/17/1978	1978	5	17	351	41	80	60.5	28.5	6183.5
5/18/1978	1978	5	18	352	51	81	66	34	6217.5
5/19/1978	1978	5	19	353	44	79	61.5	29.5	6247
5/20/1978	1978	5	20	354	34	77	55.5	23.5	6270.5
5/21/1978	1978	5	21	355	33	69	51	19	6289.5
5/22/1978	1978	5	22	356	43	70	56.5	24.5	6314
5/23/1978	1978	5	23	357	42	73	57.5	25.5	6339.5
5/24/1978	1978	5	24	358	37	70	53.5	21.5	6361
5/25/1978	1978	5	25	359	42	70	56	24	6385
5/26/1978	1978	5	26	360	47	71	59	27	6412
5/27/1978	1978	5	27	361	43	75	59	27	6439
5/28/1978	1978	5	28	362	40	74	57	25	6464
5/29/1978	1978	5	29	363	42	73	57.5	25.5	6489.5
5/30/1978	1978	5	30	364	41	74	57.5	25.5	6515
5/31/1978	1978	5	31	365	42	75	58.5	26.5	6541.5
6/1/1978	1978	6	1	1	48	80	64	32	32
6/2/1978	1978	6	2	2	44	79	61.5	29.5	61.5
6/3/1978	1978	6	3	3	45	80	62.5	30.5	92
6/4/1978	1978	6	4	4	46	81	63.5	31.5	123.5
6/5/1978	1978	6	5	5	47	80	63.5	31.5	155
6/6/1978	1978	6	6	6	41	77	59	27	182
6/7/1978	1978	6	7	7	44	79	61.5	29.5	211.5
6/8/1978	1978	6	8	8	48	80	64	32	243.5
6/9/1978	1978	6	9	9	47	82	64.5	32.5	276
6/10/1978	1978	6	10	10	46	80	63	31	307
6/11/1978	1978	6	11	11	45	80	62.5	30.5	337.5
6/12/1978	1978	6	12	12	49	78	63.5	31.5	369
6/13/1978	1978	6	13	13	50	80	65	33	402
6/14/1978	1978	6	14	14	55	83	69	37	439
6/15/1978	1978	6	15	15	56	86	71	39	478
6/16/1978	1978	6	16	16	51	85	68	36	514
6/17/1978	1978	6	17	17	52	85	68.5	36.5	550.5
6/18/1978	1978	6	18	18	60	80	70	38	588.5

6/19/1978	1978	6	19	19	58	87	72.5	40.5	629
6/20/1978	1978	6	20	20	54	85	69.5	37.5	666.5
6/21/1978	1978	6	21	21	53	87	70	38	704.5
6/22/1978	1978	6	22	22	56	86	71	39	743.5
6/23/1978	1978	6	23	23	59	87	73	41	784.5
6/24/1978	1978	6	24	24	58	90	74	42	826.5
6/25/1978	1978	6	25	25	59	90	74.5	42.5	869
6/26/1978	1978	6	26	26	68	89	78.5	46.5	915.5
6/27/1978	1978	6	27	27	55	86	70.5	38.5	954
6/28/1978	1978	6	28	28	54	84	69	37	991
6/29/1978	1978	6	29	29	53	77	65	33	1024
6/30/1978	1978	6	30	30	54	80	67	35	1059
7/1/1978	1978	7	1	31	52	83	67.5	35.5	1094.5
7/2/1978	1978	7	2	32	53	90	71.5	39.5	1134
7/3/1978	1978	7	3	33	54	89	71.5	39.5	1173.5
7/4/1978	1978	7	4	34	55	83	69	37	1210.5
7/5/1978	1978	7	5	35	54	80	67	35	1245.5
7/6/1978	1978	7	6	36	52	87	69.5	37.5	1283
7/7/1978	1978	7	7	37	52	84	68	36	1319
7/8/1978	1978	7	8	38	55	90	72.5	40.5	1359.5
7/9/1978	1978	7	9	39	54	87	70.5	38.5	1398
7/10/1978	1978	7	10	40	60	86	73	41	1439
7/11/1978	1978	7	11	41	55	83	69	37	1476
7/12/1978	1978	7	12	42	54	84	69	37	1513
7/13/1978	1978	7	13	43	57	85	71	39	1552
7/14/1978	1978	7	14	44	59	87	73	41	1593
7/15/1978	1978	7	15	45	54	88	71	39	1632
7/16/1978	1978	7	16	46	59	90	74.5	42.5	1674.5
7/17/1978	1978	7	17	47	64	90	77	45	1719.5
7/18/1978	1978	7	18	48	57	88	72.5	40.5	1760
7/19/1978	1978	7	19	49	56	78	67	35	1795
7/20/1978	1978	7	20	50	56	88	72	40	1835
7/21/1978	1978	7	21	51	58	87	72.5	40.5	1875.5
7/22/1978	1978	7	22	52	56	89	72.5	40.5	1916
7/23/1978	1978	7	23	53	55	80	67.5	35.5	1951.5
7/24/1978	1978	7	24	54	54	81	67.5	35.5	1987
7/25/1978	1978	7	25	55	56	89	72.5	40.5	2027.5
7/26/1978	1978	7	26	56	57	88	72.5	40.5	2068
7/27/1978	1978	7	27	57	57	86	71.5	39.5	2107.5
7/28/1978	1978	7	28	58	60	89	74.5	42.5	2150
7/29/1978	1978	7	29	59	56	89	72.5	40.5	2190.5
7/30/1978	1978	7	30	60	59	85	72	40	2230.5
7/31/1978	1978	7	31	61	61	85	73	41	2271.5
8/1/1978	1978	8	1	62	56	88	72	40	2311.5
8/2/1978	1978	8	2	63	55	81	68	36	2347.5
8/3/1978	1978	8	3	64	56	81	68.5	36.5	2384
8/4/1978	1978	8	4	65	53	83	68	36	2420
8/5/1978	1978	8	5	66	47	75	61	29	2449
8/6/1978	1978	8	6	67	50	79	64.5	32.5	2481.5
8/7/1978	1978	8	7	68	55	80	67.5	35.5	2517
8/8/1978	1978	8	8	69	52	81	66.5	34.5	2551.5
8/9/1978	1978	8	9	70	50	82	66	34	2585.5
8/10/1978	1978	8	10	71	54	84	69	37	2622.5
8/11/1978	1978	8	11	72	53	85	69	37	2659.5
8/12/1978	1978	8	12	73	52	79	65.5	33.5	2693
8/13/1978	1978	8	13	74	54	76	65	33	2726
8/14/1978	1978	8	14	75	53	70	61.5	29.5	2755.5
8/15/1978	1978	8	15	76	49	79	64	32	2787.5
8/16/1978	1978	8	16	77	48	79	63.5	31.5	2819
8/17/1978	1978	8	17	78	55	79	67	35	2854
8/18/1978	1978	8	18	79	56	79	67.5	35.5	2889.5
8/19/1978	1978	8	19	80	54	80	67	35	2924.5
8/20/1978	1978	8	20	81	54	76	65	33	2957.5
8/21/1978	1978	8	21	82	53	75	64	32	2989.5
8/22/1978	1978	8	22	83	49	78	63.5	31.5	3021
8/23/1978	1978	8	23	84	49	76	62.5	30.5	3051.5
8/24/1978	1978	8	24	85	52	79	65.5	33.5	3085
8/25/1978	1978	8	25	86	49	78	63.5	31.5	3116.5
8/26/1978	1978	8	26	87	54	80	67	35	3151.5
8/27/1978	1978	8	27	88	52	81	66.5	34.5	3186
8/28/1978	1978	8	28	89	49	82	65.5	33.5	3219.5
8/29/1978	1978	8	29	90	57	82	69.5	37.5	3257
8/30/1978	1978	8	30	91	44	79	61.5	29.5	3286.5
8/31/1978	1978	8	31	92	56	79	67.5	35.5	3322
9/1/1978	1978	9	1	93	51	76	63.5	31.5	3353.5
9/2/1978	1978	9	2	94	53	79	66	34	3387.5
9/3/1978	1978	9	3	95	48	78	63	31	3418.5
9/4/1978	1978	9	4	96	50	80	65	33	3451.5
9/5/1978	1978	9	5	97	55	80	67.5	35.5	3487
9/6/1978	1978	9	6	98	53	77	65	33	3520
9/7/1978	1978	9	7	99	50	75	62.5	30.5	3550.5
9/8/1978	1978	9	8	100	49	77	63	31	3581.5
9/9/1978	1978	9	9	101	48	78	63	31	3612.5
9/10/1978	1978	9	10	102	55	79	67	35	3647.5
9/11/1978	1978	9	11	103	54	79	66.5	34.5	3682
9/12/1978	1978	9	12	104	52	76	64	32	3714
9/13/1978	1978	9	13	105	49	72	60.5	28.5	3742.5
9/14/1978	1978	9	14	106	45	70	57.5	25.5	3768
9/15/1978	1978	9	15	107	48	71	59.5	27.5	3795.5
9/16/1978	1978	9	16	108	47	71	59	27	3822.5
9/17/1978	1978	9	17	109	43	72	57.5	25.5	3848
9/18/1978	1978	9	18	110	47	74	60.5	28.5	3876.5
9/19/1978	1978	9	19	111	43	72	57.5	25.5	3902

9/20/1978	1978	9	20	112	34	69	51.5	19.5	3921.5
9/21/1978	1978	9	21	113	33	66	49.5	17.5	3939
9/22/1978	1978	9	22	114	39	68	53.5	21.5	3960.5
9/23/1978	1978	9	23	115	43	66	54.5	22.5	3983
9/24/1978	1978	9	24	116	49	63	56	24	4007
9/25/1978	1978	9	25	117	47	61	54	22	4029
9/26/1978	1978	9	26	118	42	70	56	24	4053
9/27/1978	1978	9	27	119	44	72	58	26	4079
9/28/1978	1978	9	28	120	44	74	59	27	4106
9/29/1978	1978	9	29	121	49	72	60.5	28.5	4134.5
9/30/1978	1978	9	30	122	45	76	60.5	28.5	4163
10/1/1978	1978	10	1	123	50	78	64	32	4195
10/2/1978	1978	10	2	124	49	78	63.5	31.5	4226.5
10/3/1978	1978	10	3	125	44	74	59	27	4253.5
10/4/1978	1978	10	4	126	43	72	57.5	25.5	4279
10/5/1978	1978	10	5	127	42	73	57.5	25.5	4304.5
10/6/1978	1978	10	6	128	38	72	55	23	4327.5
10/7/1978	1978	10	7	129	43	74	58.5	26.5	4354
10/8/1978	1978	10	8	130	42	70	56	24	4378
10/9/1978	1978	10	9	131	43	72	57.5	25.5	4403.5
10/10/1978	1978	10	10	132	46	75	60.5	28.5	4432
10/11/1978	1978	10	11	133	43	70	56.5	24.5	4456.5
10/12/1978	1978	10	12	134	44	71	57.5	25.5	4482
10/13/1978	1978	10	13	135	39	70	54.5	22.5	4504.5
10/14/1978	1978	10	14	136	35	69	52	20	4524.5
10/15/1978	1978	10	15	137	39	70	54.5	22.5	4547
10/16/1978	1978	10	16	138	38	72	55	23	4570
10/17/1978	1978	10	17	139	36	70	53	21	4591
10/18/1978	1978	10	18	140	44	69	56.5	24.5	4615.5
10/19/1978	1978	10	19	141	43	67	55	23	4638.5
10/20/1978	1978	10	20	142	42	65	53.5	21.5	4660
10/21/1978	1978	10	21	143	38	69	53.5	21.5	4681.5
10/22/1978	1978	10	22	144	36	60	48	16	4697.5
10/23/1978	1978	10	23	145	39	59	49	17	4714.5
10/24/1978	1978	10	24	146	38	50	44	12	4726.5
10/25/1978	1978	10	25	147	40	54	47	15	4741.5
10/26/1978	1978	10	26	148	27	50	38.5	6.5	4748
10/27/1978	1978	10	27	149	29	56	42.5	10.5	4758.5
10/28/1978	1978	10	28	150	29	58	43.5	11.5	4770
10/29/1978	1978	10	29	151	36	59	47.5	15.5	4785.5
10/30/1978	1978	10	30	152	32	58	45	13	4798.5
10/31/1978	1978	10	31	153	32	58	45	13	4811.5
11/1/1978	1978	11	1	154	45	59	52	20	4831.5
11/2/1978	1978	11	2	155	40	58	49	17	4848.5
11/3/1978	1978	11	3	156	32	55	43.5	11.5	4860
11/4/1978	1978	11	4	157	33	56	44.5	12.5	4872.5
11/5/1978	1978	11	5	158	32	52	42	10	4882.5
11/6/1978	1978	11	6	159	35	52	43.5	11.5	4894
11/7/1978	1978	11	7	160	32	56	44	12	4906
11/8/1978	1978	11	8	161	34	59	46.5	14.5	4920.5
11/9/1978	1978	11	9	162	36	60	48	16	4936.5
11/10/1978	1978	11	10	163	34	60	47	15	4951.5
11/11/1978	1978	11	11	164	39	59	49	17	4968.5
11/12/1978	1978	11	12	165	38	55	46.5	14.5	4983
11/13/1978	1978	11	13	166	36	55	45.5	13.5	4996.5
11/14/1978	1978	11	14	167	26	49	37.5	5.5	5002
11/15/1978	1978	11	15	168	29	45	37	5	5007
11/16/1978	1978	11	16	169	29	43	36	4	5011
11/17/1978	1978	11	17	170	28	40	34	2	5013
11/18/1978	1978	11	18	171	20	46	33	1	5014
11/19/1978	1978	11	19	172	23	48	35.5	3.5	5017.5
11/20/1978	1978	11	20	173	24	49	36.5	4.5	5022
11/21/1978	1978	11	21	174	27	49	38	6	5028
11/22/1978	1978	11	22	175	31	47	39	7	5035
11/23/1978	1978	11	23	176	30	46	38	6	5041
11/24/1978	1978	11	24	177	29	44	36.5	4.5	5045.5
11/25/1978	1978	11	25	178	28	43	35.5	3.5	5049
11/26/1978	1978	11	26	179	26	43	34.5	2.5	5051.5
11/27/1978	1978	11	27	180	25	40	32.5	0.5	5052
11/28/1978	1978	11	28	181	26	39	32.5	0.5	5052.5
11/29/1978	1978	11	29	182	25	39	32	0	5052.5
11/30/1978	1978	11	30	183	17	39	28	-4	5048.5
12/1/1978	1978	12	1	184	32	49	40.5	8.5	5057
12/2/1978	1978	12	2	185	30	45	37.5	5.5	5062.5
12/3/1978	1978	12	3	186	31	40	35.5	3.5	5066
12/4/1978	1978	12	4	187	9	40	24.5	-7.5	5058.5
12/5/1978	1978	12	5	188	8	36	22	-10	5048.5
12/6/1978	1978	12	6	189	7	29	18	-14	5034.5
12/7/1978	1978	12	7	190	-4	20	8	-24	5010.5
12/8/1978	1978	12	8	191	-10	23	6.5	-25.5	4985
12/9/1978	1978	12	9	192	-9	20	5.5	-26.5	4958.5
12/10/1978	1978	12	10	193	4	30	17	-15	4943.5
12/11/1978	1978	12	11	194	7	30	18.5	-13.5	4930
12/12/1978	1978	12	12	195	10	39	24.5	-7.5	4922.5
12/13/1978	1978	12	13	196	12	37	24.5	-7.5	4915
12/14/1978	1978	12	14	197	15	37	26	-6	4909
12/15/1978	1978	12	15	198	16	39	27.5	-4.5	4904.5
12/16/1978	1978	12	16	199	20	38	29	-3	4901.5
12/17/1978	1978	12	17	200	20	39	29.5	-2.5	4899
12/18/1978	1978	12	18	201	26	40	33	1	4900
12/19/1978	1978	12	19	202	30	39	34.5	2.5	4902.5
12/20/1978	1978	12	20	203	19	39	29	-3	4899.5
12/21/1978	1978	12	21	204	16	36	26	-6	4893.5

12/22/1978	1978	12	22	205	18	38	28	-4	4889.5
12/23/1978	1978	12	23	206	16	37	26.5	-5.5	4884
12/24/1978	1978	12	24	207	15	35	25	-7	4877
12/25/1978	1978	12	25	208	14	30	22	-10	4867
12/26/1978	1978	12	26	209	12	29	20.5	-11.5	4855.5
12/27/1978	1978	12	27	210	19	29	24	-8	4847.5
12/28/1978	1978	12	28	211	19	38	28.5	-3.5	4844
12/29/1978	1978	12	29	212	20	39	29.5	-2.5	4841.5
12/30/1978	1978	12	30	213	-10	39	14.5	-17.5	4824
12/31/1978	1978	12	31	214	-12	38	13	-19	4805
1/1/1979	1979	1	1	215	-4	34	15	-17	4788
1/2/1979	1979	1	2	216	-5	32	13.5	-18.5	4769.5
1/3/1979	1979	1	3	217	-4	40	18	-14	4755.5
1/4/1979	1979	1	4	218	10	42	26	-6	4749.5
1/5/1979	1979	1	5	219	19	40	29.5	-2.5	4747
1/6/1979	1979	1	6	220	18	36	27	-5	4742
1/7/1979	1979	1	7	221	20	35	27.5	-4.5	4737.5
1/8/1979	1979	1	8	222	6	32	19	-13	4724.5
1/9/1979	1979	1	9	223	10	31	20.5	-11.5	4713
1/10/1979	1979	1	10	224	16	35	25.5	-6.5	4706.5
1/11/1979	1979	1	11	225	18	40	29	-3	4703.5
1/12/1979	1979	1	12	226	18	43	30.5	-1.5	4702
1/13/1979	1979	1	13	227	15	39	27	-5	4697
1/14/1979	1979	1	14	228	10	30	20	-12	4685
1/15/1979	1979	1	15	229	7	30	18.5	-13.5	4671.5
1/16/1979	1979	1	16	230	18	39	28.5	-3.5	4668
1/17/1979	1979	1	17	231	19	38	28.5	-3.5	4664.5
1/18/1979	1979	1	18	232	20	40	30	-2	4662.5
1/19/1979	1979	1	19	233	19	36	27.5	-4.5	4658
1/20/1979	1979	1	20	234	18	30	24	-8	4650
1/21/1979	1979	1	21	235	17	30	23.5	-8.5	4641.5
1/22/1979	1979	1	22	236	15	39	27	-5	4636.5
1/23/1979	1979	1	23	237	3	30	16.5	-15.5	4621
1/24/1979	1979	1	24	238	5	34	19.5	-12.5	4608.5
1/25/1979	1979	1	25	239	5	30	17.5	-14.5	4594
1/26/1979	1979	1	26	240	10	34	22	-10	4584
1/27/1979	1979	1	27	241	11	25	18	-14	4570
1/28/1979	1979	1	28	242	0	30	15	-17	4553
1/29/1979	1979	1	29	243	0	30	15	-17	4536
1/30/1979	1979	1	30	244	-8	20	6	-26	4510
1/31/1979	1979	1	31	245	-2	26	12	-20	4490
2/1/1979	1979	2	1	246	14	34	24	-8	4482
2/2/1979	1979	2	2	247	19	30	24.5	-7.5	4474.5
2/3/1979	1979	2	3	248	18	29	23.5	-8.5	4466
2/4/1979	1979	2	4	249	17	29	23	-9	4457
2/5/1979	1979	2	5	250	15	29	22	-10	4447
2/6/1979	1979	2	6	251	10	31	20.5	-11.5	4435.5
2/7/1979	1979	2	7	252	12	30	21	-11	4424.5
2/8/1979	1979	2	8	253	12	36	24	-8	4416.5
2/9/1979	1979	2	9	254	10	30	20	-12	4404.5
2/10/1979	1979	2	10	255	17	36	26.5	-5.5	4399
2/11/1979	1979	2	11	256	16	40	28	-4	4395
2/12/1979	1979	2	12	257	17	43	30	-2	4393
2/13/1979	1979	2	13	258	18	40	29	-3	4390
2/14/1979	1979	2	14	259	20	39	29.5	-2.5	4387.5
2/15/1979	1979	2	15	260	18	40	29	-3	4384.5
2/16/1979	1979	2	16	261	19	40	29.5	-2.5	4382
2/17/1979	1979	2	17	262	15	39	27	-5	4377
2/18/1979	1979	2	18	263	20	40	30	-2	4375
2/19/1979	1979	2	19	264	30	56	43	11	4386
2/20/1979	1979	2	20	265	27	53	40	8	4394
2/21/1979	1979	2	21	266	28	50	39	7	4401
2/22/1979	1979	2	22	267	18	39	28.5	-3.5	4397.5
2/23/1979	1979	2	23	268	15	37	26	-6	4391.5
2/24/1979	1979	2	24	269	14	38	26	-6	4385.5
2/25/1979	1979	2	25	270	16	37	26.5	-5.5	4380
2/26/1979	1979	2	26	271	14	35	24.5	-7.5	4372.5
2/27/1979	1979	2	27	272	12	30	21	-11	4361.5
2/28/1979	1979	2	28	273	12	42	27	-5	4356.5
3/1/1979	1979	3	1	274	15	42	28.5	-3.5	4353
3/2/1979	1979	3	2	275	16	35	25.5	-6.5	4346.5
3/3/1979	1979	3	3	276	16	40	28	-4	4342.5
3/4/1979	1979	3	4	277	17	40	28.5	-3.5	4339
3/5/1979	1979	3	5	278	18	42	30	-2	4337
3/6/1979	1979	3	6	279	20	50	35	3	4340
3/7/1979	1979	3	7	280	26	57	41.5	9.5	4349.5
3/8/1979	1979	3	8	281	31	57	44	12	4361.5
3/9/1979	1979	3	9	282	28	56	42	10	4371.5
3/10/1979	1979	3	10	283	17	49	33	1	4372.5
3/11/1979	1979	3	11	284	22	55	38.5	6.5	4379
3/12/1979	1979	3	12	285	25	58	41.5	9.5	4388.5
3/13/1979	1979	3	13	286	27	57	42	10	4398.5
3/14/1979	1979	3	14	287	34	54	44	12	4410.5
3/15/1979	1979	3	15	288	21	54	37.5	5.5	4416
3/16/1979	1979	3	16	289	38	57	47.5	15.5	4431.5
3/17/1979	1979	3	17	290	25	49	37	5	4436.5
3/18/1979	1979	3	18	291	24	40	32	0	4436.5
3/19/1979	1979	3	19	292	25	40	32.5	0.5	4437
3/20/1979	1979	3	20	293	33	51	42	10	4447
3/21/1979	1979	3	21	294	29	54	41.5	9.5	4456.5
3/22/1979	1979	3	22	295	27	49	38	6	4462.5
3/23/1979	1979	3	23	296	24	49	36.5	4.5	4467
3/24/1979	1979	3	24	297	25	57	41	9	4476

3/25/1979	1979	3	25	298	27	55	41	9	4485
3/26/1979	1979	3	26	299	29	57	43	11	4496
3/27/1979	1979	3	27	300	30	58	44	12	4508
3/28/1979	1979	3	28	301	29	56	42.5	10.5	4518.5
3/29/1979	1979	3	29	302	28	50	39	7	4525.5
3/30/1979	1979	3	30	303	27	50	38.5	6.5	4532
3/31/1979	1979	3	31	304	26	50	38	6	4538
4/1/1979	1979	4	1	305	21	44	32.5	0.5	4538.5
4/2/1979	1979	4	2	306	20	42	31	-1	4537.5
4/3/1979	1979	4	3	307	21	40	30.5	-1.5	4536
4/4/1979	1979	4	4	308	19	41	30	-2	4534
4/5/1979	1979	4	5	309	19	49	34	2	4536
4/6/1979	1979	4	6	310	28	49	38.5	6.5	4542.5
4/7/1979	1979	4	7	311	27	50	38.5	6.5	4549
4/8/1979	1979	4	8	312	27	53	40	8	4557
4/9/1979	1979	4	9	313	33	60	46.5	14.5	4571.5
4/10/1979	1979	4	10	314	35	65	50	18	4589.5
4/11/1979	1979	4	11	315	32	62	47	15	4604.5
4/12/1979	1979	4	12	316	33	58	45.5	13.5	4618
4/13/1979	1979	4	13	317	31	53	42	10	4628
4/14/1979	1979	4	14	318	21	39	30	-2	4626
4/15/1979	1979	4	15	319	24	38	31	-1	4625
4/16/1979	1979	4	16	320	21	46	33.5	1.5	4626.5
4/17/1979	1979	4	17	321	33	60	46.5	14.5	4641
4/18/1979	1979	4	18	322	30	68	49	17	4658
4/19/1979	1979	4	19	323	39	70	54.5	22.5	4680.5
4/20/1979	1979	4	20	324	38	71	54.5	22.5	4703
4/21/1979	1979	4	21	325	39	72	55.5	23.5	4726.5
4/22/1979	1979	4	22	326	40	70	55	23	4749.5
4/23/1979	1979	4	23	327	40	71	55.5	23.5	4773
4/24/1979	1979	4	24	328	38	69	53.5	21.5	4794.5
4/25/1979	1979	4	25	329	31	65	48	16	4810.5
4/26/1979	1979	4	26	330	36	65	50.5	18.5	4829
4/27/1979	1979	4	27	331	35	69	52	20	4849
4/28/1979	1979	4	28	332	41	69	55	23	4872
4/29/1979	1979	4	29	333	40	69	54.5	22.5	4894.5
4/30/1979	1979	4	30	334	41	68	54.5	22.5	4917
5/1/1979	1979	5	1	335	42	68	55	23	4940
5/2/1979	1979	5	2	336	39	63	51	19	4959
5/3/1979	1979	5	3	337	30	63	46.5	14.5	4973.5
5/4/1979	1979	5	4	338	31	64	47.5	15.5	4989
5/5/1979	1979	5	5	339	37	69	53	21	5010
5/6/1979	1979	5	6	340	34	69	51.5	19.5	5029.5
5/7/1979	1979	5	7	341	49	70	59.5	27.5	5057
5/8/1979	1979	5	8	342	44	72	58	26	5083
5/9/1979	1979	5	9	343	47	70	58.5	26.5	5109.5
5/10/1979	1979	5	10	344	29	65	47	15	5124.5
5/11/1979	1979	5	11	345	30	51	40.5	8.5	5133
5/12/1979	1979	5	12	346	28	58	43	11	5144
5/13/1979	1979	5	13	347	37	68	52.5	20.5	5164.5
5/14/1979	1979	5	14	348	32	69	50.5	18.5	5183
5/15/1979	1979	5	15	349	32	77	54.5	22.5	5205.5
5/16/1979	1979	5	16	350	40	76	58	26	5231.5
5/17/1979	1979	5	17	351	49	69	59	27	5258.5
5/18/1979	1979	5	18	352	44	67	55.5	23.5	5282
5/19/1979	1979	5	19	353	42	75	58.5	26.5	5308.5
5/20/1979	1979	5	20	354	48	76	62	30	5338.5
5/21/1979	1979	5	21	355	42	75	58.5	26.5	5365
5/22/1979	1979	5	22	356	33	66	49.5	17.5	5382.5
5/23/1979	1979	5	23	357	42	69	55.5	23.5	5406
5/24/1979	1979	5	24	358	42	75	58.5	26.5	5432.5
5/25/1979	1979	5	25	359	45	77	61	29	5461.5
5/26/1979	1979	5	26	360	46	78	62	30	5491.5
5/27/1979	1979	5	27	361	45	72	58.5	26.5	5518
5/28/1979	1979	5	28	362	46	72	59	27	5545
5/29/1979	1979	5	29	363	40	73	56.5	24.5	5569.5
5/30/1979	1979	5	30	364	47	74	60.5	28.5	5598
5/31/1979	1979	5	31	365	44	75	59.5	27.5	5625.5
6/1/1979	1979	6	1	1	42	72	57	25	25
6/2/1979	1979	6	2	2	43	69	56	24	49
6/3/1979	1979	6	3	3	41	69	55	23	72
6/4/1979	1979	6	4	4	47	70	58.5	26.5	98.5
6/5/1979	1979	6	5	5	46	76	61	29	127.5
6/6/1979	1979	6	6	6	52	77	64.5	32.5	160
6/7/1979	1979	6	7	7	49	75	62	30	190
6/8/1979	1979	6	8	8	42	65	53.5	21.5	211.5
6/9/1979	1979	6	9	9	41	67	54	22	233.5
6/10/1979	1979	6	10	10	39	64	51.5	19.5	253
6/11/1979	1979	6	11	11	41	79	60	28	281
6/12/1979	1979	6	12	12	49	84	66.5	34.5	315.5
6/13/1979	1979	6	13	13	51	86	68.5	36.5	352
6/14/1979	1979	6	14	14	55	86	70.5	38.5	390.5
6/15/1979	1979	6	15	15	56	84	70	38	428.5
6/16/1979	1979	6	16	16	58	82	70	38	466.5
6/17/1979	1979	6	17	17	49	79	64	32	498.5
6/18/1979	1979	6	18	18	50	79	64.5	32.5	531
6/19/1979	1979	6	19	19	41	76	58.5	26.5	557.5
6/20/1979	1979	6	20	20	45	81	63	31	588.5
6/21/1979	1979	6	21	21	51	85	68	36	624.5
6/22/1979	1979	6	22	22	57	87	72	40	664.5
6/23/1979	1979	6	23	23	53	85	69	37	701.5
6/24/1979	1979	6	24	24	55	84	69.5	37.5	739
6/25/1979	1979	6	25	25	53	87	70	38	777

6/26/1979	1979	6	26	26	58	90	74	42	819
6/27/1979	1979	6	27	27	59	92	75.5	43.5	862.5
6/28/1979	1979	6	28	28	57	91	74	42	904.5
6/29/1979	1979	6	29	29	57	91	74	42	946.5
6/30/1979	1979	6	30	30	55	87	71	39	985.5
7/1/1979	1979	7	1	31	50	85	67.5	35.5	1021
7/2/1979	1979	7	2	32	55	79	67	35	1056
7/3/1979	1979	7	3	33	55	89	72	40	1096
7/4/1979	1979	7	4	34	50	79	64.5	32.5	1128.5
7/5/1979	1979	7	5	35	51	81	66	34	1162.5
7/6/1979	1979	7	6	36	61	82	71.5	39.5	1202
7/7/1979	1979	7	7	37	56	94	75	43	1245
7/8/1979	1979	7	8	38	53	90	71.5	39.5	1284.5
7/9/1979	1979	7	9	39	54	92	73	41	1325.5
7/10/1979	1979	7	10	40	55	89	72	40	1365.5
7/11/1979	1979	7	11	41	55	90	72.5	40.5	1406
7/12/1979	1979	7	12	42	56	94	75	43	1449
7/13/1979	1979	7	13	43	60	95	77.5	45.5	1494.5
7/14/1979	1979	7	14	44	57	94	75.5	43.5	1538
7/15/1979	1979	7	15	45	59	95	77	45	1583
7/16/1979	1979	7	16	46	60	96	78	46	1629
7/17/1979	1979	7	17	47	61	92	76.5	44.5	1673.5
7/18/1979	1979	7	18	48	59	90	74.5	42.5	1716
7/19/1979	1979	7	19	49	56	77	66.5	34.5	1750.5
7/20/1979	1979	7	20	50	54	71	62.5	30.5	1781
7/21/1979	1979	7	21	51	50	74	62	30	1811
7/22/1979	1979	7	22	52	50	74	62	30	1841
7/23/1979	1979	7	23	53	57	76	66.5	34.5	1875.5
7/24/1979	1979	7	24	54	58	78	68	36	1911.5
7/25/1979	1979	7	25	55	55	85	70	38	1949.5
7/26/1979	1979	7	26	56	54	86	70	38	1987.5
7/27/1979	1979	7	27	57	57	87	72	40	2027.5
7/28/1979	1979	7	28	58	58	88	73	41	2068.5
7/29/1979	1979	7	29	59	60	89	74.5	42.5	2111
7/30/1979	1979	7	30	60	58	91	74.5	42.5	2153.5
7/31/1979	1979	7	31	61	56	83	69.5	37.5	2191
8/1/1979	1979	8	1	62	50	88	69	37	2228
8/2/1979	1979	8	2	63	55	89	72	40	2268
8/3/1979	1979	8	3	64	63	88	75.5	43.5	2311.5
8/4/1979	1979	8	4	65	57	88	72.5	40.5	2352
8/5/1979	1979	8	5	66	60	86	73	41	2393
8/6/1979	1979	8	6	67	56	84	70	38	2431
8/7/1979	1979	8	7	68	57	86	71.5	39.5	2470.5
8/8/1979	1979	8	8	69	54	78	66	34	2504.5
8/9/1979	1979	8	9	70	56	84	70	38	2542.5
8/10/1979	1979	8	10	71	58	84	71	39	2581.5
8/11/1979	1979	8	11	72	52	82	67	35	2616.5
8/12/1979	1979	8	12	73	51	75	63	31	2647.5
8/13/1979	1979	8	13	74	54	77	65.5	33.5	2681
8/14/1979	1979	8	14	75	54	72	63	31	2712
8/15/1979	1979	8	15	76	52	70	61	29	2741
8/16/1979	1979	8	16	77	45	70	57.5	25.5	2766.5
8/17/1979	1979	8	17	78	52	71	61.5	29.5	2796
8/18/1979	1979	8	18	79	47	70	58.5	26.5	2822.5
8/19/1979	1979	8	19	80	46	69	57.5	25.5	2848
8/20/1979	1979	8	20	81	44	69	56.5	24.5	2872.5
8/21/1979	1979	8	21	82	50	70	60	28	2900.5
8/22/1979	1979	8	22	83	49	70	59.5	27.5	2928
8/23/1979	1979	8	23	84	49	80	64.5	32.5	2960.5
8/24/1979	1979	8	24	85	51	81	66	34	2994.5
8/25/1979	1979	8	25	86	51	81	66	34	3028.5
8/26/1979	1979	8	26	87	53	82	67.5	35.5	3064
8/27/1979	1979	8	27	88	57	83	70	38	3102
8/28/1979	1979	8	28	89	50	82	66	34	3136
8/29/1979	1979	8	29	90	55	83	69	37	3173
8/30/1979	1979	8	30	91	56	83	69.5	37.5	3210.5
8/31/1979	1979	8	31	92	55	79	67	35	3245.5
9/1/1979	1979	9	1	93	55	83	69	37	3282.5
9/2/1979	1979	9	2	94	54	82	68	36	3318.5
9/3/1979	1979	9	3	95	53	81	67	35	3353.5
9/4/1979	1979	9	4	96	57	84	70.5	38.5	3392
9/5/1979	1979	9	5	97	56	83	69.5	37.5	3429.5
9/6/1979	1979	9	6	98	52	84	68	36	3465.5
9/7/1979	1979	9	7	99	56	85	70.5	38.5	3504
9/8/1979	1979	9	8	100	57	82	69.5	37.5	3541.5
9/9/1979	1979	9	9	101	55	81	68	36	3577.5
9/10/1979	1979	9	10	102	51	78	64.5	32.5	3610
9/11/1979	1979	9	11	103	57	77	67	35	3645
9/12/1979	1979	9	12	104	51	72	61.5	29.5	3674.5
9/13/1979	1979	9	13	105	50	76	63	31	3705.5
9/14/1979	1979	9	14	106	51	70	60.5	28.5	3734
9/15/1979	1979	9	15	107	50	69	59.5	27.5	3761.5
9/16/1979	1979	9	16	108	40	69	54.5	22.5	3784
9/17/1979	1979	9	17	109	45	67	56	24	3808
9/18/1979	1979	9	18	110	45	68	56.5	24.5	3832.5
9/19/1979	1979	9	19	111	41	71	56	24	3856.5
9/20/1979	1979	9	20	112	46	74	60	28	3884.5
9/21/1979	1979	9	21	113	48	72	60	28	3912.5
9/22/1979	1979	9	22	114	43	75	59	27	3939.5
9/23/1979	1979	9	23	115	49	76	62.5	30.5	3970
9/24/1979	1979	9	24	116	50	76	63	31	4001
9/25/1979	1979	9	25	117	51	79	65	33	4034
9/26/1979	1979	9	26	118	48	76	62	30	4064

9/27/1979	1979	9	27	119	52	74	63	31	4095
9/28/1979	1979	9	28	120	49	75	62	30	4125
9/29/1979	1979	9	29	121	48	75	61.5	29.5	4154.5
9/30/1979	1979	9	30	122	50	75	62.5	30.5	4185
10/1/1979	1979	10	1	123	51	77	64	32	4217
10/2/1979	1979	10	2	124	49	75	62	30	4247
10/3/1979	1979	10	3	125	48	74	61	29	4276
10/4/1979	1979	10	4	126	43	76	59.5	27.5	4303.5
10/5/1979	1979	10	5	127	46	76	61	29	4332.5
10/6/1979	1979	10	6	128	44	78	61	29	4361.5
10/7/1979	1979	10	7	129	43	76	59.5	27.5	4389
10/8/1979	1979	10	8	130	42	74	58	26	4415
10/9/1979	1979	10	9	131	45	72	58.5	26.5	4441.5
10/10/1979	1979	10	10	132	40	75	57.5	25.5	4467
10/11/1979	1979	10	11	133	45	76	60.5	28.5	4495.5
10/12/1979	1979	10	12	134	46	75	60.5	28.5	4524
10/13/1979	1979	10	13	135	41	72	56.5	24.5	4548.5
10/14/1979	1979	10	14	136	44	70	57	25	4573.5
10/15/1979	1979	10	15	137	39	67	53	21	4594.5
10/16/1979	1979	10	16	138	38	70	54	22	4616.5
10/17/1979	1979	10	17	139	39	65	52	20	4636.5
10/18/1979	1979	10	18	140	47	66	56.5	24.5	4661
10/19/1979	1979	10	19	141	40	64	52	20	4681
10/20/1979	1979	10	20	142	39	60	49.5	17.5	4698.5
10/21/1979	1979	10	21	143	24	60	42	10	4708.5
10/22/1979	1979	10	22	144	30	61	45.5	13.5	4722
10/23/1979	1979	10	23	145	39	66	52.5	20.5	4742.5
10/24/1979	1979	10	24	146	40	69	54.5	22.5	4765
10/25/1979	1979	10	25	147	40	69	54.5	22.5	4787.5
10/26/1979	1979	10	26	148	39	68	53.5	21.5	4809
10/27/1979	1979	10	27	149	34	67	50.5	18.5	4827.5
10/28/1979	1979	10	28	150	40	61	50.5	18.5	4846
10/29/1979	1979	10	29	151	25	43	34	2	4848
10/30/1979	1979	10	30	152	17	41	29	-3	4845
10/31/1979	1979	10	31	153	20	42.5	31.25	-0.75	4844.25
11/1/1979	1979	11	1	154	26	44	35	3	4847.25
11/2/1979	1979	11	2	155	22	43	32.5	0.5	4847.75
11/3/1979	1979	11	3	156	21	43	32	0	4847.75
11/4/1979	1979	11	4	157	23	43	33	1	4848.75
11/5/1979	1979	11	5	158	20	43	31.5	-0.5	4848.25
11/6/1979	1979	11	6	159	25	43	34	2	4850.25
11/7/1979	1979	11	7	160	25	43	34	2	4852.25
11/8/1979	1979	11	8	161	36	49	42.5	10.5	4862.75
11/9/1979	1979	11	9	162	25	44	34.5	2.5	4865.25
11/10/1979	1979	11	10	163	31	41	36	4	4869.25
11/11/1979	1979	11	11	164	29	41	35	3	4872.25
11/12/1979	1979	11	12	165	25	42	33.5	1.5	4873.75
11/13/1979	1979	11	13	166	20	43	31.5	-0.5	4873.25
11/14/1979	1979	11	14	167	20	45	32.5	0.5	4873.75
11/15/1979	1979	11	15	168	23	43	33	1	4874.75
11/16/1979	1979	11	16	169	24	43	33.5	1.5	4876.25
11/17/1979	1979	11	17	170	23	43	33	1	4877.25
11/18/1979	1979	11	18	171	24	51	37.5	5.5	4882.75
11/19/1979	1979	11	19	172	23	49	36	4	4886.75
11/20/1979	1979	11	20	173	22	48	35	3	4889.75
11/21/1979	1979	11	21	174	20	47	33.5	1.5	4891.25
11/22/1979	1979	11	22	175	26	49	37.5	5.5	4896.75
11/23/1979	1979	11	23	176	18	42	30	-2	4894.75
11/24/1979	1979	11	24	177	17	40	28.5	-3.5	4891.25
11/25/1979	1979	11	25	178	15	40	27.5	-4.5	4886.75
11/26/1979	1979	11	26	179	14	40	27	-5	4881.75
11/27/1979	1979	11	27	180	9	40	24.5	-7.5	4874.25
11/28/1979	1979	11	28	181	11	34	22.5	-9.5	4864.75
11/29/1979	1979	11	29	182	10	34	22	-10	4854.75
11/30/1979	1979	11	30	183	10	32	21	-11	4843.75
12/1/1979	1979	12	1	184	9	43	26	-6	4837.75
12/2/1979	1979	12	2	185	8	43	25.5	-6.5	4831.25
12/3/1979	1979	12	3	186	12	43	27.5	-4.5	4826.75
12/4/1979	1979	12	4	187	13	43	28	-4	4822.75
12/5/1979	1979	12	5	188	10	43	26.5	-5.5	4817.25
12/6/1979	1979	12	6	189	20	43	31.5	-0.5	4816.75
12/7/1979	1979	12	7	190	23	43	33	1	4817.75
12/8/1979	1979	12	8	191	23	43	33	1	4818.75
12/9/1979	1979	12	9	192	15	43	29	-3	4815.75
12/10/1979	1979	12	10	193	15	43	29	-3	4812.75
12/11/1979	1979	12	11	194	12	43	27.5	-4.5	4808.25
12/12/1979	1979	12	12	195	25	49	37	5	4813.25
12/13/1979	1979	12	13	196	23	50	36.5	4.5	4817.75
12/14/1979	1979	12	14	197	20	53	36.5	4.5	4822.25
12/15/1979	1979	12	15	198	27	53	40	8	4830.25
12/16/1979	1979	12	16	199	29	55	42	10	4840.25
12/17/1979	1979	12	17	200	20	55	37.5	5.5	4845.75
12/18/1979	1979	12	18	201	18	55	36.5	4.5	4850.25
12/19/1979	1979	12	19	202	18	55	36.5	4.5	4854.75
12/20/1979	1979	12	20	203	15	55	35	3	4857.75
12/21/1979	1979	12	21	204	16	45	30.5	-1.5	4856.25
12/22/1979	1979	12	22	205	18	46	32	0	4856.25
12/23/1979	1979	12	23	206	18	49	33.5	1.5	4857.75
12/24/1979	1979	12	24	207	19	40	29.5	-2.5	4855.25
12/25/1979	1979	12	25	208	19	40	29.5	-2.5	4852.75
12/26/1979	1979	12	26	209	19	39	29	-3	4849.75
12/27/1979	1979	12	27	210	18	39	28.5	-3.5	4846.25
12/28/1979	1979	12	28	211	12	39	25.5	-6.5	4839.75

12/29/1979	1979	12	29	212	14	40	27	-5	4834.75
12/30/1979	1979	12	30	213	15	42	28.5	-3.5	4831.25
12/31/1979	1979	12	31	214	8	36	22	-10	4821.25
1/1/1980	1980	1	1	215	8	30	19	-13	4808.25
1/2/1980	1980	1	2	216	7	30	18.5	-13.5	4794.75
1/3/1980	1980	1	3	217	7	29	18	-14	4780.75
1/4/1980	1980	1	4	218	11	28	19.5	-12.5	4768.25
1/5/1980	1980	1	5	219	15	30	60.5	28.5	4796.75
1/6/1980	1980	1	6	220	14	29	60.5	28.5	4825.25
1/7/1980	1980	1	7	221	14	30	22	-10	4815.25
1/8/1980	1980	1	8	222	25	39	32	0	4815.25
1/9/1980	1980	1	9	223	13	40	26.5	-5.5	4809.75
1/10/1980	1980	1	10	224	13	40	26.5	-5.5	4804.25
1/11/1980	1980	1	11	225	17	37	27	-5	4799.25
1/12/1980	1980	1	12	226	10	38	24	-8	4791.25
1/13/1980	1980	1	13	227	15	39	27	-5	4786.25
1/14/1980	1980	1	14	228	18	39	28.5	-3.5	4782.75
1/15/1980	1980	1	15	229	20	40	30	-2	4780.75
1/16/1980	1980	1	16	230	20	40	30	-2	4778.75
1/17/1980	1980	1	17	231	18	42	30	-2	4776.75
1/18/1980	1980	1	18	232	19	42	30.5	-1.5	4775.25
1/19/1980	1980	1	19	233	15	40	27.5	-4.5	4770.75
1/20/1980	1980	1	20	234	18	43	30.5	-1.5	4769.25
1/21/1980	1980	1	21	235	19	40	29.5	-2.5	4766.75
1/22/1980	1980	1	22	236	15	39	27	-5	4761.75
1/23/1980	1980	1	23	237	19	36	27.5	-4.5	4757.25
1/24/1980	1980	1	24	238	16	37	26.5	-5.5	4751.75
1/25/1980	1980	1	25	239	15	36	25.5	-6.5	4745.25
1/26/1980	1980	1	26	240	19	40	29.5	-2.5	4742.75
1/27/1980	1980	1	27	241	12	39	25.5	-6.5	4736.25
1/28/1980	1980	1	28	242	19	41	30	-2	4734.25
1/29/1980	1980	1	29	243	18	42	30	-2	4732.25
1/30/1980	1980	1	30	244	19	46	32.5	0.5	4732.75
1/31/1980	1980	1	31	245	15	45	30	-2	4730.75
2/1/1980	1980	2	1	246	24	44	34	2	4732.75
2/2/1980	1980	2	2	247	23	41	32	0	4732.75
2/3/1980	1980	2	3	248	25	48	36.5	4.5	4737.25
2/4/1980	1980	2	4	249	20	50	35	3	4740.25
2/5/1980	1980	2	5	250	20	50	35	3	4743.25
2/6/1980	1980	2	6	251	25	48	36.5	4.5	4747.75
2/7/1980	1980	2	7	252	26	49	37.5	5.5	4753.25
2/8/1980	1980	2	8	253	16	39	27.5	-4.5	4748.75
2/9/1980	1980	2	9	254	4	28	16	-16	4732.75
2/10/1980	1980	2	10	255	-9	30	10.5	-21.5	4711.25
2/11/1980	1980	2	11	256	9	30	19.5	-12.5	4698.75
2/12/1980	1980	2	12	257	10	45	27.5	-4.5	4694.25
2/13/1980	1980	2	13	258	12	44	28	-4	4690.25
2/14/1980	1980	2	14	259	18	46	32	0	4690.25
2/15/1980	1980	2	15	260	15	44	29.5	-2.5	4687.75
2/16/1980	1980	2	16	261	15	44	29.5	-2.5	4685.25
2/17/1980	1980	2	17	262	18	45	31.5	-0.5	4684.75
2/18/1980	1980	2	18	263	20	44	32	0	4684.75
2/19/1980	1980	2	19	264	19	42	30.5	-1.5	4683.25
2/20/1980	1980	2	20	265	12	44	28	-4	4679.25
2/21/1980	1980	2	21	266	11	43	27	-5	4674.25
2/22/1980	1980	2	22	267	12	42	27	-5	4669.25
2/23/1980	1980	2	23	268	24	42	33	1	4670.25
2/24/1980	1980	2	24	269	30	42	36	4	4674.25
2/25/1980	1980	2	25	270	20	49	34.5	2.5	4676.75
2/26/1980	1980	2	26	271	19	50	34.5	2.5	4679.25
2/27/1980	1980	2	27	272	25	53	39	7	4686.25
2/28/1980	1980	2	28	273	27	60	43.5	11.5	4697.75
2/29/1980	1980	2	29	274	30	61	45.5	13.5	4711.25
3/1/1980	1980	3	1	275	23	59	41	9	4720.25
3/2/1980	1980	3	2	276	23	56	39.5	7.5	4727.75
3/3/1980	1980	3	3	277	24	55	39.5	7.5	4735.25
3/4/1980	1980	3	4	278	29	50	39.5	7.5	4742.75
3/5/1980	1980	3	5	279	26	48	37	5	4747.75
3/6/1980	1980	3	6	280	29	47	38	6	4753.75
3/7/1980	1980	3	7	281	19	48	33.5	1.5	4755.25
3/8/1980	1980	3	8	282	20	46	33	1	4756.25
3/9/1980	1980	3	9	283	20	48	34	2	4758.25
3/10/1980	1980	3	10	284	24	49	36.5	4.5	4762.75
3/11/1980	1980	3	11	285	30	49	39.5	7.5	4770.25
3/12/1980	1980	3	12	286	29	48	38.5	6.5	4776.75
3/13/1980	1980	3	13	287	21	54	37.5	5.5	4782.25
3/14/1980	1980	3	14	288	27	60	43.5	11.5	4793.75
3/15/1980	1980	3	15	289	29	59	44	12	4805.75
3/16/1980	1980	3	16	290	19	56	37.5	5.5	4811.25
3/17/1980	1980	3	17	291	10	40	25	-7	4804.25
3/18/1980	1980	3	18	292	11	41	26	-6	4798.25
3/19/1980	1980	3	19	293	12	55	33.5	1.5	4799.75
3/20/1980	1980	3	20	294	29	54	41.5	9.5	4809.25
3/21/1980	1980	3	21	295	24	52	38	6	4815.25
3/22/1980	1980	3	22	296	29	59	44	12	4827.25
3/23/1980	1980	3	23	297	20	57	38.5	6.5	4833.75
3/24/1980	1980	3	24	298	23	47	35	3	4836.75
3/25/1980	1980	3	25	299	24	50	37	5	4841.75
3/26/1980	1980	3	26	300	29	49	39	7	4848.75
3/27/1980	1980	3	27	301	24	45	34.5	2.5	4851.25
3/28/1980	1980	3	28	302	27	40	33.5	1.5	4852.75
3/29/1980	1980	3	29	303	24	40	32	0	4852.75
3/30/1980	1980	3	30	304	23	43	33	1	4853.75

3/31/1980	1980	3	31	305	19	49	34	2	4855.75
4/1/1980	1980	4	1	306	13	49	31	-1	4854.75
4/2/1980	1980	4	2	307	18	48	33	1	4855.75
4/3/1980	1980	4	3	308	19	49	34	2	4857.75
4/4/1980	1980	4	4	309	20	50	35	3	4860.75
4/5/1980	1980	4	5	310	22	56	39	7	4867.75
4/6/1980	1980	4	6	311	28	59	43.5	11.5	4879.25
4/7/1980	1980	4	7	312	30	58	44	12	4891.25
4/8/1980	1980	4	8	313	23	57	40	8	4899.25
4/9/1980	1980	4	9	314	20	59	39.5	7.5	4906.75
4/10/1980	1980	4	10	315	30	59	44.5	12.5	4919.25
4/11/1980	1980	4	11	316	24	60	42	10	4929.25
4/12/1980	1980	4	12	317	24	59	41.5	9.5	4938.75
4/13/1980	1980	4	13	318	20	49	34.5	2.5	4941.25
4/14/1980	1980	4	14	319	25	50	37.5	5.5	4946.75
4/15/1980	1980	4	15	320	32	59	45.5	13.5	4960.25
4/16/1980	1980	4	16	321	25	58	41.5	9.5	4969.75
4/17/1980	1980	4	17	322	32	60	46	14	4983.75
4/18/1980	1980	4	18	323	35	60	47.5	15.5	4999.25
4/19/1980	1980	4	19	324	41	69	55	23	5022.25
4/20/1980	1980	4	20	325	44	69	56.5	24.5	5046.75
4/21/1980	1980	4	21	326	43	65	54	22	5068.75
4/22/1980	1980	4	22	327	37	67	52	20	5088.75
4/23/1980	1980	4	23	328	38	65	51.5	19.5	5108.25
4/24/1980	1980	4	24	329	25	64	44.5	12.5	5120.75
4/25/1980	1980	4	25	330	24	48	36	4	5124.75
4/26/1980	1980	4	26	331	31	59	45	13	5137.75
4/27/1980	1980	4	27	332	34	61	47.5	15.5	5153.25
4/28/1980	1980	4	28	333	35	66	50.5	18.5	5171.75
4/29/1980	1980	4	29	334	46	69	57.5	25.5	5197.25
4/30/1980	1980	4	30	335	30	55	42.5	10.5	5207.75
5/1/1980	1980	5	1	336	33	60	46.5	14.5	5222.25
5/2/1980	1980	5	2	337	32	59	45.5	13.5	5235.75
5/3/1980	1980	5	3	338	34	58	46	14	5249.75
5/4/1980	1980	5	4	339	35	69	52	20	5269.75
5/5/1980	1980	5	5	340	45	55	50	18	5287.75
5/6/1980	1980	5	6	341	37	66	51.5	19.5	5307.25
5/7/1980	1980	5	7	342	26	63	44.5	12.5	5319.75
5/8/1980	1980	5	8	343	37	67	52	20	5339.75
5/9/1980	1980	5	9	344	39	65	52	20	5359.75
5/10/1980	1980	5	10	345	47	70	58.5	26.5	5386.25
5/11/1980	1980	5	11	346	45	67	56	24	5410.25
5/12/1980	1980	5	12	347	29	59	44	12	5422.25
5/13/1980	1980	5	13	348	30	64	47	15	5437.25
5/14/1980	1980	5	14	349	32	65	48.5	16.5	5453.75
5/15/1980	1980	5	15	350	35	64	49.5	17.5	5471.25
5/16/1980	1980	5	16	351	36	60	48	16	5487.25
5/17/1980	1980	5	17	352	45	65	55	23	5510.25
5/18/1980	1980	5	18	353	40	69	54.5	22.5	5532.75
5/19/1980	1980	5	19	354	42	71	56.5	24.5	5557.25
5/20/1980	1980	5	20	355	45	74	59.5	27.5	5584.75
5/21/1980	1980	5	21	356	46	79	62.5	30.5	5615.25
5/22/1980	1980	5	22	357	50	76	63	31	5646.25
5/23/1980	1980	5	23	358	40	77	58.5	26.5	5672.75
5/24/1980	1980	5	24	359	45	69	57	25	5697.75
5/25/1980	1980	5	25	360	28	67	47.5	15.5	5713.25
5/26/1980	1980	5	26	361	35	74	54.5	22.5	5735.75
5/27/1980	1980	5	27	362	40	75	57.5	25.5	5761.25
5/28/1980	1980	5	28	363	38	74	56	24	5785.25
5/29/1980	1980	5	29	364	40	75	57.5	25.5	5810.75
5/30/1980	1980	5	30	365	42	76	59	27	5837.75
5/31/1980	1980	5	31	366	40	76	58	26	5863.75
6/1/1980	1980	6	1	1	40	75	57.5	25.5	25.5
6/2/1980	1980	6	2	2	36	76	56	24	49.5
6/3/1980	1980	6	3	3	39	79	59	27	76.5
6/4/1980	1980	6	4	4	43	80	61.5	29.5	106
6/5/1980	1980	6	5	5	44	81	62.5	30.5	136.5
6/6/1980	1980	6	6	6	45	82	63.5	31.5	168
6/7/1980	1980	6	7	7	52	81	66.5	34.5	202.5
6/8/1980	1980	6	8	8	48	85	66.5	34.5	237
6/9/1980	1980	6	9	9	49	84	66.5	34.5	271.5
6/10/1980	1980	6	10	10	51	85	68	36	307.5
6/11/1980	1980	6	11	11	50	84	67	35	342.5
6/12/1980	1980	6	12	12	49	86	67.5	35.5	378
6/13/1980	1980	6	13	13	48	87	67.5	35.5	413.5
6/14/1980	1980	6	14	14	50	85	67.5	35.5	449
6/15/1980	1980	6	15	15	48	85	66.5	34.5	483.5
6/16/1980	1980	6	16	16	47	86	66.5	34.5	518
6/17/1980	1980	6	17	17	52	90	71	39	557
6/18/1980	1980	6	18	18	58	88	73	41	598
6/19/1980	1980	6	19	19	56	87	71.5	39.5	637.5
6/20/1980	1980	6	20	20	57	85	71	39	676.5
6/21/1980	1980	6	21	21	54	84	69	37	713.5
6/22/1980	1980	6	22	22	53	83	68	36	749.5
6/23/1980	1980	6	23	23	53	82	67.5	35.5	785
6/24/1980	1980	6	24	24	52	87	69.5	37.5	822.5
6/25/1980	1980	6	25	25	55	88	71.5	39.5	862
6/26/1980	1980	6	26	26	56	89	72.5	40.5	902.5
6/27/1980	1980	6	27	27	59	87	73	41	943.5
6/28/1980	1980	6	28	28	60	90	75	43	986.5
6/29/1980	1980	6	29	29	62	89	75.5	43.5	1030
6/30/1980	1980	6	30	30	60	92	76	44	1074
7/1/1980	1980	7	1	31	57	90	73.5	41.5	1115.5

7/2/1980	1980	7	2	32	52	85	68.5	36.5	1152
7/3/1980	1980	7	3	33	54	88	71	39	1191
7/4/1980	1980	7	4	34	58	89	73.5	41.5	1232.5
7/5/1980	1980	7	5	35	58	95	76.5	44.5	1277
7/6/1980	1980	7	6	36	63	91	77	45	1322
7/7/1980	1980	7	7	37	60	87	73.5	41.5	1363.5
7/8/1980	1980	7	8	38	53	85	69	37	1400.5
7/9/1980	1980	7	9	39	54	88	71	39	1439.5
7/10/1980	1980	7	10	40	59	90	74.5	42.5	1482
7/11/1980	1980	7	11	41	58	91	74.5	42.5	1524.5
7/12/1980	1980	7	12	42	57	89	73	41	1565.5
7/13/1980	1980	7	13	43	55	80	67.5	35.5	1601
7/14/1980	1980	7	14	44	52	79	65.5	33.5	1634.5
7/15/1980	1980	7	15	45	56	83	69.5	37.5	1672
7/16/1980	1980	7	16	46	55	89	72	40	1712
7/17/1980	1980	7	17	47	56	89	72.5	40.5	1752.5
7/18/1980	1980	7	18	48	57	92	74.5	42.5	1795
7/19/1980	1980	7	19	49	58	94	76	44	1839
7/20/1980	1980	7	20	50	65	92	78.5	46.5	1885.5
7/21/1980	1980	7	21	51	59	88	73.5	41.5	1927
7/22/1980	1980	7	22	52	54	80	67	35	1962
7/23/1980	1980	7	23	53	57	82	69.5	37.5	1999.5
7/24/1980	1980	7	24	54	53	83	68	36	2035.5
7/25/1980	1980	7	25	55	55	85	70	38	2073.5
7/26/1980	1980	7	26	56	56	90	73	41	2114.5
7/27/1980	1980	7	27	57	57	90	73.5	41.5	2156
7/28/1980	1980	7	28	58	58	91	74.5	42.5	2198.5
7/29/1980	1980	7	29	59	63	89	76	44	2242.5
7/30/1980	1980	7	30	60	63	87	75	43	2285.5
7/31/1980	1980	7	31	61	55	88	71.5	39.5	2325
8/1/1980	1980	8	1	62	64	86	75	43	2368
8/2/1980	1980	8	2	63	61	86	73.5	41.5	2409.5
8/3/1980	1980	8	3	64	58	83	70.5	38.5	2448
8/4/1980	1980	8	4	65	61	89	75	43	2491
8/5/1980	1980	8	5	66	57	81	69	37	2528
8/6/1980	1980	8	6	67	59	80	69.5	37.5	2565.5
8/7/1980	1980	8	7	68	58	85	71.5	39.5	2605
8/8/1980	1980	8	8	69	57	88	72.5	40.5	2645.5
8/9/1980	1980	8	9	70	54	85	69.5	37.5	2683
8/10/1980	1980	8	10	71	56	88	72	40	2723
8/11/1980	1980	8	11	72	58	82	70	38	2761
8/12/1980	1980	8	12	73	52	81	66.5	34.5	2795.5
8/13/1980	1980	8	13	74	53	80	66.5	34.5	2830
8/14/1980	1980	8	14	75	54	78	66	34	2864
8/15/1980	1980	8	15	76	55	78	66.5	34.5	2898.5
8/16/1980	1980	8	16	77	54	79	66.5	34.5	2933
8/17/1980	1980	8	17	78	54	80	67	35	2968
8/18/1980	1980	8	18	79	55	80	51.6	19.6	2987.6
8/19/1980	1980	8	19	80	54	80	67	35	3022.6
8/20/1980	1980	8	20	81	49	79	64	32	3054.6
8/21/1980	1980	8	21	82	49	82	65.5	33.5	3088.1
8/22/1980	1980	8	22	83	54	82	68	36	3124.1
8/23/1980	1980	8	23	84	59	77	68	36	3160.1
8/24/1980	1980	8	24	85	55	69	62	30	3190.1
8/25/1980	1980	8	25	86	52	76	64	32	3222.1
8/26/1980	1980	8	26	87	51	75	63	31	3253.1
8/27/1980	1980	8	27	88	49	79	64	32	3285.1
8/28/1980	1980	8	28	89	53	79	66	34	3319.1
8/29/1980	1980	8	29	90	54	79	66.5	34.5	3353.6
8/30/1980	1980	8	30	91	56	79	67.5	35.5	3389.1
8/31/1980	1980	8	31	92	47	76	61.5	29.5	3418.6
9/1/1980	1980	9	1	93	49	79	64	32	3450.6
9/2/1980	1980	9	2	94	51	80	65.5	33.5	3484.1
9/3/1980	1980	9	3	95	50	81	65.5	33.5	3517.6
9/4/1980	1980	9	4	96	52	81	66.5	34.5	3552.1
9/5/1980	1980	9	5	97	57	76	66.5	34.5	3586.6
9/6/1980	1980	9	6	98	55	72	63.5	31.5	3618.1
9/7/1980	1980	9	7	99	53	73	63	31	3649.1
9/8/1980	1980	9	8	100	52	72	62	30	3679.1
9/9/1980	1980	9	9	101	54	68	61	29	3708.1
9/10/1980	1980	9	10	102	52	69	60.5	28.5	3736.6
9/11/1980	1980	9	11	103	51	68	59.5	27.5	3764.1
9/12/1980	1980	9	12	104	48	70	59	27	3791.1
9/13/1980	1980	9	13	105	47	72	59.5	27.5	3818.6
9/14/1980	1980	9	14	106	49	73	61	29	3847.6
9/15/1980	1980	9	15	107	48	74	61	29	3876.6
9/16/1980	1980	9	16	108	51	76	63.5	31.5	3908.1
9/17/1980	1980	9	17	109	47	77	62	30	3938.1
9/18/1980	1980	9	18	110	49	79	64	32	3970.1
9/19/1980	1980	9	19	111	53	78	65.5	33.5	4003.6
9/20/1980	1980	9	20	112	50	77	63.5	31.5	4035.1
9/21/1980	1980	9	21	113	44	72	58	26	4061.1
9/22/1980	1980	9	22	114	43	77	60	28	4089.1
9/23/1980	1980	9	23	115	44	76	60	28	4117.1
9/24/1980	1980	9	24	116	45	74	59.5	27.5	4144.6
9/25/1980	1980	9	25	117	49	68	58.5	26.5	4171.1
9/26/1980	1980	9	26	118	43	71	57	25	4196.1
9/27/1980	1980	9	27	119	47	76	61.5	29.5	4225.6
9/28/1980	1980	9	28	120	47	76	61.5	29.5	4255.1
9/29/1980	1980	9	29	121	49	79	64	32	4287.1
9/30/1980	1980	9	30	122	48	78	63	31	4318.1
10/1/1980	1980	10	1	123	50	78	64	32	4350.1
10/2/1980	1980	10	2	124	43	79	61	29	4379.1

10/3/1980	1980	10	3	125	42	75	58.5	26.5	4405.6
10/4/1980	1980	10	4	126	44	76	60	28	4433.6
10/5/1980	1980	10	5	127	45	75	60	28	4461.6
10/6/1980	1980	10	6	128	47	70	58.5	26.5	4488.1
10/7/1980	1980	10	7	129	41	72	56.5	24.5	4512.6
10/8/1980	1980	10	8	130	44	72	58	26	4538.6
10/9/1980	1980	10	9	131	45	76	60.5	28.5	4567.1
10/10/1980	1980	10	10	132	40	76	58	26	4593.1
10/11/1980	1980	10	11	133	39	60	49.5	17.5	4610.6
10/12/1980	1980	10	12	134	40	61	50.5	18.5	4629.1
10/13/1980	1980	10	13	135	40	69	54.5	22.5	4651.6
10/14/1980	1980	10	14	136	41	64	52.5	20.5	4672.1
10/15/1980	1980	10	15	137	32	62	47	15	4687.1
10/16/1980	1980	10	16	138	29	52	40.5	8.5	4695.6
10/17/1980	1980	10	17	139	26	47	36.5	4.5	4700.1
10/18/1980	1980	10	18	140	25	50	37.5	5.5	4705.6
10/19/1980	1980	10	19	141	26	55	40.5	8.5	4714.1
10/20/1980	1980	10	20	142	29	56	42.5	10.5	4724.6
10/21/1980	1980	10	21	143	31	57	44	12	4736.6
10/22/1980	1980	10	22	144	30	56	43	11	4747.6
10/23/1980	1980	10	23	145	29	50	39.5	7.5	4755.1
10/24/1980	1980	10	24	146	23	53	38	6	4761.1
10/25/1980	1980	10	25	147	28	67	47.5	15.5	4776.6
10/26/1980	1980	10	26	148	29	63	46	14	4790.6
10/27/1980	1980	10	27	149	29	39	34	2	4792.6
10/28/1980	1980	10	28	150	25	38	31.5	-0.5	4792.1
10/29/1980	1980	10	29	151	21	48	34.5	2.5	4794.6
10/30/1980	1980	10	30	152	25	58	41.5	9.5	4804.1
10/31/1980	1980	10	31	153	32	57	44.5	12.5	4816.6
11/1/1980	1980	11	1	154	28	56	42	10	4826.6
11/2/1980	1980	11	2	155	29	57	43	11	4837.6
11/3/1980	1980	11	3	156	31	59	45	13	4850.6
11/4/1980	1980	11	4	157	32	60	46	14	4864.6
11/5/1980	1980	11	5	158	34	60	47	15	4879.6
11/6/1980	1980	11	6	159	38	61	49.5	17.5	4897.1
11/7/1980	1980	11	7	160	36	63	49.5	17.5	4914.6
11/8/1980	1980	11	8	161	37	66	51.5	19.5	4934.1
11/9/1980	1980	11	9	162	36	66	51	19	4953.1
11/10/1980	1980	11	10	163	39	69	54	22	4975.1
11/11/1980	1980	11	11	164	38	69	53.5	21.5	4996.6
11/12/1980	1980	11	12	165	36	68	52	20	5016.6
11/13/1980	1980	11	13	166	37	65	51	19	5035.6
11/14/1980	1980	11	14	167	38	61	49.5	17.5	5053.1
11/15/1980	1980	11	15	168	15	61	38	6	5059.1
11/16/1980	1980	11	16	169	11	48	29.5	-2.5	5056.6
11/17/1980	1980	11	17	170	17	37	27	-5	5051.6
11/18/1980	1980	11	18	171	10	35	22.5	-9.5	5042.1
11/19/1980	1980	11	19	172	11	34	22.5	-9.5	5032.6
11/20/1980	1980	11	20	173	12	40	26	-6	5026.6
11/21/1980	1980	11	21	174	11	44	27.5	-4.5	5022.1
11/22/1980	1980	11	22	175	17	45	31	-1	5021.1
11/23/1980	1980	11	23	176	19	46	32.5	0.5	5021.6
11/24/1980	1980	11	24	177	16	45	30.5	-1.5	5020.1
11/25/1980	1980	11	25	178	14	43	28.5	-3.5	5016.6
11/26/1980	1980	11	26	179	20	42	31	-1	5015.6
11/27/1980	1980	11	27	180	20	40	30	-2	5013.6
11/28/1980	1980	11	28	181	15	39	27	-5	5008.6
11/29/1980	1980	11	29	182	14	28	21	-11	4997.6
11/30/1980	1980	11	30	183	14	30	22	-10	4987.6
12/1/1980	1980	12	1	184	15	50	32.5	0.5	4988.1
12/2/1980	1980	12	2	185	27	56	41.5	9.5	4997.6
12/3/1980	1980	12	3	186	30	59	44.5	12.5	5010.1
12/4/1980	1980	12	4	187	31	60	45.5	13.5	5023.6
12/5/1980	1980	12	5	188	30	57	43.5	11.5	5035.1
12/6/1980	1980	12	6	189	31	48	39.5	7.5	5042.6
12/7/1980	1980	12	7	190	25	50	37.5	5.5	5048.1
12/8/1980	1980	12	8	191	31	43	37	5	5053.1
12/9/1980	1980	12	9	192	26	40	33	1	5054.1
12/10/1980	1980	12	10	193	18	32	25	-7	5047.1
12/11/1980	1980	12	11	194	15	36	25.5	-6.5	5040.6
12/12/1980	1980	12	12	195	13	39	26	-6	5034.6
12/13/1980	1980	12	13	196	16	39	27.5	-4.5	5030.1
12/14/1980	1980	12	14	197	21	47	34	2	5032.1
12/15/1980	1980	12	15	198	22	45	33.5	1.5	5033.6
12/16/1980	1980	12	16	199	23	45	34	2	5035.6
12/17/1980	1980	12	17	200	24	40	32	0	5035.6
12/18/1980	1980	12	18	201	24	46	35	3	5038.6
12/19/1980	1980	12	19	202	28	50	39	7	5045.6
12/20/1980	1980	12	20	203	27	60	43.5	11.5	5057.1
12/21/1980	1980	12	21	204	30	60	45	13	5070.1
12/22/1980	1980	12	22	205	33	60	46.5	14.5	5084.6
12/23/1980	1980	12	23	206	15	55	35	3	5087.6
12/24/1980	1980	12	24	207	20	49	34.5	2.5	5090.1
12/25/1980	1980	12	25	208	22	49	35.5	3.5	5093.6
12/26/1980	1980	12	26	209	23	50	36.5	4.5	5098.1
12/27/1980	1980	12	27	210	31	56	43.5	11.5	5109.6
12/28/1980	1980	12	28	211	29	68	48.5	16.5	5126.1
12/29/1980	1980	12	29	212	28	50	39	7	5133.1
12/30/1980	1980	12	30	213	29	49	39	7	5140.1
12/31/1980	1980	12	31	214	25	57	41	9	5149.1
1/1/1981	1981	1	1	215	25	57	41	9	5158.1
1/2/1981	1981	1	2	216	28	50	39	7	5165.1
1/3/1981	1981	1	3	217	27	56	41.5	9.5	5174.6

1/4/1981	1981	1	4	218	26	55	40.5	8.5	5183.1
1/5/1981	1981	1	5	219	27	54	40.5	8.5	5191.6
1/6/1981	1981	1	6	220	34	51	42.5	10.5	5202.1
1/7/1981	1981	1	7	221	18	46	32	0	5202.1
1/8/1981	1981	1	8	222	18	45	31.5	-0.5	5201.6
1/9/1981	1981	1	9	223	19	48	33.5	1.5	5203.1
1/10/1981	1981	1	10	224	30	50	40	8	5211.1
1/11/1981	1981	1	11	225	30	50	40	8	5219.1
1/12/1981	1981	1	12	226	21	45	33	1	5220.1
1/13/1981	1981	1	13	227	22	40	31	-1	5219.1
1/14/1981	1981	1	14	228	27	49	38	6	5225.1
1/15/1981	1981	1	15	229	19	50	34.5	2.5	5227.6
1/16/1981	1981	1	16	230	21	48	34.5	2.5	5230.1
1/17/1981	1981	1	17	231	26	47	36.5	4.5	5234.6
1/18/1981	1981	1	18	232	19	45	32	0	5234.6
1/19/1981	1981	1	19	233	20	47	33.5	1.5	5236.1
1/20/1981	1981	1	20	234	18	44	31	-1	5235.1
1/21/1981	1981	1	21	235	20	47	33.5	1.5	5236.6
1/22/1981	1981	1	22	236	14	46	30	-2	5234.6
1/23/1981	1981	1	23	237	15	49	32	0	5234.6
1/24/1981	1981	1	24	238	23	50	36.5	4.5	5239.1
1/25/1981	1981	1	25	239	20	51	35.5	3.5	5242.6
1/26/1981	1981	1	26	240	34	50	42	10	5252.6
1/27/1981	1981	1	27	241	29	49	39	7	5259.6
1/28/1981	1981	1	28	242	14	44	29	-3	5256.6
1/29/1981	1981	1	29	243	13	45	29	-3	5253.6
1/30/1981	1981	1	30	244	16	46	31	-1	5252.6
1/31/1981	1981	1	31	245	17	46	31.5	-0.5	5252.1
2/1/1981	1981	2	1	246	10	44	27	-5	5247.1
2/2/1981	1981	2	2	247	11	41	26	-6	5241.1
2/3/1981	1981	2	3	248	15	45	30	-2	5239.1
2/4/1981	1981	2	4	249	16	50	33	1	5240.1
2/5/1981	1981	2	5	250	15	45	30	-2	5238.1
2/6/1981	1981	2	6	251	16	46	31	-1	5237.1
2/7/1981	1981	2	7	252	17	48	32.5	0.5	5237.6
2/8/1981	1981	2	8	253	20	50	35	3	5240.6
2/9/1981	1981	2	9	254	21	49	35	3	5243.6
2/10/1981	1981	2	10	255	29	49	39	7	5250.6
2/11/1981	1981	2	11	256	9	32	20.5	-11.5	5239.1
2/12/1981	1981	2	12	257	10	44	27	-5	5234.1
2/13/1981	1981	2	13	258	20	42	31	-1	5233.1
2/14/1981	1981	2	14	259	19	50	34.5	2.5	5235.6
2/15/1981	1981	2	15	260	18	49	33.5	1.5	5237.1
2/16/1981	1981	2	16	261	17	48	32.5	0.5	5237.6
2/17/1981	1981	2	17	262	18	56	37	5	5242.6
2/18/1981	1981	2	18	263	23	62	42.5	10.5	5253.1
2/19/1981	1981	2	19	264	24	59	41.5	9.5	5262.6
2/20/1981	1981	2	20	265	25	59	42	10	5272.6
2/21/1981	1981	2	21	266	30	63	46.5	14.5	5287.1
2/22/1981	1981	2	22	267	36	64	50	18	5305.1
2/23/1981	1981	2	23	268	18	58	38	6	5311.1
2/24/1981	1981	2	24	269	19	52	35.5	3.5	5314.6
2/25/1981	1981	2	25	270	19	61	40	8	5322.6
2/26/1981	1981	2	26	271	17	57	37	5	5327.6
2/27/1981	1981	2	27	272	19	59	39	7	5334.6
2/28/1981	1981	2	28	273	20	59	39.5	7.5	5342.1
3/1/1981	1981	3	1	274	25	54	39.5	7.5	5349.6
3/2/1981	1981	3	2	275	30	50	40	8	5357.6
3/3/1981	1981	3	3	276	18	41	29.5	-2.5	5355.1
3/4/1981	1981	3	4	277	20	40	30	-2	5353.1
3/5/1981	1981	3	5	278	20	46	33	1	5354.1
3/6/1981	1981	3	6	279	23	44	33.5	1.5	5355.6
3/7/1981	1981	3	7	280	25	38	31.5	-0.5	5355.1
3/8/1981	1981	3	8	281	23	42	32.5	0.5	5355.6
3/9/1981	1981	3	9	282	25	48	36.5	4.5	5360.1
3/10/1981	1981	3	10	283	20	43	31.5	-0.5	5359.6
3/11/1981	1981	3	11	284	19	40	29.5	-2.5	5357.1
3/12/1981	1981	3	12	285	20	40	30	-2	5355.1
3/13/1981	1981	3	13	286	19	45	32	0	5355.1
3/14/1981	1981	3	14	287	25	46	35.5	3.5	5358.6
3/15/1981	1981	3	15	288	20	47	33.5	1.5	5360.1
3/16/1981	1981	3	16	289	20	47	33.5	1.5	5361.6
3/17/1981	1981	3	17	290	27	50	38.5	6.5	5368.1
3/18/1981	1981	3	18	291	28	55	41.5	9.5	5377.6
3/19/1981	1981	3	19	292	30	52	41	9	5386.6
3/20/1981	1981	3	20	293	19	49	34	2	5388.6
3/21/1981	1981	3	21	294	24	60	42	10	5398.6
3/22/1981	1981	3	22	295	37	58	47.5	15.5	5414.1
3/23/1981	1981	3	23	296	24	56	40	8	5422.1
3/24/1981	1981	3	24	297	24	57	40.5	8.5	5430.6
3/25/1981	1981	3	25	298	25	60	42.5	10.5	5441.1
3/26/1981	1981	3	26	299	33	61	47	15	5456.1
3/27/1981	1981	3	27	300	24	59	41.5	9.5	5465.6
3/28/1981	1981	3	28	301	37	66	51.5	19.5	5485.1
3/29/1981	1981	3	29	302	28	62	45	13	5498.1
3/30/1981	1981	3	30	303	25	44	34.5	2.5	5500.6
3/31/1981	1981	3	31	304	21	55	38	6	5506.6
4/1/1981	1981	4	1	305	26	64	45	13	5519.6
4/2/1981	1981	4	2	306	35	62	48.5	16.5	5536.1
4/3/1981	1981	4	3	307	21	59	40	8	5544.1
4/4/1981	1981	4	4	308	22	62	42	10	5554.1
4/5/1981	1981	4	5	309	32	66	49	17	5571.1
4/6/1981	1981	4	6	310	36	64	50	18	5589.1

4/7/1981	1981	4	7	311	35	62	48.5	16.5	5605.6
4/8/1981	1981	4	8	312	34	71	52.5	20.5	5626.1
4/9/1981	1981	4	9	313	32	69	50.5	18.5	5644.6
4/10/1981	1981	4	10	314	36	70	53	21	5665.6
4/11/1981	1981	4	11	315	34	66	50	18	5683.6
4/12/1981	1981	4	12	316	39	67	53	21	5704.6
4/13/1981	1981	4	13	317	40	65	52.5	20.5	5725.1
4/14/1981	1981	4	14	318	35	61	48	16	5741.1
4/15/1981	1981	4	15	319	34	68	51	19	5760.1
4/16/1981	1981	4	16	320	41	72	56.5	24.5	5784.6
4/17/1981	1981	4	17	321	42	65	53.5	21.5	5806.1
4/18/1981	1981	4	18	322	35	64	49.5	17.5	5823.6
4/19/1981	1981	4	19	323	35	64	49.5	17.5	5841.1
4/20/1981	1981	4	20	324	40	69	54.5	22.5	5863.6
4/21/1981	1981	4	21	325	36	66	51	19	5882.6
4/22/1981	1981	4	22	326	34	68	51	19	5901.6
4/23/1981	1981	4	23	327	36	67	51.5	19.5	5921.1
4/24/1981	1981	4	24	328	39	73	56	24	5945.1
4/25/1981	1981	4	25	329	44	78	61	29	5974.1
4/26/1981	1981	4	26	330	43	77	60	28	6002.1
4/27/1981	1981	4	27	331	44	74	59	27	6029.1
4/28/1981	1981	4	28	332	57	75	66	34	6063.1
4/29/1981	1981	4	29	333	45	76	60.5	28.5	6091.6
4/30/1981	1981	4	30	334	48	70	59	27	6118.6
5/1/1981	1981	5	1	335	47	72	59.5	27.5	6146.1
5/2/1981	1981	5	2	336	43	70	56.5	24.5	6170.6
5/3/1981	1981	5	3	337	47	69	58	26	6196.6
5/4/1981	1981	5	4	338	48	68	58	26	6222.6
5/5/1981	1981	5	5	339	39	70	54.5	22.5	6245.1
5/6/1981	1981	5	6	340	38	68	53	21	6266.1
5/7/1981	1981	5	7	341	38	69	53.5	21.5	6287.6
5/8/1981	1981	5	8	342	36	68	52	20	6307.6
5/9/1981	1981	5	9	343	29	69	49	17	6324.6
5/10/1981	1981	5	10	344	29	69	49	17	6341.6
5/11/1981	1981	5	11	345	40	70	55	23	6364.6
5/12/1981	1981	5	12	346	46	72	59	27	6391.6
5/13/1981	1981	5	13	347	45	75	60	28	6419.6
5/14/1981	1981	5	14	348	38	74	56	24	6443.6
5/15/1981	1981	5	15	349	43	67	55	23	6466.6
5/16/1981	1981	5	16	350	42	68	55	23	6489.6
5/17/1981	1981	5	17	351	42	68	55	23	6512.6
5/18/1981	1981	5	18	352	34	71	52.5	20.5	6533.1
5/19/1981	1981	5	19	353	41	74	57.5	25.5	6558.6
5/20/1981	1981	5	20	354	44	71	57.5	25.5	6584.1
5/21/1981	1981	5	21	355	41	69	55	23	6607.1
5/22/1981	1981	5	22	356	39	71	55	23	6630.1
5/23/1981	1981	5	23	357	38	70	54	22	6652.1
5/24/1981	1981	5	24	358	37	69	53	21	6673.1
5/25/1981	1981	5	25	359	41	70	55.5	23.5	6696.6
5/26/1981	1981	5	26	360	49	72	60.5	28.5	6725.1
5/27/1981	1981	5	27	361	47	78	62.5	30.5	6755.6
5/28/1981	1981	5	28	362	46	74	60	28	6783.6
5/29/1981	1981	5	29	363	43	69	56	24	6807.6
5/30/1981	1981	5	30	364	47	67	57	25	6832.6
5/31/1981	1981	5	31	365	40	71	55.5	23.5	6856.1
6/1/1981	1981	6	1	1	42	71	56.5	24.5	24.5
6/2/1981	1981	6	2	2	47	80	63.5	31.5	56
6/3/1981	1981	6	3	3	49	79	64	32	88
6/4/1981	1981	6	4	4	48	78	63	31	119
6/5/1981	1981	6	5	5	49	79	64	32	151
6/6/1981	1981	6	6	6	50	80	65	33	184
6/7/1981	1981	6	7	7	55	81	68	36	220
6/8/1981	1981	6	8	8	56	83	69.5	37.5	257.5
6/9/1981	1981	6	9	9	57	90	73.5	41.5	299
6/10/1981	1981	6	10	10	57	90	73.5	41.5	340.5
6/11/1981	1981	6	11	11	59	93	76	44	384.5
6/12/1981	1981	6	12	12	57	91	74	42	426.5
6/13/1981	1981	6	13	13	55	88	71.5	39.5	466
6/14/1981	1981	6	14	14	56	86	71	39	505
6/15/1981	1981	6	15	15	53	81	67	35	540
6/16/1981	1981	6	16	16	35	79	57	25	565
6/17/1981	1981	6	17	17	43	76	59.5	27.5	592.5
6/18/1981	1981	6	18	18	49	88	68.5	36.5	629
6/19/1981	1981	6	19	19	53	92	72.5	40.5	669.5
6/20/1981	1981	6	20	20	56	93	74.5	42.5	712
6/21/1981	1981	6	21	21	57	93	75	43	755
6/22/1981	1981	6	22	22	60	95	77.5	45.5	800.5
6/23/1981	1981	6	23	23	59	90	74.5	42.5	843
6/24/1981	1981	6	24	24	62	94	78	46	889
6/25/1981	1981	6	25	25	59	95	77	45	934
6/26/1981	1981	6	26	26	66	93	79.5	47.5	981.5
6/27/1981	1981	6	27	27	62	86	74	42	1023.5
6/28/1981	1981	6	28	28	59	87	73	41	1064.5
6/29/1981	1981	6	29	29	54	81	67.5	35.5	1100
6/30/1981	1981	6	30	30	53	87	70	38	1138
7/1/1981	1981	7	1	31	55	70	62.5	30.5	1168.5
7/2/1981	1981	7	2	32	51	81	66	34	1202.5
7/3/1981	1981	7	3	33	56	85	70.5	38.5	1241
7/4/1981	1981	7	4	34	55	84	69.5	37.5	1278.5
7/5/1981	1981	7	5	35	54	80	67	35	1313.5
7/6/1981	1981	7	6	36	51	90	70.5	38.5	1352
7/7/1981	1981	7	7	37	55	90	72.5	40.5	1392.5
7/8/1981	1981	7	8	38	56	85	70.5	38.5	1431

7/9/1981	1981	7	9	39	55	80	67.5	35.5	1466.5
7/10/1981	1981	7	10	40	56	81	68.5	36.5	1503
7/11/1981	1981	7	11	41	55	78	66.5	34.5	1537.5
7/12/1981	1981	7	12	42	53	79	66	34	1571.5
7/13/1981	1981	7	13	43	55	77	66	34	1605.5
7/14/1981	1981	7	14	44	53	78	65.5	33.5	1639
7/15/1981	1981	7	15	45	53	78	65.5	33.5	1672.5
7/16/1981	1981	7	16	46	54	71	62.5	30.5	1703
7/17/1981	1981	7	17	47	54	76	65	33	1736
7/18/1981	1981	7	18	48	50	75	62.5	30.5	1766.5
7/19/1981	1981	7	19	49	51	76	63.5	31.5	1798
7/20/1981	1981	7	20	50	57	78	67.5	35.5	1833.5
7/21/1981	1981	7	21	51	51	81	66	34	1867.5
7/22/1981	1981	7	22	52	50	80	65	33	1900.5
7/23/1981	1981	7	23	53	60	90	75	43	1943.5
7/24/1981	1981	7	24	54	59	89	74	42	1985.5
7/25/1981	1981	7	25	55	60	87	73.5	41.5	2027
7/26/1981	1981	7	26	56	68	83	75.5	43.5	2070.5
7/27/1981	1981	7	27	57	60	77	68.5	36.5	2107
7/28/1981	1981	7	28	58	56	78	67	35	2142
7/29/1981	1981	7	29	59	55	84	69.5	37.5	2179.5
7/30/1981	1981	7	30	60	56	86	71	39	2218.5
7/31/1981	1981	7	31	61	55	84	69.5	37.5	2256
8/1/1981	1981	8	1	62	57	83	70	38	2294
8/2/1981	1981	8	2	63	56	84	70	38	2332
8/3/1981	1981	8	3	64	58	84	71	39	2371
8/4/1981	1981	8	4	65	59	89	74	42	2413
8/5/1981	1981	8	5	66	57	90	73.5	41.5	2454.5
8/6/1981	1981	8	6	67	58	91	74.5	42.5	2497
8/7/1981	1981	8	7	68	59	90	74.5	42.5	2539.5
8/8/1981	1981	8	8	69	51	84	67.5	35.5	2575
8/9/1981	1981	8	9	70	53	82	67.5	35.5	2610.5
8/10/1981	1981	8	10	71	54	80	67	35	2645.5
8/11/1981	1981	8	11	72	51	70	60.5	28.5	2674
8/12/1981	1981	8	12	73	49	75	62	30	2704
8/13/1981	1981	8	13	74	49	75	62	30	2734
8/14/1981	1981	8	14	75	50	78	64	32	2766
8/15/1981	1981	8	15	76	57	78	67.5	35.5	2801.5
8/16/1981	1981	8	16	77	52	80	66	34	2835.5
8/17/1981	1981	8	17	78	51	78	64.5	32.5	2868
8/18/1981	1981	8	18	79	50	79	64.5	32.5	2900.5
8/19/1981	1981	8	19	80	50	77	63.5	31.5	2932
8/20/1981	1981	8	20	81	54	83	68.5	36.5	2968.5
8/21/1981	1981	8	21	82	57	83	70	38	3006.5
8/22/1981	1981	8	22	83	54	76	65	33	3039.5
8/23/1981	1981	8	23	84	53	70	61.5	29.5	3069
8/24/1981	1981	8	24	85	52	71	61.5	29.5	3098.5
8/25/1981	1981	8	25	86	57	73	65	33	3131.5
8/26/1981	1981	8	26	87	55	79	67	35	3166.5
8/27/1981	1981	8	27	88	54	80	67	35	3201.5
8/28/1981	1981	8	28	89	52	80	66	34	3235.5
8/29/1981	1981	8	29	90	47	79	63	31	3266.5
8/30/1981	1981	8	30	91	48	80	64	32	3298.5
8/31/1981	1981	8	31	92	55	81	68	36	3334.5
9/1/1981	1981	9	1	93	48	76	62	30	3364.5
9/2/1981	1981	9	2	94	50	77	63.5	31.5	3396
9/3/1981	1981	9	3	95	52	79	65.5	33.5	3429.5
9/4/1981	1981	9	4	96	52	79	65.5	33.5	3463
9/5/1981	1981	9	5	97	51	77	64	32	3495
9/6/1981	1981	9	6	98	50	77	63.5	31.5	3526.5
9/7/1981	1981	9	7	99	50	76	63	31	3557.5
9/8/1981	1981	9	8	100	46	75	60.5	28.5	3586
9/9/1981	1981	9	9	101	45	72	58.5	26.5	3612.5
9/10/1981	1981	9	10	102	40	71	55.5	23.5	3636
9/11/1981	1981	9	11	103	49	74	61.5	29.5	3665.5
9/12/1981	1981	9	12	104	46	75	60.5	28.5	3694
9/13/1981	1981	9	13	105	47	76	61.5	29.5	3723.5
9/14/1981	1981	9	14	106	48	77	62.5	30.5	3754
9/15/1981	1981	9	15	107	49	75	62	30	3784
9/16/1981	1981	9	16	108	44	69	56.5	24.5	3808.5
9/17/1981	1981	9	17	109	44	72	58	26	3834.5
9/18/1981	1981	9	18	110	43	70	56.5	24.5	3859
9/19/1981	1981	9	19	111	42	70	56	24	3883
9/20/1981	1981	9	20	112	43	71	57	25	3908
9/21/1981	1981	9	21	113	46	76	61	29	3937
9/22/1981	1981	9	22	114	52	75	63.5	31.5	3968.5
9/23/1981	1981	9	23	115	51	71	61	29	3997.5
9/24/1981	1981	9	24	116	48	69	58.5	26.5	4024
9/25/1981	1981	9	25	117	47	68	57.5	25.5	4049.5
9/26/1981	1981	9	26	118	44	70	57	25	4074.5
9/27/1981	1981	9	27	119	47	76	61.5	29.5	4104
9/28/1981	1981	9	28	120	50	77	63.5	31.5	4135.5
9/29/1981	1981	9	29	121	56	76	66	34	4169.5
9/30/1981	1981	9	30	122	52	74	63	31	4200.5
10/1/1981	1981	10	1	123	49	70	59.5	27.5	4228
10/2/1981	1981	10	2	124	48	69	58.5	26.5	4254.5
10/3/1981	1981	10	3	125	40	60	50	18	4272.5
10/4/1981	1981	10	4	126	40	65	52.5	20.5	4293
10/5/1981	1981	10	5	127	42	64	53	21	4314
10/6/1981	1981	10	6	128	43	66	54.5	22.5	4336.5
10/7/1981	1981	10	7	129	36	64	50	18	4354.5
10/8/1981	1981	10	8	130	46	66	56	24	4378.5
10/9/1981	1981	10	9	131	43	65	54	22	4400.5

10/10/1981	1981	10	10	132	35	67	51	19	4419.5
10/11/1981	1981	10	11	133	39	66	52.5	20.5	4440
10/12/1981	1981	10	12	134	44	62	53	21	4461
10/13/1981	1981	10	13	135	41	64	52.5	20.5	4481.5
10/14/1981	1981	10	14	136	43	62	52.5	20.5	4502
10/15/1981	1981	10	15	137	47	64	55.5	23.5	4525.5
10/16/1981	1981	10	16	138	24	62	43	11	4536.5
10/17/1981	1981	10	17	139	24	62	43	11	4547.5
10/18/1981	1981	10	18	140	31	58	44.5	12.5	4560
10/19/1981	1981	10	19	141	33	61	47	15	4575
10/20/1981	1981	10	20	142	35	63	49	17	4592
10/21/1981	1981	10	21	143	38	64	51	19	4611
10/22/1981	1981	10	22	144	32	59	45.5	13.5	4624.5
10/23/1981	1981	10	23	145	29	57	43	11	4635.5
10/24/1981	1981	10	24	146	28	50	39	7	4642.5
10/25/1981	1981	10	25	147	28	50	39	7	4649.5
10/26/1981	1981	10	26	148	27	61	44	12	4661.5
10/27/1981	1981	10	27	149	36	60	48	16	4677.5
10/28/1981	1981	10	28	150	34	61	47.5	15.5	4693
10/29/1981	1981	10	29	151	48	61	54.5	22.5	4715.5
10/30/1981	1981	10	30	152	30	55	42.5	10.5	4726
10/31/1981	1981	10	31	153	22	48	35	3	4729
11/1/1981	1981	11	1	154	34	53	43.5	11.5	4740.5
11/2/1981	1981	11	2	155	28	58	43	11	4751.5
11/3/1981	1981	11	3	156	31	59	45	13	4764.5
11/4/1981	1981	11	4	157	32	59	45.5	13.5	4778
11/5/1981	1981	11	5	158	32	63	47.5	15.5	4793.5
11/6/1981	1981	11	6	159	30	60	45	13	4806.5
11/7/1981	1981	11	7	160	30	59	44.5	12.5	4819
11/8/1981	1981	11	8	161	35	58	46.5	14.5	4833.5
11/9/1981	1981	11	9	162	29	49	39	7	4840.5
11/10/1981	1981	11	10	163	28	55	41.5	9.5	4850
11/11/1981	1981	11	11	164	31	51	41	9	4859
11/12/1981	1981	11	12	165	30	54	42	10	4869
11/13/1981	1981	11	13	166	32	55	43.5	11.5	4880.5
11/14/1981	1981	11	14	167	33	60	46.5	14.5	4895
11/15/1981	1981	11	15	168	35	64	49.5	17.5	4912.5
11/16/1981	1981	11	16	169	38	65	51.5	19.5	4932
11/17/1981	1981	11	17	170	32	64	48	16	4948
11/18/1981	1981	11	18	171	34	62	48	16	4964
11/19/1981	1981	11	19	172	19	57	38	6	4970
11/20/1981	1981	11	20	173	18	40	29	-3	4967
11/21/1981	1981	11	21	174	17	39	28	-4	4963
11/22/1981	1981	11	22	175	18	37	27.5	-4.5	4958.5
11/23/1981	1981	11	23	176	19	62	40.5	8.5	4967
11/24/1981	1981	11	24	177	34	65	49.5	17.5	4984.5
11/25/1981	1981	11	25	178	32	60	46	14	4998.5
11/26/1981	1981	11	26	179	10	48	29	-3	4995.5
11/27/1981	1981	11	27	180	12	45	28.5	-3.5	4992
11/28/1981	1981	11	28	181	19	47	33	1	4993
11/29/1981	1981	11	29	182	23	44	33.5	1.5	4994.5
11/30/1981	1981	11	30	183	19	40	29.5	-2.5	4992
12/1/1981	1981	12	1	184	9	32	20.5	-11.5	4980.5
12/2/1981	1981	12	2	185	5	30	17.5	-14.5	4966
12/3/1981	1981	12	3	186	10	46	28	-4	4962
12/4/1981	1981	12	4	187	15	54	34.5	2.5	4964.5
12/5/1981	1981	12	5	188	19	47	33	1	4965.5
12/6/1981	1981	12	6	189	20	46	33	1	4966.5
12/7/1981	1981	12	7	190	21	45	33	1	4967.5
12/8/1981	1981	12	8	191	24	50	37	5	4972.5
12/9/1981	1981	12	9	192	19	50	34.5	2.5	4975
12/10/1981	1981	12	10	193	20	51	35.5	3.5	4978.5
12/11/1981	1981	12	11	194	27	52	39.5	7.5	4986
12/12/1981	1981	12	12	195	16	57	36.5	4.5	4990.5
12/13/1981	1981	12	13	196	19	53	36	4	4994.5
12/14/1981	1981	12	14	197	18	49	33.5	1.5	4996
12/15/1981	1981	12	15	198	17	48	32.5	0.5	4996.5
12/16/1981	1981	12	16	199	20	49	34.5	2.5	4999
12/17/1981	1981	12	17	200	21	50	35.5	3.5	5002.5
12/18/1981	1981	12	18	201	20	51	35.5	3.5	5006
12/19/1981	1981	12	19	202	16	49	32.5	0.5	5006.5
12/20/1981	1981	12	20	203	17	48	32.5	0.5	5007
12/21/1981	1981	12	21	204	18	50	34	2	5009
12/22/1981	1981	12	22	205	17	49	33	1	5010
12/23/1981	1981	12	23	206	20	48	34	2	5012
12/24/1981	1981	12	24	207	9	50	29.5	-2.5	5009.5
12/25/1981	1981	12	25	208	10	40	25	-7	5002.5
12/26/1981	1981	12	26	209	5	33	19	-13	4989.5
12/27/1981	1981	12	27	210	4	32	18	-14	4975.5
12/28/1981	1981	12	28	211	5	30	17.5	-14.5	4961
12/29/1981	1981	12	29	212	6	31	18.5	-13.5	4947.5
12/30/1981	1981	12	30	213	11	33	22	-10	4937.5
12/31/1981	1981	12	31	214	15	40	27.5	-4.5	4933
1/1/1982	1982	1	1	215	36	40	38	6	4939
1/2/1982	1982	1	2	216	26	37	31.5	-0.5	4938.5
1/3/1982	1982	1	3	217	13	32	22.5	-9.5	4929
1/4/1982	1982	1	4	218	3	37	20	-12	4917
1/5/1982	1982	1	5	219	27	40	33.5	1.5	4918.5
1/6/1982	1982	1	6	220	32	40	36	4	4922.5
1/7/1982	1982	1	7	221	14	30	22	-10	4912.5
1/8/1982	1982	1	8	222	5	32	18.5	-13.5	4899
1/9/1982	1982	1	9	223	10	45	27.5	-4.5	4894.5
1/10/1982	1982	1	10	224	11	52	31.5	-0.5	4894

1/11/1982	1982	1	11	225	16	44	30	-2	4892
1/12/1982	1982	1	12	226	30	37	33.5	1.5	4893.5
1/13/1982	1982	1	13	227	14	32	23	-9	4884.5
1/14/1982	1982	1	14	228	6	45	25.5	-6.5	4878
1/15/1982	1982	1	15	229	11	44	27.5	-4.5	4873.5
1/16/1982	1982	1	16	230	13	47	30	-2	4871.5
1/17/1982	1982	1	17	231	15	56	35.5	3.5	4875
1/18/1982	1982	1	18	232	25	53	39	7	4882
1/19/1982	1982	1	19	233	25	47	36	4	4886
1/20/1982	1982	1	20	234	23	49	36	4	4890
1/21/1982	1982	1	21	235	16	40	28	-4	4886
1/22/1982	1982	1	22	236	20	31	25.5	-6.5	4879.5
1/23/1982	1982	1	23	237	7	42	24.5	-7.5	4872
1/24/1982	1982	1	24	238	12	62	37	5	4877
1/25/1982	1982	1	25	239	18	61	39.5	7.5	4884.5
1/26/1982	1982	1	26	240	16	65	40.5	8.5	4893
1/27/1982	1982	1	27	241	32	54	43	11	4904
1/28/1982	1982	1	28	242	19	50	34.5	2.5	4906.5
1/29/1982	1982	1	29	243	27	40	33.5	1.5	4908
1/30/1982	1982	1	30	244	18	46	32	0	4908
1/31/1982	1982	1	31	245	11	42	26.5	-5.5	4902.5
2/1/1982	1982	2	1	246	15	39	27	-5	4928
2/2/1982	1982	2	2	247	7	29	18	-14	4914
2/3/1982	1982	2	3	248	6	28	17	-15	4899
2/4/1982	1982	2	4	249	5	29	17	-15	4884
2/5/1982	1982	2	5	250	8	28	18	-14	4870
2/6/1982	1982	2	6	251	-7	30	11.5	-20.5	4849.5
2/7/1982	1982	2	7	252	-8	39	15.5	-16.5	4833
2/8/1982	1982	2	8	253	10	38	24	-8	4825
2/9/1982	1982	2	9	254	10	37	23.5	-8.5	4816.5
2/10/1982	1982	2	10	255	12	35	23.5	-8.5	4808
2/11/1982	1982	2	11	256	11	39	25	-7	4801
2/12/1982	1982	2	12	257	10	34	22	-10	4791
2/13/1982	1982	2	13	258	11	33	22	-10	4781
2/14/1982	1982	2	14	259	10	30	20	-12	4769
2/15/1982	1982	2	15	260	9	30	19.5	-12.5	4756.5
2/16/1982	1982	2	16	261	16	39	27.5	-4.5	4752
2/17/1982	1982	2	17	262	18	39	28.5	-3.5	4748.5
2/18/1982	1982	2	18	263	17	37	27	-5	4743.5
2/19/1982	1982	2	19	264	16	35	25.5	-6.5	4737
2/20/1982	1982	2	20	265	15	36	25.5	-6.5	4730.5
2/21/1982	1982	2	21	266	16	37	26.5	-5.5	4725
2/22/1982	1982	2	22	267	20	58	39	7	4732
2/23/1982	1982	2	23	268	30	50	40	8	4740
2/25/1982	1982	2	25	269	24	57	40.5	8.5	4748.5
2/26/1982	1982	2	26	270	29	41	35	3	4751.5
2/27/1982	1982	2	27	271	27	40	33.5	1.5	4753
2/28/1982	1982	2	28	272	20	42	31	-1	4752
3/1/1982	1982	3	1	273	28	59	43.5	11.5	4763.5
3/2/1982	1982	3	2	274	30	55	42.5	10.5	4774
3/3/1982	1982	3	3	275	29	46	37.5	5.5	4779.5
3/4/1982	1982	3	4	276	25	45	35	3	4782.5
3/5/1982	1982	3	5	277	19	40	29.5	-2.5	4780
3/6/1982	1982	3	6	278	18	40	29	-3	4777
3/7/1982	1982	3	7	279	19	49	34	2	4779
3/8/1982	1982	3	8	280	19	48	33.5	1.5	4780.5
3/9/1982	1982	3	9	281	19	50	34.5	2.5	4783
3/10/1982	1982	3	10	282	20	50	35	3	4786
3/11/1982	1982	3	11	283	29	51	40	8	4794
3/12/1982	1982	3	12	284	28	56	42	10	4804
3/13/1982	1982	3	13	285	29	52	40.5	8.5	4812.5
3/14/1982	1982	3	14	286	30	49	39.5	7.5	4820
3/15/1982	1982	3	15	287	32	49	40.5	8.5	4828.5
3/16/1982	1982	3	16	288	30	46	38	6	4834.5
3/17/1982	1982	3	17	289	26	49	37.5	5.5	4840
3/18/1982	1982	3	18	290	28	50	39	7	4847
3/19/1982	1982	3	19	291	30	51	40.5	8.5	4855.5
3/20/1982	1982	3	20	292	22	50	36	4	4859.5
3/21/1982	1982	3	21	293	20	40	30	-2	4857.5
3/22/1982	1982	3	22	294	20	49	34.5	2.5	4860
3/23/1982	1982	3	23	295	24	47	35.5	3.5	4863.5
3/24/1982	1982	3	24	296	20	48	34	2	4865.5
3/25/1982	1982	3	25	297	24	51	37.5	5.5	4871
3/26/1982	1982	3	26	298	23	56	39.5	7.5	4878.5
3/27/1982	1982	3	27	299	28	58	43	11	4889.5
3/28/1982	1982	3	28	300	35	57	46	14	4903.5
3/29/1982	1982	3	29	301	32	50	41	9	4912.5
3/30/1982	1982	3	30	302	30	59	44.5	12.5	4925
3/31/1982	1982	3	31	303	28	49	38.5	6.5	4931.5
4/1/1982	1982	4	1	304	35	63	49	17	4948.5
4/2/1982	1982	4	2	305	26	64	45	13	4961.5
4/3/1982	1982	4	3	306	26	64	45	13	4974.5
4/4/1982	1982	4	4	307	31	59	45	13	4987.5
4/5/1982	1982	4	5	308	29	60	44.5	12.5	5000
4/6/1982	1982	4	6	309	41	58	49.5	17.5	5017.5
4/7/1982	1982	4	7	310	35	54	44.5	12.5	5030
4/8/1982	1982	4	8	311	24	52	38	6	5036
4/9/1982	1982	4	9	312	33	51	42	10	5046
4/10/1982	1982	4	10	313	25	63	44	12	5058
4/11/1982	1982	4	11	314	34	69	51.5	19.5	5077.5
4/12/1982	1982	4	12	315	34	68	51	19	5096.5
4/13/1982	1982	4	13	316	40	67	53.5	21.5	5118
4/14/1982	1982	4	14	317	34	66	50	18	5136

4/15/1982	1982	4	15	318	33	64	48.5	16.5	5152.5
4/16/1982	1982	4	16	319	34	62	48	16	5168.5
4/17/1982	1982	4	17	320	31	62	46.5	14.5	5183
4/18/1982	1982	4	18	321	35	65	50	18	5201
4/19/1982	1982	4	19	322	32	65	48.5	16.5	5217.5
4/20/1982	1982	4	20	323	24	62	43	11	5228.5
4/21/1982	1982	4	21	324	29	49	39	7	5235.5
4/22/1982	1982	4	22	325	30	42	36	4	5239.5
4/23/1982	1982	4	23	326	30	50	40	8	5247.5
4/24/1982	1982	4	24	327	29	49	39	7	5254.5
4/25/1982	1982	4	25	328	29	50	39.5	7.5	5262
4/26/1982	1982	4	26	329	28	54	41	9	5271
4/27/1982	1982	4	27	330	29	63	46	14	5285
4/28/1982	1982	4	28	331	40	70	55	23	5308
4/29/1982	1982	4	29	332	39	73	56	24	5332
4/30/1982	1982	4	30	333	44	70	57	25	5357
5/1/1982	1982	5	1	334	39	60	49.5	17.5	5374.5
5/2/1982	1982	5	2	335	42	61	51.5	19.5	5394
5/3/1982	1982	5	3	336	40	68	54	22	5416
5/4/1982	1982	5	4	337	44	67	55.5	23.5	5439.5
5/5/1982	1982	5	5	338	35	61	48	16	5455.5
5/6/1982	1982	5	6	339	30	59	44.5	12.5	5468
5/7/1982	1982	5	7	340	31	69	50	18	5486
5/8/1982	1982	5	8	341	39	68	53.5	21.5	5507.5
5/9/1982	1982	5	9	342	41	67	54	22	5529.5
5/10/1982	1982	5	10	343	35	66	50.5	18.5	5548
5/11/1982	1982	5	11	344	34	65	49.5	17.5	5565.5
5/12/1982	1982	5	12	345	32	61	46.5	14.5	5580
5/13/1982	1982	5	13	346	33	56	44.5	12.5	5592.5
5/14/1982	1982	5	14	347	33	65	49	17	5609.5
5/15/1982	1982	5	15	348	36	66	51	19	5628.5
5/16/1982	1982	5	16	349	37	67	52	20	5648.5
5/17/1982	1982	5	17	350	40	71	55.5	23.5	5672
5/18/1982	1982	5	18	351	43	72	57.5	25.5	5697.5
5/19/1982	1982	5	19	352	44	74	59	27	5724.5
5/21/1982	1982	5	21	353	41	73	57	25	5749.5
5/22/1982	1982	5	22	354	40	79	59.5	27.5	5777
5/23/1982	1982	5	23	355	44	76	60	28	5805
5/24/1982	1982	5	24	356	42	76	59	27	5832
5/25/1982	1982	5	25	357	45	75	60	28	5860
5/26/1982	1982	5	26	358	47	75	61	29	5889
5/27/1982	1982	5	27	359	46	77	61.5	29.5	5918.5
5/28/1982	1982	5	28	360	44	78	61	29	5947.5
5/29/1982	1982	5	29	361	43	76	59.5	27.5	5975
5/30/1982	1982	5	30	362	44	74	59	27	6002
5/31/1982	1982	5	31	363	46	75	60.5	28.5	6030.5
6/1/1982	1982	6	1	1	49	78	63.5	31.5	31.5
6/2/1982	1982	6	2	2	46	78	62	30	61.5
6/3/1982	1982	6	3	3	44	76	60	28	89.5
6/4/1982	1982	6	4	4	42	73	57.5	25.5	115
6/5/1982	1982	6	5	5	46	75	60.5	28.5	143.5
6/6/1982	1982	6	6	6	43	76	59.5	27.5	171
6/7/1982	1982	6	7	7	48	80	64	32	203
6/8/1982	1982	6	8	8	50	79	64.5	32.5	235.5
6/9/1982	1982	6	9	9	46	82	64	32	267.5
6/10/1982	1982	6	10	10	45	81	63	31	298.5
6/11/1982	1982	6	11	11	50	80	65	33	331.5
6/12/1982	1982	6	12	12	51	83	67	35	366.5
6/13/1982	1982	6	13	13	52	82	67	35	401.5
6/14/1982	1982	6	14	14	48	83	65.5	33.5	435
6/15/1982	1982	6	15	15	47	79	63	31	466
6/16/1982	1982	6	16	16	48	80	64	32	498
6/17/1982	1982	6	17	17	52	83	67.5	35.5	533.5
6/18/1982	1982	6	18	18	55	84	69.5	37.5	571
6/19/1982	1982	6	19	19	42	78	60	28	599
6/20/1982	1982	6	20	20	45	74	59.5	27.5	626.5
6/21/1982	1982	6	21	21	46	82	64	32	658.5
6/22/1982	1982	6	22	22	50	83	66.5	34.5	693
6/23/1982	1982	6	23	23	47	80	63.5	31.5	724.5
6/24/1982	1982	6	24	24	50	86	68	36	760.5
6/25/1982	1982	6	25	25	53	85	69	37	797.5
6/26/1982	1982	6	26	26	54	87	70.5	38.5	836
6/27/1982	1982	6	27	27	53	90	71.5	39.5	875.5
6/28/1982	1982	6	28	28	58	90	74	42	917.5
6/29/1982	1982	6	29	29	59	89	74	42	959.5
6/30/1982	1982	6	30	30	55	83	69	37	996.5
7/1/1982	1982	7	1	31	49	80	64.5	32.5	1029
7/2/1982	1982	7	2	32	48	81	64.5	32.5	1061.5
7/3/1982	1982	7	3	33	52	80	66	34	1095.5
7/4/1982	1982	7	4	34	55	76	65.5	33.5	1129
7/5/1982	1982	7	5	35	56	78	67	35	1164
7/6/1982	1982	7	6	36	49	79	64	32	1196
7/7/1982	1982	7	7	37	58	79	68.5	36.5	1232.5
7/8/1982	1982	7	8	38	55	83	69	37	1269.5
7/9/1982	1982	7	9	39	54	85	69.5	37.5	1307
7/10/1982	1982	7	10	40	53	88	70.5	38.5	1345.5
7/11/1982	1982	7	11	41	57	86	71.5	39.5	1385
7/12/1982	1982	7	12	42	52	88	70	38	1423
7/13/1982	1982	7	13	43	60	90	75	43	1466
7/14/1982	1982	7	14	44	58	90	74	42	1508
7/15/1982	1982	7	15	45	65	90	77.5	45.5	1553.5
7/16/1982	1982	7	16	46	59	85	72	40	1593.5
7/17/1982	1982	7	17	47	53	82	67.5	35.5	1629

7/18/1982	1982	7	18	48	52	84	68	36	1665
7/19/1982	1982	7	19	49	57	83	70	38	1703
7/20/1982	1982	7	20	50	58	80	69	37	1740
7/21/1982	1982	7	21	51	52	87	69.5	37.5	1777.5
7/22/1982	1982	7	22	52	62	86	74	42	1819.5
7/23/1982	1982	7	23	53	63	83	73	41	1860.5
7/24/1982	1982	7	24	54	68	79	73.5	41.5	1902
7/25/1982	1982	7	25	55	69	79	74	42	1944
7/26/1982	1982	7	26	56	58	79	68.5	36.5	1980.5
7/27/1982	1982	7	27	57	56	81	68.5	36.5	2017
7/28/1982	1982	7	28	58	57	80	68.5	36.5	2053.5
7/29/1982	1982	7	29	59	56	74	65	33	2086.5
7/30/1982	1982	7	30	60	55	74	64.5	32.5	2119
7/31/1982	1982	7	31	61	53	77	65	33	2152
8/1/1982	1982	8	1	62	53	79	66	34	2186
8/2/1982	1982	8	2	63	56	76	66	34	2220
8/3/1982	1982	8	3	64	54	75	64.5	32.5	2252.5
8/4/1982	1982	8	4	65	50	77	63.5	31.5	2284
8/5/1982	1982	8	5	66	59	78	68.5	36.5	2320.5
8/6/1982	1982	8	6	67	54	79	66.5	34.5	2355
8/7/1982	1982	8	7	68	56	79	67.5	35.5	2390.5
8/8/1982	1982	8	8	69	54	77	65.5	33.5	2424
8/9/1982	1982	8	9	70	54	83	68.5	36.5	2460.5
8/10/1982	1982	8	10	71	56	82	69	37	2497.5
8/11/1982	1982	8	11	72	55	81	68	36	2533.5
8/12/1982	1982	8	12	73	56	83	69.5	37.5	2571
8/13/1982	1982	8	13	74	52	75	63.5	31.5	2602.5
8/14/1982	1982	8	14	75	53	79	66	34	2636.5
8/15/1982	1982	8	15	76	55	74	64.5	32.5	2669
8/16/1982	1982	8	16	77	54	81	67.5	35.5	2704.5
8/17/1982	1982	8	17	78	55	78	66.5	34.5	2739
8/18/1982	1982	8	18	79	54	83	68.5	36.5	2775.5
8/19/1982	1982	8	19	80	59	81	70	38	2813.5
8/20/1982	1982	8	20	81	62	82	72	40	2853.5
8/21/1982	1982	8	21	82	57	73	65	33	2886.5
8/22/1982	1982	8	22	83	57	75	66	34	2920.5
8/23/1982	1982	8	23	84	59	73	66	34	2954.5
8/24/1982	1982	8	24	85	54	75	64.5	32.5	2987
8/25/1982	1982	8	25	86	53	74	63.5	31.5	3018.5
8/26/1982	1982	8	26	87	54	73	63.5	31.5	3050
8/27/1982	1982	8	27	88	52	75	63.5	31.5	3081.5
8/28/1982	1982	8	28	89	53	74	63.5	31.5	3113
8/29/1982	1982	8	29	90	52	72	62	30	3143
8/30/1982	1982	8	30	91	54	68	61	29	3172
8/31/1982	1982	8	31	92	52	74	63	31	3203
9/1/1982	1982	9	1	93	56	79	67.5	35.5	3238.5
9/2/1982	1982	9	2	94	57	80	68.5	36.5	3275
9/3/1982	1982	9	3	95	54	81	67.5	35.5	3310.5
9/4/1982	1982	9	4	96	55	76	65.5	33.5	3344
9/5/1982	1982	9	5	97	50	66	58	26	3370
9/6/1982	1982	9	6	98	51	69	60	28	3398
9/7/1982	1982	9	7	99	53	69	61	29	3427
9/8/1982	1982	9	8	100	50	73	61.5	29.5	3456.5
9/9/1982	1982	9	9	101	55	70	62.5	30.5	3487
9/10/1982	1982	9	10	102	52	71	61.5	29.5	3516.5
9/11/1982	1982	9	11	103	50	69	59.5	27.5	3544
9/12/1982	1982	9	12	104	45	58	51.5	19.5	3563.5
9/13/1982	1982	9	13	105	46	63	54.5	22.5	3586
9/14/1982	1982	9	14	106	57	68	62.5	30.5	3616.5
9/15/1982	1982	9	15	107	48	71	59.5	27.5	3644
9/16/1982	1982	9	16	108	49	69	59	27	3671
9/17/1982	1982	9	17	109	49	72	60.5	28.5	3699.5
9/18/1982	1982	9	18	110	44	69	56.5	24.5	3724
9/19/1982	1982	9	19	111	45	69	57	25	3749
9/20/1982	1982	9	20	112	44	69	56.5	24.5	3773.5
9/21/1982	1982	9	21	113	46	68	57	25	3798.5
9/22/1982	1982	9	22	114	47	74	60.5	28.5	3827
9/23/1982	1982	9	23	115	51	77	64	32	3859
9/24/1982	1982	9	24	116	52	76	64	32	3891
9/25/1982	1982	9	25	117	53	69	61	29	3920
9/26/1982	1982	9	26	118	52	76	64	32	3952
9/27/1982	1982	9	27	119	54	73	63.5	31.5	3983.5
9/28/1982	1982	9	28	120	41	67	54	22	4005.5
9/29/1982	1982	9	29	121	36	69	52.5	20.5	4026
9/30/1982	1982	9	30	122	40	69	54.5	22.5	4048.5
10/1/1982	1982	10	1	123	41	68	54.5	22.5	4071
10/2/1982	1982	10	2	124	40	59	49.5	17.5	4088.5
10/3/1982	1982	10	3	125	34	60	47	15	4103.5
10/4/1982	1982	10	4	126	35	64	49.5	17.5	4121
10/5/1982	1982	10	5	127	34	64	49	17	4138
10/6/1982	1982	10	6	128	36	72	54	22	4160
10/7/1982	1982	10	7	129	34	65	49.5	17.5	4177.5
10/8/1982	1982	10	8	130	35	69	52	20	4197.5
10/9/1982	1982	10	9	131	29	59	44	12	4209.5
10/10/1982	1982	10	10	132	22	55	38.5	6.5	4216
10/11/1982	1982	10	11	133	26	50	38	6	4222
10/12/1982	1982	10	12	134	9	40	24.5	-7.5	4214.5
10/13/1982	1982	10	13	135	10	35	22.5	-9.5	4205
10/14/1982	1982	10	14	136	13	40	26.5	-5.5	4199.5
10/15/1982	1982	10	15	137	14	49	31.5	-0.5	4199
10/16/1982	1982	10	16	138	15	50	32.5	0.5	4199.5
10/17/1982	1982	10	17	139	20	64	42	10	4209.5
10/18/1982	1982	10	18	140	32	62	47	15	4224.5

10/19/1982	1982	10	19	141	36	65	50.5	18.5	4243
10/20/1982	1982	10	20	142	28	66	47	15	4258
10/21/1982	1982	10	21	143	35	65	50	18	4276
10/22/1982	1982	10	22	144	32	77	54.5	22.5	4298.5
10/23/1982	1982	10	23	145	34	62	48	16	4314.5
10/24/1982	1982	10	24	146	36	64	50	18	4332.5
10/25/1982	1982	10	25	147	34	68	51	19	4351.5
10/26/1982	1982	10	26	148	30	67	48.5	16.5	4368
10/27/1982	1982	10	27	149	32	65	48.5	16.5	4384.5
10/28/1982	1982	10	28	150	35	63	49	17	4401.5
10/29/1982	1982	10	29	151	37	58	47.5	15.5	4417
10/30/1982	1982	10	30	152	20	46	33	1	4418
10/31/1982	1982	10	31	153	22	50	36	4	4422
11/1/1982	1982	11	1	154	31	54	42.5	10.5	4432.5
11/2/1982	1982	11	2	155	25	48	36.5	4.5	4437
11/3/1982	1982	11	3	156	18	42	30	-2	4435
11/4/1982	1982	11	4	157	24	50	37	5	4440
11/5/1982	1982	11	5	158	29	56	42.5	10.5	4450.5
11/6/1982	1982	11	6	159	30	60	45	13	4463.5
11/7/1982	1982	11	7	160	30	61	45.5	13.5	4477
11/8/1982	1982	11	8	161	34	56	45	13	4490
11/9/1982	1982	11	9	162	20	52	36	4	4494
11/10/1982	1982	11	10	163	30	55	42.5	10.5	4504.5
11/11/1982	1982	11	11	164	27	49	38	6	4510.5
11/12/1982	1982	11	12	165	19	49	34	2	4512.5
11/13/1982	1982	11	13	166	20	50	35	3	4515.5
11/14/1982	1982	11	14	167	19	45	32	0	4515.5
11/15/1982	1982	11	15	168	21	49	35	3	4518.5
11/16/1982	1982	11	16	169	28	47	37.5	5.5	4524
11/17/1982	1982	11	17	170	29	48	38.5	6.5	4530.5
11/18/1982	1982	11	18	171	28	46	37	5	4535.5
11/19/1982	1982	11	19	172	20	45	32.5	0.5	4536
11/20/1982	1982	11	20	173	26	49	37.5	5.5	4541.5
11/21/1982	1982	11	21	174	25	48	36.5	4.5	4546
11/22/1982	1982	11	22	175	28	50	39	7	4553
11/23/1982	1982	11	23	176	30	49	39.5	7.5	4560.5
11/24/1982	1982	11	24	177	23	42	32.5	0.5	4561
11/25/1982	1982	11	25	178	20	39	29.5	-2.5	4558.5
11/26/1982	1982	11	26	179	29	37	33	1	4559.5
11/27/1982	1982	11	27	180	26	38	32	0	4559.5
11/28/1982	1982	11	28	181	27	39	33	1	4560.5
11/29/1982	1982	11	29	182	30	40	35	3	4563.5
11/30/1982	1982	11	30	183	23	42	32.5	0.5	4564
12/1/1982	1982	12	1	184	23	40	31.5	-0.5	4563.5
12/2/1982	1982	12	2	185	20	36	28	-4	4559.5
12/3/1982	1982	12	3	186	17	30	23.5	-8.5	4551
12/4/1982	1982	12	4	187	18	44	31	-1	4550
12/5/1982	1982	12	5	188	21	43	32	0	4550
12/6/1982	1982	12	6	189	19	40	29.5	-2.5	4547.5
12/7/1982	1982	12	7	190	20	48	34	2	4549.5
12/8/1982	1982	12	8	191	23	45	34	2	4551.5
12/9/1982	1982	12	9	192	27	42	34.5	2.5	4554
12/10/1982	1982	12	10	193	28	43	35.5	3.5	4557.5
12/11/1982	1982	12	11	194	29	37	33	1	4558.5
12/12/1982	1982	12	12	195	10	40	25	-7	4551.5
12/13/1982	1982	12	13	196	11	44	27.5	-4.5	4547
12/14/1982	1982	12	14	197	19	40	29.5	-2.5	4544.5
12/15/1982	1982	12	15	198	16	42	29	-3	4541.5
12/16/1982	1982	12	16	199	19	39	29	-3	4538.5
12/17/1982	1982	12	17	200	18	40	29	-3	4535.5
12/18/1982	1982	12	18	201	20	45	32.5	0.5	4536
12/19/1982	1982	12	19	202	20	45	32.5	0.5	4536.5
12/20/1982	1982	12	20	203	21	50	35.5	3.5	4540
12/21/1982	1982	12	21	204	21	46	33.5	1.5	4541.5
12/22/1982	1982	12	22	205	20	49	34.5	2.5	4544
12/23/1982	1982	12	23	206	19	45	32	0	4544
12/24/1982	1982	12	24	207	18	39	28.5	-3.5	4540.5
12/25/1982	1982	12	25	208	6	30	18	-14	4526.5
12/26/1982	1982	12	26	209	7	30	18.5	-13.5	4513
12/27/1982	1982	12	27	210	12	34	23	-9	4504
12/28/1982	1982	12	28	211	14	30	22	-10	4494
12/29/1982	1982	12	29	212	0	25	12.5	-19.5	4474.5
12/30/1982	1982	12	30	213	0	27	13.5	-18.5	4456
12/31/1982	1982	12	31	214	0	24	12	-20	4436
1/1/1983	1983	1	1	215	5	38	21.5	-10.5	4425.5
1/2/1983	1983	1	2	216	4	32	18	-14	4411.5
1/3/1983	1983	1	3	217	0	31	15.5	-16.5	4395
1/4/1983	1983	1	4	218	6	34	20	-12	4383
1/5/1983	1983	1	5	219	10	40	25	-7	4376
1/6/1983	1983	1	6	220		39	39	7	4383
1/7/1983	1983	1	7	221	12	40	26	-6	4377
1/8/1983	1983	1	8	222	19	40	29.5	-2.5	4374.5
1/9/1983	1983	1	9	223	20	44	32	0	4374.5
1/10/1983	1983	1	10	224	15	42	28.5	-3.5	4371
1/11/1983	1983	1	11	225	15	42	28.5	-3.5	4367.5
1/12/1983	1983	1	12	226	19	42	30.5	-1.5	4366
1/13/1983	1983	1	13	227	18	41	29.5	-2.5	4363.5
1/14/1983	1983	1	14	228	19	44	31.5	-0.5	4363
1/15/1983	1983	1	15	229	16	40	28	-4	4359
1/16/1983	1983	1	16	230	15	39	27	-5	4354
1/17/1983	1983	1	17	231	16	38	27	-5	4349
1/18/1983	1983	1	18	232	16	40	28	-4	4345
1/19/1983	1983	1	19	233	10	39	24.5	-7.5	4337.5

1/20/1983	1983	1	20	234	19	40	29.5	-2.5	4335
1/21/1983	1983	1	21	235	20	40	30	-2	4333
1/22/1983	1983	1	22	236	21	38	29.5	-2.5	4330.5
1/23/1983	1983	1	23	237	10	32	21	-11	4319.5
1/24/1983	1983	1	24	238	15	39	27	-5	4314.5
1/25/1983	1983	1	25	239	16	38	27	-5	4309.5
1/26/1983	1983	1	26	240	19	37	28	-4	4305.5
1/27/1983	1983	1	27	241	16	39	27.5	-4.5	4301
1/28/1983	1983	1	28	242	19	40	29.5	-2.5	4298.5
1/29/1983	1983	1	29	243	19	42	30.5	-1.5	4297
1/30/1983	1983	1	30	244	19	40	29.5	-2.5	4294.5
1/31/1983	1983	1	31	245	11	30	20.5	-11.5	4283
2/1/1983	1983	2	1	246	5	28	16.5	-15.5	4267.5
2/2/1983	1983	2	2	247	9	30	19.5	-12.5	4255
2/3/1983	1983	2	3	248	8	38	23	-9	4246
2/4/1983	1983	2	4	249	7	39	23	-9	4237
2/5/1983	1983	2	5	250	5	30	17.5	-14.5	4222.5
2/6/1983	1983	2	6	251	4	34	19	-13	4209.5
2/7/1983	1983	2	7	252	5	36	20.5	-11.5	4198
2/8/1983	1983	2	8	253	5	38	21.5	-10.5	4187.5
2/9/1983	1983	2	9	254	9	46	27.5	-4.5	4183
2/10/1983	1983	2	10	255	10	40	25	-7	4176
2/11/1983	1983	2	11	256	10	40	25	-7	4169
2/12/1983	1983	2	12	257	15	48	31.5	-0.5	4168.5
2/13/1983	1983	2	13	258	17	48	32.5	0.5	4169
2/14/1983	1983	2	14	259	16	46	31	-1	4168
2/15/1983	1983	2	15	260	15	47	31	-1	4167
2/16/1983	1983	2	16	261	17	44	30.5	-1.5	4165.5
2/17/1983	1983	2	17	262	14	45	29.5	-2.5	4163
2/18/1983	1983	2	18	263	15	48	31.5	-0.5	4162.5
2/19/1983	1983	2	19	264	19	49	34	2	4164.5
2/20/1983	1983	2	20	265	20	45	32.5	0.5	4165
2/21/1983	1983	2	21	266	19	48	33.5	1.5	4166.5
2/22/1983	1983	2	22	267	19	46	32.5	0.5	4167
2/23/1983	1983	2	23	268	20	48	34	2	4169
2/24/1983	1983	2	24	269	20	51	35.5	3.5	4172.5
2/25/1983	1983	2	25	270	20	50	35	3	4175.5
2/26/1983	1983	2	26	271	18	50	34	2	4177.5
2/27/1983	1983	2	27	272	19	50	34.5	2.5	4180
2/28/1983	1983	2	28	273	20	43	31.5	-0.5	4179.5
3/1/1983	1983	3	1	274	33	56	44.5	12.5	4192
3/2/1983	1983	3	2	275	39	54	46.5	14.5	4206.5
3/3/1983	1983	3	3	276	34	54	44	12	4218.5
3/4/1983	1983	3	4	277	12	40	26	-6	4212.5
3/5/1983	1983	3	5	278	12	41	26.5	-5.5	4207
3/6/1983	1983	3	6	279	15	45	30	-2	4205
3/7/1983	1983	3	7	280	11	45	28	-4	4201
3/8/1983	1983	3	8	281	11	50	30.5	-1.5	4199.5
3/9/1983	1983	3	9	282	12	51	31.5	-0.5	4199
3/10/1983	1983	3	10	283	20	56	38	6	4205
3/11/1983	1983	3	11	284	22	59	40.5	8.5	4213.5
3/12/1983	1983	3	12	285	25	61	43	11	4224.5
3/13/1983	1983	3	13	286	20	59	39.5	7.5	4232
3/14/1983	1983	3	14	287	19	56	37.5	5.5	4237.5
3/15/1983	1983	3	15	288	18	58	38	6	4243.5
3/16/1983	1983	3	16	289	30	59	44.5	12.5	4256
3/17/1983	1983	3	17	290	28	46	37	5	4261
3/18/1983	1983	3	18	291	25	47	36	4	4265
3/19/1983	1983	3	19	292	24	46	35	3	4268
3/20/1983	1983	3	20	293	25	42	33.5	1.5	4269.5
3/21/1983	1983	3	21	294	26	40	33	1	4270.5
3/22/1983	1983	3	22	295	23	39	31	-1	4269.5
3/23/1983	1983	3	23	296	20	44	32	0	4269.5
3/24/1983	1983	3	24	297	25	44	34.5	2.5	4272
3/25/1983	1983	3	25	298	28	40	34	2	4274
3/26/1983	1983	3	26	299	21	39	30	-2	4272
3/27/1983	1983	3	27	300	21	35	28	-4	4268
3/28/1983	1983	3	28	301	20	46	33	1	4269
3/29/1983	1983	3	29	302	20	45	32.5	0.5	4269.5
3/30/1983	1983	3	30	303	29	49	39	7	4276.5
3/31/1983	1983	3	31	304	29	64	46.5	14.5	4291
4/1/1983	1983	4	1	305	20	30	25	-7	4284
4/2/1983	1983	4	2	306	12	30	21	-11	4273
4/3/1983	1983	4	3	307	16	30	23	-9	4264
4/4/1983	1983	4	4	308	14	35	24.5	-7.5	4256.5
4/5/1983	1983	4	5	309	11	37	24	-8	4248.5
4/6/1983	1983	4	6	310	17	36	26.5	-5.5	4243
4/7/1983	1983	4	7	311	18	40	29	-3	4240
4/8/1983	1983	4	8	312	19	42	30.5	-1.5	4238.5
4/9/1983	1983	4	9	313	20	45	32.5	0.5	4239
4/10/1983	1983	4	10	314	19	48	33.5	1.5	4240.5
4/11/1983	1983	4	11	315	17	47	32	0	4240.5
4/12/1983	1983	4	12	316	19	50	34.5	2.5	4243
4/13/1983	1983	4	13	317	20	57	38.5	6.5	4249.5
4/14/1983	1983	4	14	318	19	55	37	5	4254.5
4/15/1983	1983	4	15	319	13	56	34.5	2.5	4257
4/16/1983	1983	4	16	320	8	48	28	-4	4253
4/17/1983	1983	4	17	321	10	36	23	-9	4244
4/18/1983	1983	4	18	322	15	44	29.5	-2.5	4241.5
4/19/1983	1983	4	19	323	12	40	26	-6	4235.5
4/20/1983	1983	4	20	324	19	45	32	0	4235.5
4/21/1983	1983	4	21	325	20	50	35	3	4238.5
4/22/1983	1983	4	22	326	26	58	42	10	4248.5

4/23/1983	1983	4	23	327	27	64	45.5	13.5	4262
4/24/1983	1983	4	24	328	28	65	46.5	14.5	4276.5
4/25/1983	1983	4	25	329	30	64	47	15	4291.5
4/26/1983	1983	4	26	330	30	65	47.5	15.5	4307
4/27/1983	1983	4	27	331	34	61	47.5	15.5	4322.5
4/28/1983	1983	4	28	332	32	58	45	13	4335.5
4/29/1983	1983	4	29	333	34	66	50	18	4353.5
4/30/1983	1983	4	30	334	66	64	65	33	4386.5
5/1/1983	1983	5	1	335	32	57	44.5	12.5	4399
5/2/1983	1983	5	2	336	29	54	41.5	9.5	4408.5
5/3/1983	1983	5	3	337	31	60	45.5	13.5	4422
5/4/1983	1983	5	4	338	30	60	45	13	4435
5/5/1983	1983	5	5	339	32	61	46.5	14.5	4449.5
5/6/1983	1983	5	6	340	39	68	53.5	21.5	4471
5/7/1983	1983	5	7	341	41	68	54.5	22.5	4493.5
5/8/1983	1983	5	8	342	33	69	51	19	4512.5
5/9/1983	1983	5	9	343	48	73	60.5	28.5	4541
5/10/1983	1983	5	10	344	45	72	58.5	26.5	4567.5
5/11/1983	1983	5	11	345	44	73	58.5	26.5	4594
5/12/1983	1983	5	12	346	46	71	58.5	26.5	4620.5
5/13/1983	1983	5	13	347	31	67	49	17	4637.5
5/14/1983	1983	5	14	348	37	68	52.5	20.5	4658
5/15/1983	1983	5	15	349	32	62	47	15	4673
5/16/1983	1983	5	16	350	34	64	49	17	4690
5/17/1983	1983	5	17	351	39	67	53	21	4711
5/18/1983	1983	5	18	352	30	64	47	15	4726
5/19/1983	1983	5	19	353	29	61	45	13	4739
5/20/1983	1983	5	20	354	38	63	50.5	18.5	4757.5
5/21/1983	1983	5	21	355	33	46	39.5	7.5	4765
5/22/1983	1983	5	22	356	32	68	50	18	4783
5/23/1983	1983	5	23	357	40	74	57	25	4808
5/24/1983	1983	5	24	358	41	75	58	26	4834
5/25/1983	1983	5	25	359	47	77	62	30	4864
5/26/1983	1983	5	26	360	49	75	62	30	4894
5/27/1983	1983	5	27	361	52	77	64.5	32.5	4926.5
5/28/1983	1983	5	28	362	50	81	65.5	33.5	4960
5/29/1983	1983	5	29	363	50	81	65.5	33.5	4993.5
5/30/1983	1983	5	30	364	46	74	60	28	5021.5
5/31/1983	1983	5	31	365	49	74	61.5	29.5	5051
6/1/1983	1983	6	1	1	54	75	64.5	32.5	32.5
6/2/1983	1983	6	2	2	43	74	58.5	26.5	59
6/3/1983	1983	6	3	3	47	76	61.5	29.5	88.5
6/4/1983	1983	6	4	4	44	73	58.5	26.5	115
6/5/1983	1983	6	5	5	45	75	60	28	143
6/6/1983	1983	6	6	6	43	72	57.5	25.5	168.5
6/7/1983	1983	6	7	7	40	70	55	23	191.5
6/8/1983	1983	6	8	8	49	75	62	30	221.5
6/9/1983	1983	6	9	9	49	76	62.5	30.5	252
6/10/1983	1983	6	10	10	48	71	59.5	27.5	279.5
6/11/1983	1983	6	11	11	46	73	59.5	27.5	307
6/12/1983	1983	6	12	12	45	74	59.5	27.5	334.5
6/13/1983	1983	6	13	13	50	80	65	33	367.5
6/14/1983	1983	6	14	14	48	80	64	32	399.5
6/15/1983	1983	6	15	15	43	74	58.5	26.5	426
6/16/1983	1983	6	16	16	39	73	56	24	450
6/17/1983	1983	6	17	17	45	81	63	31	481
6/18/1983	1983	6	18	18	51	80	65.5	33.5	514.5
6/19/1983	1983	6	19	19	53	85	69	37	551.5
6/20/1983	1983	6	20	20	51	82	66.5	34.5	586
6/21/1983	1983	6	21	21	54	85	69.5	37.5	623.5
6/22/1983	1983	6	22	22	50	86	68	36	659.5
6/23/1983	1983	6	23	23	51	87	69	37	696.5
6/24/1983	1983	6	24	24	58	70	64	32	728.5
6/25/1983	1983	6	25	25	50	62	56	24	752.5
6/26/1983	1983	6	26	26	45	60	52.5	20.5	773
6/27/1983	1983	6	27	27	46	70	58	26	799
6/28/1983	1983	6	28	28	45	75	60	28	827
6/29/1983	1983	6	29	29	50	80	65	33	860
6/30/1983	1983	6	30	30	51	81	66	34	894
7/1/1983	1983	7	1	31	52	85	68.5	36.5	930.5
7/2/1983	1983	7	2	32	53	84	68.5	36.5	967
7/3/1983	1983	7	3	33	55	83	69	37	1004
7/4/1983	1983	7	4	34	56	85	70.5	38.5	1042.5
7/5/1983	1983	7	5	35	57	86	71.5	39.5	1082
7/6/1983	1983	7	6	36	54	83	68.5	36.5	1118.5
7/7/1983	1983	7	7	37	55	84	69.5	37.5	1156
7/8/1983	1983	7	8	38	58	82	70	38	1194
7/9/1983	1983	7	9	39	57	85	71	39	1233
7/10/1983	1983	7	10	40	54	81	67.5	35.5	1268.5
7/11/1983	1983	7	11	41	53	78	65.5	33.5	1302
7/12/1983	1983	7	12	42	49	75	62	30	1332
7/13/1983	1983	7	13	43	50	82	66	34	1366
7/14/1983	1983	7	14	44	54	83	68.5	36.5	1402.5
7/15/1983	1983	7	15	45	59	82	70.5	38.5	1441
7/16/1983	1983	7	16	46	57	85	71	39	1480
7/17/1983	1983	7	17	47	58	86	72	40	1520
7/18/1983	1983	7	18	48	56	80	68	36	1556
7/19/1983	1983	7	19	49	55	78	66.5	34.5	1590.5
7/20/1983	1983	7	20	50	54	79	66.5	34.5	1625
7/21/1983	1983	7	21	51	53	78	65.5	33.5	1658.5
7/22/1983	1983	7	22	52	54	80	67	35	1693.5
7/23/1983	1983	7	23	53	55	79	67	35	1728.5
7/24/1983	1983	7	24	54	55	80	67.5	35.5	1764

7/25/1983	1983	7	25	55	54	79	66.5	34.5	1798.5
7/26/1983	1983	7	26	56	52	76	64	32	1830.5
7/27/1983	1983	7	27	57	52	74	63	31	1861.5
7/28/1983	1983	7	28	58	54	77	65.5	33.5	1895
7/29/1983	1983	7	29	59	58	79	68.5	36.5	1931.5
7/30/1983	1983	7	30	60	57	78	67.5	35.5	1967
7/31/1983	1983	7	31	61	58	79	68.5	36.5	2003.5
8/1/1983	1983	8	1	62	55	77	66	34	2037.5
8/2/1983	1983	8	2	63	54	79	66.5	34.5	2072
8/3/1983	1983	8	3	64	56	78	67	35	2107
8/4/1983	1983	8	4	65	55	79	67	35	2142
8/5/1983	1983	8	5	66	58	80	69	37	2179
8/6/1983	1983	8	6	67	57	81	69	37	2216
8/7/1983	1983	8	7	68	59	80	69.5	37.5	2253.5
8/8/1983	1983	8	8	69	57	82	69.5	37.5	2291
8/9/1983	1983	8	9	70	56	81	68.5	36.5	2327.5
8/10/1983	1983	8	10	71	57	79	68	36	2363.5
8/11/1983	1983	8	11	72	55	77	66	34	2397.5
8/12/1983	1983	8	12	73	54	70	62	30	2427.5
8/13/1983	1983	8	13	74	55	74	64.5	32.5	2460
8/14/1983	1983	8	14	75	54	78	66	34	2494
8/15/1983	1983	8	15	76	55	79	67	35	2529
8/16/1983	1983	8	16	77	56	79	67.5	35.5	2564.5
8/17/1983	1983	8	17	78	54	80	67	35	2599.5
8/18/1983	1983	8	18	79	56	80	68	36	2635.5
8/19/1983	1983	8	19	80	57	80	68.5	36.5	2672
8/20/1983	1983	8	20	81	54	79	66.5	34.5	2706.5
8/21/1983	1983	8	21	82	50	77	63.5	31.5	2738
8/22/1983	1983	8	22	83	56	79	67.5	35.5	2773.5
8/23/1983	1983	8	23	84	55	78	66.5	34.5	2808
8/24/1983	1983	8	24	85	54	80	67	35	2843
8/25/1983	1983	8	25	86	56	77	66.5	34.5	2877.5
8/26/1983	1983	8	26	87	52	75	63.5	31.5	2909
8/27/1983	1983	8	27	88	54	76	65	33	2942
8/28/1983	1983	8	28	89	53	77	65	33	2975
8/29/1983	1983	8	29	90	51	75	63	31	3006
8/30/1983	1983	8	30	91	54	72	63	31	3037
8/31/1983	1983	8	31	92	54	76	65	33	3070
9/1/1983	1983	9	1	93	55	76	65.5	33.5	3103.5
9/2/1983	1983	9	2	94	57	77	67	35	3138.5
9/3/1983	1983	9	3	95	61	79	70	38	3176.5
9/4/1983	1983	9	4	96	57	80	68.5	36.5	3213
9/5/1983	1983	9	5	97	54	77	65.5	33.5	3246.5
9/6/1983	1983	9	6	98	52	69	60.5	28.5	3275
9/7/1983	1983	9	7	99	54	79	66.5	34.5	3309.5
9/8/1983	1983	9	8	100	55	74	64.5	32.5	3342
9/9/1983	1983	9	9	101	52	78	65	33	3375
9/10/1983	1983	9	10	102	55	79	67	35	3410
9/11/1983	1983	9	11	103	54	74	64	32	3442
9/12/1983	1983	9	12	104	52	70	61	29	3471
9/13/1983	1983	9	13	105	55	70	62.5	30.5	3501.5
9/14/1983	1983	9	14	106	48	74	61	29	3530.5
9/15/1983	1983	9	15	107	53	78	65.5	33.5	3564
9/16/1983	1983	9	16	108	54	78	66	34	3598
9/17/1983	1983	9	17	109	50	88	69	37	3635
9/18/1983	1983	9	18	110	50	75	62.5	30.5	3665.5
9/19/1983	1983	9	19	111	51	72	61.5	29.5	3695
9/20/1983	1983	9	20	112	35	71	53	21	3716
9/21/1983	1983	9	21	113	36	70	53	21	3737
9/22/1983	1983	9	22	114	45	73	59	27	3764
9/23/1983	1983	9	23	115	51	71	61	29	3793
9/24/1983	1983	9	24	116	42	69	55.5	23.5	3816.5
9/25/1983	1983	9	25	117	43	70	56.5	24.5	3841
9/26/1983	1983	9	26	118	46	71	58.5	26.5	3867.5
9/27/1983	1983	9	27	119	49	71	60	28	3895.5
9/28/1983	1983	9	28	120	45	60	52.5	20.5	3916
9/29/1983	1983	9	29	121	46	62	54	22	3938
9/30/1983	1983	9	30	122	46	62	54	22	3960
10/1/1983	1983	10	1	123	43	61	52	20	3980
10/2/1983	1983	10	2	124	42	61	51.5	19.5	3999.5
10/3/1983	1983	10	3	125	39	59	49	17	4016.5
10/4/1983	1983	10	4	126	37	61	49	17	4033.5
10/5/1983	1983	10	5	127	44	60	52	20	4053.5
10/6/1983	1983	10	6	128	43	64	53.5	21.5	4075
10/7/1983	1983	10	7	129	44	67	55.5	23.5	4098.5
10/8/1983	1983	10	8	130	47	66	56.5	24.5	4123
10/9/1983	1983	10	9	131	40	57	48.5	16.5	4139.5
10/10/1983	1983	10	10	132	41	58	49.5	17.5	4157
10/11/1983	1983	10	11	133	42	55	48.5	16.5	4173.5
10/12/1983	1983	10	12	134	36	56	46	14	4187.5
10/13/1983	1983	10	13	135	36	57	46.5	14.5	4202
10/14/1983	1983	10	14	136	38	68	53	21	4223
10/15/1983	1983	10	15	137	45	66	55.5	23.5	4246.5
10/16/1983	1983	10	16	138	39	58	48.5	16.5	4263
10/17/1983	1983	10	17	139	37	60	48.5	16.5	4279.5
10/18/1983	1983	10	18	140	41	62	51.5	19.5	4299
10/19/1983	1983	10	19	141	42	65	53.5	21.5	4320.5
10/20/1983	1983	10	20	142	46	64	55	23	4343.5
10/21/1983	1983	10	21	143	43	57	50	18	4361.5
10/22/1983	1983	10	22	144	36	60	48	16	4377.5
10/23/1983	1983	10	23	145	40	64	52	20	4397.5
10/24/1983	1983	10	24	146	39	64	51.5	19.5	4417
10/25/1983	1983	10	25	147	42	62	52	20	4437

10/26/1983	1983	10	26	148	33	55	44	12	4449
10/27/1983	1983	10	27	149	32	54	43	11	4460
10/28/1983	1983	10	28	150	33	55	44	12	4472
10/29/1983	1983	10	29	151	32	55	43.5	11.5	4483.5
10/30/1983	1983	10	30	152	33	60	46.5	14.5	4498
10/31/1983	1983	10	31	153	43	64	53.5	21.5	4519.5
11/1/1983	1983	11	1	154	39	61	50	18	4537.5
11/2/1983	1983	11	2	155	40	62	51	19	4556.5
11/3/1983	1983	11	3	156	39	64	51.5	19.5	4576
11/4/1983	1983	11	4	157	40	57	48.5	16.5	4592.5
11/5/1983	1983	11	5	158	40	59	49.5	17.5	4610
11/6/1983	1983	11	6	159	38	60	49	17	4627
11/7/1983	1983	11	7	160	37	63	50	18	4645
11/8/1983	1983	11	8	161	36	63	49.5	17.5	4662.5
11/9/1983	1983	11	9	162	21	59	40	8	4670.5
11/10/1983	1983	11	10	163	27	55	41	9	4679.5
11/11/1983	1983	11	11	164	26	56	41	9	4688.5
11/12/1983	1983	11	12	165	33	60	46.5	14.5	4703
11/13/1983	1983	11	13	166	39	60	49.5	17.5	4720.5
11/14/1983	1983	11	14	167	38	61	49.5	17.5	4738
11/15/1983	1983	11	15	168	20	54	37	5	4743
11/16/1983	1983	11	16	169	24	55	39.5	7.5	4750.5
11/17/1983	1983	11	17	170	25	59	42	10	4760.5
11/18/1983	1983	11	18	171	31	58	44.5	12.5	4773
11/19/1983	1983	11	19	172	11	52	31.5	-0.5	4772.5
11/20/1983	1983	11	20	173	15	36	25.5	-6.5	4766
11/21/1983	1983	11	21	174	26	45	35.5	3.5	4769.5
11/22/1983	1983	11	22	175	7	40	23.5	-8.5	4761
11/23/1983	1983	11	23	176	11	27	19	-13	4748
11/24/1983	1983	11	24	177	16	26	21	-11	4737
11/25/1983	1983	11	25	178	15	45	30	-2	4735
11/26/1983	1983	11	26	179	16	46	31	-1	4734
11/27/1983	1983	11	27	180	12	42	27	-5	4729
11/28/1983	1983	11	28	181	13	39	26	-6	4723
11/29/1983	1983	11	29	182	10	37	23.5	-8.5	4714.5
11/30/1983	1983	11	30	183	15	39	27	-5	4709.5
12/1/1983	1983	12	1	184	26	49	37.5	5.5	4715
12/2/1983	1983	12	2	185	12	46	29	-3	4712
12/3/1983	1983	12	3	186	12	40	26	-6	4706
12/4/1983	1983	12	4	187	18	40	29	-3	4703
12/5/1983	1983	12	5	188	19	41	30	-2	4701
12/6/1983	1983	12	6	189	10	40	25	-7	4694
12/7/1983	1983	12	7	190	18	42	30	-2	4692
12/8/1983	1983	12	8	191	19	48	33.5	1.5	4693.5
12/9/1983	1983	12	9	192	20	48	34	2	4695.5
12/10/1983	1983	12	10	193	19	47	33	1	4696.5
12/11/1983	1983	12	11	194	18	46	32	0	4696.5
12/12/1983	1983	12	12	195	17	40	28.5	-3.5	4693
12/13/1983	1983	12	13	196	16	39	27.5	-4.5	4688.5
12/14/1983	1983	12	14	197	16	40	28	-4	4684.5
12/15/1983	1983	12	15	198	20	35	27.5	-4.5	4680
12/16/1983	1983	12	16	199	16	43	29.5	-2.5	4677.5
12/17/1983	1983	12	17	200	17	37	27	-5	4672.5
12/18/1983	1983	12	18	201	15	36	25.5	-6.5	4666
12/19/1983	1983	12	19	202	15	35	25	-7	4659
12/20/1983	1983	12	20	203	6	32	19	-13	4646
12/21/1983	1983	12	21	204	11	36	23.5	-8.5	4637.5
12/22/1983	1983	12	22	205	15	38	26.5	-5.5	4632
12/23/1983	1983	12	23	206	19	35	27	-5	4627
12/24/1983	1983	12	24	207	16	34	25	-7	4620
12/25/1983	1983	12	25	208	17	36	26.5	-5.5	4614.5
12/26/1983	1983	12	26	209	19	37	28	-4	4610.5
12/27/1983	1983	12	27	210	17	34	25.5	-6.5	4604
12/28/1983	1983	12	28	211	4	35	19.5	-12.5	4591.5
12/29/1983	1983	12	29	212	9	25	17	-15	4576.5
12/30/1983	1983	12	30	213	16	39	27.5	-4.5	4572
12/31/1983	1983	12	31	214	15	38	26.5	-5.5	4566.5
1/1/1984	1984	1	1	215	20	39	29.5	-2.5	4564
1/2/1984	1984	1	2	216	24	40	32	0	4564
1/3/1984	1984	1	3	217	20	39	29.5	-2.5	4561.5
1/4/1984	1984	1	4	218	21	40	30.5	-1.5	4560
1/5/1984	1984	1	5	219	20	39	29.5	-2.5	4557.5
1/6/1984	1984	1	6	220	22	36	29	-3	4554.5
1/7/1984	1984	1	7	221	27	37	32	0	4554.5
1/8/1984	1984	1	8	222	27	45	36	4	4558.5
1/9/1984	1984	1	9	223	26	46	36	4	4562.5
1/10/1984	1984	1	10	224	17	43	30	-2	4560.5
1/11/1984	1984	1	11	225	18	41	29.5	-2.5	4558
1/12/1984	1984	1	12	226	15	39	27	-5	4553
1/13/1984	1984	1	13	227	16	38	27	-5	4548
1/14/1984	1984	1	14	228	9	37	23	-9	4539
1/15/1984	1984	1	15	229	10	35	22.5	-9.5	4529.5
1/16/1984	1984	1	16	230	13	32	22.5	-9.5	4520
1/17/1984	1984	1	17	231	17	28	22.5	-9.5	4510.5
1/18/1984	1984	1	18	232	-4	22	9	-23	4487.5
1/19/1984	1984	1	19	233	-13	29	8	-24	4463.5
1/20/1984	1984	1	20	234	-13	34	10.5	-21.5	4442
1/21/1984	1984	1	21	235	-4	30	13	-19	4423
1/22/1984	1984	1	22	236	11	39	25	-7	4416
1/23/1984	1984	1	23	237	12	34	23	-9	4407
1/24/1984	1984	1	24	238	-6	34	14	-18	4389
1/25/1984	1984	1	25	239	15	37	26	-6	4383
1/26/1984	1984	1	26	240	19	42	30.5	-1.5	4381.5

1/27/1984	1984	1	27	241	18	43	30.5	-1.5	4380
1/28/1984	1984	1	28	242	21	45	33	1	4381
1/29/1984	1984	1	29	243	20	41	30.5	-1.5	4379.5
1/30/1984	1984	1	30	244	17	44	30.5	-1.5	4378
1/31/1984	1984	1	31	245	19	45	32	0	4378
2/1/1984	1984	2	1	246	22	49	35.5	3.5	4381.5
2/2/1984	1984	2	2	247	24	48	36	4	4385.5
2/3/1984	1984	2	3	248	20	47	33.5	1.5	4387
2/4/1984	1984	2	4	249	25	42	33.5	1.5	4388.5
2/5/1984	1984	2	5	250	32	49	40.5	8.5	4397
2/6/1984	1984	2	6	251	23	55	39	7	4404
2/7/1984	1984	2	7	252	25	54	39.5	7.5	4411.5
2/8/1984	1984	2	8	253	21	42	31.5	-0.5	4411
2/9/1984	1984	2	9	254	23	40	31.5	-0.5	4410.5
2/10/1984	1984	2	10	255	12	41	26.5	-5.5	4405
2/11/1984	1984	2	11	256	13	42	27.5	-4.5	4400.5
2/12/1984	1984	2	12	257	15	45	30	-2	4398.5
2/13/1984	1984	2	13	258	13	45	29	-3	4395.5
2/14/1984	1984	2	14	259	13	50	31.5	-0.5	4395
2/15/1984	1984	2	15	260	12	50	31	-1	4394
2/16/1984	1984	2	16	261	16	50	33	1	4395
2/17/1984	1984	2	17	262	11	50	30.5	-1.5	4393.5
2/18/1984	1984	2	18	263	15	49	32	0	4393.5
2/19/1984	1984	2	19	264	19	36	27.5	-4.5	4389
2/20/1984	1984	2	20	265	15	35	25	-7	4382
2/21/1984	1984	2	21	266	12	36	24	-8	4374
2/22/1984	1984	2	22	267	14	39	26.5	-5.5	4368.5
2/23/1984	1984	2	23	268	19	49	34	2	4370.5
2/24/1984	1984	2	24	269	15	48	31.5	-0.5	4370
2/25/1984	1984	2	25	270	18	49	33.5	1.5	4371.5
2/26/1984	1984	2	26	271	30	48	39	7	4378.5
2/27/1984	1984	2	27	272	71	40	55.5	23.5	4402
2/28/1984	1984	2	28	273	12	40	26	-6	4396
2/29/1984	1984	2	29	274	19	50	34.5	2.5	4398.5
3/1/1984	1984	3	1	275	27	58	42.5	10.5	4409
3/2/1984	1984	3	2	276	26	57	41.5	9.5	4418.5
3/3/1984	1984	3	3	277	25	54	39.5	7.5	4426
3/4/1984	1984	3	4	278	22	52	37	5	4431
3/5/1984	1984	3	5	279	15	38	26.5	-5.5	4425.5
3/6/1984	1984	3	6	280	13	39	26	-6	4419.5
3/7/1984	1984	3	7	281	16	48	32	0	4419.5
3/8/1984	1984	3	8	282	25	50	37.5	5.5	4425
3/9/1984	1984	3	9	283	26	51	38.5	6.5	4431.5
3/10/1984	1984	3	10	284	27	55	41	9	4440.5
3/11/1984	1984	3	11	285	17	51	34	2	4442.5
3/12/1984	1984	3	12	286	25	55	40	8	4450.5
3/13/1984	1984	3	13	287	32	60	46	14	4464.5
3/14/1984	1984	3	14	288	39	61	50	18	4482.5
3/15/1984	1984	3	15	289	33	60	46.5	14.5	4497
3/16/1984	1984	3	16	290	40	59	49.5	17.5	4514.5
3/17/1984	1984	3	17	291	28	60	44	12	4526.5
3/18/1984	1984	3	18	292	19	60	39.5	7.5	4534
3/19/1984	1984	3	19	293	20	53	36.5	4.5	4538.5
3/20/1984	1984	3	20	294	24	61	42.5	10.5	4549
3/21/1984	1984	3	21	295	31	64	47.5	15.5	4564.5
3/22/1984	1984	3	22	296	29	61	45	13	4577.5
3/23/1984	1984	3	23	297	19	45	32	0	4577.5
3/24/1984	1984	3	24	298	25	58	41.5	9.5	4587
3/25/1984	1984	3	25	299	26	58	42	10	4597
3/26/1984	1984	3	26	300	24	45	34.5	2.5	4599.5
3/27/1984	1984	3	27	301	28	38	33	1	4600.5
3/28/1984	1984	3	28	302	21	39	30	-2	4598.5
3/29/1984	1984	3	29	303	25	40	32.5	0.5	4599
3/30/1984	1984	3	30	304	20	43	31.5	-0.5	4598.5
3/31/1984	1984	3	31	305	31	46	38.5	6.5	4605
4/1/1984	1984	4	1	306	25	40	32.5	0.5	4605.5
4/2/1984	1984	4	2	307	25	40	32.5	0.5	4606
4/3/1984	1984	4	3	308	27	47	37	5	4611
4/4/1984	1984	4	4	309	23	50	36.5	4.5	4615.5
4/5/1984	1984	4	5	310	25	50	37.5	5.5	4621
4/6/1984	1984	4	6	311	23	61	42	10	4631
4/7/1984	1984	4	7	312	25	61	43	11	4642
4/8/1984	1984	4	8	313	28	58	43	11	4653
4/9/1984	1984	4	9	314	22	56	39	7	4660
4/10/1984	1984	4	10	315	24	40	32	0	4660
4/11/1984	1984	4	11	316	23	59	41	9	4669
4/12/1984	1984	4	12	317	39	61	50	18	4687
4/13/1984	1984	4	13	318	27	62	44.5	12.5	4699.5
4/14/1984	1984	4	14	319	30	64	47	15	4714.5
4/15/1984	1984	4	15	320	32	65	48.5	16.5	4731
4/16/1984	1984	4	16	321	30	68	49	17	4748
4/17/1984	1984	4	17	322	32	72	52	20	4768
4/18/1984	1984	4	18	323	40	71	55.5	23.5	4791.5
4/19/1984	1984	4	19	324	45	69	57	25	4816.5
4/20/1984	1984	4	20	325	40	66	53	21	4837.5
4/21/1984	1984	4	21	326	25	61	43	11	4848.5
4/22/1984	1984	4	22	327	31	48	39.5	7.5	4856
4/23/1984	1984	4	23	328	25	54	39.5	7.5	4863.5
4/24/1984	1984	4	24	329	31	64	47.5	15.5	4879
4/25/1984	1984	4	25	330	30	66	48	16	4895
4/26/1984	1984	4	26	331	36	69	52.5	20.5	4915.5
4/27/1984	1984	4	27	332	37	67	52	20	4935.5
4/28/1984	1984	4	28	333	30	57	43.5	11.5	4947

4/29/1984	1984	4	29	334	21	43	32	0	4947
4/30/1984	1984	4	30	335	27	50	38.5	6.5	4953.5
5/1/1984	1984	5	1	336	39	63	51	19	4972.5
5/2/1984	1984	5	2	337	38	64	51	19	4991.5
5/3/1984	1984	5	3	338	35	69	52	20	5011.5
5/4/1984	1984	5	4	339	34	70	52	20	5031.5
5/5/1984	1984	5	5	340	44	71	57.5	25.5	5057
5/6/1984	1984	5	6	341	48	69	58.5	26.5	5083.5
5/7/1984	1984	5	7	342	43	68	55.5	23.5	5107
5/8/1984	1984	5	8	343	35	67	51	19	5126
5/9/1984	1984	5	9	344	30	71	50.5	18.5	5144.5
5/10/1984	1984	5	10	345	39	72	55.5	23.5	5168
5/11/1984	1984	5	11	346	47	78	62.5	30.5	5198.5
5/12/1984	1984	5	12	347	53	80	66.5	34.5	5233
5/13/1984	1984	5	13	348	54	79	66.5	34.5	5267.5
5/14/1984	1984	5	14	349	49	80	64.5	32.5	5300
5/15/1984	1984	5	15	350	49	76	62.5	30.5	5330.5
5/16/1984	1984	5	16	351	41	66	53.5	21.5	5352
5/17/1984	1984	5	17	352	39	64	51.5	19.5	5371.5
5/18/1984	1984	5	18	353	44	70	57	25	5396.5
5/19/1984	1984	5	19	354	42	74	58	26	5422.5
5/20/1984	1984	5	20	355	44	74	59	27	5449.5
5/21/1984	1984	5	21	356	43	75	59	27	5476.5
5/22/1984	1984	5	22	357	46	80	63	31	5507.5
5/23/1984	1984	5	23	358	55	80	67.5	35.5	5543
5/24/1984	1984	5	24	359	54	85	69.5	37.5	5580.5
5/25/1984	1984	5	25	360	52	86	69	37	5617.5
5/26/1984	1984	5	26	361	53	84	68.5	36.5	5654
5/27/1984	1984	5	27	362	50	83	66.5	34.5	5688.5
5/28/1984	1984	5	28	363	51	87	69	37	5725.5
5/29/1984	1984	5	29	364	52	84	68	36	5761.5
5/30/1984	1984	5	30	365	49	78	63.5	31.5	5793
5/31/1984	1984	5	31	366	47	80	63.5	31.5	5824.5
6/1/1984	1984	6	1	1	45	71	58	26	26
6/2/1984	1984	6	2	2	46	76	61	29	55
6/3/1984	1984	6	3	3	54	74	64	32	87
6/4/1984	1984	6	4	4	50	73	61.5	29.5	116.5
6/5/1984	1984	6	5	5	52	73	62.5	30.5	147
6/6/1984	1984	6	6	6	44	73	58.5	26.5	173.5
6/7/1984	1984	6	7	7	48	74	61	29	202.5
6/8/1984	1984	6	8	8	44	75	59.5	27.5	230
6/9/1984	1984	6	9	9	39	74	56.5	24.5	254.5
6/10/1984	1984	6	10	10	50	82	66	34	288.5
6/11/1984	1984	6	11	11	49	81	65	33	321.5
6/12/1984	1984	6	12	12	51	80	65.5	33.5	355
6/13/1984	1984	6	13	13	50	84	67	35	390
6/14/1984	1984	6	14	14	53	81	67	35	425
6/15/1984	1984	6	15	15	49	76	62.5	30.5	455.5
6/16/1984	1984	6	16	16	48	74	61	29	484.5
6/17/1984	1984	6	17	17	46	80	63	31	515.5
6/18/1984	1984	6	18	18	53	82	67.5	35.5	551
6/19/1984	1984	6	19	19	52	83	67.5	35.5	586.5
6/20/1984	1984	6	20	20	47	79	63	31	617.5
6/21/1984	1984	6	21	21	50	80	65	33	650.5
6/22/1984	1984	6	22	22	56	82	69	37	687.5
6/23/1984	1984	6	23	23	55	81	68	36	723.5
6/24/1984	1984	6	24	24	60	79	69.5	37.5	761
6/25/1984	1984	6	25	25	55	77	66	34	795
6/26/1984	1984	6	26	26	54	78	66	34	829
6/27/1984	1984	6	27	27	53	80	66.5	34.5	863.5
6/28/1984	1984	6	28	28	54	83	68.5	36.5	900
6/29/1984	1984	6	29	29	61	84	72.5	40.5	940.5
6/30/1984	1984	6	30	30	58	83	70.5	38.5	979
7/1/1984	1984	7	1	31	58	79	68.5	36.5	1015.5
7/2/1984	1984	7	2	32	55	86	70.5	38.5	1054
7/3/1984	1984	7	3	33	58	87	72.5	40.5	1094.5
7/4/1984	1984	7	4	34	56	88	72	40	1134.5
7/5/1984	1984	7	5	35	59	86	72.5	40.5	1175
7/6/1984	1984	7	6	36	58	85	71.5	39.5	1214.5
7/7/1984	1984	7	7	37	50	83	66.5	34.5	1249
7/8/1984	1984	7	8	38	64	84	74	42	1291
7/9/1984	1984	7	9	39	59	80	69.5	37.5	1328.5
7/10/1984	1984	7	10	40	57	81	69	37	1365.5
7/11/1984	1984	7	11	41	58	79	68.5	36.5	1402
7/12/1984	1984	7	12	42	55	75	65	33	1435
7/13/1984	1984	7	13	43	56	77	66.5	34.5	1469.5
7/14/1984	1984	7	14	44	57	82	69.5	37.5	1507
7/15/1984	1984	7	15	45	58	86	72	40	1547
7/16/1984	1984	7	16	46	61	83	72	40	1587
7/17/1984	1984	7	17	47	52	77	64.5	32.5	1619.5
7/18/1984	1984	7	18	48	53	80	66.5	34.5	1654
7/19/1984	1984	7	19	49	56	83	69.5	37.5	1691.5
7/20/1984	1984	7	20	50	57	85	71	39	1730.5
7/21/1984	1984	7	21	51	54	87	70.5	38.5	1769
7/22/1984	1984	7	22	52	55	84	69.5	37.5	1806.5
7/23/1984	1984	7	23	53	59	80	69.5	37.5	1844
7/24/1984	1984	7	24	54	56	80	68	36	1880
7/25/1984	1984	7	25	55	57	77	67	35	1915
7/26/1984	1984	7	26	56	56	75	65.5	33.5	1948.5
7/27/1984	1984	7	27	57	55	78	66.5	34.5	1983
7/28/1984	1984	7	28	58	56	80	68	36	2019
7/29/1984	1984	7	29	59	59	78	68.5	36.5	2055.5
7/30/1984	1984	7	30	60	54	81	67.5	35.5	2091

7/31/1984	1984	7	31	61	57	82	69.5	37.5	2128.5
8/1/1984	1984	8	1	62	59	84	71.5	39.5	2168
8/2/1984	1984	8	2	63	58	81	69.5	37.5	2205.5
8/3/1984	1984	8	3	64	56	83	69.5	37.5	2243
8/4/1984	1984	8	4	65	55	82	68.5	36.5	2279.5
8/5/1984	1984	8	5	66	54	79	66.5	34.5	2314
8/6/1984	1984	8	6	67	56	76	66	34	2348
8/7/1984	1984	8	7	68	54	82	68	36	2384
8/8/1984	1984	8	8	69	53	81	67	35	2419
8/9/1984	1984	8	9	70	50	79	64.5	32.5	2451.5
8/10/1984	1984	8	10	71	54	74	64	32	2483.5
8/11/1984	1984	8	11	72	51	76	63.5	31.5	2515
8/12/1984	1984	8	12	73	56	79	67.5	35.5	2550.5
8/13/1984	1984	8	13	74	55	78	66.5	34.5	2585
8/14/1984	1984	8	14	75	52	79	65.5	33.5	2618.5
8/15/1984	1984	8	15	76	56	78	67	35	2653.5
8/16/1984	1984	8	16	77	55	79	67	35	2688.5
8/17/1984	1984	8	17	78	53	78	65.5	33.5	2722
8/18/1984	1984	8	18	79	54	79	66.5	34.5	2756.5
8/19/1984	1984	8	19	80	57	78	67.5	35.5	2792
8/20/1984	1984	8	20	81	56	77	66.5	34.5	2826.5
8/21/1984	1984	8	21	82	57	80	68.5	36.5	2863
8/22/1984	1984	8	22	83	51	82	66.5	34.5	2897.5
8/23/1984	1984	8	23	84	55	72	63.5	31.5	2929
8/24/1984	1984	8	24	85	49	69	59	27	2956
8/25/1984	1984	8	25	86	52	79	65.5	33.5	2989.5
8/26/1984	1984	8	26	87	54	78	66	34	3023.5
8/27/1984	1984	8	27	88	52	79	65.5	33.5	3057
8/28/1984	1984	8	28	89	58	78	68	36	3093
8/29/1984	1984	8	29	90	57	82	69.5	37.5	3130.5
8/30/1984	1984	8	30	91	59	84	71.5	39.5	3170
8/31/1984	1984	8	31	92	58	81	69.5	37.5	3207.5
9/1/1984	1984	9	1	93	54	74	64	32	3239.5
9/2/1984	1984	9	2	94	49	78	63.5	31.5	3271
9/3/1984	1984	9	3	95	48	79	63.5	31.5	3302.5
9/4/1984	1984	9	4	96	47	72	59.5	27.5	3330
9/5/1984	1984	9	5	97	50	78	64	32	3362
9/6/1984	1984	9	6	98	48	78	63	31	3393
9/7/1984	1984	9	7	99	54	76	65	33	3426
9/8/1984	1984	9	8	100	47	79	63	31	3457
9/9/1984	1984	9	9	101	46	80	63	31	3488
9/10/1984	1984	9	10	102	55	84	69.5	37.5	3525.5
9/11/1984	1984	9	11	103	56	81	68.5	36.5	3562
9/12/1984	1984	9	12	104	50	76	63	31	3593
9/13/1984	1984	9	13	105	56	77	66.5	34.5	3627.5
9/14/1984	1984	9	14	106	55	80	67.5	35.5	3663
9/15/1984	1984	9	15	107	50	75	62.5	30.5	3693.5
9/16/1984	1984	9	16	108	52	70	61	29	3722.5
9/17/1984	1984	9	17	109	53	65	59	27	3749.5
9/18/1984	1984	9	18	110	48	72	60	28	3777.5
9/19/1984	1984	9	19	111	50	75	62.5	30.5	3808
9/20/1984	1984	9	20	112	52	76	64	32	3840
9/21/1984	1984	9	21	113	51	73	62	30	3870
9/22/1984	1984	9	22	114	49	68	58.5	26.5	3896.5
9/23/1984	1984	9	23	115	47	70	58.5	26.5	3923
9/24/1984	1984	9	24	116	52	72	62	30	3953
9/25/1984	1984	9	25	117	46	71	58.5	26.5	3979.5
9/26/1984	1984	9	26	118	41	58	49.5	17.5	3997
9/27/1984	1984	9	27	119	40	59	49.5	17.5	4014.5
9/28/1984	1984	9	28	120	41	63	52	20	4034.5
9/29/1984	1984	9	29	121	39	64	51.5	19.5	4054
9/30/1984	1984	9	30	122	36	67	51.5	19.5	4073.5
10/1/1984	1984	10	1	123	48	65	56.5	24.5	4098
10/2/1984	1984	10	2	124	48	65	56.5	24.5	4122.5
10/3/1984	1984	10	3	125	39	63	51	19	4141.5
10/4/1984	1984	10	4	126	38	62	50	18	4159.5
10/5/1984	1984	10	5	127	38	60	49	17	4176.5
10/6/1984	1984	10	6	128	38	59	48.5	16.5	4193
10/7/1984	1984	10	7	129	32	58	45	13	4206
10/8/1984	1984	10	8	130	38	63	50.5	18.5	4224.5
10/9/1984	1984	10	9	131	38	64	51	19	4243.5
10/10/1984	1984	10	10	132	43	63	53	21	4264.5
10/11/1984	1984	10	11	133	42	64	53	21	4285.5
10/12/1984	1984	10	12	134	41	62	51.5	19.5	4305
10/13/1984	1984	10	13	135	32	55	43.5	11.5	4316.5
10/14/1984	1984	10	14	136	30	54	42	10	4326.5
10/15/1984	1984	10	15	137	30	50	40	8	4334.5
10/16/1984	1984	10	16	138	28	34	31	-1	4333.5
10/17/1984	1984	10	17	139	28	57	42.5	10.5	4344
10/18/1984	1984	10	18	140	26	52	39	7	4351
10/19/1984	1984	10	19	141	27	44	35.5	3.5	4354.5
10/20/1984	1984	10	20	142	28	48	38	6	4360.5
10/21/1984	1984	10	21	143	29	44	36.5	4.5	4365
10/22/1984	1984	10	22	144	28	42	35	3	4368
10/23/1984	1984	10	23	145	30	44	37	5	4373
10/24/1984	1984	10	24	146	29	37	33	1	4374
10/25/1984	1984	10	25	147	27	45	36	4	4378
10/26/1984	1984	10	26	148	27	51	39	7	4385
10/27/1984	1984	10	27	149	30	52	41	9	4394
10/28/1984	1984	10	28	150	31	53	42	10	4404
10/29/1984	1984	10	29	151	33	59	46	14	4418
10/30/1984	1984	10	30	152	35	62	48.5	16.5	4434.5
10/31/1984	1984	10	31	153	38	60	49	17	4451.5

11/1/1984	1984	11	1	154	32	55	43.5	11.5	4463
11/2/1984	1984	11	2	155	31	58	44.5	12.5	4475.5
11/3/1984	1984	11	3	156	32	61	46.5	14.5	4490
11/4/1984	1984	11	4	157	33	57	45	13	4503
11/5/1984	1984	11	5	158	30	61	45.5	13.5	4516.5
11/6/1984	1984	11	6	159	35	60	47.5	15.5	4532
11/7/1984	1984	11	7	160	36	61	48.5	16.5	4548.5
11/8/1984	1984	11	8	161	37	59	48	16	4564.5
11/9/1984	1984	11	9	162	31	55	43	11	4575.5
11/10/1984	1984	11	10	163	21	49	35	3	4578.5
11/11/1984	1984	11	11	164	29	56	42.5	10.5	4589
11/12/1984	1984	11	12	165	30	61	45.5	13.5	4602.5
11/13/1984	1984	11	13	166	33	59	46	14	4616.5
11/14/1984	1984	11	14	167	30	57	43.5	11.5	4628
11/15/1984	1984	11	15	168	29	55	42	10	4638
11/16/1984	1984	11	16	169	28	54	41	9	4647
11/17/1984	1984	11	17	170	32	51	41.5	9.5	4656.5
11/18/1984	1984	11	18	171	30	42	36	4	4660.5
11/19/1984	1984	11	19	172	24	44	34	2	4662.5
11/20/1984	1984	11	20	173	23	45	34	2	4664.5
11/21/1984	1984	11	21	174	20	52	36	4	4668.5
11/22/1984	1984	11	22	175	21	42	31.5	-0.5	4668
11/23/1984	1984	11	23	176	27	48	37.5	5.5	4673.5
11/24/1984	1984	11	24	177	30	47	38.5	6.5	4680
11/25/1984	1984	11	25	178	26	39	32.5	0.5	4680.5
11/26/1984	1984	11	26	179	16	31	23.5	-8.5	4672
11/27/1984	1984	11	27	180	8	30	19	-13	4659
11/28/1984	1984	11	28	181	10	39	24.5	-7.5	4651.5
11/29/1984	1984	11	29	182	12	40	26	-6	4645.5
11/30/1984	1984	11	30	183	19	34	26.5	-5.5	4640
12/1/1984	1984	12	1	184	20	40	30	-2	4638
12/2/1984	1984	12	2	185	21	40	30.5	-1.5	4636.5
12/3/1984	1984	12	3	186	21	44	32.5	0.5	4637
12/4/1984	1984	12	4	187	22	42	32	0	4637
12/5/1984	1984	12	5	188	21	40	30.5	-1.5	4635.5
12/6/1984	1984	12	6	189	16	41	28.5	-3.5	4632
12/7/1984	1984	12	7	190	22	51	36.5	4.5	4636.5
12/8/1984	1984	12	8	191	25	50	37.5	5.5	4642
12/9/1984	1984	12	9	192	26	40	33	1	4643
12/10/1984	1984	12	10	193	23	53	38	6	4649
12/11/1984	1984	12	11	194	32	52	42	10	4659
12/12/1984	1984	12	12	195	32	41	36.5	4.5	4663.5
12/13/1984	1984	12	13	196	30	41	35.5	3.5	4667
12/14/1984	1984	12	14	197	14	33	23.5	-8.5	4658.5
12/15/1984	1984	12	15	198	16	32	24	-8	4650.5
12/16/1984	1984	12	16	199	14	39	26.5	-5.5	4645
12/17/1984	1984	12	17	200	15	39	27	-5	4640
12/18/1984	1984	12	18	201	16	40	28	-4	4636
12/19/1984	1984	12	19	202	17	46	31.5	-0.5	4635.5
12/20/1984	1984	12	20	203	31	42	36.5	4.5	4640
12/21/1984	1984	12	21	204	19	35	27	-5	4635
12/22/1984	1984	12	22	205	12	33	22.5	-9.5	4625.5
12/23/1984	1984	12	23	206	15	38	26.5	-5.5	4620
12/24/1984	1984	12	24	207	15	38	26.5	-5.5	4614.5
12/25/1984	1984	12	25	208	17	37	27	-5	4609.5
12/26/1984	1984	12	26	209	19	40	29.5	-2.5	4607
12/27/1984	1984	12	27	210	20	36	28	-4	4603
12/28/1984	1984	12	28	211	35	49	42	10	4613
12/29/1984	1984	12	29	212	28	47	37.5	5.5	4618.5
12/30/1984	1984	12	30	213	21	39	30	-2	4616.5
12/31/1984	1984	12	31	214	12	37	24.5	-7.5	4609
1/1/1985	1985	1	1	215	17	38	27.5	-4.5	4604.5
1/2/1985	1985	1	2	216	16	30	23	-9	4595.5
1/3/1985	1985	1	3	217	10	36	23	-9	4586.5
1/4/1985	1985	1	4	218	13	39	26	-6	4580.5
1/5/1985	1985	1	5	219	19	40	29.5	-2.5	4578
1/6/1985	1985	1	6	220	20	43	31.5	-0.5	4577.5
1/7/1985	1985	1	7	221	21	46	33.5	1.5	4579
1/8/1985	1985	1	8	222	20	44	32	0	4579
1/9/1985	1985	1	9	223	17	38	27.5	-4.5	4574.5
1/10/1985	1985	1	10	224	11	39	25	-7	4567.5
1/11/1985	1985	1	11	225	13	27	20	-12	4555.5
1/12/1985	1985	1	12	226	7	31	19	-13	4542.5
1/13/1985	1985	1	13	227	11	37	24	-8	4534.5
1/14/1985	1985	1	14	228	13	40	26.5	-5.5	4529
1/15/1985	1985	1	15	229	16	42	29	-3	4526
1/16/1985	1985	1	16	230	15	38	26.5	-5.5	4520.5
1/17/1985	1985	1	17	231	20	47	33.5	1.5	4522
1/18/1985	1985	1	18	232	18	45	31.5	-0.5	4521.5
1/19/1985	1985	1	19	233	17	41	29	-3	4518.5
1/20/1985	1985	1	20	234	19	41	30	-2	4516.5
1/21/1985	1985	1	21	235	16	40	28	-4	4512.5
1/22/1985	1985	1	22	236	15	39	27	-5	4507.5
1/23/1985	1985	1	23	237	16	38	27	-5	4502.5
1/24/1985	1985	1	24	238	19	39	29	-3	4499.5
1/25/1985	1985	1	25	239	19	38	28.5	-3.5	4496
1/26/1985	1985	1	26	240	20	37	28.5	-3.5	4492.5
1/27/1985	1985	1	27	241	14	35	24.5	-7.5	4485
1/28/1985	1985	1	28	242	15	33	24	-8	4477
1/29/1985	1985	1	29	243	19	32	25.5	-6.5	4470.5
1/30/1985	1985	1	30	244	5	27	16	-16	4454.5
1/31/1985	1985	1	31	245	6	27	16.5	-15.5	4439
2/1/1985	1985	2	1	246	-5	14	4.5	-27.5	4411.5

2/2/1985	1985	2	2	247	-4	19	7.5	-24.5	4387
2/3/1985	1985	2	3	248	10	20	15	-17	4370
2/4/1985	1985	2	4	249	-3	20	8.5	-23.5	4346.5
2/5/1985	1985	2	5	250	-4	22	9	-23	4323.5
2/6/1985	1985	2	6	251	10	21	15.5	-16.5	4307
2/7/1985	1985	2	7	252	8	30	19	-13	4294
2/8/1985	1985	2	8	253	9	32	20.5	-11.5	4282.5
2/9/1985	1985	2	9	254	9	35	22	-10	4272.5
2/10/1985	1985	2	10	255	5	36	20.5	-11.5	4261
2/11/1985	1985	2	11	256	7	36	21.5	-10.5	4250.5
2/12/1985	1985	2	12	257	19	40	29.5	-2.5	4248
2/13/1985	1985	2	13	258	18	42	30	-2	4246
2/14/1985	1985	2	14	259	20	43	31.5	-0.5	4245.5
2/15/1985	1985	2	15	260	12	45	28.5	-3.5	4242
2/16/1985	1985	2	16	261	18	45	31.5	-0.5	4241.5
2/17/1985	1985	2	17	262	13	43	28	-4	4237.5
2/18/1985	1985	2	18	263	13	45	29	-3	4234.5
2/19/1985	1985	2	19	264	20	49	34.5	2.5	4237
2/20/1985	1985	2	20	265	13	50	31.5	-0.5	4236.5
2/21/1985	1985	2	21	266	14	51	32.5	0.5	4237
2/22/1985	1985	2	22	267	18	45	31.5	-0.5	4236.5
2/23/1985	1985	2	23	268	15	41	28	-4	4232.5
2/24/1985	1985	2	24	269	15	40	27.5	-4.5	4228
2/25/1985	1985	2	25	270	13	40	26.5	-5.5	4222.5
2/26/1985	1985	2	26	271	15	41	28	-4	4218.5
2/27/1985	1985	2	27	272	18	42	30	-2	4216.5
2/28/1985	1985	2	28	273	19	45	32	0	4216.5
3/1/1985	1985	3	1	274	31	52	41.5	9.5	4226
3/2/1985	1985	3	2	275	32	50	41	9	4235
3/3/1985	1985	3	3	276	20	52	36	4	4239
3/4/1985	1985	3	4	277	18	38	28	-4	4235
3/5/1985	1985	3	5	278	21	54	37.5	5.5	4240.5
3/6/1985	1985	3	6	279	25	54	39.5	7.5	4248
3/7/1985	1985	3	7	280	26	52	39	7	4255
3/8/1985	1985	3	8	281	29	54	41.5	9.5	4264.5
3/9/1985	1985	3	9	282	30	58	44	12	4276.5
3/10/1985	1985	3	10	283	38	60	49	17	4293.5
3/11/1985	1985	3	11	284	41	59	50	18	4311.5
3/12/1985	1985	3	12	285	19	46	32.5	0.5	4312
3/13/1985	1985	3	13	286	20	50	35	3	4315
3/14/1985	1985	3	14	287	26	46	36	4	4319
3/15/1985	1985	3	15	288	31	45	38	6	4325
3/16/1985	1985	3	16	289	25	46	35.5	3.5	4328.5
3/17/1985	1985	3	17	290	26	52	39	7	4335.5
3/18/1985	1985	3	18	291	29	52	40.5	8.5	4344
3/19/1985	1985	3	19	292	28	53	40.5	8.5	4352.5
3/20/1985	1985	3	20	293	25	49	37	5	4357.5
3/21/1985	1985	3	21	294	29	52	40.5	8.5	4366
3/22/1985	1985	3	22	295	20	53	36.5	4.5	4370.5
3/23/1985	1985	3	23	296	19	54	36.5	4.5	4375
3/24/1985	1985	3	24	297	30	60	45	13	4388
3/25/1985	1985	3	25	298	31	65	48	16	4404
3/26/1985	1985	3	26	299	35	65	50	18	4422
3/27/1985	1985	3	27	300	39	60	49.5	17.5	4439.5
3/28/1985	1985	3	28	301	38	57	47.5	15.5	4455
3/29/1985	1985	3	29	302	41	56	48.5	16.5	4471.5
3/30/1985	1985	3	30	303	25	54	39.5	7.5	4479
3/31/1985	1985	3	31	304	21	33	27	-5	4474
4/1/1985	1985	4	1	305	28	57	42.5	10.5	4484.5
4/2/1985	1985	4	2	306	30	66	48	16	4500.5
4/3/1985	1985	4	3	307	32	66	49	17	4517.5
4/4/1985	1985	4	4	308	35	65	50	18	4535.5
4/5/1985	1985	4	5	309	29	64	46.5	14.5	4550
4/6/1985	1985	4	6	310	30	62	46	14	4564
4/7/1985	1985	4	7	311	33	60	46.5	14.5	4578.5
4/8/1985	1985	4	8	312	37	68	52.5	20.5	4599
4/9/1985	1985	4	9	313	40	67	53.5	21.5	4620.5
4/10/1985	1985	4	10	314	39	68	53.5	21.5	4642
4/11/1985	1985	4	11	315	38	69	53.5	21.5	4663.5
4/12/1985	1985	4	12	316	39	70	54.5	22.5	4686
4/13/1985	1985	4	13	317	37	69	53	21	4707
4/14/1985	1985	4	14	318	38	68	53	21	4728
4/15/1985	1985	4	15	319	36	72	54	22	4750
4/16/1985	1985	4	16	320	40	73	56.5	24.5	4774.5
4/17/1985	1985	4	17	321	42	74	58	26	4800.5
4/18/1985	1985	4	18	322	45	70	57.5	25.5	4826
4/19/1985	1985	4	19	323	31	69	50	18	4844
4/20/1985	1985	4	20	324	30	66	48	16	4860
4/21/1985	1985	4	21	325	32	64	48	16	4876
4/22/1985	1985	4	22	326	41	65	53	21	4897
4/23/1985	1985	4	23	327	39	46	42.5	10.5	4907.5
4/24/1985	1985	4	24	328	28	59	43.5	11.5	4919
4/25/1985	1985	4	25	329	33	66	49.5	17.5	4936.5
4/26/1985	1985	4	26	330	39	65	52	20	4956.5
4/27/1985	1985	4	27	331	32	54	43	11	4967.5
4/28/1985	1985	4	28	332	34	52	43	11	4978.5
4/29/1985	1985	4	29	333	33	50	41.5	9.5	4988
4/30/1985	1985	4	30	334	32	60	46	14	5002
5/1/1985	1985	5	1	335	41	72	56.5	24.5	5026.5
5/2/1985	1985	5	2	336	36	75	55.5	23.5	5050
5/3/1985	1985	5	3	337	39	69	54	22	5072
5/4/1985	1985	5	4	338	40	70	55	23	5095
5/5/1985	1985	5	5	339	43	69	56	24	5119

5/6/1985	1985	5	6	340	45	70	57.5	25.5	5144.5
5/7/1985	1985	5	7	341	41	71	56	24	5168.5
5/8/1985	1985	5	8	342	48	74	61	29	5197.5
5/9/1985	1985	5	9	343	50	75	62.5	30.5	5228
5/10/1985	1985	5	10	344	54	69	61.5	29.5	5257.5
5/11/1985	1985	5	11	345	46	67	56.5	24.5	5282
5/12/1985	1985	5	12	346	35	63	49	17	5299
5/13/1985	1985	5	13	347	32	58	45	13	5312
5/14/1985	1985	5	14	348	30	66	48	16	5328
5/15/1985	1985	5	15	349	38	75	56.5	24.5	5352.5
5/16/1985	1985	5	16	350	41	74	57.5	25.5	5378
5/17/1985	1985	5	17	351	49	70	59.5	27.5	5405.5
5/18/1985	1985	5	18	352	48	69	58.5	26.5	5432
5/19/1985	1985	5	19	353	41	69	55	23	5455
5/20/1985	1985	5	20	354	40	60	50	18	5473
5/21/1985	1985	5	21	355	41	65	53	21	5494
5/22/1985	1985	5	22	356	46	74	60	28	5522
5/23/1985	1985	5	23	357	45	79	62	30	5552
5/24/1985	1985	5	24	358	46	78	62	30	5582
5/25/1985	1985	5	25	359	45	77	61	29	5611
5/26/1985	1985	5	26	360	40	76	58	26	5637
5/27/1985	1985	5	27	361	46	79	62.5	30.5	5667.5
5/28/1985	1985	5	28	362	52	81	66.5	34.5	5702
5/29/1985	1985	5	29	363	50	80	65	33	5735
5/30/1985	1985	5	30	364	50	76	63	31	5766
5/31/1985	1985	5	31	365	47	70	58.5	26.5	5792.5
6/1/1985	1985	6	1	1	41	75	58	26	26
6/2/1985	1985	6	2	2	40	79	59.5	27.5	53.5
6/3/1985	1985	6	3	3	46	73	59.5	27.5	81
6/4/1985	1985	6	4	4	42	70	56	24	105
6/5/1985	1985	6	5	5	42	71	56.5	24.5	129.5
6/6/1985	1985	6	6	6	46	84	65	33	162.5
6/7/1985	1985	6	7	7	56	92	74	42	204.5
6/8/1985	1985	6	8	8	58	93	75.5	43.5	248
6/9/1985	1985	6	9	9	56	86	71	39	287
6/10/1985	1985	6	10	10	55	88	71.5	39.5	326.5
6/11/1985	1985	6	11	11	53	87	70	38	364.5
6/12/1985	1985	6	12	12	50	85	67.5	35.5	400
6/13/1985	1985	6	13	13	52	86	69	37	437
6/14/1985	1985	6	14	14	60	87	73.5	41.5	478.5
6/15/1985	1985	6	15	15	57	91	74	42	520.5
6/16/1985	1985	6	16	16	56	90	73	41	561.5
6/17/1985	1985	6	17	17	55	88	71.5	39.5	601
6/18/1985	1985	6	18	18	51	83	67	35	636
6/19/1985	1985	6	19	19	55	84	69.5	37.5	673.5
6/20/1985	1985	6	20	20	52	86	69	37	710.5
6/21/1985	1985	6	21	21	57	89	73	41	751.5
6/22/1985	1985	6	22	22	56	86	71	39	790.5
6/23/1985	1985	6	23	23	53	86	69.5	37.5	828
6/24/1985	1985	6	24	24	57	85	71	39	867
6/25/1985	1985	6	25	25	51	80	65.5	33.5	900.5
6/26/1985	1985	6	26	26	40	81	60.5	28.5	929
6/27/1985	1985	6	27	27	44	81	62.5	30.5	959.5
6/28/1985	1985	6	28	28	50	88	69	37	996.5
6/29/1985	1985	6	29	29	51	87	69	37	1033.5
6/30/1985	1985	6	30	30	58	86	72	40	1073.5
7/1/1985	1985	7	1	31	53	90	71.5	39.5	1113
7/2/1985	1985	7	2	32	52	88	70	38	1151
7/3/1985	1985	7	3	33	49	86	67.5	35.5	1186.5
7/4/1985	1985	7	4	34	59	93	76	44	1230.5
7/5/1985	1985	7	5	35	57	94	75.5	43.5	1274
7/6/1985	1985	7	6	36	59	93	76	44	1318
7/7/1985	1985	7	7	37	61	94	77.5	45.5	1363.5
7/8/1985	1985	7	8	38	63	90	76.5	44.5	1408
7/9/1985	1985	7	9	39	59	89	74	42	1450
7/10/1985	1985	7	10	40	63	90	76.5	44.5	1494.5
7/11/1985	1985	7	11	41	55	86	70.5	38.5	1533
7/12/1985	1985	7	12	42	58	91	74.5	42.5	1575.5
7/13/1985	1985	7	13	43	59	93	76	44	1619.5
7/14/1985	1985	7	14	44	58	90	74	42	1661.5
7/15/1985	1985	7	15	45	58	84	71	39	1700.5
7/16/1985	1985	7	16	46	54	87	70.5	38.5	1739
7/17/1985	1985	7	17	47	57	85	71	39	1778
7/18/1985	1985	7	18	48	55	89	72	40	1818
7/19/1985	1985	7	19	49	55	82	68.5	36.5	1854.5
7/20/1985	1985	7	20	50	54	83	68.5	36.5	1891
7/21/1985	1985	7	21	51	55	79	67	35	1926
7/22/1985	1985	7	22	52	54	82	68	36	1962
7/23/1985	1985	7	23	53	55	77	66	34	1996
7/24/1985	1985	7	24	54	53	79	66	34	2030
7/25/1985	1985	7	25	55	50	80	65	33	2063
7/26/1985	1985	7	26	56	51	81	66	34	2097
7/27/1985	1985	7	27	57	52	74	63	31	2128
7/28/1985	1985	7	28	58	58	73	65.5	33.5	2161.5
7/29/1985	1985	7	29	59	56	75	65.5	33.5	2195
7/30/1985	1985	7	30	60	53	76	64.5	32.5	2227.5
7/31/1985	1985	7	31	61	52	79	65.5	33.5	2261
8/1/1985	1985	8	1	62	53	78	65.5	33.5	2294.5
8/2/1985	1985	8	2	63	54	69	61.5	29.5	2324
8/3/1985	1985	8	3	64	40	70	55	23	2347
8/4/1985	1985	8	4	65	51	79	65	33	2380
8/5/1985	1985	8	5	66	55	85	70	38	2418
8/6/1985	1985	8	6	67	58	85	71.5	39.5	2457.5

8/7/1985	1985	8	7	68	59	87	73	41	2498.5
8/8/1985	1985	8	8	69	58	83	70.5	38.5	2537
8/9/1985	1985	8	9	70	55	81	68	36	2573
8/10/1985	1985	8	10	71	57	80	68.5	36.5	2609.5
8/11/1985	1985	8	11	72	50	74	62	30	2639.5
8/12/1985	1985	8	12	73	55	77	66	34	2673.5
8/13/1985	1985	8	13	74	46	81	63.5	31.5	2705
8/14/1985	1985	8	14	75	50	81	65.5	33.5	2738.5
8/15/1985	1985	8	15	76	54	82	68	36	2774.5
8/16/1985	1985	8	16	77	55	83	69	37	2811.5
8/17/1985	1985	8	17	78	53	80	66.5	34.5	2846
8/18/1985	1985	8	18	79	52	80	66	34	2880
8/19/1985	1985	8	19	80	53	85	69	37	2917
8/20/1985	1985	8	20	81	57	86	71.5	39.5	2956.5
8/21/1985	1985	8	21	82	52	80	66	34	2990.5
8/22/1985	1985	8	22	83	58	85	71.5	39.5	3030
8/23/1985	1985	8	23	84	53	86	69.5	37.5	3067.5
8/24/1985	1985	8	24	85	51	87	69	37	3104.5
8/25/1985	1985	8	25	86	55	85	70	38	3142.5
8/26/1985	1985	8	26	87	57	87	72	40	3182.5
8/27/1985	1985	8	27	88	58	86	72	40	3222.5
8/28/1985	1985	8	28	89	57	82	69.5	37.5	3260
8/29/1985	1985	8	29	90	55	86	70.5	38.5	3298.5
8/30/1985	1985	8	30	91	57	86	71.5	39.5	3338
8/31/1985	1985	8	31	92	55	85	70	38	3376
9/1/1985	1985	9	1	93	53	81	67	35	3411
9/2/1985	1985	9	2	94	54	78	66	34	3445
9/3/1985	1985	9	3	95	56	79	67.5	35.5	3480.5
9/4/1985	1985	9	4	96	50	74	62	30	3510.5
9/5/1985	1985	9	5	97	45	75	60	28	3538.5
9/6/1985	1985	9	6	98	46	74	60	28	3566.5
9/7/1985	1985	9	7	99	45	71	58	26	3592.5
9/8/1985	1985	9	8	100	48	75	61.5	29.5	3622
9/9/1985	1985	9	9	101	47	77	62	30	3652
9/10/1985	1985	9	10	102	46	74	60	28	3680
9/11/1985	1985	9	11	103	52	75	63.5	31.5	3711.5
9/12/1985	1985	9	12	104	40	68	54	22	3733.5
9/13/1985	1985	9	13	105	42	78	60	28	3761.5
9/14/1985	1985	9	14	106	50	79	64.5	32.5	3794
9/15/1985	1985	9	15	107	57	75	66	34	3828
9/16/1985	1985	9	16	108	48	75	61.5	29.5	3857.5
9/17/1985	1985	9	17	109	49	72	60.5	28.5	3886
9/18/1985	1985	9	18	110	40	71	55.5	23.5	3909.5
9/19/1985	1985	9	19	111	49	75	62	30	3939.5
9/20/1985	1985	9	20	112	43	62	52.5	20.5	3960
9/21/1985	1985	9	21	113	40	52	46	14	3974
9/22/1985	1985	9	22	114	36	66	51	19	3993
9/23/1985	1985	9	23	115	36	66	51	19	4012
9/24/1985	1985	9	24	116	39	70	54.5	22.5	4034.5
9/25/1985	1985	9	25	117	42	69	55.5	23.5	4058
9/26/1985	1985	9	26	118	38	70	54	22	4080
9/27/1985	1985	9	27	119	44	70	57	25	4105
9/28/1985	1985	9	28	120	45	69	57	25	4130
9/29/1985	1985	9	29	121	37	58	47.5	15.5	4145.5
9/30/1985	1985	9	30	122	32	63	47.5	15.5	4161
10/1/1985	1985	10	1	123	36	65	50.5	18.5	4179.5
10/2/1985	1985	10	2	124	38	64	51	19	4198.5
10/3/1985	1985	10	3	125	35	70	52.5	20.5	4219
10/4/1985	1985	10	4	126	36	70	53	21	4240
10/5/1985	1985	10	5	127	35	69	52	20	4260
10/6/1985	1985	10	6	128	44	74	59	27	4287
10/7/1985	1985	10	7	129	29	71	50	18	4305
10/8/1985	1985	10	8	130	27	62	44.5	12.5	4317.5
10/9/1985	1985	10	9	131	25	64	44.5	12.5	4330
10/10/1985	1985	10	10	132	24	62	43	11	4341
10/11/1985	1985	10	11	133	30	57	43.5	11.5	4352.5
10/12/1985	1985	10	12	134	34	60	47	15	4367.5
10/13/1985	1985	10	13	135	30	59	44.5	12.5	4380
10/14/1985	1985	10	14	136	33	60	46.5	14.5	4394.5
10/15/1985	1985	10	15	137	30	58	44	12	4406.5
10/16/1985	1985	10	16	138	31	58	44.5	12.5	4419
10/17/1985	1985	10	17	139	32	54	43	11	4430
10/18/1985	1985	10	18	140	36	55	45.5	13.5	4443.5
10/19/1985	1985	10	19	141	38	53	45.5	13.5	4457
10/20/1985	1985	10	20	142	33	59	46	14	4471
10/21/1985	1985	10	21	143	39	60	49.5	17.5	4488.5
10/22/1985	1985	10	22	144	38	61	49.5	17.5	4506
10/23/1985	1985	10	23	145	35	60	47.5	15.5	4521.5
10/24/1985	1985	10	24	146	38	66	52	20	4541.5
10/25/1985	1985	10	25	147	37	69	53	21	4562.5
10/26/1985	1985	10	26	148	36	66	51	19	4581.5
10/27/1985	1985	10	27	149	35	64	49.5	17.5	4599
10/28/1985	1985	10	28	150	30	66	48	16	4615
10/29/1985	1985	10	29	151	38	62	50	18	4633
10/30/1985	1985	10	30	152	33	62	47.5	15.5	4648.5
10/31/1985	1985	10	31	153	38	57	47.5	15.5	4664
11/1/1985	1985	11	1	154	32	51	41.5	9.5	4673.5
11/2/1985	1985	11	2	155	29	50	39.5	7.5	4681
11/3/1985	1985	11	3	156	32	58	45	13	4694
11/4/1985	1985	11	4	157	33	66	49.5	17.5	4711.5
11/5/1985	1985	11	5	158	43	63	53	21	4732.5
11/6/1985	1985	11	6	159	29	58	43.5	11.5	4744
11/7/1985	1985	11	7	160	27	57	42	10	4754

11/8/1985	1985	11	8	161	34	58	46	14	4768
11/9/1985	1985	11	9	162	24	56	40	8	4776
11/10/1985	1985	11	10	163	23	59	41	9	4785
11/11/1985	1985	11	11	164	34	59	46.5	14.5	4799.5
11/12/1985	1985	11	12	165	27	54	40.5	8.5	4808
11/13/1985	1985	11	13	166	25	35	30	-2	4806
11/14/1985	1985	11	14	167	15	32	23.5	-8.5	4797.5
11/15/1985	1985	11	15	168	9	41	25	-7	4790.5
11/16/1985	1985	11	16	169	19	52	35.5	3.5	4794
11/17/1985	1985	11	17	170	11	51	31	-1	4793
11/18/1985	1985	11	18	171	16	36	26	-6	4787
11/19/1985	1985	11	19	172	5	33	19	-13	4774
11/20/1985	1985	11	20	173	9	47	28	-4	4770
11/21/1985	1985	11	21	174	10	44	27	-5	4765
11/22/1985	1985	11	22	175	12	50	31	-1	4764
11/23/1985	1985	11	23	176	10	51	30.5	-1.5	4762.5
11/24/1985	1985	11	24	177	11	55	33	1	4763.5
11/25/1985	1985	11	25	178	20	51	35.5	3.5	4767
11/26/1985	1985	11	26	179	18	47	32.5	0.5	4767.5
11/27/1985	1985	11	27	180	10	49	29.5	-2.5	4765
11/28/1985	1985	11	28	181	26	48	37	5	4770
11/29/1985	1985	11	29	182	8	47	27.5	-4.5	4765.5
11/30/1985	1985	11	30	183	10	35	22.5	-9.5	4756
12/1/1985	1985	12	1	184	6	44	25	-7	4749
12/2/1985	1985	12	2	185	16	49	32.5	0.5	4749.5
12/3/1985	1985	12	3	186	14	50	32	0	4749.5
12/4/1985	1985	12	4	187	14	50	32	0	4749.5
12/5/1985	1985	12	5	188	20	54	37	5	4754.5
12/6/1985	1985	12	6	189	20	50	35	3	4757.5
12/7/1985	1985	12	7	190	23	49	36	4	4761.5
12/8/1985	1985	12	8	191	25	47	36	4	4765.5
12/9/1985	1985	12	9	192	10	44	27	-5	4760.5
12/10/1985	1985	12	10	193	19	32	25.5	-6.5	4754
12/11/1985	1985	12	11	194	6	33	19.5	-12.5	4741.5
12/12/1985	1985	12	12	195	7	28	17.5	-14.5	4727
12/13/1985	1985	12	13	196	3	29	16	-16	4711
12/14/1985	1985	12	14	197	9	37	23	-9	4702
12/15/1985	1985	12	15	198	10	39	24.5	-7.5	4694.5
12/16/1985	1985	12	16	199	15	40	27.5	-4.5	4690
12/17/1985	1985	12	17	200	6	38	22	-10	4680
12/18/1985	1985	12	18	201	10	45	27.5	-4.5	4675.5
12/19/1985	1985	12	19	202	15	46	30.5	-1.5	4674
12/20/1985	1985	12	20	203	20	45	32.5	0.5	4674.5
12/21/1985	1985	12	21	204	14	52	33	1	4675.5
12/22/1985	1985	12	22	205	16	53	34.5	2.5	4678
12/23/1985	1985	12	23	206	14	50	32	0	4678
12/24/1985	1985	12	24	207	19	47	33	1	4679
12/25/1985	1985	12	25	208	13	46	29.5	-2.5	4676.5
12/26/1985	1985	12	26	209	15	47	31	-1	4675.5
12/27/1985	1985	12	27	210	15	47	31	-1	4674.5
12/28/1985	1985	12	28	211	15	52	33.5	1.5	4676
12/29/1985	1985	12	29	212	16	54	35	3	4679
12/30/1985	1985	12	30	213	10	46	28	-4	4675
12/31/1985	1985	12	31	214	14	47	30.5	-1.5	4673.5
1/1/1986	1986	1	1	215	12	43	27.5	-4.5	4669
1/2/1986	1986	1	2	216	19	46	32.5	0.5	4669.5
1/3/1986	1986	1	3	217	16	45	30.5	-1.5	4668
1/4/1986	1986	1	4	218	14	44	29	-3	4665
1/5/1986	1986	1	5	219	15	46	30.5	-1.5	4663.5
1/6/1986	1986	1	6	220	12	46	29	-3	4660.5
1/7/1986	1986	1	7	221	19	43	31	-1	4659.5
1/8/1986	1986	1	8	222	10	39	24.5	-7.5	4652
1/9/1986	1986	1	9	223	15	40	27.5	-4.5	4647.5
1/10/1986	1986	1	10	224	19	49	34	2	4649.5
1/11/1986	1986	1	11	225	12	51	31.5	-0.5	4649
1/12/1986	1986	1	12	226	16	56	36	4	4653
1/13/1986	1986	1	13	227	14	54	34	2	4655
1/14/1986	1986	1	14	228	9	47	28	-4	4651
1/15/1986	1986	1	15	229	16	44	30	-2	4649
1/16/1986	1986	1	16	230	17	47	32	0	4649
1/17/1986	1986	1	17	231	19	52	35.5	3.5	4652.5
1/18/1986	1986	1	18	232	18	50	34	2	4654.5
1/19/1986	1986	1	19	233	20	61	40.5	8.5	4663
1/20/1986	1986	1	20	234	37	58	47.5	15.5	4678.5
1/21/1986	1986	1	21	235	16	56	36	4	4682.5
1/22/1986	1986	1	22	236	23	52	37.5	5.5	4688
1/23/1986	1986	1	23	237	20	59	39.5	7.5	4695.5
1/24/1986	1986	1	24	238	27	57	42	10	4705.5
1/25/1986	1986	1	25	239	21	53	37	5	4710.5
1/26/1986	1986	1	26	240	21	54	37.5	5.5	4716
1/27/1986	1986	1	27	241	25	57	41	9	4725
1/28/1986	1986	1	28	242	27	60	43.5	11.5	4736.5
1/29/1986	1986	1	29	243	31	64	47.5	15.5	4752
1/30/1986	1986	1	30	244	29	63	46	14	4766
1/31/1986	1986	1	31	245	20	56	38	6	4772
2/1/1986	1986	2	1	246	30	57	43.5	11.5	4783.5
2/2/1986	1986	2	2	247	29	55	42	10	4793.5
2/3/1986	1986	2	3	248	28	54	41	9	4802.5
2/4/1986	1986	2	4	249	22	43	32.5	0.5	4803
2/5/1986	1986	2	5	250	-3	40	18.5	-13.5	4789.5
2/6/1986	1986	2	6	251	7	36	21.5	-10.5	4779
2/7/1986	1986	2	7	252	13	32	22.5	-9.5	4769.5
2/8/1986	1986	2	8	253	12	34	23	-9	4760.5

2/9/1986	1986	2	9	254	4	32	18	-14	4746.5
2/10/1986	1986	2	10	255	5	33	19	-13	4733.5
2/11/1986	1986	2	11	256	10	35	22.5	-9.5	4724
2/12/1986	1986	2	12	257	12	45	28.5	-3.5	4720.5
2/13/1986	1986	2	13	258	11	44	27.5	-4.5	4716
2/14/1986	1986	2	14	259	12	41	26.5	-5.5	4710.5
2/15/1986	1986	2	15	260	13	40	26.5	-5.5	4705
2/16/1986	1986	2	16	261	14	40	27	-5	4700
2/17/1986	1986	2	17	262	13	54	33.5	1.5	4701.5
2/18/1986	1986	2	18	263	15	58	36.5	4.5	4706
2/19/1986	1986	2	19	264	19	55	37	5	4711
2/20/1986	1986	2	20	265	20	55	37.5	5.5	4716.5
2/21/1986	1986	2	21	266	20	51	35.5	3.5	4720
2/22/1986	1986	2	22	267	23	52	37.5	5.5	4725.5
2/23/1986	1986	2	23	268	26	55	40.5	8.5	4734
2/24/1986	1986	2	24	269	32	60	46	14	4748
2/25/1986	1986	2	25	270	36	67	51.5	19.5	4767.5
2/26/1986	1986	2	26	271	37	64	50.5	18.5	4786
2/27/1986	1986	2	27	272	35	60	47.5	15.5	4801.5
2/28/1986	1986	2	28	273	24	58	41	9	4810.5
3/1/1986	1986	3	1	274	27	64	45.5	13.5	4824
3/2/1986	1986	3	2	275	35	61	48	16	4840
3/3/1986	1986	3	3	276	33	61	47	15	4855
3/4/1986	1986	3	4	277	29	61	45	13	4868
3/5/1986	1986	3	5	278	32	61	46.5	14.5	4882.5
3/6/1986	1986	3	6	279	31	63	47	15	4897.5
3/7/1986	1986	3	7	280	32	63	47.5	15.5	4913
3/8/1986	1986	3	8	281	37	61	49	17	4930
3/9/1986	1986	3	9	282	20	56	38	6	4936
3/10/1986	1986	3	10	283	28	40	34	2	4938
3/11/1986	1986	3	11	284	11	44	27.5	-4.5	4933.5
3/12/1986	1986	3	12	285	29	45	37	5	4938.5
3/13/1986	1986	3	13	286	25	43	34	2	4940.5
3/14/1986	1986	3	14	287	28	39	33.5	1.5	4942
3/15/1986	1986	3	15	288	28	48	38	6	4948
3/16/1986	1986	3	16	289	27	53	40	8	4956
3/17/1986	1986	3	17	290	27	48	37.5	5.5	4961.5
3/18/1986	1986	3	18	291	26	41	33.5	1.5	4963
3/19/1986	1986	3	19	292	20	45	32.5	0.5	4963.5
3/20/1986	1986	3	20	293	28	54	41	9	4972.5
3/21/1986	1986	3	21	294	28	61	44.5	12.5	4985
3/22/1986	1986	3	22	295	29	64	46.5	14.5	4999.5
3/23/1986	1986	3	23	296	33	68	50.5	18.5	5018
3/24/1986	1986	3	24	297	38	66	52	20	5038
3/25/1986	1986	3	25	298	39	66	52.5	20.5	5058.5
3/26/1986	1986	3	26	299	38	67	52.5	20.5	5079
3/27/1986	1986	3	27	300	35	70	52.5	20.5	5099.5
3/28/1986	1986	3	28	301	33	69	51	19	5118.5
3/29/1986	1986	3	29	302	33	64	48.5	16.5	5135
3/30/1986	1986	3	30	303	37	66	51.5	19.5	5154.5
3/31/1986	1986	3	31	304	39	65	52	20	5174.5
4/1/1986	1986	4	1	305	41	58	49.5	17.5	5192
4/2/1986	1986	4	2	306	27	58	42.5	10.5	5202.5
4/3/1986	1986	4	3	307	28	38	33	1	5203.5
4/4/1986	1986	4	4	308	29	51	40	8	5211.5
4/5/1986	1986	4	5	309	29	63	46	14	5225.5
4/6/1986	1986	4	6	310	29	64	46.5	14.5	5240
4/7/1986	1986	4	7	311	44	65	54.5	22.5	5262.5
4/8/1986	1986	4	8	312	42	69	55.5	23.5	5286
4/9/1986	1986	4	9	313	32	66	49	17	5303
4/10/1986	1986	4	10	314	33	64	48.5	16.5	5319.5
4/11/1986	1986	4	11	315	33	64	48.5	16.5	5336
4/12/1986	1986	4	12	316	40	61	50.5	18.5	5354.5
4/13/1986	1986	4	13	317	44	58	51	19	5373.5
4/14/1986	1986	4	14	318	26	62	44	12	5385.5
4/15/1986	1986	4	15	319	42	68	55	23	5408.5
4/16/1986	1986	4	16	320	46	62	54	22	5430.5
4/17/1986	1986	4	17	321	38	59	48.5	16.5	5447
4/18/1986	1986	4	18	322	25	47	36	4	5451
4/19/1986	1986	4	19	323	26	55	40.5	8.5	5459.5
4/20/1986	1986	4	20	324	33	67	50	18	5477.5
4/21/1986	1986	4	21	325	40	73	56.5	24.5	5502
4/22/1986	1986	4	22	326	43	75	59	27	5529
4/23/1986	1986	4	23	327	48	67	57.5	25.5	5554.5
4/24/1986	1986	4	24	328	44	65	54.5	22.5	5577
4/25/1986	1986	4	25	329	46	62	54	22	5599
4/26/1986	1986	4	26	330	31	63	47	15	5614
4/27/1986	1986	4	27	331	21	63	42	10	5624
4/28/1986	1986	4	28	332	21	74	47.5	15.5	5639.5
4/29/1986	1986	4	29	333	44	73	58.5	26.5	5666
4/30/1986	1986	4	30	334	46	72	59	27	5693
5/1/1986	1986	5	1	335	44	77	60.5	28.5	5721.5
5/2/1986	1986	5	2	336	44	77	60.5	28.5	5750
5/3/1986	1986	5	3	337	44	73	58.5	26.5	5776.5
5/4/1986	1986	5	4	338	48	75	61.5	29.5	5806
5/5/1986	1986	5	5	339	36	68	52	20	5826
5/6/1986	1986	5	6	340	40	68	54	22	5848
5/7/1986	1986	5	7	341	39	59	49	17	5865
5/8/1986	1986	5	8	342	29	51	40	8	5873
5/9/1986	1986	5	9	343	26	60	43	11	5884
5/10/1986	1986	5	10	344	30	71	50.5	18.5	5902.5
5/11/1986	1986	5	11	345	40	74	57	25	5927.5
5/12/1986	1986	5	12	346	41	74	57.5	25.5	5953

5/13/1986	1986	5	13	347	41	73	57	25	5978
5/14/1986	1986	5	14	348	49	73	61	29	6007
5/15/1986	1986	5	15	349	49	73	61	29	6036
5/16/1986	1986	5	16	350	49	73	61	29	6065
5/17/1986	1986	5	17	351	49	73	61	29	6094
5/18/1986	1986	5	18	352	34	69	51.5	19.5	6113.5
5/19/1986	1986	5	19	353	41	76	58.5	26.5	6140
5/20/1986	1986	5	20	354	47	80	63.5	31.5	6171.5
5/21/1986	1986	5	21	355	52	79	65.5	33.5	6205
5/22/1986	1986	5	22	356	52	74	63	31	6236
5/23/1986	1986	5	23	357	44	79	61.5	29.5	6265.5
5/24/1986	1986	5	24	358	52	79	65.5	33.5	6299
5/25/1986	1986	5	25	359	49	79	64	32	6331
5/26/1986	1986	5	26	360	45	78	61.5	29.5	6360.5
5/27/1986	1986	5	27	361	45	77	61	29	6389.5
5/28/1986	1986	5	28	362	43	73	58	26	6415.5
5/29/1986	1986	5	29	363	47	80	63.5	31.5	6447
5/30/1986	1986	5	30	364	40	77	58.5	26.5	6473.5
5/31/1986	1986	5	31	365	42	62	52	20	6493.5
6/1/1986	1986	6	1	1	43	65	54	22	22
6/2/1986	1986	6	2	2	43	62	52.5	20.5	42.5
6/3/1986	1986	6	3	3	47	72	59.5	27.5	70
6/4/1986	1986	6	4	4	49	81	65	33	103
6/5/1986	1986	6	5	5	49	83	66	34	137
6/6/1986	1986	6	6	6	59	82	70.5	38.5	175.5
6/7/1986	1986	6	7	7	54	82	68	36	211.5
6/8/1986	1986	6	8	8	54	82	68	36	247.5
6/9/1986	1986	6	9	9	43	72	57.5	25.5	273
6/10/1986	1986	6	10	10	41	71	56	24	297
6/11/1986	1986	6	11	11	45	76	60.5	28.5	325.5
6/12/1986	1986	6	12	12	49	83	66	34	359.5
6/13/1986	1986	6	13	13	57	86	71.5	39.5	399
6/14/1986	1986	6	14	14	56	86	71	39	438
6/15/1986	1986	6	15	15	57	84	70.5	38.5	476.5
6/16/1986	1986	6	16	16	67	86	76.5	44.5	521
6/17/1986	1986	6	17	17	54	83	68.5	36.5	557.5
6/18/1986	1986	6	18	18	54	78	66	34	591.5
6/19/1986	1986	6	19	19	55	82	68.5	36.5	628
6/20/1986	1986	6	20	20	53	86	69.5	37.5	665.5
6/21/1986	1986	6	21	21	54	86	70	38	703.5
6/22/1986	1986	6	22	22	54	88	71	39	742.5
6/23/1986	1986	6	23	23	58	88	73	41	783.5
6/24/1986	1986	6	24	24	53	74	63.5	31.5	815
6/25/1986	1986	6	25	25	53	66	59.5	27.5	842.5
6/26/1986	1986	6	26	26	50	74	62	30	872.5
6/27/1986	1986	6	27	27	53	81	67	35	907.5
6/28/1986	1986	6	28	28	55	84	69.5	37.5	945
6/29/1986	1986	6	29	29	60	83	71.5	39.5	984.5
6/30/1986	1986	6	30	30	60	79	69.5	37.5	1022
7/1/1986	1986	7	1	31	57	78	67.5	35.5	1057.5
7/2/1986	1986	7	2	32	53	81	67	35	1092.5
7/3/1986	1986	7	3	33	56	83	69.5	37.5	1130
7/4/1986	1986	7	4	34	60	84	72	40	1170
7/5/1986	1986	7	5	35	59	84	71.5	39.5	1209.5
7/6/1986	1986	7	6	36	53	82	67.5	35.5	1245
7/7/1986	1986	7	7	37	61	80	70.5	38.5	1283.5
7/8/1986	1986	7	8	38	56	77	66.5	34.5	1318
7/9/1986	1986	7	9	39	55	79	67	35	1353
7/10/1986	1986	7	10	40	53	82	67.5	35.5	1388.5
7/11/1986	1986	7	11	41	53	85	69	37	1425.5
7/12/1986	1986	7	12	42	53	88	70.5	38.5	1464
7/13/1986	1986	7	13	43	60	88	74	42	1506
7/14/1986	1986	7	14	44	60	88	74	42	1548
7/15/1986	1986	7	15	45	56	88	72	40	1588
7/16/1986	1986	7	16	46	56	67	61.5	29.5	1617.5
7/17/1986	1986	7	17	47	52	72	62	30	1647.5
7/18/1986	1986	7	18	48	52	74	63	31	1678.5
7/19/1986	1986	7	19	49	52	76	64	32	1710.5
7/20/1986	1986	7	20	50	52	79	65.5	33.5	1744
7/21/1986	1986	7	21	51	53	71	62	30	1774
7/22/1986	1986	7	22	52	52	71	61.5	29.5	1803.5
7/23/1986	1986	7	23	53	50	75	62.5	30.5	1834
7/24/1986	1986	7	24	54	50	79	64.5	32.5	1866.5
7/25/1986	1986	7	25	55	53	81	67	35	1901.5
7/26/1986	1986	7	26	56	56	84	70	38	1939.5
7/27/1986	1986	7	27	57	51	84	67.5	35.5	1975
7/28/1986	1986	7	28	58	55	86	70.5	38.5	2013.5
7/29/1986	1986	7	29	59	55	89	72	40	2053.5
7/30/1986	1986	7	30	60	60	89	74.5	42.5	2096
7/31/1986	1986	7	31	61	56	87	71.5	39.5	2135.5
8/1/1986	1986	8	1	62	57	88	72.5	40.5	2176
8/2/1986	1986	8	2	63	58	87	72.5	40.5	2216.5
8/3/1986	1986	8	3	64	58	87	72.5	40.5	2257
8/4/1986	1986	8	4	65	55	85	70	38	2295
8/5/1986	1986	8	5	66	56	85	70.5	38.5	2333.5
8/6/1986	1986	8	6	67	58	80	69	37	2370.5
8/7/1986	1986	8	7	68	55	83	69	37	2407.5
8/8/1986	1986	8	8	69	55	84	69.5	37.5	2445
8/9/1986	1986	8	9	70	57	83	70	38	2483
8/10/1986	1986	8	10	71	56	81	68.5	36.5	2519.5
8/11/1986	1986	8	11	72	49	81	65	33	2552.5
8/12/1986	1986	8	12	73	57	81	69	37	2589.5
8/13/1986	1986	8	13	74	55	80	67.5	35.5	2625

8/14/1986	1986	8	14	75	55	82	68.5	36.5	2661.5
8/15/1986	1986	8	15	76	55	82	68.5	36.5	2698
8/16/1986	1986	8	16	77	54	87	70.5	38.5	2736.5
8/17/1986	1986	8	17	78	58	87	72.5	40.5	2777
8/18/1986	1986	8	18	79	62	87	74.5	42.5	2819.5
8/19/1986	1986	8	19	80	60	87	73.5	41.5	2861
8/20/1986	1986	8	20	81	60	88	74	42	2903
8/21/1986	1986	8	21	82	62	87	74.5	42.5	2945.5
8/22/1986	1986	8	22	83	60	86	73	41	2986.5
8/23/1986	1986	8	23	84	56	85	70.5	38.5	3025
8/24/1986	1986	8	24	85	51	72	61.5	29.5	3054.5
8/25/1986	1986	8	25	86	54	73	63.5	31.5	3086
8/26/1986	1986	8	26	87	54	76	65	33	3119
8/27/1986	1986	8	27	88	56	75	65.5	33.5	3152.5
8/28/1986	1986	8	28	89	55	74	64.5	32.5	3185
8/29/1986	1986	8	29	90	55	72	63.5	31.5	3216.5
8/30/1986	1986	8	30	91	54	73	63.5	31.5	3248
8/31/1986	1986	8	31	92	56	72	64	32	3280
9/1/1986	1986	9	1	93	48	76	62	30	3310
9/2/1986	1986	9	2	94	48	76	62	30	3340
9/3/1986	1986	9	3	95	52	77	64.5	32.5	3372.5
9/4/1986	1986	9	4	96	49	80	64.5	32.5	3405
9/5/1986	1986	9	5	97	47	80	63.5	31.5	3436.5
9/6/1986	1986	9	6	98	47	82	64.5	32.5	3469
9/7/1986	1986	9	7	99	63	80	71.5	39.5	3508.5
9/8/1986	1986	9	8	100	53	73	63	31	3539.5
9/9/1986	1986	9	9	101	51	70	60.5	28.5	3568
9/10/1986	1986	9	10	102	50	69	59.5	27.5	3595.5
9/11/1986	1986	9	11	103	40	70	55	23	3618.5
9/12/1986	1986	9	12	104	40	75	57.5	25.5	3644
9/13/1986	1986	9	13	105	49	76	62.5	30.5	3674.5
9/14/1986	1986	9	14	106	48	77	62.5	30.5	3705
9/15/1986	1986	9	15	107	45	76	60.5	28.5	3733.5
9/16/1986	1986	9	16	108	50	74	62	30	3763.5
9/17/1986	1986	9	17	109	44	75	59.5	27.5	3791
9/18/1986	1986	9	18	110	45	74	59.5	27.5	3818.5
9/19/1986	1986	9	19	111	57	78	67.5	35.5	3854
9/20/1986	1986	9	20	112	53	76	64.5	32.5	3886.5
9/21/1986	1986	9	21	113	48	74	61	29	3915.5
9/22/1986	1986	9	22	114	50	72	61	29	3944.5
9/23/1986	1986	9	23	115	43	68	55.5	23.5	3968
9/24/1986	1986	9	24	116	32	60	46	14	3982
9/25/1986	1986	9	25	117	37	53	45	13	3995
9/26/1986	1986	9	26	118	46	62	54	22	4017
9/27/1986	1986	9	27	119	39	70	54.5	22.5	4039.5
9/28/1986	1986	9	28	120	42	70	56	24	4063.5
9/29/1986	1986	9	29	121	39	70	54.5	22.5	4086
9/30/1986	1986	9	30	122	34	70	52	20	4106
10/1/1986	1986	10	1	123	37	74	55.5	23.5	4129.5
10/2/1986	1986	10	2	124	48	70	59	27	4156.5
10/3/1986	1986	10	3	125	39	67	53	21	4177.5
10/4/1986	1986	10	4	126	33	64	48.5	16.5	4194
10/5/1986	1986	10	5	127	35	66	50.5	18.5	4212.5
10/6/1986	1986	10	6	128	44	63	53.5	21.5	4234
10/7/1986	1986	10	7	129	36	64	50	18	4252
10/8/1986	1986	10	8	130	40	67	53.5	21.5	4273.5
10/9/1986	1986	10	9	131	40	67	53.5	21.5	4295
10/10/1986	1986	10	10	132	42	67	54.5	22.5	4317.5
10/11/1986	1986	10	11	133	41	53	47	15	4332.5
10/12/1986	1986	10	12	134	31	46	38.5	6.5	4339
10/13/1986	1986	10	13	135	26	47	36.5	4.5	4343.5
10/14/1986	1986	10	14	136	30	58	44	12	4355.5
10/15/1986	1986	10	15	137	32	62	47	15	4370.5
10/16/1986	1986	10	16	138	36	62	49	17	4387.5
10/17/1986	1986	10	17	139	36	63	49.5	17.5	4405
10/18/1986	1986	10	18	140	38	65	51.5	19.5	4424.5
10/19/1986	1986	10	19	141	53	62	57.5	25.5	4450
10/20/1986	1986	10	20	142	44	62	53	21	4471
10/21/1986	1986	10	21	143	29	55	42	10	4481
10/22/1986	1986	10	22	144	28	54	41	9	4490
10/23/1986	1986	10	23	145	34	60	47	15	4505
10/24/1986	1986	10	24	146	31	59	45	13	4518
10/25/1986	1986	10	25	147	31	59	45	13	4531
10/26/1986	1986	10	26	148	32	62	47	15	4546
10/27/1986	1986	10	27	149	30	64	47	15	4561
10/28/1986	1986	10	28	150	34	66	50	18	4579
10/29/1986	1986	10	29	151	36	64	50	18	4597
10/30/1986	1986	10	30	152	36	65	50.5	18.5	4615.5
10/31/1986	1986	10	31	153	39	64	51.5	19.5	4635
11/1/1986	1986	11	1	154	34	59	46.5	14.5	4649.5
11/2/1986	1986	11	2	155	32	58	45	13	4662.5
11/3/1986	1986	11	3	156	35	44	39.5	7.5	4670
11/4/1986	1986	11	4	157	31	41	36	4	4674
11/5/1986	1986	11	5	158	29	52	40.5	8.5	4682.5
11/6/1986	1986	11	6	159	29	54	41.5	9.5	4692
11/7/1986	1986	11	7	160	25	49	37	5	4697
11/8/1986	1986	11	8	161	25	49	37	5	4702
11/9/1986	1986	11	9	162	17	47	32	0	4702
11/10/1986	1986	11	10	163	24	47	35.5	3.5	4705.5
11/11/1986	1986	11	11	164	19	53	36	4	4709.5
11/12/1986	1986	11	12	165	19	52	35.5	3.5	4713
11/13/1986	1986	11	13	166	19	45	32	0	4713
11/14/1986	1986	11	14	167	16	58	37	5	4718

11/15/1986	1986	11	15	168	16	57	36.5	4.5	4722.5
11/16/1986	1986	11	16	169	35	55	45	13	4735.5
11/17/1986	1986	11	17	170	35	58	46.5	14.5	4750
11/18/1986	1986	11	18	171	37	57	47	15	4765
11/19/1986	1986	11	19	172	38	51	44.5	12.5	4777.5
11/20/1986	1986	11	20	173	31	56	43.5	11.5	4789
11/21/1986	1986	11	21	174	29	57	43	11	4800
11/22/1986	1986	11	22	175	32	48	40	8	4808
11/23/1986	1986	11	23	176	20	48	34	2	4810
11/24/1986	1986	11	24	177	19	43	31	-1	4809
11/25/1986	1986	11	25	178	19	50	34.5	2.5	4811.5
11/26/1986	1986	11	26	179	26	46	36	4	4815.5
11/27/1986	1986	11	27	180	24	44	34	2	4817.5
11/28/1986	1986	11	28	181	24	56	40	8	4825.5
11/29/1986	1986	11	29	182	28	58	43	11	4836.5
11/30/1986	1986	11	30	183	19	51	35	3	4839.5
12/1/1986	1986	12	1	184	19	50	34.5	2.5	4842
12/2/1986	1986	12	2	185	19	53	36	4	4846
12/3/1986	1986	12	3	186	23	54	38.5	6.5	4852.5
12/4/1986	1986	12	4	187	27	50	38.5	6.5	4859
12/5/1986	1986	12	5	188	30	51	40.5	8.5	4867.5
12/6/1986	1986	12	6	189	33	48	40.5	8.5	4876
12/7/1986	1986	12	7	190	33	43	38	6	4882
12/8/1986	1986	12	8	191	27	40	33.5	1.5	4883.5
12/9/1986	1986	12	9	192	27	40	33.5	1.5	4885
12/10/1986	1986	12	10	193	9	27	18	-14	4871
12/11/1986	1986	12	11	194	10	37	23.5	-8.5	4862.5
12/12/1986	1986	12	12	195	10	44	27	-5	4857.5
12/13/1986	1986	12	13	196	18	48	33	1	4858.5
12/14/1986	1986	12	14	197	19	50	34.5	2.5	4861
12/15/1986	1986	12	15	198	21	51	36	4	4865
12/16/1986	1986	12	16	199	28	46	37	5	4870
12/17/1986	1986	12	17	200	29	39	34	2	4872
12/18/1986	1986	12	18	201	26	33	29.5	-2.5	4869.5
12/19/1986	1986	12	19	202	22	40	31	-1	4868.5
12/20/1986	1986	12	20	203	22	43	32.5	0.5	4869
12/21/1986	1986	12	21	204	24	34	29	-3	4866
12/22/1986	1986	12	22	205	24	38	31	-1	4865
12/23/1986	1986	12	23	206	19	40	29.5	-2.5	4862.5
12/24/1986	1986	12	24	207	28	40	34	2	4864.5
12/25/1986	1986	12	25	208	25	36	30.5	-1.5	4863
12/26/1986	1986	12	26	209	13	37	25	-7	4856
12/27/1986	1986	12	27	210	13	39	26	-6	4850
12/28/1986	1986	12	28	211	16	38	27	-5	4845
12/29/1986	1986	12	29	212	16	44	30	-2	4843
12/30/1986	1986	12	30	213	20	44	32	0	4843
12/31/1986	1986	12	31	214	15	42	28.5	-3.5	4839.5
1/1/1987	1987	1	1	215	17	48	32.5	0.5	4840
1/2/1987	1987	1	2	216	17	42	29.5	-2.5	4837.5
1/3/1987	1987	1	3	217	20	45	32.5	0.5	4838
1/4/1987	1987	1	4	218	21	57	39	7	4845
1/5/1987	1987	1	5	219	29	52	40.5	8.5	4853.5
1/6/1987	1987	1	6	220	21	37	29	-3	4850.5
1/7/1987	1987	1	7	221	22	41	31.5	-0.5	4850
1/8/1987	1987	1	8	222	22	30	26	-6	4844
1/9/1987	1987	1	9	223	12	29	20.5	-11.5	4832.5
1/10/1987	1987	1	10	224	10	38	24	-8	4824.5
1/11/1987	1987	1	11	225	13	46	29.5	-2.5	4822
1/12/1987	1987	1	12	226	20	55	37.5	5.5	4827.5
1/13/1987	1987	1	13	227	24	57	40.5	8.5	4836
1/14/1987	1987	1	14	228	25	48	36.5	4.5	4840.5
1/15/1987	1987	1	15	229	24	43	33.5	1.5	4842
1/16/1987	1987	1	16	230	16	29	22.5	-9.5	4832.5
1/17/1987	1987	1	17	231	9	20	14.5	-17.5	4815
1/18/1987	1987	1	18	232	0	23	11.5	-20.5	4794.5
1/19/1987	1987	1	19	233	1	23	12	-20	4774.5
1/20/1987	1987	1	20	234	7	22	14.5	-17.5	4757
1/21/1987	1987	1	21	235	4	30	17	-15	4742
1/22/1987	1987	1	22	236	7	37	22	-10	4732
1/23/1987	1987	1	23	237	17	41	29	-3	4729
1/24/1987	1987	1	24	238	20	39	29.5	-2.5	4726.5
1/25/1987	1987	1	25	239	18	45	31.5	-0.5	4726
1/26/1987	1987	1	26	240	24	51	37.5	5.5	4731.5
1/27/1987	1987	1	27	241	23	51	37	5	4736.5
1/28/1987	1987	1	28	242	36	48	42	10	4746.5
1/29/1987	1987	1	29	243	26	47	36.5	4.5	4751
1/30/1987	1987	1	30	244	24	51	37.5	5.5	4756.5
1/31/1987	1987	1	31	245	30	46	38	6	4762.5
2/1/1987	1987	2	1	246	18	47	32.5	0.5	4763
2/2/1987	1987	2	2	247	24	54	39	7	4770
2/3/1987	1987	2	3	248	30	49	39.5	7.5	4777.5
2/4/1987	1987	2	4	249	29	44	36.5	4.5	4782
2/5/1987	1987	2	5	250	20	11	15.5	-16.5	4765.5
2/6/1987	1987	2	6	251	18	44	31	-1	4764.5
2/7/1987	1987	2	7	252	20	49	34.5	2.5	4767
2/8/1987	1987	2	8	253	27	49	38	6	4773
2/9/1987	1987	2	9	254	28	53	40.5	8.5	4781.5
2/10/1987	1987	2	10	255	29	54	41.5	9.5	4791
2/11/1987	1987	2	11	256	31	55	43	11	4802
2/12/1987	1987	2	12	257	30	49	39.5	7.5	4809.5
2/13/1987	1987	2	13	258	29	50	39.5	7.5	4817
2/14/1987	1987	2	14	259	27	48	37.5	5.5	4822.5
2/15/1987	1987	2	15	260	23	43	33	1	4823.5

2/16/1987	1987	2	16	261	28	39	33.5	1.5	4825
2/17/1987	1987	2	17	262	25	36	30.5	-1.5	4823.5
2/18/1987	1987	2	18	263	17	33	25	-7	4816.5
2/19/1987	1987	2	19	264	17	33	25	-7	4809.5
2/20/1987	1987	2	20	265	14	33	23.5	-8.5	4801
2/21/1987	1987	2	21	266	4	32	18	-14	4787
2/22/1987	1987	2	22	267	9	40	24.5	-7.5	4779.5
2/23/1987	1987	2	23	268	14	37	25.5	-6.5	4773
2/24/1987	1987	2	24	269	22	39	30.5	-1.5	4771.5
2/25/1987	1987	2	25	270	23	38	30.5	-1.5	4770
2/26/1987	1987	2	26	271	23	36	29.5	-2.5	4767.5
2/27/1987	1987	2	27	272	9	32	20.5	-11.5	4756
2/28/1987	1987	2	28	273	11	36	23.5	-8.5	4747.5
3/1/1987	1987	3	1	274	13	44	28.5	-3.5	4744
3/2/1987	1987	3	2	275	20	43	31.5	-0.5	4743.5
3/3/1987	1987	3	3	276	20	48	34	2	4745.5
3/4/1987	1987	3	4	277	24	55	39.5	7.5	4753
3/5/1987	1987	3	5	278	26	60	43	11	4764
3/6/1987	1987	3	6	279	25	63	44	12	4776
3/7/1987	1987	3	7	280	25	63	44	12	4788
3/8/1987	1987	3	8	281	30	52	41	9	4797
3/9/1987	1987	3	9	282	34	46	40	8	4805
3/10/1987	1987	3	10	283	31	51	41	9	4814
3/11/1987	1987	3	11	284	26	53	39.5	7.5	4821.5
3/12/1987	1987	3	12	285	29	56	42.5	10.5	4832
3/13/1987	1987	3	13	286	33	62	47.5	15.5	4847.5
3/14/1987	1987	3	14	287	29	57	43	11	4858.5
3/15/1987	1987	3	15	288	35	53	44	12	4870.5
3/16/1987	1987	3	16	289	21	53	37	5	4875.5
3/17/1987	1987	3	17	290	18	37	27.5	-4.5	4871
3/18/1987	1987	3	18	291	26	55	40.5	8.5	4879.5
3/19/1987	1987	3	19	292	29	53	41	9	4888.5
3/20/1987	1987	3	20	293	23	53	38	6	4894.5
3/21/1987	1987	3	21	294	21	53	37	5	4899.5
3/22/1987	1987	3	22	295	24	49	36.5	4.5	4904
3/23/1987	1987	3	23	296	20	40	30	-2	4902
3/24/1987	1987	3	24	297	23	42	32.5	0.5	4902.5
3/25/1987	1987	3	25	298	20	41	30.5	-1.5	4901
3/26/1987	1987	3	26	299	22	42	32	0	4901
3/27/1987	1987	3	27	300	27	43	35	3	4904
3/28/1987	1987	3	28	301	17	35	26	-6	4898
3/29/1987	1987	3	29	302	17	29	23	-9	4889
3/30/1987	1987	3	30	303	9	43	26	-6	4883
3/31/1987	1987	3	31	304	25	56	40.5	8.5	4891.5
4/1/1987	1987	4	1	305	28	56	42	10	4901.5
4/2/1987	1987	4	2	306	29	57	43	11	4912.5
4/3/1987	1987	4	3	307	26	59	42.5	10.5	4923
4/4/1987	1987	4	4	308	26	59	42.5	10.5	4933.5
4/5/1987	1987	4	5	309	26	59	42.5	10.5	4944
4/6/1987	1987	4	6	310	26	59	42.5	10.5	4954.5
4/7/1987	1987	4	7	311	26	59	42.5	10.5	4965
4/8/1987	1987	4	8	312	26	59	42.5	10.5	4975.5
4/9/1987	1987	4	9	313	26	62	44	12	4987.5
4/10/1987	1987	4	10	314	32	63	47.5	15.5	5003
4/11/1987	1987	4	11	315	35	65	50	18	5021
4/12/1987	1987	4	12	316	30	59	44.5	12.5	5033.5
4/13/1987	1987	4	13	317	28	49	38.5	6.5	5040
4/14/1987	1987	4	14	318	29	64	46.5	14.5	5054.5
4/15/1987	1987	4	15	319	35	71	53	21	5075.5
4/16/1987	1987	4	16	320	35	74	54.5	22.5	5098
4/17/1987	1987	4	17	321	42	76	59	27	5125
4/18/1987	1987	4	18	322	43	75	59	27	5152
4/19/1987	1987	4	19	323	43	75	59	27	5179
4/20/1987	1987	4	20	324	26	65	45.5	13.5	5192.5
4/21/1987	1987	4	21	325	29	62	45.5	13.5	5206
4/22/1987	1987	4	22	326	29	67	48	16	5222
4/23/1987	1987	4	23	327	38	70	54	22	5244
4/24/1987	1987	4	24	328	40	69	54.5	22.5	5266.5
4/25/1987	1987	4	25	329	38	69	53.5	21.5	5288
4/26/1987	1987	4	26	330	39	68	53.5	21.5	5309.5
4/27/1987	1987	4	27	331	47	68	57.5	25.5	5335
4/28/1987	1987	4	28	332	41	66	53.5	21.5	5356.5
4/29/1987	1987	4	29	333	39	71	55	23	5379.5
4/30/1987	1987	4	30	334	46	71	58.5	26.5	5406
5/1/1987	1987	5	1	335	44	66	55	23	5429
5/2/1987	1987	5	2	336	35	67	51	19	5448
5/3/1987	1987	5	3	337	36	61	48.5	16.5	5464.5
5/4/1987	1987	5	4	338	39	65	52	20	5484.5
5/5/1987	1987	5	5	339	40	64	52	20	5504.5
5/6/1987	1987	5	6	340	38	65	51.5	19.5	5524
5/7/1987	1987	5	7	341	41	65	53	21	5545
5/8/1987	1987	5	8	342	40	69	54.5	22.5	5567.5
5/9/1987	1987	5	9	343	44	73	58.5	26.5	5594
5/10/1987	1987	5	10	344	52	69	60.5	28.5	5622.5
5/11/1987	1987	5	11	345	40	71	55.5	23.5	5646
5/12/1987	1987	5	12	346	43	69	56	24	5670
5/13/1987	1987	5	13	347	42	74	58	26	5696
5/14/1987	1987	5	14	348	49	74	61.5	29.5	5725.5
5/15/1987	1987	5	15	349	44	65	54.5	22.5	5748
5/16/1987	1987	5	16	350	44	68	56	24	5772
5/17/1987	1987	5	17	351	43	74	58.5	26.5	5798.5
5/18/1987	1987	5	18	352	44	71	57.5	25.5	5824
5/19/1987	1987	5	19	353	47	65	56	24	5848

5/20/1987	1987	5	20	354	45	63	54	22	5870
5/21/1987	1987	5	21	355	47	65	56	24	5894
5/22/1987	1987	5	22	356	38	66	52	20	5914
5/23/1987	1987	5	23	357	39	63	51	19	5933
5/24/1987	1987	5	24	358	40	67	53.5	21.5	5954.5
5/25/1987	1987	5	25	359	41	67	54	22	5976.5
5/26/1987	1987	5	26	360	38	64	51	19	5995.5
5/27/1987	1987	5	27	361	34	64	49	17	6012.5
5/28/1987	1987	5	28	362	41	63	52	20	6032.5
5/29/1987	1987	5	29	363	37	68	52.5	20.5	6053
5/30/1987	1987	5	30	364	40	70	55	23	6076
5/31/1987	1987	5	31	365	44	76	60	28	6104
6/1/1987	1987	6	1	1	49	78	63.5	31.5	31.5
6/2/1987	1987	6	2	2	47	78	62.5	30.5	62
6/3/1987	1987	6	3	3	44	78	61	29	91
6/4/1987	1987	6	4	4	47	75	61	29	120
6/5/1987	1987	6	5	5	49	74	61.5	29.5	149.5
6/6/1987	1987	6	6	6	46	76	61	29	178.5
6/7/1987	1987	6	7	7	45	76	60.5	28.5	207
6/8/1987	1987	6	8	8	50	62	56	24	231
6/9/1987	1987	6	9	9	43	75	59	27	258
6/10/1987	1987	6	10	10	48	79	63.5	31.5	289.5
6/11/1987	1987	6	11	11	49	83	66	34	323.5
6/12/1987	1987	6	12	12	49	82	65.5	33.5	357
6/13/1987	1987	6	13	13	52	85	68.5	36.5	393.5
6/14/1987	1987	6	14	14	54	86	70	38	431.5
6/15/1987	1987	6	15	15	57	83	70	38	469.5
6/16/1987	1987	6	16	16	51	81	66	34	503.5
6/17/1987	1987	6	17	17	49	83	66	34	537.5
6/18/1987	1987	6	18	18	48	85	66.5	34.5	572
6/19/1987	1987	6	19	19	49	84	66.5	34.5	606.5
6/20/1987	1987	6	20	20	51	82	66.5	34.5	641
6/21/1987	1987	6	21	21	55	83	69	37	678
6/22/1987	1987	6	22	22	52	83	67.5	35.5	713.5
6/23/1987	1987	6	23	23	52	88	70	38	751.5
6/24/1987	1987	6	24	24	56	89	72.5	40.5	792
6/25/1987	1987	6	25	25	56	87	71.5	39.5	831.5
6/26/1987	1987	6	26	26	53	87	70	38	869.5
6/27/1987	1987	6	27	27	51	83	67	35	904.5
6/28/1987	1987	6	28	28	51	80	65.5	33.5	938
6/29/1987	1987	6	29	29	48	77	62.5	30.5	968.5
6/30/1987	1987	6	30	30	48	83	65.5	33.5	1002
7/1/1987	1987	7	1	31	52	84	68	36	1038
7/2/1987	1987	7	2	32	54	86	70	38	1076
7/3/1987	1987	7	3	33	54	86	70	38	1114
7/4/1987	1987	7	4	34	54	86	70	38	1152
7/5/1987	1987	7	5	35	49	86	67.5	35.5	1187.5
7/6/1987	1987	7	6	36	49	85	67	35	1222.5
7/7/1987	1987	7	7	37	57	87	72	40	1262.5
7/8/1987	1987	7	8	38	57	88	72.5	40.5	1303
7/9/1987	1987	7	9	39	56	86	71	39	1342
7/10/1987	1987	7	10	40	56	86	71	39	1381
7/11/1987	1987	7	11	41	52	84	68	36	1417
7/12/1987	1987	7	12	42	59	84	71.5	39.5	1456.5
7/13/1987	1987	7	13	43	53	83	68	36	1492.5
7/14/1987	1987	7	14	44	51	85	68	36	1528.5
7/15/1987	1987	7	15	45	51	85	68	36	1564.5
7/16/1987	1987	7	16	46	63	85	74	42	1606.5
7/17/1987	1987	7	17	47	52	76	64	32	1638.5
7/18/1987	1987	7	18	48	49	81	65	33	1671.5
7/19/1987	1987	7	19	49	55	83	69	37	1708.5
7/20/1987	1987	7	20	50	53	86	69.5	37.5	1746
7/21/1987	1987	7	21	51	57	87	72	40	1786
7/22/1987	1987	7	22	52	57	86	71.5	39.5	1825.5
7/23/1987	1987	7	23	53	57	89	73	41	1866.5
7/24/1987	1987	7	24	54	60	89	74.5	42.5	1909
7/25/1987	1987	7	25	55	55	82	68.5	36.5	1945.5
7/26/1987	1987	7	26	56	57	83	70	38	1983.5
7/27/1987	1987	7	27	57	54	83	68.5	36.5	2020
7/28/1987	1987	7	28	58	58	79	68.5	36.5	2056.5
7/29/1987	1987	7	29	59	55	82	68.5	36.5	2093
7/30/1987	1987	7	30	60	57	79	68	36	2129
7/31/1987	1987	7	31	61	56	79	67.5	35.5	2164.5
8/1/1987	1987	8	1	62	54	84	69	37	2201.5
8/2/1987	1987	8	2	63	58	79	68.5	36.5	2238
8/3/1987	1987	8	3	64	55	80	67.5	35.5	2273.5
8/4/1987	1987	8	4	65	59	80	69.5	37.5	2311
8/5/1987	1987	8	5	66	55	80	67.5	35.5	2346.5
8/6/1987	1987	8	6	67	55	83	69	37	2383.5
8/7/1987	1987	8	7	68	57	72	64.5	32.5	2416
8/8/1987	1987	8	8	69	56	78	67	35	2451
8/9/1987	1987	8	9	70	55	78	66.5	34.5	2485.5
8/10/1987	1987	8	10	71	56	82	69	37	2522.5
8/11/1987	1987	8	11	72	59	80	69.5	37.5	2560
8/12/1987	1987	8	12	73	56	77	66.5	34.5	2594.5
8/13/1987	1987	8	13	74	52	79	65.5	33.5	2628
8/14/1987	1987	8	14	75	50	78	64	32	2660
8/15/1987	1987	8	15	76	50	78	64	32	2692
8/16/1987	1987	8	16	77	51	82	66.5	34.5	2726.5
8/17/1987	1987	8	17	78	50	82	66	34	2760.5
8/18/1987	1987	8	18	79	53	86	69.5	37.5	2798
8/19/1987	1987	8	19	80	53	87	70	38	2836
8/20/1987	1987	8	20	81	60	87	73.5	41.5	2877.5

8/21/1987	1987	8	21	82	56	76	66	34	2911.5
8/22/1987	1987	8	22	83	52	79	65.5	33.5	2945
8/23/1987	1987	8	23	84	54	76	65	33	2978
8/24/1987	1987	8	24	85	55	72	63.5	31.5	3009.5
8/25/1987	1987	8	25	86	52	70	61	29	3038.5
8/26/1987	1987	8	26	87	49	67	58	26	3064.5
8/27/1987	1987	8	27	88	47	70	58.5	26.5	3091
8/28/1987	1987	8	28	89	44	74	59	27	3118
8/29/1987	1987	8	29	90	48	76	62	30	3148
8/30/1987	1987	8	30	91	46	77	61.5	29.5	3177.5
8/31/1987	1987	8	31	92	51	79	65	33	3210.5
9/1/1987	1987	9	1	93	52	77	64.5	32.5	3243
9/2/1987	1987	9	2	94	48	79	63.5	31.5	3274.5
9/3/1987	1987	9	3	95	48	80	64	32	3306.5
9/4/1987	1987	9	4	96	53	75	64	32	3338.5
9/5/1987	1987	9	5	97	49	71	60	28	3366.5
9/6/1987	1987	9	6	98	48	71	59.5	27.5	3394
9/7/1987	1987	9	7	99	47	76	61.5	29.5	3423.5
9/8/1987	1987	9	8	100	46	76	61	29	3452.5
9/9/1987	1987	9	9	101	49	77	63	31	3483.5
9/10/1987	1987	9	10	102	47	77	62	30	3513.5
9/11/1987	1987	9	11	103	47	76	61.5	29.5	3543
9/12/1987	1987	9	12	104	47	76	61.5	29.5	3572.5
9/13/1987	1987	9	13	105	47	78	62.5	30.5	3603
9/14/1987	1987	9	14	106	46	69	57.5	25.5	3628.5
9/15/1987	1987	9	15	107	39	69	54	22	3650.5
9/16/1987	1987	9	16	108	44	76	60	28	3678.5
9/17/1987	1987	9	17	109	53	73	63	31	3709.5
9/18/1987	1987	9	18	110	48	73	60.5	28.5	3738
9/19/1987	1987	9	19	111	47	71	59	27	3765
9/20/1987	1987	9	20	112	41	76	58.5	26.5	3791.5
9/21/1987	1987	9	21	113	43	73	58	26	3817.5
9/22/1987	1987	9	22	114	46	71	58.5	26.5	3844
9/23/1987	1987	9	23	115	46	74	60	28	3872
9/24/1987	1987	9	24	116	47	74	60.5	28.5	3900.5
9/25/1987	1987	9	25	117	49	64	56.5	24.5	3925
9/26/1987	1987	9	26	118	43	72	57.5	25.5	3950.5
9/27/1987	1987	9	27	119	47	74	60.5	28.5	3979
9/28/1987	1987	9	28	120	44	74	59	27	4006
9/29/1987	1987	9	29	121	42	75	58.5	26.5	4032.5
9/30/1987	1987	9	30	122	42	70	56	24	4056.5
10/1/1987	1987	10	1	123	42	74	58	26	4082.5
10/2/1987	1987	10	2	124	42	74	58	26	4108.5
10/3/1987	1987	10	3	125	43	74	58.5	26.5	4135
10/4/1987	1987	10	4	126	44	76	60	28	4163
10/5/1987	1987	10	5	127	44	77	60.5	28.5	4191.5
10/6/1987	1987	10	6	128	42	76	59	27	4218.5
10/7/1987	1987	10	7	129	43	78	60.5	28.5	4247
10/8/1987	1987	10	8	130	44	75	59.5	27.5	4274.5
10/9/1987	1987	10	9	131	44	75	59.5	27.5	4302
10/10/1987	1987	10	10	132	46	73	59.5	27.5	4329.5
10/11/1987	1987	10	11	133	46	74	60	28	4357.5
10/12/1987	1987	10	12	134	47	75	61	29	4386.5
10/13/1987	1987	10	13	135	48	70	59	27	4413.5
10/14/1987	1987	10	14	136	37	60	48.5	16.5	4430
10/15/1987	1987	10	15	137	39	58	48.5	16.5	4446.5
10/16/1987	1987	10	16	138	34	64	49	17	4463.5
10/17/1987	1987	10	17	139	35	66	50.5	18.5	4482
10/18/1987	1987	10	18	140	34	65	49.5	17.5	4499.5
10/19/1987	1987	10	19	141	35	64	49.5	17.5	4517
10/20/1987	1987	10	20	142	32	65	48.5	16.5	4533.5
10/21/1987	1987	10	21	143	33	67	50	18	4551.5
10/22/1987	1987	10	22	144	38	63	50.5	18.5	4570
10/23/1987	1987	10	23	145	42	60	51	19	4589
10/24/1987	1987	10	24	146	41	59	50	18	4607
10/25/1987	1987	10	25	147	45	64	54.5	22.5	4629.5
10/26/1987	1987	10	26	148	36	64	50	18	4647.5
10/27/1987	1987	10	27	149	37	68	52.5	20.5	4668
10/28/1987	1987	10	28	150	40	71	55.5	23.5	4691.5
10/29/1987	1987	10	29	151	41	60	50.5	18.5	4710
10/30/1987	1987	10	30	152	37	59	48	16	4726
10/31/1987	1987	10	31	153	35	55	45	13	4739
11/1/1987	1987	11	1	154	37	61	49	17	4756
11/2/1987	1987	11	2	155	38	56	47	15	4771
11/3/1987	1987	11	3	156	34	61	47.5	15.5	4786.5
11/4/1987	1987	11	4	157	37	64	50.5	18.5	4805
11/5/1987	1987	11	5	158	41	58	49.5	17.5	4822.5
11/6/1987	1987	11	6	159	41	53	47	15	4837.5
11/7/1987	1987	11	7	160	36	46	41	9	4846.5
11/8/1987	1987	11	8	161	29	52	40.5	8.5	4855
11/9/1987	1987	11	9	162	27	55	41	9	4864
11/10/1987	1987	11	10	163	26	56	41	9	4873
11/11/1987	1987	11	11	164	28	52	40	8	4881
11/12/1987	1987	11	12	165	24	55	39.5	7.5	4888.5
11/13/1987	1987	11	13	166	28	58	43	11	4899.5
11/14/1987	1987	11	14	167	33	52	42.5	10.5	4910
11/15/1987	1987	11	15	168	26	36	31	-1	4909
11/16/1987	1987	11	16	169	20	41	30.5	-1.5	4907.5
11/17/1987	1987	11	17	170	26	45	35.5	3.5	4911
11/18/1987	1987	11	18	171	13	42	27.5	-4.5	4906.5
11/19/1987	1987	11	19	172	17	52	34.5	2.5	4909
11/20/1987	1987	11	20	173	23	61	42	10	4919
11/21/1987	1987	11	21	174	27	56	41.5	9.5	4928.5

11/22/1987	1987	11	22	175	22	52	37	5	4933.5
11/23/1987	1987	11	23	176	25	52	38.5	6.5	4940
11/24/1987	1987	11	24	177	23	46	34.5	2.5	4942.5
11/25/1987	1987	11	25	178	17	52	34.5	2.5	4945
11/26/1987	1987	11	26	179	23	44	33.5	1.5	4946.5
11/27/1987	1987	11	27	180	22	46	34	2	4948.5
11/28/1987	1987	11	28	181	14	46	30	-2	4946.5
11/29/1987	1987	11	29	182	17	45	31	-1	4945.5
11/30/1987	1987	11	30	183	17	42	29.5	-2.5	4943
12/1/1987	1987	12	1	184	17	46	31.5	-0.5	4942.5
12/2/1987	1987	12	2	185	23	53	38	6	4948.5
12/3/1987	1987	12	3	186	29	60	44.5	12.5	4961
12/4/1987	1987	12	4	187	30	61	45.5	13.5	4974.5
12/5/1987	1987	12	5	188	30	61	45.5	13.5	4988
12/6/1987	1987	12	6	189	25	52	38.5	6.5	4994.5
12/7/1987	1987	12	7	190	27	57	42	10	5004.5
12/8/1987	1987	12	8	191	20	48	34	2	5006.5
12/9/1987	1987	12	9	192	21	50	35.5	3.5	5010
12/10/1987	1987	12	10	193	26	59	42.5	10.5	5020.5
12/11/1987	1987	12	11	194	35	58	46.5	14.5	5035
12/12/1987	1987	12	12	195	19	42	30.5	-1.5	5033.5
12/13/1987	1987	12	13	196	13	26	19.5	-12.5	5021
12/14/1987	1987	12	14	197	8	22	15	-17	5004
12/15/1987	1987	12	15	198	2	28	15	-17	4987
12/16/1987	1987	12	16	199	10	29	19.5	-12.5	4974.5
12/17/1987	1987	12	17	200	17	44	30.5	-1.5	4973
12/18/1987	1987	12	18	201	25	41	33	1	4974
12/19/1987	1987	12	19	202	26	32	29	-3	4971
12/20/1987	1987	12	20	203	26	33	29.5	-2.5	4968.5
12/21/1987	1987	12	21	204	11	42	26.5	-5.5	4963
12/22/1987	1987	12	22	205	19	51	35	3	4966
12/23/1987	1987	12	23	206	31	45	38	6	4972
12/24/1987	1987	12	24	207	21	34	27.5	-4.5	4967.5
12/25/1987	1987	12	25	208	14	32	23	-9	4958.5
12/26/1987	1987	12	26	209	1	32	16.5	-15.5	4943
12/27/1987	1987	12	27	210	9	26	17.5	-14.5	4928.5
12/28/1987	1987	12	28	211	9	40	24.5	-7.5	4921
12/29/1987	1987	12	29	212	9	51	30	-2	4919
12/30/1987	1987	12	30	213	21	43	32	0	4919
12/31/1987	1987	12	31	214	6	29	17.5	-14.5	4904.5
1/1/1988	1988	1	1	215	5	30	17.5	-14.5	4890
1/2/1988	1988	1	2	216	21	31	26	-6	4884
1/3/1988	1988	1	3	217	10	40	25	-7	4877
1/4/1988	1988	1	4	218	28	41	34.5	2.5	4879.5
1/5/1988	1988	1	5	219	33	47	40	8	4887.5
1/6/1988	1988	1	6	220	28	38	33	1	4888.5
1/7/1988	1988	1	7	221	17	38	27.5	-4.5	4884
1/8/1988	1988	1	8	222	15	36	25.5	-6.5	4877.5
1/9/1988	1988	1	9	223	11	37	24	-8	4869.5
1/10/1988	1988	1	10	224	19	44	31.5	-0.5	4869
1/11/1988	1988	1	11	225	23	47	35	3	4872
1/12/1988	1988	1	12	226	16	41	28.5	-3.5	4868.5
1/13/1988	1988	1	13	227	11	44	27.5	-4.5	4864
1/14/1988	1988	1	14	228	16	42	29	-3	4861
1/15/1988	1988	1	15	229	17	49	33	1	4862
1/16/1988	1988	1	16	230	28	45	36.5	4.5	4866.5
1/17/1988	1988	1	17	231	22	39	30.5	-1.5	4865
1/18/1988	1988	1	18	232	22	38	30	-2	4863
1/19/1988	1988	1	19	233	16	28	22	-10	4853
1/20/1988	1988	1	20	234	4	26	15	-17	4836
1/21/1988	1988	1	21	235	5	29	17	-15	4821
1/22/1988	1988	1	22	236	1	27	14	-18	4803
1/23/1988	1988	1	23	237	8	45	26.5	-5.5	4797.5
1/24/1988	1988	1	24	238	13	32	22.5	-9.5	4788
1/25/1988	1988	1	25	239	8	37	22.5	-9.5	4778.5
1/26/1988	1988	1	26	240	18	47	32.5	0.5	4779
1/27/1988	1988	1	27	241	19	55	37	5	4784
1/28/1988	1988	1	28	242	25	52	38.5	6.5	4790.5
1/29/1988	1988	1	29	243	28	51	39.5	7.5	4798
1/30/1988	1988	1	30	244	29	53	41	9	4807
1/31/1988	1988	1	31	245	23	48	35.5	3.5	4810.5
2/1/1988	1988	2	1	246	23	41	32	0	4810.5
2/2/1988	1988	2	2	247	31	45	38	6	4816.5
2/3/1988	1988	2	3	248	32	42	37	5	4821.5
2/4/1988	1988	2	4	249	24	37	30.5	-1.5	4820
2/5/1988	1988	2	5	250	23	41	32	0	4820
2/6/1988	1988	2	6	251	23	41	32	0	4820
2/7/1988	1988	2	7	252	17	47	32	0	4820
2/8/1988	1988	2	8	253	21	50	35.5	3.5	4823.5
2/9/1988	1988	2	9	254	21	53	37	5	4828.5
2/10/1988	1988	2	10	255	26	53	39.5	7.5	4836
2/11/1988	1988	2	11	256	22	47	34.5	2.5	4838.5
2/12/1988	1988	2	12	257	23	53	38	6	4844.5
2/13/1988	1988	2	13	258	24	55	39.5	7.5	4852
2/14/1988	1988	2	14	259	19	50	34.5	2.5	4854.5
2/15/1988	1988	2	15	260	18	52	35	3	4857.5
2/16/1988	1988	2	16	261	29	52	40.5	8.5	4866
2/17/1988	1988	2	17	262	19	39	29	-3	4863
2/18/1988	1988	2	18	263	13	38	25.5	-6.5	4856.5
2/19/1988	1988	2	19	264	18	41	29.5	-2.5	4854
2/20/1988	1988	2	20	265	20	47	33.5	1.5	4855.5
2/21/1988	1988	2	21	266	21	53	37	5	4860.5
2/22/1988	1988	2	22	267	25	56	40.5	8.5	4869

2/23/1988	1988	2	23	268	28	57	42.5	10.5	4879.5
2/24/1988	1988	2	24	269	27	58	42.5	10.5	4890
2/25/1988	1988	2	25	270	29	60	44.5	12.5	4902.5
2/26/1988	1988	2	26	271	38	61	49.5	17.5	4920
2/27/1988	1988	2	27	272	35	54	44.5	12.5	4932.5
2/28/1988	1988	2	28	273	32	56	44	12	4944.5
2/29/1988	1988	2	29	274	31	61	46	14	4958.5
3/1/1988	1988	3	1	275	22	67	44.5	12.5	4971
3/2/1988	1988	3	2	276	27	58	42.5	10.5	4981.5
3/3/1988	1988	3	3	277	32	47	39.5	7.5	4989
3/4/1988	1988	3	4	278	22	58	40	8	4997
3/5/1988	1988	3	5	279	22	62	42	10	5007
3/6/1988	1988	3	6	280	21	62	41.5	9.5	5016.5
3/7/1988	1988	3	7	281	38	48	43	11	5027.5
3/8/1988	1988	3	8	282	16	46	31	-1	5026.5
3/9/1988	1988	3	9	283	13	65	39	7	5033.5
3/10/1988	1988	3	10	284	33	47	40	8	5041.5
3/11/1988	1988	3	11	285	22	43	32.5	0.5	5042
3/12/1988	1988	3	12	286	8	48	28	-4	5038
3/13/1988	1988	3	13	287	26	40	33	1	5039
3/14/1988	1988	3	14	288	7	56	31.5	-0.5	5038.5
3/15/1988	1988	3	15	289	10	59	34.5	2.5	5041
3/16/1988	1988	3	16	290	24	46	35	3	5044
3/17/1988	1988	3	17	291	13	42	27.5	-4.5	5039.5
3/18/1988	1988	3	18	292	9	57	33	1	5040.5
3/19/1988	1988	3	19	293	14	65	39.5	7.5	5048
3/20/1988	1988	3	20	294	13	71	42	10	5058
3/21/1988	1988	3	21	295	16	74	45	13	5071
3/22/1988	1988	3	22	296	29	68	48.5	16.5	5087.5
3/23/1988	1988	3	23	297	30	74	52	20	5107.5
3/24/1988	1988	3	24	298	36	65	50.5	18.5	5126
3/25/1988	1988	3	25	299	22	73	47.5	15.5	5141.5
3/26/1988	1988	3	26	300	24	72	48	16	5157.5
3/27/1988	1988	3	27	301	26	77	51.5	19.5	5177
3/28/1988	1988	3	28	302	43	60	51.5	19.5	5196.5
3/29/1988	1988	3	29	303	23	59	41	9	5205.5
3/30/1988	1988	3	30	304	41	64	52.5	20.5	5226
3/31/1988	1988	3	31	305	25	41	33	1	5227
4/1/1988	1988	4	1	306	30	57	43.5	11.5	5238.5
4/2/1988	1988	4	2	307	21	66	43.5	11.5	5250
4/3/1988	1988	4	3	308	20	72	46	14	5264
4/4/1988	1988	4	4	309	25	72	48.5	16.5	5280.5
4/5/1988	1988	4	5	310	36	68	52	20	5300.5
4/6/1988	1988	4	6	311	26	77	51.5	19.5	5320
4/7/1988	1988	4	7	312	27	80	53.5	21.5	5341.5
4/8/1988	1988	4	8	313	35	76	55.5	23.5	5365
4/9/1988	1988	4	9	314	27	75	51	19	5384
4/10/1988	1988	4	10	315	19	66	42.5	10.5	5394.5
4/11/1988	1988	4	11	316	26	74	50	18	5412.5
4/12/1988	1988	4	12	317	23	78	50.5	18.5	5431
4/13/1988	1988	4	13	318	25	75	50	18	5449
4/14/1988	1988	4	14	319	47	60	53.5	21.5	5470.5
4/15/1988	1988	4	15	320	33	66	49.5	17.5	5488
4/16/1988	1988	4	16	321	26	48	37	5	5493
4/17/1988	1988	4	17	322	15	49	32	0	5493
4/18/1988	1988	4	18	323	30	60	45	13	5506
4/19/1988	1988	4	19	324	34	67	50.5	18.5	5524.5
4/20/1988	1988	4	20	325	32	69	50.5	18.5	5543
4/21/1988	1988	4	21	326	32	66	49	17	5560
4/22/1988	1988	4	22	327	31	66	48.5	16.5	5576.5
4/23/1988	1988	4	23	328	29	66	47.5	15.5	5592
4/24/1988	1988	4	24	329	29	60	44.5	12.5	5604.5
4/25/1988	1988	4	25	330	23	76	49.5	17.5	5622
4/26/1988	1988	4	26	331	31	71	51	19	5641
4/27/1988	1988	4	27	332	30	76	53	21	5662
4/28/1988	1988	4	28	333	36	65	50.5	18.5	5680.5
4/29/1988	1988	4	29	334	39	72	55.5	23.5	5704
4/30/1988	1988	4	30	335	33	81	57	25	5729
5/1/1988	1988	5	1	336	38	58	48	16	5745
5/2/1988	1988	5	2	337	31	61	46	14	5759
5/3/1988	1988	5	3	338	24	73	48.5	16.5	5775.5
5/4/1988	1988	5	4	339	36	78	57	25	5800.5
5/5/1988	1988	5	5	340	37	79	58	26	5826.5
5/6/1988	1988	5	6	341	36	63	49.5	17.5	5844
5/7/1988	1988	5	7	342	32	63	47.5	15.5	5859.5
5/8/1988	1988	5	8	343	40	65	52.5	20.5	5880
5/9/1988	1988	5	9	344	27	76	51.5	19.5	5899.5
5/10/1988	1988	5	10	345	35	77	56	24	5923.5
5/11/1988	1988	5	11	346	41	78	59.5	27.5	5951
5/12/1988	1988	5	12	347	41	84	62.5	30.5	5981.5
5/13/1988	1988	5	13	348	38	84	61	29	6010.5
5/14/1988	1988	5	14	349	40	84	62	30	6040.5
5/15/1988	1988	5	15	350	50	89	69.5	37.5	6078
5/16/1988	1988	5	16	351	43	86	64.5	32.5	6110.5
5/17/1988	1988	5	17	352	48	77	62.5	30.5	6141
5/18/1988	1988	5	18	353	44	63	53.5	21.5	6162.5
5/19/1988	1988	5	19	354	47	68	57.5	25.5	6188
5/20/1988	1988	5	20	355	39	63	51	19	6207
5/21/1988	1988	5	21	356	34	73	53.5	21.5	6228.5
5/22/1988	1988	5	22	357	37	78	57.5	25.5	6254
5/23/1988	1988	5	23	358	34	81	57.5	25.5	6279.5
5/24/1988	1988	5	24	359	48	79	63.5	31.5	6311
5/25/1988	1988	5	25	360	39	77	58	26	6337

5/26/1988	1988	5	26	361	39	82	60.5	28.5	6365.5
5/27/1988	1988	5	27	362	48	85	66.5	34.5	6400
5/28/1988	1988	5	28	363	42	84	63	31	6431
5/29/1988	1988	5	29	364	41	83	62	30	6461
5/30/1988	1988	5	30	365	38	58	48	16	6477
5/31/1988	1988	5	31	366	33	66	49.5	17.5	6494.5
6/1/1988	1988	6	1	1	30	76	53	21	21
6/2/1988	1988	6	2	2	39	83	61	29	50
6/3/1988	1988	6	3	3	43	83	63	31	81
6/4/1988	1988	6	4	4	52	82	67	35	116
6/5/1988	1988	6	5	5	43	78	60.5	28.5	144.5
6/6/1988	1988	6	6	6	45	87	66	34	178.5
6/7/1988	1988	6	7	7	42	88	65	33	211.5
6/8/1988	1988	6	8	8	41	87	64	32	243.5
6/9/1988	1988	6	9	9	39	84	61.5	29.5	273
6/10/1988	1988	6	10	10	54	83	68.5	36.5	309.5
6/11/1988	1988	6	11	11	44	78	61	29	338.5
6/12/1988	1988	6	12	12	49	86	67.5	35.5	374
6/13/1988	1988	6	13	13	41	82	61.5	29.5	403.5
6/14/1988	1988	6	14	14	42	85	63.5	31.5	435
6/15/1988	1988	6	15	15	49	83	66	34	469
6/16/1988	1988	6	16	16	52	86	69	37	506
6/17/1988	1988	6	17	17	49	88	68.5	36.5	542.5
6/18/1988	1988	6	18	18	49	89	69	37	579.5
6/19/1988	1988	6	19	19	52	90	71	39	618.5
6/20/1988	1988	6	20	20	53	90	71.5	39.5	658
6/21/1988	1988	6	21	21	53	93	73	41	699
6/22/1988	1988	6	22	22	54	94	74	42	741
6/23/1988	1988	6	23	23	58	91	74.5	42.5	783.5
6/24/1988	1988	6	24	24	56	87	71.5	39.5	823
6/25/1988	1988	6	25	25	58	88	73	41	864
6/26/1988	1988	6	26	26	50	84	67	35	899
6/27/1988	1988	6	27	27	56	77	66.5	34.5	933.5
6/28/1988	1988	6	28	28	57	77	67	35	968.5
6/29/1988	1988	6	29	29	55	76	65.5	33.5	1002
6/30/1988	1988	6	30	30	51	83	67	35	1037
7/1/1988	1988	7	1	31	58	88	73	41	1078
7/2/1988	1988	7	2	32	54	89	71.5	39.5	1117.5
7/3/1988	1988	7	3	33	55	85	70	38	1155.5
7/4/1988	1988	7	4	34	60	81	70.5	38.5	1194
7/5/1988	1988	7	5	35	59	88	73.5	41.5	1235.5
7/6/1988	1988	7	6	36	54	88	71	39	1274.5
7/7/1988	1988	7	7	37	63	94	78.5	46.5	1321
7/8/1988	1988	7	8	38	61	83	72	40	1361
7/9/1988	1988	7	9	39	57	78	67.5	35.5	1396.5
7/10/1988	1988	7	10	40	52	83	67.5	35.5	1432
7/11/1988	1988	7	11	41	50	89	69.5	37.5	1469.5
7/12/1988	1988	7	12	42	55	91	73	41	1510.5
7/13/1988	1988	7	13	43	58	94	76	44	1554.5
7/14/1988	1988	7	14	44	62	88	75	43	1597.5
7/15/1988	1988	7	15	45	62	93	77.5	45.5	1643
7/16/1988	1988	7	16	46	56	91	73.5	41.5	1684.5
7/17/1988	1988	7	17	47	57	91	74	42	1726.5
7/18/1988	1988	7	18	48	58	91	74.5	42.5	1769
7/19/1988	1988	7	19	49	60	87	73.5	41.5	1810.5
7/20/1988	1988	7	20	50	58	79	68.5	36.5	1847
7/21/1988	1988	7	21	51	58	89	73.5	41.5	1888.5
7/22/1988	1988	7	22	52	52	94	73	41	1929.5
7/23/1988	1988	7	23	53	62	94	78	46	1975.5
7/24/1988	1988	7	24	54	57	88	72.5	40.5	2016
7/25/1988	1988	7	25	55	53	93	73	41	2057
7/26/1988	1988	7	26	56	60	90	75	43	2100
7/27/1988	1988	7	27	57	53	89	71	39	2139
7/28/1988	1988	7	28	58	57	88	72.5	40.5	2179.5
7/29/1988	1988	7	29	59	56	82	69	37	2216.5
7/30/1988	1988	7	30	60	57	82	69.5	37.5	2254
7/31/1988	1988	7	31	61	59	81	70	38	2292
8/1/1988	1988	8	1	62	57	81	69	37	2329
8/2/1988	1988	8	2	63	54	86	70	38	2367
8/3/1988	1988	8	3	64	57	90	73.5	41.5	2408.5
8/4/1988	1988	8	4	65	58	92	75	43	2451.5
8/5/1988	1988	8	5	66	58	84	71	39	2490.5
8/6/1988	1988	8	6	67	60	79	69.5	37.5	2528
8/7/1988	1988	8	7	68	58	84	71	39	2567
8/8/1988	1988	8	8	69	51	88	69.5	37.5	2604.5
8/9/1988	1988	8	9	70	52	86	69	37	2641.5
8/10/1988	1988	8	10	71	57	84	70.5	38.5	2680
8/11/1988	1988	8	11	72	57	88	72.5	40.5	2720.5
8/12/1988	1988	8	12	73	58	87	72.5	40.5	2761
8/13/1988	1988	8	13	74	51	90	70.5	38.5	2799.5
8/14/1988	1988	8	14	75	51	92	71.5	39.5	2839
8/15/1988	1988	8	15	76	57	83	70	38	2877
8/16/1988	1988	8	16	77	58	84	71	39	2916
8/17/1988	1988	8	17	78	57	76	66.5	34.5	2950.5
8/18/1988	1988	8	18	79	51	79	65	33	2983.5
8/19/1988	1988	8	19	80	53	86	69.5	37.5	3021
8/20/1988	1988	8	20	81	52	87	69.5	37.5	3058.5
8/21/1988	1988	8	21	82	54	81	67.5	35.5	3094
8/22/1988	1988	8	22	83	59	86	72.5	40.5	3134.5
8/23/1988	1988	8	23	84	60	85	72.5	40.5	3175
8/24/1988	1988	8	24	85	60	84	72	40	3215
8/25/1988	1988	8	25	86	59	86	72.5	40.5	3255.5
8/26/1988	1988	8	26	87	55	82	68.5	36.5	3292

8/27/1988	1988	8	27	88	55	75	65	33	3325
8/28/1988	1988	8	28	89	53	64	58.5	26.5	3351.5
8/29/1988	1988	8	29	90	54	70	62	30	3381.5
8/30/1988	1988	8	30	91	57	77	67	35	3416.5
8/31/1988	1988	8	31	92	54	71	62.5	30.5	3447
9/1/1988	1988	9	1	93	55	75	65	33	3480
9/2/1988	1988	9	2	94	56	88	72	40	3520
9/3/1988	1988	9	3	95	48	79	63.5	31.5	3551.5
9/4/1988	1988	9	4	96	48	76	62	30	3581.5
9/5/1988	1988	9	5	97	44	79	61.5	29.5	3611
9/6/1988	1988	9	6	98	41	85	63	31	3642
9/7/1988	1988	9	7	99	42	88	65	33	3675
9/8/1988	1988	9	8	100	44	91	67.5	35.5	3710.5
9/9/1988	1988	9	9	101	45	89	67	35	3745.5
9/10/1988	1988	9	10	102	49	88	68.5	36.5	3782
9/11/1988	1988	9	11	103	53	83	68	36	3818
9/12/1988	1988	9	12	104	38	70	54	22	3840
9/13/1988	1988	9	13	105	48	79	63.5	31.5	3871.5
9/14/1988	1988	9	14	106	42	78	60	28	3899.5
9/15/1988	1988	9	15	107	38	78	58	26	3925.5
9/16/1988	1988	9	16	108	39	82	60.5	28.5	3954
9/17/1988	1988	9	17	109	42	81	61.5	29.5	3983.5
9/18/1988	1988	9	18	110	37	82	59.5	27.5	4011
9/19/1988	1988	9	19	111	36	83	59.5	27.5	4038.5
9/20/1988	1988	9	20	112	40	78	59	27	4065.5
9/21/1988	1988	9	21	113	46	66	56	24	4089.5
9/22/1988	1988	9	22	114	48	73	60.5	28.5	4118
9/23/1988	1988	9	23	115	36	76	56	24	4142
9/24/1988	1988	9	24	116	34	79	56.5	24.5	4166.5
9/25/1988	1988	9	25	117	36	81	58.5	26.5	4193
9/26/1988	1988	9	26	118	36	83	59.5	27.5	4220.5
9/27/1988	1988	9	27	119	40	79	59.5	27.5	4248
9/28/1988	1988	9	28	120	34	78	56	24	4272
9/29/1988	1988	9	29	121	32	70	51	19	4291
9/30/1988	1988	9	30	122	31	76	53.5	21.5	4312.5
10/1/1988	1988	10	1	123	36	82	59	27	4339.5
10/2/1988	1988	10	2	124	48	82	65	33	4372.5
10/3/1988	1988	10	3	125	37	81	59	27	4399.5
10/4/1988	1988	10	4	126	39	72	55.5	23.5	4423
10/5/1988	1988	10	5	127	48	73	60.5	28.5	4451.5
10/6/1988	1988	10	6	128	47	68	57.5	25.5	4477
10/7/1988	1988	10	7	129	35	64	49.5	17.5	4494.5
10/8/1988	1988	10	8	130	37	70	53.5	21.5	4516
10/9/1988	1988	10	9	131	37	69	53	21	4537
10/10/1988	1988	10	10	132	38	66	52	20	4557
10/11/1988	1988	10	11	133	32	68	50	18	4575
10/12/1988	1988	10	12	134	29	66	47.5	15.5	4590.5
10/13/1988	1988	10	13	135	30	73	51.5	19.5	4610
10/14/1988	1988	10	14	136	31	69	50	18	4628
10/15/1988	1988	10	15	137	46	82	64	32	4660
10/16/1988	1988	10	16	138	34	79	56.5	24.5	4684.5
10/17/1988	1988	10	17	139	34	78	56	24	4708.5
10/18/1988	1988	10	18	140	34	81	57.5	25.5	4734
10/19/1988	1988	10	19	141	36	76	56	24	4758
10/20/1988	1988	10	20	142	35	79	57	25	4783
10/21/1988	1988	10	21	143	34	79	56.5	24.5	4807.5
10/22/1988	1988	10	22	144	31	79	55	23	4830.5
10/23/1988	1988	10	23	145	35	78	56.5	24.5	4855
10/24/1988	1988	10	24	146	30	79	54.5	22.5	4877.5
10/25/1988	1988	10	25	147	29	77	53	21	4898.5
10/26/1988	1988	10	26	148	31	76	53.5	21.5	4920
10/27/1988	1988	10	27	149	29	78	53.5	21.5	4941.5
10/28/1988	1988	10	28	150	30	71	50.5	18.5	4960
10/29/1988	1988	10	29	151	31	68	49.5	17.5	4977.5
10/30/1988	1988	10	30	152	37	69	53	21	4998.5
10/31/1988	1988	10	31	153	29	73	51	19	5017.5
11/1/1988	1988	11	1	154	28	74	51	19	5036.5
11/2/1988	1988	11	2	155	32	69	50.5	18.5	5055
11/3/1988	1988	11	3	156	37	74	55.5	23.5	5078.5
11/4/1988	1988	11	4	157	52	72	62	30	5108.5
11/5/1988	1988	11	5	158	33	76	54.5	22.5	5131
11/6/1988	1988	11	6	159	29	74	51.5	19.5	5150.5
11/7/1988	1988	11	7	160	40	71	55.5	23.5	5174
11/8/1988	1988	11	8	161	46	69	57.5	25.5	5199.5
11/9/1988	1988	11	9	162	46	64	55	23	5222.5
11/10/1988	1988	11	10	163	29	68	48.5	16.5	5239
11/11/1988	1988	11	11	164	36	58	47	15	5254
11/12/1988	1988	11	12	165	26	65	45.5	13.5	5267.5
11/13/1988	1988	11	13	166	25	70	47.5	15.5	5283
11/14/1988	1988	11	14	167	33	68	50.5	18.5	5301.5
11/15/1988	1988	11	15	168	29	44	36.5	4.5	5306
11/16/1988	1988	11	16	169	15	48	31.5	-0.5	5305.5
11/17/1988	1988	11	17	170	20	58	39	7	5312.5
11/18/1988	1988	11	18	171	20	41	30.5	-1.5	5311
11/19/1988	1988	11	19	172	25	44	34.5	2.5	5313.5
11/20/1988	1988	11	20	173	15	46	30.5	-1.5	5312
11/21/1988	1988	11	21	174	17	46	31.5	-0.5	5311.5
11/22/1988	1988	11	22	175	11	56	33.5	1.5	5313
11/23/1988	1988	11	23	176	15	58	36.5	4.5	5317.5
11/24/1988	1988	11	24	177	29	58	43.5	11.5	5329
11/25/1988	1988	11	25	178	31	44	37.5	5.5	5334.5
11/26/1988	1988	11	26	179	29	39	34	2	5336.5
11/27/1988	1988	11	27	180	13	58	35.5	3.5	5340

11/28/1988	1988	11	28	181	13	58	35.5	3.5	5343.5
11/29/1988	1988	11	29	182	18	42	30	-2	5341.5
11/30/1988	1988	11	30	183	13	43	28	-4	5337.5
12/1/1988	1988	12	1	184	12	54	33	1	5338.5
12/2/1988	1988	12	2	185	18	58	38	6	5344.5
12/3/1988	1988	12	3	186	14	59	36.5	4.5	5349
12/4/1988	1988	12	4	187	19	52	35.5	3.5	5352.5
12/5/1988	1988	12	5	188	10	57	33.5	1.5	5354
12/6/1988	1988	12	6	189	12	52	32	0	5354
12/7/1988	1988	12	7	190	20	45	32.5	0.5	5354.5
12/8/1988	1988	12	8	191	20	34	27	-5	5349.5
12/9/1988	1988	12	9	192	9	46	27.5	-4.5	5345
12/10/1988	1988	12	10	193	19	44	31.5	-0.5	5344.5
12/11/1988	1988	12	11	194	12	55	33.5	1.5	5346
12/12/1988	1988	12	12	195	11	53	32	0	5346
12/13/1988	1988	12	13	196	12	62	37	5	5351
12/14/1988	1988	12	14	197	15	60	37.5	5.5	5356.5
12/15/1988	1988	12	15	198	23	38	30.5	-1.5	5355
12/16/1988	1988	12	16	199	12	51	31.5	-0.5	5354.5
12/17/1988	1988	12	17	200	20	49	34.5	2.5	5357
12/18/1988	1988	12	18	201	18	56	37	5	5362
12/19/1988	1988	12	19	202	13	41	27	-5	5357
12/20/1988	1988	12	20	203	15	45	30	-2	5355
12/21/1988	1988	12	21	204	18	44	31	-1	5354
12/22/1988	1988	12	22	205	14	44	29	-3	5351
12/23/1988	1988	12	23	206	17	37	27	-5	5346
12/24/1988	1988	12	24	207	5	46	25.5	-6.5	5339.5
12/25/1988	1988	12	25	208	22	52	37	5	5344.5
12/26/1988	1988	12	26	209	19	43	31	-1	5343.5
12/27/1988	1988	12	27	210	-1	28	13.5	-18.5	5325
12/28/1988	1988	12	28	211	-18	37	9.5	-22.5	5302.5
12/29/1988	1988	12	29	212	2	34	18	-14	5288.5
12/30/1988	1988	12	30	213	0	37	18.5	-13.5	5275
12/31/1988	1988	12	31	214	3	36	19.5	-12.5	5262.5
1/1/1989	1989	1	1	215	7	45	26	-6	5256.5
1/2/1989	1989	1	2	216	8	48	28	-4	5252.5
1/3/1989	1989	1	3	217	14	50	32	0	5252.5
1/4/1989	1989	1	4	218	25	43	34	2	5254.5
1/5/1989	1989	1	5	219	32	40	36	4	5258.5
1/6/1989	1989	1	6	220	28	39	33.5	1.5	5260
1/7/1989	1989	1	7	221	-5	26	10.5	-21.5	5238.5
1/8/1989	1989	1	8	222	-15	30	7.5	-24.5	5214
1/9/1989	1989	1	9	223	-7	42	17.5	-14.5	5199.5
1/10/1989	1989	1	10	224	-17	55	19	-13	5186.5
1/11/1989	1989	1	11	225	18	46	32	0	5186.5
1/12/1989	1989	1	12	226	3	35	19	-13	5173.5
1/13/1989	1989	1	13	227	0	36	18	-14	5159.5
1/14/1989	1989	1	14	228	2	48	25	-7	5152.5
1/15/1989	1989	1	15	229	10	35	22.5	-9.5	5143
1/16/1989	1989	1	16	230	4	46	25	-7	5136
1/17/1989	1989	1	17	231	-2	50	24	-8	5128
1/18/1989	1989	1	18	232	12	53	32.5	0.5	5128.5
1/19/1989	1989	1	19	233	10	54	32	0	5128.5
1/20/1989	1989	1	20	234	16	48	32	0	5128.5
1/21/1989	1989	1	21	235	10	47	28.5	-3.5	5125
1/22/1989	1989	1	22	236	15	58	36.5	4.5	5129.5
1/23/1989	1989	1	23	237	3	56	29.5	-2.5	5127
1/24/1989	1989	1	24	238	23	46	34.5	2.5	5129.5
1/25/1989	1989	1	25	239	21	40	30.5	-1.5	5128
1/26/1989	1989	1	26	240	22	49	35.5	3.5	5131.5
1/27/1989	1989	1	27	241	18	36	27	-5	5126.5
1/28/1989	1989	1	28	242	19	38	28.5	-3.5	5123
1/29/1989	1989	1	29	243	5	43	24	-8	5115
1/30/1989	1989	1	30	244	7	46	26.5	-5.5	5109.5
1/31/1989	1989	1	31	245	9	57	33	1	5110.5
2/1/1989	1989	2	1	246	10	54	32	0	5110.5
2/2/1989	1989	2	2	247	33	53	43	11	5121.5
2/3/1989	1989	2	3	248	29	53	41	9	5130.5
2/4/1989	1989	2	4	249	32	54	43	11	5141.5
2/5/1989	1989	2	5	250	9	26	17.5	-14.5	5127
2/6/1989	1989	2	6	251	3	22	12.5	-19.5	5107.5
2/7/1989	1989	2	7	252	6	26	16	-16	5091.5
2/8/1989	1989	2	8	253	10	40	25	-7	5084.5
2/9/1989	1989	2	9	254	10	42	26	-6	5078.5
2/10/1989	1989	2	10	255	26	53	39.5	7.5	5086
2/11/1989	1989	2	11	256	27	58	42.5	10.5	5096.5
2/12/1989	1989	2	12	257	24	51	37.5	5.5	5102
2/13/1989	1989	2	13	258	21	47	34	2	5104
2/14/1989	1989	2	14	259	19	48	33.5	1.5	5105.5
2/15/1989	1989	2	15	260	19	53	36	4	5109.5
2/16/1989	1989	2	16	261	15	53	34	2	5111.5
2/17/1989	1989	2	17	262	22	60	41	9	5120.5
2/18/1989	1989	2	18	263	20	59	39.5	7.5	5128
2/19/1989	1989	2	19	264	28	48	38	6	5134
2/20/1989	1989	2	20	265	27	47	37	5	5139
2/21/1989	1989	2	21	266	14	50	32	0	5139
2/22/1989	1989	2	22	267	14	58	36	4	5143
2/23/1989	1989	2	23	268	18	65	41.5	9.5	5152.5
2/24/1989	1989	2	24	269	20	71	45.5	13.5	5166
2/25/1989	1989	2	25	270	24	72	48	16	5182
2/26/1989	1989	2	26	271	23	70	46.5	14.5	5196.5
2/27/1989	1989	2	27	272	32	61	46.5	14.5	5211
2/28/1989	1989	2	28	273	16	61	38.5	6.5	5217.5

3/1/1989	1989	3	1	274	23	60	41.5	9.5	5227
3/2/1989	1989	3	2	275	33	57	45	13	5240
3/3/1989	1989	3	3	276	28	44	36	4	5244
3/4/1989	1989	3	4	277	18	37	27.5	-4.5	5239.5
3/5/1989	1989	3	5	278	11	48	29.5	-2.5	5237
3/6/1989	1989	3	6	279	15	61	38	6	5243
3/7/1989	1989	3	7	280	21	73	47	15	5258
3/8/1989	1989	3	8	281	27	76	51.5	19.5	5277.5
3/9/1989	1989	3	9	282	26	80	53	21	5298.5
3/10/1989	1989	3	10	283	30	81	55.5	23.5	5322
3/11/1989	1989	3	11	284	31	77	54	22	5344
3/12/1989	1989	3	12	285	26	78	52	20	5364
3/13/1989	1989	3	13	286	36	72	54	22	5386
3/14/1989	1989	3	14	287	41	68	54.5	22.5	5408.5
3/15/1989	1989	3	15	288	28	66	47	15	5423.5
3/16/1989	1989	3	16	289	29	70	49.5	17.5	5441
3/17/1989	1989	3	17	290	37	71	54	22	5463
3/18/1989	1989	3	18	291	34	74	54	22	5485
3/19/1989	1989	3	19	292	31	70	50.5	18.5	5503.5
3/20/1989	1989	3	20	293	33	49	41	9	5512.5
3/21/1989	1989	3	21	294	20	61	40.5	8.5	5521
3/22/1989	1989	3	22	295	21	67	44	12	5533
3/23/1989	1989	3	23	296	25	69	47	15	5548
3/24/1989	1989	3	24	297	35	74	54.5	22.5	5570.5
3/25/1989	1989	3	25	298	29	68	48.5	16.5	5587
3/26/1989	1989	3	26	299	31	54	42.5	10.5	5597.5
3/27/1989	1989	3	27	300	33	59	46	14	5611.5
3/28/1989	1989	3	28	301	25	68	46.5	14.5	5626
3/29/1989	1989	3	29	302	35	71	53	21	5647
3/30/1989	1989	3	30	303	29	68	48.5	16.5	5663.5
3/31/1989	1989	3	31	304	23	74	48.5	16.5	5680
4/1/1989	1989	4	1	305	36	69	52.5	20.5	5700.5
4/2/1989	1989	4	2	306	34	72	53	21	5721.5
4/3/1989	1989	4	3	307	44	74	59	27	5748.5
4/4/1989	1989	4	4	308	41	67	54	22	5770.5
4/5/1989	1989	4	5	309	27	71	49	17	5787.5
4/6/1989	1989	4	6	310	27	78	52.5	20.5	5808
4/7/1989	1989	4	7	311	26	84	55	23	5831
4/8/1989	1989	4	8	312	30	82	56	24	5855
4/9/1989	1989	4	9	313	38	81	59.5	27.5	5882.5
4/10/1989	1989	4	10	314	36	59	47.5	15.5	5898
4/11/1989	1989	4	11	315	34	78	56	24	5922
4/12/1989	1989	4	12	316	36	71	53.5	21.5	5943.5
4/13/1989	1989	4	13	317	33	67	50	18	5961.5
4/14/1989	1989	4	14	318	28	76	52	20	5981.5
4/15/1989	1989	4	15	319	33	79	56	24	6005.5
4/16/1989	1989	4	16	320	39	79	59	27	6032.5
4/17/1989	1989	4	17	321	44	81	62.5	30.5	6063
4/18/1989	1989	4	18	322	38	80	59	27	6090
4/19/1989	1989	4	19	323	36	84	60	28	6118
4/20/1989	1989	4	20	324	35	86	60.5	28.5	6146.5
4/21/1989	1989	4	21	325	39	85	62	30	6176.5
4/22/1989	1989	4	22	326	38	81	59.5	27.5	6204
4/23/1989	1989	4	23	327	35	79	57	25	6229
4/24/1989	1989	4	24	328	38	80	59	27	6256
4/25/1989	1989	4	25	329	35	76	55.5	23.5	6279.5
4/26/1989	1989	4	26	330	38	71	54.5	22.5	6302
4/27/1989	1989	4	27	331	33	71	52	20	6322
4/28/1989	1989	4	28	332	22	68	45	13	6335
4/29/1989	1989	4	29	333	26	70	48	16	6351
4/30/1989	1989	4	30	334	28	71	49.5	17.5	6368.5
5/1/1989	1989	5	1	335	31	76	53.5	21.5	6390
5/2/1989	1989	5	2	336	32	80	56	24	6414
5/3/1989	1989	5	3	337	28	82	55	23	6437
5/4/1989	1989	5	4	338	30	82	56	24	6461
5/5/1989	1989	5	5	339	28	81	54.5	22.5	6483.5
5/6/1989	1989	5	6	340	33	85	59	27	6510.5
5/7/1989	1989	5	7	341	34	87	60.5	28.5	6539
5/8/1989	1989	5	8	342	39	88	63.5	31.5	6570.5
5/9/1989	1989	5	9	343	42	81	61.5	29.5	6600
5/10/1989	1989	5	10	344	47	81	64	32	6632
5/11/1989	1989	5	11	345	36	78	57	25	6657
5/12/1989	1989	5	12	346	34	68	51	19	6676
5/13/1989	1989	5	13	347	34	69	51.5	19.5	6695.5
5/14/1989	1989	5	14	348	36	71	53.5	21.5	6717
5/15/1989	1989	5	15	349	37	68	52.5	20.5	6737.5
5/16/1989	1989	5	16	350	48	62	55	23	6760.5
5/17/1989	1989	5	17	351	35	68	51.5	19.5	6780
5/18/1989	1989	5	18	352	35	81	58	26	6806
5/19/1989	1989	5	19	353	42	83	62.5	30.5	6836.5
5/20/1989	1989	5	20	354	39	87	63	31	6867.5
5/21/1989	1989	5	21	355	42	89	65.5	33.5	6901
5/22/1989	1989	5	22	356	44	89	66.5	34.5	6935.5
5/23/1989	1989	5	23	357	53	90	71.5	39.5	6975
5/24/1989	1989	5	24	358	51	86	68.5	36.5	7011.5
5/25/1989	1989	5	25	359	46	82	64	32	7043.5
5/26/1989	1989	5	26	360	43	82	62.5	30.5	7074
5/27/1989	1989	5	27	361	41	89	65	33	7107
5/28/1989	1989	5	28	362	48	89	68.5	36.5	7143.5
5/29/1989	1989	5	29	363	49	87	68	36	7179.5
5/30/1989	1989	5	30	364	49	83	66	34	7213.5
5/31/1989	1989	5	31	365	39	83	61	29	7242.5
6/1/1989	1989	6	1	1	41	82	61.5	29.5	29.5

6/2/1989	1989	6	2	2	38	86	62	30	59.5
6/3/1989	1989	6	3	3	39	79	59	27	86.5
6/4/1989	1989	6	4	4	41	82	61.5	29.5	116
6/5/1989	1989	6	5	5	43	86	64.5	32.5	148.5
6/6/1989	1989	6	6	6	41	80	60.5	28.5	177
6/7/1989	1989	6	7	7	40	88	64	32	209
6/8/1989	1989	6	8	8	50	79	64.5	32.5	241.5
6/9/1989	1989	6	9	9	40	80	60	28	269.5
6/10/1989	1989	6	10	10	45	85	65	33	302.5
6/11/1989	1989	6	11	11	47	85	66	34	336.5
6/12/1989	1989	6	12	12	51	82	66.5	34.5	371
6/13/1989	1989	6	13	13	43	83	63	31	402
6/14/1989	1989	6	14	14	41	81	61	29	431
6/15/1989	1989	6	15	15	49	89	69	37	468
6/16/1989	1989	6	16	16	58	92	75	43	511
6/17/1989	1989	6	17	17	58	95	76.5	44.5	555.5
6/18/1989	1989	6	18	18	55	97	76	44	599.5
6/19/1989	1989	6	19	19	56	98	77	45	644.5
6/20/1989	1989	6	20	20	53	89	71	39	683.5
6/21/1989	1989	6	21	21	59	91	75	43	726.5
6/22/1989	1989	6	22	22	46	88	67	35	761.5
6/23/1989	1989	6	23	23	45	89	67	35	796.5
6/24/1989	1989	6	24	24	48	88	68	36	832.5
6/25/1989	1989	6	25	25	49	88	68.5	36.5	869
6/26/1989	1989	6	26	26	46	86	66	34	903
6/27/1989	1989	6	27	27	47	90	68.5	36.5	939.5
6/28/1989	1989	6	28	28	53	87	70	38	977.5
6/29/1989	1989	6	29	29	54	88	71	39	1016.5
6/30/1989	1989	6	30	30	59	88	73.5	41.5	1058
7/1/1989	1989	7	1	31	53	95	74	42	1100
7/2/1989	1989	7	2	32	54	99	76.5	44.5	1144.5
7/3/1989	1989	7	3	33	50	100	75	43	1187.5
7/4/1989	1989	7	4	34	51	101	76	44	1231.5
7/5/1989	1989	7	5	35	56	100	78	46	1277.5
7/6/1989	1989	7	6	36	60	97	78.5	46.5	1324
7/7/1989	1989	7	7	37	61	97	79	47	1371
7/8/1989	1989	7	8	38	60	94	77	45	1416
7/9/1989	1989	7	9	39	60	91	75.5	43.5	1459.5
7/10/1989	1989	7	10	40	56	87	71.5	39.5	1499
7/11/1989	1989	7	11	41	57	79	68	36	1535
7/12/1989	1989	7	12	42	54	87	70.5	38.5	1573.5
7/13/1989	1989	7	13	43	58	94	76	44	1617.5
7/14/1989	1989	7	14	44	58	93	75.5	43.5	1661
7/15/1989	1989	7	15	45	56	96	76	44	1705
7/16/1989	1989	7	16	46	57	92	74.5	42.5	1747.5
7/17/1989	1989	7	17	47	57	96	76.5	44.5	1792
7/18/1989	1989	7	18	48	50	98	74	42	1834
7/19/1989	1989	7	19	49	63	86	74.5	42.5	1876.5
7/20/1989	1989	7	20	50	56	91	73.5	41.5	1918
7/21/1989	1989	7	21	51	59	93	76	44	1962
7/22/1989	1989	7	22	52	56	86	71	39	2001
7/23/1989	1989	7	23	53	56	81	68.5	36.5	2037.5
7/24/1989	1989	7	24	54	56	84	70	38	2075.5
7/25/1989	1989	7	25	55	57	80	68.5	36.5	2112
7/26/1989	1989	7	26	56	56	75	65.5	33.5	2145.5
7/27/1989	1989	7	27	57	56	81	68.5	36.5	2182
7/28/1989	1989	7	28	58	54	80	67	35	2217
7/29/1989	1989	7	29	59	52	83	67.5	35.5	2252.5
7/30/1989	1989	7	30	60	55	87	71	39	2291.5
7/31/1989	1989	7	31	61	59	87	73	41	2332.5
8/1/1989	1989	8	1	62	60	77	68.5	36.5	2369
8/2/1989	1989	8	2	63	52	86	69	37	2406
8/3/1989	1989	8	3	64	51	85	68	36	2442
8/4/1989	1989	8	4	65	57	87	72	40	2482
8/5/1989	1989	8	5	66	50	89	69.5	37.5	2519.5
8/6/1989	1989	8	6	67	53	92	72.5	40.5	2560
8/7/1989	1989	8	7	68	56	88	72	40	2600
8/8/1989	1989	8	8	69	57	89	73	41	2641
8/9/1989	1989	8	9	70	57	86	71.5	39.5	2680.5
8/10/1989	1989	8	10	71	57	90	73.5	41.5	2722
8/11/1989	1989	8	11	72	56	91	73.5	41.5	2763.5
8/12/1989	1989	8	12	73	53	88	70.5	38.5	2802
8/13/1989	1989	8	13	74	54	87	70.5	38.5	2840.5
8/14/1989	1989	8	14	75	55	88	71.5	39.5	2880
8/15/1989	1989	8	15	76	58	88	73	41	2921
8/16/1989	1989	8	16	77	53	87	70	38	2959
8/17/1989	1989	8	17	78	55	89	72	40	2999
8/18/1989	1989	8	18	79	51	87	69	37	3036
8/19/1989	1989	8	19	80	52	88	70	38	3074
8/20/1989	1989	8	20	81	49	87	68	36	3110
8/21/1989	1989	8	21	82	50	84	67	35	3145
8/22/1989	1989	8	22	83	48	84	66	34	3179
8/23/1989	1989	8	23	84	45	87	66	34	3213
8/24/1989	1989	8	24	85	45	86	65.5	33.5	3246.5
8/25/1989	1989	8	25	86	43	87	65	33	3279.5
8/26/1989	1989	8	26	87	42	86	64	32	3311.5
8/27/1989	1989	8	27	88	44	82	63	31	3342.5
8/28/1989	1989	8	28	89	52	84	68	36	3378.5
8/29/1989	1989	8	29	90	44	89	66.5	34.5	3413
8/30/1989	1989	8	30	91	52	86	69	37	3450
8/31/1989	1989	8	31	92	56	83	69.5	37.5	3487.5
9/1/1989	1989	9	1	93	45	88	66.5	34.5	3522
9/2/1989	1989	9	2	94	46	89	67.5	35.5	3557.5

9/3/1989	1989	9	3	95	51	84	67.5	35.5	3593
9/4/1989	1989	9	4	96	54	81	67.5	35.5	3628.5
9/5/1989	1989	9	5	97	52	74	63	31	3659.5
9/6/1989	1989	9	6	98	51	82	66.5	34.5	3694
9/7/1989	1989	9	7	99	52	86	69	37	3731
9/8/1989	1989	9	8	100	52	83	67.5	35.5	3766.5
9/9/1989	1989	9	9	101	41	86	63.5	31.5	3798
9/10/1989	1989	9	10	102	41	82	61.5	29.5	3827.5
9/11/1989	1989	9	11	103	39	80	59.5	27.5	3855
9/12/1989	1989	9	12	104	42	79	60.5	28.5	3883.5
9/13/1989	1989	9	13	105	39	73	56	24	3907.5
9/14/1989	1989	9	14	106	34	76	55	23	3930.5
9/15/1989	1989	9	15	107	35	84	59.5	27.5	3958
9/16/1989	1989	9	16	108	34	83	58.5	26.5	3984.5
9/17/1989	1989	9	17	109	38	83	60.5	28.5	4013
9/18/1989	1989	9	18	110	48	86	67	35	4048
9/19/1989	1989	9	19	111	46	84	65	33	4081
9/20/1989	1989	9	20	112	49	81	65	33	4114
9/21/1989	1989	9	21	113	34	82	58	26	4140
9/22/1989	1989	9	22	114	48	71	59.5	27.5	4167.5
9/23/1989	1989	9	23	115	48	79	63.5	31.5	4199
9/24/1989	1989	9	24	116	42	83	62.5	30.5	4229.5
9/25/1989	1989	9	25	117	39	82	60.5	28.5	4258
9/26/1989	1989	9	26	118	43	83	63	31	4289
9/27/1989	1989	9	27	119	44	82	63	31	4320
9/28/1989	1989	9	28	120	39	86	62.5	30.5	4350.5
9/29/1989	1989	9	29	121	38	84	61	29	4379.5
9/30/1989	1989	9	30	122	40	87	63.5	31.5	4411
10/1/1989	1989	10	1	123	44	81	62.5	30.5	4441.5
10/2/1989	1989	10	2	124	42	80	61	29	4470.5
10/3/1989	1989	10	3	125	44	72	58	26	4496.5
10/4/1989	1989	10	4	126	47	64	55.5	23.5	4520
10/5/1989	1989	10	5	127	44	55	49.5	17.5	4537.5
10/6/1989	1989	10	6	128	34	69	51.5	19.5	4557
10/7/1989	1989	10	7	129	37	69	53	21	4578
10/8/1989	1989	10	8	130	36	71	53.5	21.5	4599.5
10/9/1989	1989	10	9	131	34	75	54.5	22.5	4622
10/10/1989	1989	10	10	132	33	81	57	25	4647
10/11/1989	1989	10	11	133	34	82	58	26	4673
10/12/1989	1989	10	12	134	33	82	57.5	25.5	4698.5
10/13/1989	1989	10	13	135	34	80	57	25	4723.5
10/14/1989	1989	10	14	136	35	79	57	25	4748.5
10/15/1989	1989	10	15	137	46	80	63	31	4779.5
10/16/1989	1989	10	16	138	36	72	54	22	4801.5
10/17/1989	1989	10	17	139	34	61	47.5	15.5	4817
10/18/1989	1989	10	18	140	33	60	46.5	14.5	4831.5
10/19/1989	1989	10	19	141	29	65	47	15	4846.5
10/20/1989	1989	10	20	142	31	59	45	13	4859.5
10/21/1989	1989	10	21	143	36	66	51	19	4878.5
10/22/1989	1989	10	22	144	38	65	51.5	19.5	4898
10/23/1989	1989	10	23	145	33	71	52	20	4918
10/24/1989	1989	10	24	146	30	70	50	18	4936
10/25/1989	1989	10	25	147	35	71	53	21	4957
10/26/1989	1989	10	26	148	34	59	46.5	14.5	4971.5
10/27/1989	1989	10	27	149	20	69	44.5	12.5	4984
10/28/1989	1989	10	28	150	22	65	43.5	11.5	4995.5
10/29/1989	1989	10	29	151	19	52	35.5	3.5	4999
10/30/1989	1989	10	30	152	19	54	36.5	4.5	5003.5
10/31/1989	1989	10	31	153	11	62	36.5	4.5	5008
11/1/1989	1989	11	1	154	19	54	36.5	4.5	5012.5
11/2/1989	1989	11	2	155	10	60	35	3	5015.5
11/3/1989	1989	11	3	156	-5	58	26.5	-5.5	5010
11/4/1989	1989	11	4	157	15	65	40	8	5018
11/5/1989	1989	11	5	158	25	68	46.5	14.5	5032.5
11/6/1989	1989	11	6	159	40	65	52.5	20.5	5053
11/7/1989	1989	11	7	160	30	64	47	15	5068
11/8/1989	1989	11	8	161	20	57	38.5	6.5	5074.5
11/9/1989	1989	11	9	162	18	60	39	7	5081.5
11/10/1989	1989	11	10	163	25	68	46.5	14.5	5096
11/11/1989	1989	11	11	164	24	71	47.5	15.5	5111.5
11/12/1989	1989	11	12	165	23	73	48	16	5127.5
11/13/1989	1989	11	13	166	24	68	46	14	5141.5
11/14/1989	1989	11	14	167	24	67	45.5	13.5	5155
11/15/1989	1989	11	15	168	20	53	36.5	4.5	5159.5
11/16/1989	1989	11	16	169	19	56	37.5	5.5	5165
11/17/1989	1989	11	17	170	16	50	33	1	5166
11/18/1989	1989	11	18	171	15	58	36.5	4.5	5170.5
11/19/1989	1989	11	19	172	18	63	40.5	8.5	5179
11/20/1989	1989	11	20	173	18	70	44	12	5191
11/21/1989	1989	11	21	174	25	65	45	13	5204
11/22/1989	1989	11	22	175	22	65	43.5	11.5	5215.5
11/23/1989	1989	11	23	176	19	64	41.5	9.5	5225
11/24/1989	1989	11	24	177	23	63	43	11	5236
11/25/1989	1989	11	25	178	39	64	51.5	19.5	5255.5
11/26/1989	1989	11	26	179	30	59	44.5	12.5	5268
11/27/1989	1989	11	27	180	21	47	34	2	5270
11/28/1989	1989	11	28	181	10	38	24	-8	5262
11/29/1989	1989	11	29	182	8	36	22	-10	5252
11/30/1989	1989	11	30	183	15	34	24.5	-7.5	5244.5
12/1/1989	1989	12	1	184	13	42	27.5	-4.5	5240
12/2/1989	1989	12	2	185	12	45	28.5	-3.5	5236.5
12/3/1989	1989	12	3	186	12	53	32.5	0.5	5237
12/4/1989	1989	12	4	187	14	55	34.5	2.5	5239.5

12/5/1989	1989	12	5	188	18	62	40	8	5247.5
12/6/1989	1989	12	6	189	22	53	37.5	5.5	5253
12/7/1989	1989	12	7	190	20	45	32.5	0.5	5253.5
12/8/1989	1989	12	8	191	10	54	32	0	5253.5
12/9/1989	1989	12	9	192	12	62	37	5	5258.5
12/10/1989	1989	12	10	193	12	54	33	1	5259.5
12/11/1989	1989	12	11	194	-5	32	13.5	-18.5	5241
12/12/1989	1989	12	12	195	0	41	20.5	-11.5	5229.5
12/13/1989	1989	12	13	196	4	45	24.5	-7.5	5222
12/14/1989	1989	12	14	197	11	53	32	0	5222
12/15/1989	1989	12	15	198	16	58	37	5	5227
12/16/1989	1989	12	16	199	20	49	34.5	2.5	5229.5
12/17/1989	1989	12	17	200	9	49	29	-3	5226.5
12/18/1989	1989	12	18	201	20	50	35	3	5229.5
12/19/1989	1989	12	19	202	15	50	32.5	0.5	5230
12/20/1989	1989	12	20	203	10	51	30.5	-1.5	5228.5
12/21/1989	1989	12	21	204	9	47	28	-4	5224.5
12/22/1989	1989	12	22	205	9	45	27	-5	5219.5
12/23/1989	1989	12	23	206	10	52	31	-1	5218.5
12/24/1989	1989	12	24	207	12	52	32	0	5218.5
12/25/1989	1989	12	25	208	10	53	31.5	-0.5	5218
12/26/1989	1989	12	26	209	9	55	32	0	5218
12/27/1989	1989	12	27	210	8	51	29.5	-2.5	5215.5
12/28/1989	1989	12	28	211	14	51	32.5	0.5	5216
12/29/1989	1989	12	29	212	16	44	30	-2	5214
12/30/1989	1989	12	30	213	17	42	29.5	-2.5	5211.5
12/31/1989	1989	12	31	214	8	43	25.5	-6.5	5205
1/1/1990	1990	1	1	215	4	49	26.5	-5.5	5199.5
1/2/1990	1990	1	2	216	9	39	24	-8	5191.5
1/3/1990	1990	1	3	217	18	39	28.5	-3.5	5188
1/4/1990	1990	1	4	218	-3	34	15.5	-16.5	5171.5
1/5/1990	1990	1	5	219	-1	32	15.5	-16.5	5155
1/6/1990	1990	1	6	220	-1	42	20.5	-11.5	5143.5
1/7/1990	1990	1	7	221	2	52	27	-5	5138.5
1/8/1990	1990	1	8	222	5	55	30	-2	5136.5
1/9/1990	1990	1	9	223	11	61	36	4	5140.5
1/10/1990	1990	1	10	224	10	62	36	4	5144.5
1/11/1990	1990	1	11	225	9	66	37.5	5.5	5150
1/12/1990	1990	1	12	226	11	47	29	-3	5147
1/13/1990	1990	1	13	227	20	59	39.5	7.5	5154.5
1/14/1990	1990	1	14	228	15	59	37	5	5159.5
1/15/1990	1990	1	15	229	14	50	32	0	5159.5
1/16/1990	1990	1	16	230	11	46	28.5	-3.5	5156
1/17/1990	1990	1	17	231	4	43	23.5	-8.5	5147.5
1/18/1990	1990	1	18	232	6	37	21.5	-10.5	5137
1/19/1990	1990	1	19	233	10	38	24	-8	5129
1/20/1990	1990	1	20	234	15	47	31	-1	5128
1/21/1990	1990	1	21	235	8	38	23	-9	5119
1/22/1990	1990	1	22	236	-1	35	17	-15	5104
1/23/1990	1990	1	23	237	11	49	30	-2	5102
1/24/1990	1990	1	24	238	9	36	22.5	-9.5	5092.5
1/25/1990	1990	1	25	239	-1	47	23	-9	5083.5
1/26/1990	1990	1	26	240	5	59	32	0	5083.5
1/27/1990	1990	1	27	241	10	42	26	-6	5077.5
1/28/1990	1990	1	28	242	4	40	22	-10	5067.5
1/29/1990	1990	1	29	243	-3	49	23	-9	5058.5
1/30/1990	1990	1	30	244	5	48	26.5	-5.5	5053
1/31/1990	1990	1	31	245	15	43	29	-3	5050
2/1/1990	1990	2	1	246	20	42	31	-1	5049
2/2/1990	1990	2	2	247	21	35	28	-4	5045
2/3/1990	1990	2	3	248	9	42	25.5	-6.5	5038.5
2/4/1990	1990	2	4	249	8	42	25	-7	5031.5
2/5/1990	1990	2	5	250	14	41	27.5	-4.5	5027
2/6/1990	1990	2	6	251	10	50	30	-2	5025
2/7/1990	1990	2	7	252	10	55	32.5	0.5	5025.5
2/8/1990	1990	2	8	253	23	50	36.5	4.5	5030
2/9/1990	1990	2	9	254	20	47	33.5	1.5	5031.5
2/10/1990	1990	2	10	255	18	53	35.5	3.5	5035
2/11/1990	1990	2	11	256	20	63	41.5	9.5	5044.5
2/12/1990	1990	2	12	257	20	64	42	10	5054.5
2/13/1990	1990	2	13	258	36	59	47.5	15.5	5070
2/14/1990	1990	2	14	259	33	51	42	10	5080
2/15/1990	1990	2	15	260	13	33	23	-9	5071
2/16/1990	1990	2	16	261	3	42	22.5	-9.5	5061.5
2/17/1990	1990	2	17	262	12	52	32	0	5061.5
2/18/1990	1990	2	18	263	15	54	34.5	2.5	5064
2/19/1990	1990	2	19	264	26	41	33.5	1.5	5065.5
2/20/1990	1990	2	20	265	6	41	23.5	-8.5	5057
2/21/1990	1990	2	21	266	15	47	31	-1	5056
2/22/1990	1990	2	22	267	18	52	35	3	5059
2/23/1990	1990	2	23	268	16	59	37.5	5.5	5064.5
2/24/1990	1990	2	24	269	15	66	40.5	8.5	5073
2/25/1990	1990	2	25	270	18	67	42.5	10.5	5083.5
2/26/1990	1990	2	26	271	26	64	45	13	5096.5
2/27/1990	1990	2	27	272	33	47	40	8	5104.5
2/28/1990	1990	2	28	273	30	46	38	6	5110.5
3/1/1990	1990	3	1	274	30	55	42.5	10.5	5121
3/2/1990	1990	3	2	275	22	59	40.5	8.5	5129.5
3/3/1990	1990	3	3	276	23	49	36	4	5133.5
3/4/1990	1990	3	4	277	22	62	42	10	5143.5
3/5/1990	1990	3	5	278	28	64	46	14	5157.5
3/6/1990	1990	3	6	279	20	56	38	6	5163.5
3/7/1990	1990	3	7	280	22	58	40	8	5171.5

3/8/1990	1990	3	8	281	17	65	41	9	5180.5
3/9/1990	1990	3	9	282	31	64	47.5	15.5	5196
3/10/1990	1990	3	10	283	33	52	42.5	10.5	5206.5
3/11/1990	1990	3	11	284	34	48	41	9	5215.5
3/12/1990	1990	3	12	285	28	57	42.5	10.5	5226
3/13/1990	1990	3	13	286	27	38	32.5	0.5	5226.5
3/14/1990	1990	3	14	287	20	42	31	-1	5225.5
3/15/1990	1990	3	15	288	18	45	31.5	-0.5	5225
3/16/1990	1990	3	16	289	14	52	33	1	5226
3/17/1990	1990	3	17	290	18	63	40.5	8.5	5234.5
3/18/1990	1990	3	18	291	25	64	44.5	12.5	5247
3/19/1990	1990	3	19	292	31	64	47.5	15.5	5262.5
3/20/1990	1990	3	20	293	29	72	50.5	18.5	5281
3/21/1990	1990	3	21	294	35	71	53	21	5302
3/22/1990	1990	3	22	295	26	75	50.5	18.5	5320.5
3/23/1990	1990	3	23	296	34	75	54.5	22.5	5343
3/24/1990	1990	3	24	297	28	75	51.5	19.5	5362.5
3/25/1990	1990	3	25	298	39	72	55.5	23.5	5386
3/26/1990	1990	3	26	299	33	70	51.5	19.5	5405.5
3/27/1990	1990	3	27	300	42	68	55	23	5428.5
3/28/1990	1990	3	28	301	30	62	46	14	5442.5
3/29/1990	1990	3	29	302	28	49	38.5	6.5	5449
3/30/1990	1990	3	30	303	29	52	40.5	8.5	5457.5
3/31/1990	1990	3	31	304	33	53	43	11	5468.5
4/1/1990	1990	4	1	305	28	54	41	9	5477.5
4/2/1990	1990	4	2	306	27	46	36.5	4.5	5482
4/3/1990	1990	4	3	307	29	62	45.5	13.5	5495.5
4/4/1990	1990	4	4	308	28	69	48.5	16.5	5512
4/5/1990	1990	4	5	309	41	63	52	20	5532
4/6/1990	1990	4	6	310	29	62	45.5	13.5	5545.5
4/7/1990	1990	4	7	311	35	64	49.5	17.5	5563
4/8/1990	1990	4	8	312	38	65	51.5	19.5	5582.5
4/9/1990	1990	4	9	313	35	64	49.5	17.5	5600
4/10/1990	1990	4	10	314	31	70	50.5	18.5	5618.5
4/11/1990	1990	4	11	315	33	74	53.5	21.5	5640
4/12/1990	1990	4	12	316	34	75	54.5	22.5	5662.5
4/13/1990	1990	4	13	317	33	79	56	24	5686.5
4/14/1990	1990	4	14	318	32	82	57	25	5711.5
4/15/1990	1990	4	15	319	39	81	60	28	5739.5
4/16/1990	1990	4	16	320	36	78	57	25	5764.5
4/17/1990	1990	4	17	321	35	55	45	13	5777.5
4/18/1990	1990	4	18	322	38	54	46	14	5791.5
4/19/1990	1990	4	19	323	30	62	46	14	5805.5
4/20/1990	1990	4	20	324	32	73	52.5	20.5	5826
4/21/1990	1990	4	21	325	39	76	57.5	25.5	5851.5
4/22/1990	1990	4	22	326	40	77	58.5	26.5	5878
4/23/1990	1990	4	23	327	42	69	55.5	23.5	5901.5
4/24/1990	1990	4	24	328	36	64	50	18	5919.5
4/25/1990	1990	4	25	329	32	64	48	16	5935.5
4/26/1990	1990	4	26	330	34	69	51.5	19.5	5955
4/27/1990	1990	4	27	331	34	73	53.5	21.5	5976.5
4/28/1990	1990	4	28	332	38	78	58	26	6002.5
4/29/1990	1990	4	29	333	43	76	59.5	27.5	6030
4/30/1990	1990	4	30	334	36	62	49	17	6047
5/1/1990	1990	5	1	335	36	55	45.5	13.5	6060.5
5/2/1990	1990	5	2	336	33	45	39	7	6067.5
5/3/1990	1990	5	3	337	31	59	45	13	6080.5
5/4/1990	1990	5	4	338	35	66	50.5	18.5	6099
5/5/1990	1990	5	5	339	36	66	51	19	6118
5/6/1990	1990	5	6	340	36	75	55.5	23.5	6141.5
5/7/1990	1990	5	7	341	42	77	59.5	27.5	6169
5/8/1990	1990	5	8	342	49	78	63.5	31.5	6200.5
5/9/1990	1990	5	9	343	38	76	57	25	6225.5
5/10/1990	1990	5	10	344	34	78	56	24	6249.5
5/11/1990	1990	5	11	345	39	70	54.5	22.5	6272
5/12/1990	1990	5	12	346	44	76	60	28	6300
5/13/1990	1990	5	13	347	40	81	60.5	28.5	6328.5
5/14/1990	1990	5	14	348	39	80	59.5	27.5	6356
5/15/1990	1990	5	15	349	40	76	58	26	6382
5/16/1990	1990	5	16	350	39	75	57	25	6407
5/17/1990	1990	5	17	351	43	79	61	29	6436
5/18/1990	1990	5	18	352	42	79	60.5	28.5	6464.5
5/19/1990	1990	5	19	353	42	75	58.5	26.5	6491
5/20/1990	1990	5	20	354	41	73	57	25	6516
5/21/1990	1990	5	21	355	39	82	60.5	28.5	6544.5
5/22/1990	1990	5	22	356	44	87	65.5	33.5	6578
5/23/1990	1990	5	23	357	44	86	65	33	6611
5/24/1990	1990	5	24	358	49	85	67	35	6646
5/25/1990	1990	5	25	359	40	84	62	30	6676
5/26/1990	1990	5	26	360	39	82	60.5	28.5	6704.5
5/27/1990	1990	5	27	361	42	85	63.5	31.5	6736
5/28/1990	1990	5	28	362	45	85	65	33	6769
5/29/1990	1990	5	29	363	38	76	57	25	6794
5/30/1990	1990	5	30	364	38	78	58	26	6820
5/31/1990	1990	5	31	365	42	83	62.5	30.5	6850.5
6/1/1990	1990	6	1	1	40	82	61	29	29
6/2/1990	1990	6	2	2	42	85	63.5	31.5	60.5
6/3/1990	1990	6	3	3	45	89	67	35	95.5
6/4/1990	1990	6	4	4	48	96	72	40	135.5
6/5/1990	1990	6	5	5	52	92	72	40	175.5
6/6/1990	1990	6	6	6	52	92	72	40	215.5
6/7/1990	1990	6	7	7	49	91	70	38	253.5
6/8/1990	1990	6	8	8	50	92	71	39	292.5

6/9/1990	1990	6	9	9	50	87	68.5	36.5	329
6/10/1990	1990	6	10	10	42	74	58	26	355
6/11/1990	1990	6	11	11	50	87	68.5	36.5	391.5
6/12/1990	1990	6	12	12	49	91	70	38	429.5
6/13/1990	1990	6	13	13	52	91	71.5	39.5	469
6/14/1990	1990	6	14	14	48	92	70	38	507
6/15/1990	1990	6	15	15	50	89	69.5	37.5	544.5
6/16/1990	1990	6	16	16	46	86	66	34	578.5
6/17/1990	1990	6	17	17	40	95	67.5	35.5	614
6/18/1990	1990	6	18	18	46	97	71.5	39.5	653.5
6/19/1990	1990	6	19	19	58	96	77	45	698.5
6/20/1990	1990	6	20	20	50	92	71	39	737.5
6/21/1990	1990	6	21	21	48	97	72.5	40.5	778
6/22/1990	1990	6	22	22	50	95	72.5	40.5	818.5
6/23/1990	1990	6	23	23	52	97	74.5	42.5	861
6/24/1990	1990	6	24	24	54	99	76.5	44.5	905.5
6/25/1990	1990	6	25	25	62	98	80	48	953.5
6/26/1990	1990	6	26	26	58	98	78	46	999.5
6/27/1990	1990	6	27	27	60	94	77	45	1044.5
6/28/1990	1990	6	28	28	48	97	72.5	40.5	1085
6/29/1990	1990	6	29	29	61	98	79.5	47.5	1132.5
6/30/1990	1990	6	30	30	60	98	79	47	1179.5
7/1/1990	1990	7	1	31	58	96	77	45	1224.5
7/2/1990	1990	7	2	32	55	95	75	43	1267.5
7/3/1990	1990	7	3	33	57	87	72	40	1307.5
7/4/1990	1990	7	4	34	54	87	70.5	38.5	1346
7/5/1990	1990	7	5	35	54	79	66.5	34.5	1380.5
7/6/1990	1990	7	6	36	55	77	66	34	1414.5
7/7/1990	1990	7	7	37	55	83	69	37	1451.5
7/8/1990	1990	7	8	38	54	82	68	36	1487.5
7/9/1990	1990	7	9	39	59	80	69.5	37.5	1525
7/10/1990	1990	7	10	40	60	85	72.5	40.5	1565.5
7/11/1990	1990	7	11	41	60	85	72.5	40.5	1606
7/12/1990	1990	7	12	42	55	85	70	38	1644
7/13/1990	1990	7	13	43	55	86	70.5	38.5	1682.5
7/14/1990	1990	7	14	44	55	77	66	34	1716.5
7/15/1990	1990	7	15	45	49	84	66.5	34.5	1751
7/16/1990	1990	7	16	46	61	84	72.5	40.5	1791.5
7/17/1990	1990	7	17	47	56	86	71	39	1830.5
7/18/1990	1990	7	18	48	55	90	72.5	40.5	1871
7/19/1990	1990	7	19	49	61	91	76	44	1915
7/20/1990	1990	7	20	50	58	86	72	40	1955
7/21/1990	1990	7	21	51	55	89	72	40	1995
7/22/1990	1990	7	22	52	57	89	73	41	2036
7/23/1990	1990	7	23	53	58	87	72.5	40.5	2076.5
7/24/1990	1990	7	24	54	58	85	71.5	39.5	2116
7/25/1990	1990	7	25	55	55	89	72	40	2156
7/26/1990	1990	7	26	56	57	91	74	42	2198
7/27/1990	1990	7	27	57	53	89	71	39	2237
7/28/1990	1990	7	28	58	53	89	71	39	2276
7/29/1990	1990	7	29	59	57	84	70.5	38.5	2314.5
7/30/1990	1990	7	30	60	59	86	72.5	40.5	2355
7/31/1990	1990	7	31	61	57	89	73	41	2396
8/1/1990	1990	8	1	62	52	80	66	34	2430
8/2/1990	1990	8	2	63	54	83	68.5	36.5	2466.5
8/3/1990	1990	8	3	64	50	89	69.5	37.5	2504
8/4/1990	1990	8	4	65	52	87	69.5	37.5	2541.5
8/5/1990	1990	8	5	66	55	84	69.5	37.5	2579
8/6/1990	1990	8	6	67	53	80	66.5	34.5	2613.5
8/7/1990	1990	8	7	68	54	86	70	38	2651.5
8/8/1990	1990	8	8	69	50	92	71	39	2690.5
8/9/1990	1990	8	9	70	55	93	74	42	2732.5
8/10/1990	1990	8	10	71	50	93	71.5	39.5	2772
8/11/1990	1990	8	11	72	52	89	70.5	38.5	2810.5
8/12/1990	1990	8	12	73	55	89	72	40	2850.5
8/13/1990	1990	8	13	74	52	72	62	30	2880.5
8/14/1990	1990	8	14	75	50	74	62	30	2910.5
8/15/1990	1990	8	15	76	52	72	62	30	2940.5
8/16/1990	1990	8	16	77	51	74	62.5	30.5	2971
8/17/1990	1990	8	17	78	49	75	62	30	3001
8/18/1990	1990	8	18	79	48	82	65	33	3034
8/19/1990	1990	8	19	80	49	86	67.5	35.5	3069.5
8/20/1990	1990	8	20	81	52	79	65.5	33.5	3103
8/21/1990	1990	8	21	82	51	81	66	34	3137
8/22/1990	1990	8	22	83	46	78	62	30	3167
8/23/1990	1990	8	23	84	48	85	66.5	34.5	3201.5
8/24/1990	1990	8	24	85	50	85	67.5	35.5	3237
8/25/1990	1990	8	25	86	41	83	62	30	3267
8/26/1990	1990	8	26	87	48	84	66	34	3301
8/27/1990	1990	8	27	88	48	89	68.5	36.5	3337.5
8/28/1990	1990	8	28	89	53	95	74	42	3379.5
8/29/1990	1990	8	29	90	54	92	73	41	3420.5
8/30/1990	1990	8	30	91	54	92	73	41	3461.5
8/31/1990	1990	8	31	92	53	92	72.5	40.5	3502
9/1/1990	1990	9	1	93	51	91	71	39	3541
9/2/1990	1990	9	2	94	52	89	70.5	38.5	3579.5
9/3/1990	1990	9	3	95	52	85	68.5	36.5	3616
9/4/1990	1990	9	4	96	54	78	66	34	3650
9/5/1990	1990	9	5	97	55	82	68.5	36.5	3686.5
9/6/1990	1990	9	6	98	55	84	69.5	37.5	3724
9/7/1990	1990	9	7	99	52	84	68	36	3760
9/8/1990	1990	9	8	100	52	85	68.5	36.5	3796.5
9/9/1990	1990	9	9	101	49	90	69.5	37.5	3834

9/10/1990	1990	9	10	102	49	89	69	37	3871
9/11/1990	1990	9	11	103	48	91	69.5	37.5	3908.5
9/12/1990	1990	9	12	104	48	90	69	37	3945.5
9/13/1990	1990	9	13	105	48	92	70	38	3983.5
9/14/1990	1990	9	14	106	48	85	66.5	34.5	4018
9/15/1990	1990	9	15	107	47	82	64.5	32.5	4050.5
9/16/1990	1990	9	16	108	56	72	64	32	4082.5
9/17/1990	1990	9	17	109	47	82	64.5	32.5	4115
9/18/1990	1990	9	18	110	48	74	61	29	4144
9/19/1990	1990	9	19	111	46	78	62	30	4174
9/20/1990	1990	9	20	112	47	69	58	26	4200
9/21/1990	1990	9	21	113	48	80	64	32	4232
9/22/1990	1990	9	22	114	52	69	60.5	28.5	4260.5
9/23/1990	1990	9	23	115	51	60	55.5	23.5	4284
9/24/1990	1990	9	24	116	50	75	62.5	30.5	4314.5
9/25/1990	1990	9	25	117	45	80	62.5	30.5	4345
9/26/1990	1990	9	26	118	45	85	65	33	4378
9/27/1990	1990	9	27	119	44	82	63	31	4409
9/28/1990	1990	9	28	120	49	70	59.5	27.5	4436.5
9/29/1990	1990	9	29	121	49	73	61	29	4465.5
9/30/1990	1990	9	30	122	48	68	58	26	4491.5
10/1/1990	1990	10	1	123	47	66	56.5	24.5	4516
10/2/1990	1990	10	2	124	44	68	56	24	4540
10/3/1990	1990	10	3	125	39	75	57	25	4565
10/4/1990	1990	10	4	126	40	79	59.5	27.5	4592.5
10/5/1990	1990	10	5	127	37	80	58.5	26.5	4619
10/6/1990	1990	10	6	128	41	78	59.5	27.5	4646.5
10/7/1990	1990	10	7	129	41	78	59.5	27.5	4674
10/8/1990	1990	10	8	130	45	72	58.5	26.5	4700.5
10/9/1990	1990	10	9	131	29	60	44.5	12.5	4713
10/10/1990	1990	10	10	132	29	72	50.5	18.5	4731.5
10/11/1990	1990	10	11	133	27	76	51.5	19.5	4751
10/12/1990	1990	10	12	134	27	72	49.5	17.5	4768.5
10/13/1990	1990	10	13	135	27	78	52.5	20.5	4789
10/14/1990	1990	10	14	136	35	79	57	25	4814
10/15/1990	1990	10	15	137	33	79	56	24	4838
10/16/1990	1990	10	16	138	31	76	53.5	21.5	4859.5
10/17/1990	1990	10	17	139	42	69	55.5	23.5	4883
10/18/1990	1990	10	18	140	28	73	50.5	18.5	4901.5
10/19/1990	1990	10	19	141	38	75	56.5	24.5	4926
10/20/1990	1990	10	20	142	35	58	46.5	14.5	4940.5
10/21/1990	1990	10	21	143	26	53	39.5	7.5	4948
10/22/1990	1990	10	22	144	25	68	46.5	14.5	4962.5
10/23/1990	1990	10	23	145	18	67	42.5	10.5	4973
10/24/1990	1990	10	24	146	28	73	50.5	18.5	4991.5
10/25/1990	1990	10	25	147	28	75	51.5	19.5	5011
10/26/1990	1990	10	26	148	30	73	51.5	19.5	5030.5
10/27/1990	1990	10	27	149	30	74	52	20	5050.5
10/28/1990	1990	10	28	150	37	74	55.5	23.5	5074
10/29/1990	1990	10	29	151	31	75	53	21	5095
10/30/1990	1990	10	30	152	33	75	54	22	5117
10/31/1990	1990	10	31	153	30	73	51.5	19.5	5136.5
11/1/1990	1990	11	1	154	33	68	50.5	18.5	5155
11/2/1990	1990	11	2	155	33	50	41.5	9.5	5164.5
11/3/1990	1990	11	3	156	28	48	38	6	5170.5
11/4/1990	1990	11	4	157	27	50	38.5	6.5	5177
11/5/1990	1990	11	5	158	24	64	44	12	5189
11/6/1990	1990	11	6	159	26	61	43.5	11.5	5200.5
11/7/1990	1990	11	7	160	25	46	35.5	3.5	5204
11/8/1990	1990	11	8	161	22	46	34	2	5206
11/9/1990	1990	11	9	162	24	55	39.5	7.5	5213.5
11/10/1990	1990	11	10	163	24	56	40	8	5221.5
11/11/1990	1990	11	11	164	26	60	43	11	5232.5
11/12/1990	1990	11	12	165	22	68	45	13	5245.5
11/13/1990	1990	11	13	166	22	68	45	13	5258.5
11/14/1990	1990	11	14	167	23	71	47	15	5273.5
11/15/1990	1990	11	15	168	25	72	48.5	16.5	5290
11/16/1990	1990	11	16	169	25	61	43	11	5301
11/17/1990	1990	11	17	170	26	66	46	14	5315
11/18/1990	1990	11	18	171	26	68	47	15	5330
11/19/1990	1990	11	19	172	27	65	46	14	5344
11/20/1990	1990	11	20	173	36	61	48.5	16.5	5360.5
11/21/1990	1990	11	21	174	31	52	41.5	9.5	5370
11/22/1990	1990	11	22	175	18	52	35	3	5373
11/23/1990	1990	11	23	176	18	58	38	6	5379
11/24/1990	1990	11	24	177	18	65	41.5	9.5	5388.5
11/25/1990	1990	11	25	178	18	68	43	11	5399.5
11/26/1990	1990	11	26	179	27	55	41	9	5408.5
11/27/1990	1990	11	27	180	22	43	32.5	0.5	5409
11/28/1990	1990	11	28	181	10	38	24	-8	5401
11/29/1990	1990	11	29	182	8	48	28	-4	5397
11/30/1990	1990	11	30	183	9	57	33	1	5398
12/1/1990	1990	12	1	184	12	58	35	3	5401
12/2/1990	1990	12	2	185	15	42	28.5	-3.5	5397.5
12/3/1990	1990	12	3	186	12	41	26.5	-5.5	5392
12/4/1990	1990	12	4	187	7	53	30	-2	5390
12/5/1990	1990	12	5	188	5	56	30.5	-1.5	5388.5
12/6/1990	1990	12	6	189	10	42	26	-6	5382.5
12/7/1990	1990	12	7	190	8	53	30.5	-1.5	5381
12/8/1990	1990	12	8	191	8	58	33	1	5382
12/9/1990	1990	12	9	192	9	58	33.5	1.5	5383.5
12/10/1990	1990	12	10	193	11	60	35.5	3.5	5387
12/11/1990	1990	12	11	194	13	63	38	6	5393

12/12/1990	1990	12	12	195	22	55	38.5	6.5	5399.5
12/13/1990	1990	12	13	196	33	47	40	8	5407.5
12/14/1990	1990	12	14	197	35	50	42.5	10.5	5418
12/15/1990	1990	12	15	198	20	47	33.5	1.5	5419.5
12/16/1990	1990	12	16	199	28	38	33	1	5420.5
12/17/1990	1990	12	17	200	19	37	28	-4	5416.5
12/18/1990	1990	12	18	201	11	41	26	-6	5410.5
12/19/1990	1990	12	19	202	9	49	29	-3	5407.5
12/20/1990	1990	12	20	203	26	40	33	1	5408.5
12/21/1990	1990	12	21	204	15	26	20.5	-11.5	5397
12/22/1990	1990	12	22	205	-2	25	11.5	-20.5	5376.5
12/23/1990	1990	12	23	206	-7	24	8.5	-23.5	5353
12/24/1990	1990	12	24	207	-21	21	0	-32	5321
12/25/1990	1990	12	25	208	-33	21	-6	-38	5283
12/26/1990	1990	12	26	209	-28	28	0	-32	5251
12/27/1990	1990	12	27	210	-19	33	7	-25	5226
12/28/1990	1990	12	28	211	-10	47	18.5	-13.5	5212.5
12/29/1990	1990	12	29	212	5	48	26.5	-5.5	5207
12/30/1990	1990	12	30	213	-9	34	12.5	-19.5	5187.5
12/31/1990	1990	12	31	214	-12	37	12.5	-19.5	5168
1/1/1991	1991	1	1	215	-6	41	17.5	-14.5	5153.5
1/2/1991	1991	1	2	216	-7	45	19	-13	5140.5
1/3/1991	1991	1	3	217	-3	39	18	-14	5126.5
1/4/1991	1991	1	4	218	15	46	30.5	-1.5	5125
1/5/1991	1991	1	5	219	17	47	32	0	5125
1/6/1991	1991	1	6	220	15	39	27	-5	5120
1/7/1991	1991	1	7	221	15	39	27	-5	5115
1/8/1991	1991	1	8	222	5	44	24.5	-7.5	5107.5
1/9/1991	1991	1	9	223	8	44	26	-6	5101.5
1/10/1991	1991	1	10	224	10	40	25	-7	5094.5
1/11/1991	1991	1	11	225	18	47	32.5	0.5	5095
1/12/1991	1991	1	12	226	16	45	30.5	-1.5	5093.5
1/13/1991	1991	1	13	227	21	49	35	3	5096.5
1/14/1991	1991	1	14	228	23	41	32	0	5096.5
1/15/1991	1991	1	15	229	19	50	34.5	2.5	5099
1/16/1991	1991	1	16	230	24	39	31.5	-0.5	5098.5
1/17/1991	1991	1	17	231	16	39	27.5	-4.5	5094
1/18/1991	1991	1	18	232	15	49	32	0	5094
1/19/1991	1991	1	19	233	15	51	33	1	5095
1/20/1991	1991	1	20	234	20	40	30	-2	5093
1/21/1991	1991	1	21	235	-2	34	16	-16	5077
1/22/1991	1991	1	22	236	16	35	25.5	-6.5	5070.5
1/23/1991	1991	1	23	237	11	39	25	-7	5063.5
1/24/1991	1991	1	24	238	11	48	29.5	-2.5	5061
1/25/1991	1991	1	25	239	15	48	31.5	-0.5	5060.5
1/26/1991	1991	1	26	240	-5	52	23.5	-8.5	5052
1/27/1991	1991	1	27	241	2	46	24	-8	5044
1/28/1991	1991	1	28	242	10	46	28	-4	5040
1/29/1991	1991	1	29	243	25	37	31	-1	5039
1/30/1991	1991	1	30	244	1	40	20.5	-11.5	5027.5
1/31/1991	1991	1	31	245	8	54	31	-1	5026.5
2/1/1991	1991	2	1	246	6	54	30	-2	5024.5
2/2/1991	1991	2	2	247	3	58	30.5	-1.5	5023
2/3/1991	1991	2	3	248	12	53	32.5	0.5	5023.5
2/4/1991	1991	2	4	249	2	55	28.5	-3.5	5020
2/5/1991	1991	2	5	250	12	57	34.5	2.5	5022.5
2/6/1991	1991	2	6	251	16	57	36.5	4.5	5027
2/7/1991	1991	2	7	252	20	59	39.5	7.5	5034.5
2/8/1991	1991	2	8	253	24	56	40	8	5042.5
2/9/1991	1991	2	9	254	10	56	33	1	5043.5
2/10/1991	1991	2	10	255	15	59	37	5	5048.5
2/11/1991	1991	2	11	256	19	59	39	7	5055.5
2/12/1991	1991	2	12	257	24	55	39.5	7.5	5063
2/13/1991	1991	2	13	258	25	61	43	11	5074
2/14/1991	1991	2	14	259	26	56	41	9	5083
2/15/1991	1991	2	15	260	24	65	44.5	12.5	5095.5
2/16/1991	1991	2	16	261	15	58	36.5	4.5	5100
2/17/1991	1991	2	17	262	30	56	43	11	5111
2/18/1991	1991	2	18	263	8	42	25	-7	5104
2/19/1991	1991	2	19	264	2	45	23.5	-8.5	5095.5
2/20/1991	1991	2	20	265	8	55	31.5	-0.5	5095
2/21/1991	1991	2	21	266	8	59	33.5	1.5	5096.5
2/22/1991	1991	2	22	267	6	64	35	3	5099.5
2/23/1991	1991	2	23	268	18	63	40.5	8.5	5108
2/24/1991	1991	2	24	269	20	60	40	8	5116
2/25/1991	1991	2	25	270	15	55	35	3	5119
2/26/1991	1991	2	26	271	17	55	36	4	5123
2/27/1991	1991	2	27	272	17	61	39	7	5130
2/28/1991	1991	2	28	273	28	54	41	9	5139
3/1/1991	1991	3	1	274	23	49	36	4	5143
3/2/1991	1991	3	2	275	23	51	37	5	5148
3/3/1991	1991	3	3	276	23	59	41	9	5157
3/4/1991	1991	3	4	277	23	67	45	13	5170
3/5/1991	1991	3	5	278	30	52	41	9	5179
3/6/1991	1991	3	6	279	29	50	39.5	7.5	5186.5
3/7/1991	1991	3	7	280	25	46	35.5	3.5	5190
3/8/1991	1991	3	8	281	14	53	33.5	1.5	5191.5
3/9/1991	1991	3	9	282	16	54	35	3	5194.5
3/10/1991	1991	3	10	283	26	68	47	15	5209.5
3/11/1991	1991	3	11	284	32	61	46.5	14.5	5224
3/12/1991	1991	3	12	285	20	56	38	6	5230
3/13/1991	1991	3	13	286	20	58	39	7	5237
3/14/1991	1991	3	14	287	22	58	40	8	5245

3/15/1991	1991	3	15	288	23	50	36.5	4.5	5249.5
3/16/1991	1991	3	16	289	20	43	31.5	-0.5	5249
3/17/1991	1991	3	17	290	19	61	40	8	5257
3/18/1991	1991	3	18	291	22	68	45	13	5270
3/19/1991	1991	3	19	292	31	64	47.5	15.5	5285.5
3/20/1991	1991	3	20	293	28	54	41	9	5294.5
3/21/1991	1991	3	21	294	25	40	32.5	0.5	5295
3/22/1991	1991	3	22	295	23	46	34.5	2.5	5297.5
3/23/1991	1991	3	23	296	17	58	37.5	5.5	5303
3/24/1991	1991	3	24	297	28	66	47	15	5318
3/25/1991	1991	3	25	298	28	64	46	14	5332
3/26/1991	1991	3	26	299	30	54	42	10	5342
3/27/1991	1991	3	27	300	29	54	41.5	9.5	5351.5
3/28/1991	1991	3	28	301	24	49	36.5	4.5	5356
3/29/1991	1991	3	29	302	29	52	40.5	8.5	5364.5
3/30/1991	1991	3	30	303	24	55	39.5	7.5	5372
3/31/1991	1991	3	31	304	25	63	44	12	5384
4/1/1991	1991	4	1	305	33	73	53	21	5405
4/2/1991	1991	4	2	306	33	67	50	18	5423
4/3/1991	1991	4	3	307	32	69	50.5	18.5	5441.5
4/4/1991	1991	4	4	308	29	73	51	19	5460.5
4/5/1991	1991	4	5	309	27	79	53	21	5481.5
4/6/1991	1991	4	6	310	31	82	56.5	24.5	5506
4/7/1991	1991	4	7	311	37	74	55.5	23.5	5529.5
4/8/1991	1991	4	8	312	35	68	51.5	19.5	5549
4/9/1991	1991	4	9	313	27	70	48.5	16.5	5565.5
4/10/1991	1991	4	10	314	30	71	50.5	18.5	5584
4/11/1991	1991	4	11	315	28	67	47.5	15.5	5599.5
4/12/1991	1991	4	12	316	30	57	43.5	11.5	5611
4/13/1991	1991	4	13	317	20	52	36	4	5615
4/14/1991	1991	4	14	318	13	65	39	7	5622
4/15/1991	1991	4	15	319	18	75	46.5	14.5	5636.5
4/16/1991	1991	4	16	320	37	74	55.5	23.5	5660
4/17/1991	1991	4	17	321	39	72	55.5	23.5	5683.5
4/18/1991	1991	4	18	322	34	74	54	22	5705.5
4/19/1991	1991	4	19	323	27	74	50.5	18.5	5724
4/20/1991	1991	4	20	324	33	80	56.5	24.5	5748.5
4/21/1991	1991	4	21	325	32	70	51	19	5767.5
4/22/1991	1991	4	22	326	37	72	54.5	22.5	5790
4/23/1991	1991	4	23	327	35	70	52.5	20.5	5810.5
4/24/1991	1991	4	24	328	35	72	53.5	21.5	5832
4/25/1991	1991	4	25	329	37	73	55	23	5855
4/26/1991	1991	4	26	330	30	57	43.5	11.5	5866.5
4/27/1991	1991	4	27	331	25	63	44	12	5878.5
4/28/1991	1991	4	28	332	20	51	35.5	3.5	5882
4/29/1991	1991	4	29	333	22	64	43	11	5893
4/30/1991	1991	4	30	334	31	65	48	16	5909
5/1/1991	1991	5	1	335	29	79	54	22	5931
5/2/1991	1991	5	2	336	22	73	47.5	15.5	5946.5
5/3/1991	1991	5	3	337	27	68	47.5	15.5	5962
5/4/1991	1991	5	4	338	29	66	47.5	15.5	5977.5
5/5/1991	1991	5	5	339	29	70	49.5	17.5	5995
5/6/1991	1991	5	6	340	30	76	53	21	6016
5/7/1991	1991	5	7	341	36	79	57.5	25.5	6041.5
5/8/1991	1991	5	8	342	36	86	61	29	6070.5
5/9/1991	1991	5	9	343	49	83	66	34	6104.5
5/10/1991	1991	5	10	344	43	80	61.5	29.5	6134
5/11/1991	1991	5	11	345	38	78	58	26	6160
5/12/1991	1991	5	12	346	35	77	56	24	6184
5/13/1991	1991	5	13	347	35	84	59.5	27.5	6211.5
5/14/1991	1991	5	14	348	35	80	57.5	25.5	6237
5/15/1991	1991	5	15	349	35	70	52.5	20.5	6257.5
5/16/1991	1991	5	16	350	33	79	56	24	6281.5
5/17/1991	1991	5	17	351	39	83	61	29	6310.5
5/18/1991	1991	5	18	352	40	86	63	31	6341.5
5/19/1991	1991	5	19	353	38	83	60.5	28.5	6370
5/20/1991	1991	5	20	354	40	74	57	25	6395
5/21/1991	1991	5	21	355	44	66	55	23	6418
5/22/1991	1991	5	22	356	40	79	59.5	27.5	6445.5
5/23/1991	1991	5	23	357	40	79	59.5	27.5	6473
5/24/1991	1991	5	24	358	37	81	59	27	6500
5/25/1991	1991	5	25	359	38	83	60.5	28.5	6528.5
5/26/1991	1991	5	26	360	40	87	63.5	31.5	6560
5/27/1991	1991	5	27	361	40	87	63.5	31.5	6591.5
5/28/1991	1991	5	28	362	35	83	59	27	6618.5
5/29/1991	1991	5	29	363	35	83	59	27	6645.5
5/30/1991	1991	5	30	364	41	83	62	30	6675.5
5/31/1991	1991	5	31	365	42	76	59	27	6702.5
6/1/1991	1991	6	1	1	33	73	53	21	21
6/2/1991	1991	6	2	2	33	72	52.5	20.5	41.5
6/3/1991	1991	6	3	3	39	75	57	25	66.5
6/4/1991	1991	6	4	4	40	85	62.5	30.5	97
6/5/1991	1991	6	5	5	43	84	63.5	31.5	128.5
6/6/1991	1991	6	6	6	45	74	59.5	27.5	156
6/7/1991	1991	6	7	7	39	88	63.5	31.5	187.5
6/8/1991	1991	6	8	8	48	87	67.5	35.5	223
6/9/1991	1991	6	9	9	49	82	65.5	33.5	256.5
6/10/1991	1991	6	10	10	46	80	63	31	287.5
6/11/1991	1991	6	11	11	37	76	56.5	24.5	312
6/12/1991	1991	6	12	12	45	71	58	26	338
6/13/1991	1991	6	13	13	49	72	60.5	28.5	366.5
6/14/1991	1991	6	14	14	42	70	56	24	390.5
6/15/1991	1991	6	15	15	41	83	62	30	420.5

6/16/1991	1991	6	16	16	46	87	66.5	34.5	455
6/17/1991	1991	6	17	17	49	90	69.5	37.5	492.5
6/18/1991	1991	6	18	18	48	91	69.5	37.5	530
6/19/1991	1991	6	19	19	51	87	69	37	567
6/20/1991	1991	6	20	20	44	89	66.5	34.5	601.5
6/21/1991	1991	6	21	21	42	89	65.5	33.5	635
6/22/1991	1991	6	22	22	44	92	68	36	671
6/23/1991	1991	6	23	23	48	92	70	38	709
6/24/1991	1991	6	24	24	46	94	70	38	747
6/25/1991	1991	6	25	25	45	92	68.5	36.5	783.5
6/26/1991	1991	6	26	26	44	93	68.5	36.5	820
6/27/1991	1991	6	27	27	45	89	67	35	855
6/28/1991	1991	6	28	28	52	92	72	40	895
6/29/1991	1991	6	29	29	57	89	73	41	936
6/30/1991	1991	6	30	30	54	92	73	41	977
7/1/1991	1991	7	1	31	49	95	72	40	1017
7/2/1991	1991	7	2	32	53	90	71.5	39.5	1056.5
7/3/1991	1991	7	3	33	54	95	74.5	42.5	1099
7/4/1991	1991	7	4	34	59	89	74	42	1141
7/5/1991	1991	7	5	35	58	84	71	39	1180
7/6/1991	1991	7	6	36	54	94	74	42	1222
7/7/1991	1991	7	7	37	57	98	77.5	45.5	1267.5
7/8/1991	1991	7	8	38	60	88	74	42	1309.5
7/9/1991	1991	7	9	39	57	91	74	42	1351.5
7/10/1991	1991	7	10	40	58	89	73.5	41.5	1393
7/11/1991	1991	7	11	41	51	88	69.5	37.5	1430.5
7/12/1991	1991	7	12	42	55	84	69.5	37.5	1468
7/13/1991	1991	7	13	43	50	84	67	35	1503
7/14/1991	1991	7	14	44	55	84	69.5	37.5	1540.5
7/15/1991	1991	7	15	45	56	88	72	40	1580.5
7/16/1991	1991	7	16	46	57	89	73	41	1621.5
7/17/1991	1991	7	17	47	57	86	71.5	39.5	1661
7/18/1991	1991	7	18	48	57	84	70.5	38.5	1699.5
7/19/1991	1991	7	19	49	59	85	72	40	1739.5
7/20/1991	1991	7	20	50	55	84	69.5	37.5	1777
7/21/1991	1991	7	21	51	56	86	71	39	1816
7/22/1991	1991	7	22	52	55	87	71	39	1855
7/23/1991	1991	7	23	53	54	81	67.5	35.5	1890.5
7/24/1991	1991	7	24	54	53	82	67.5	35.5	1926
7/25/1991	1991	7	25	55	54	81	67.5	35.5	1961.5
7/26/1991	1991	7	26	56	50	80	65	33	1994.5
7/27/1991	1991	7	27	57	49	89	69	37	2031.5
7/28/1991	1991	7	28	58	56	89	72.5	40.5	2072
7/29/1991	1991	7	29	59	52	89	70.5	38.5	2110.5
7/30/1991	1991	7	30	60	55	89	72	40	2150.5
7/31/1991	1991	7	31	61	56	90	73	41	2191.5
8/1/1991	1991	8	1	62	57	84	70.5	38.5	2230
8/2/1991	1991	8	2	63	55	87	71	39	2269
8/3/1991	1991	8	3	64	56	79	67.5	35.5	2304.5
8/4/1991	1991	8	4	65	56	80	68	36	2340.5
8/5/1991	1991	8	5	66	57	81	69	37	2377.5
8/6/1991	1991	8	6	67	54	86	70	38	2415.5
8/7/1991	1991	8	7	68	55	87	71	39	2454.5
8/8/1991	1991	8	8	69	52	90	71	39	2493.5
8/9/1991	1991	8	9	70	55	81	68	36	2529.5
8/10/1991	1991	8	10	71	56	83	69.5	37.5	2567
8/11/1991	1991	8	11	72	56	77	66.5	34.5	2601.5
8/12/1991	1991	8	12	73	55	86	70.5	38.5	2640
8/13/1991	1991	8	13	74	56	90	73	41	2681
8/14/1991	1991	8	14	75	56	89	72.5	40.5	2721.5
8/15/1991	1991	8	15	76	57	86	71.5	39.5	2761
8/16/1991	1991	8	16	77	55	88	71.5	39.5	2800.5
8/17/1991	1991	8	17	78	55	87	71	39	2839.5
8/18/1991	1991	8	18	79	55	77	66	34	2873.5
8/19/1991	1991	8	19	80	57	85	71	39	2912.5
8/20/1991	1991	8	20	81	54	92	73	41	2953.5
8/21/1991	1991	8	21	82	54	94	74	42	2995.5
8/22/1991	1991	8	22	83	54	94	74	42	3037.5
8/23/1991	1991	8	23	84	55	90	72.5	40.5	3078
8/24/1991	1991	8	24	85	53	77	65	33	3111
8/25/1991	1991	8	25	86	52	91	71.5	39.5	3150.5
8/26/1991	1991	8	26	87	49	89	69	37	3187.5
8/27/1991	1991	8	27	88	48	91	69.5	37.5	3225
8/28/1991	1991	8	28	89	50	84	67	35	3260
8/29/1991	1991	8	29	90	49	89	69	37	3297
8/30/1991	1991	8	30	91	50	87	68.5	36.5	3333.5
8/31/1991	1991	8	31	92	55	83	69	37	3370.5
9/1/1991	1991	9	1	93	55	89	72	40	3410.5
9/2/1991	1991	9	2	94	55	88	71.5	39.5	3450
9/3/1991	1991	9	3	95	49	94	71.5	39.5	3489.5
9/4/1991	1991	9	4	96	58	81	69.5	37.5	3527
9/5/1991	1991	9	5	97	54	70	62	30	3557
9/6/1991	1991	9	6	98	54	77	65.5	33.5	3590.5
9/7/1991	1991	9	7	99	50	81	65.5	33.5	3624
9/8/1991	1991	9	8	100	50	80	65	33	3657
9/9/1991	1991	9	9	101	48	80	64	32	3689
9/10/1991	1991	9	10	102	56	77	66.5	34.5	3723.5
9/11/1991	1991	9	11	103	54	78	66	34	3757.5
9/12/1991	1991	9	12	104	52	79	65.5	33.5	3791
9/13/1991	1991	9	13	105	52	79	65.5	33.5	3824.5
9/14/1991	1991	9	14	106	45	79	62	30	3854.5
9/15/1991	1991	9	15	107	46	78	62	30	3884.5
9/16/1991	1991	9	16	108	35	82	58.5	26.5	3911

9/17/1991	1991	9	17	109	41	84	62.5	30.5	3941.5
9/18/1991	1991	9	18	110	40	76	58	26	3967.5
9/19/1991	1991	9	19	111	40	69	54.5	22.5	3990
9/20/1991	1991	9	20	112	41	72	56.5	24.5	4014.5
9/21/1991	1991	9	21	113	48	83	65.5	33.5	4048
9/22/1991	1991	9	22	114	44	82	63	31	4079
9/23/1991	1991	9	23	115	46	80	63	31	4110
9/24/1991	1991	9	24	116	38	85	61.5	29.5	4139.5
9/25/1991	1991	9	25	117	38	87	62.5	30.5	4170
9/26/1991	1991	9	26	118	45	80	62.5	30.5	4200.5
9/27/1991	1991	9	27	119	43	81	62	30	4230.5
9/28/1991	1991	9	28	120	41	77	59	27	4257.5
9/29/1991	1991	9	29	121	40	78	59	27	4284.5
9/30/1991	1991	9	30	122	40	76	58	26	4310.5
10/1/1991	1991	10	1	123	41	78	59.5	27.5	4338
10/2/1991	1991	10	2	124	39	82	60.5	28.5	4366.5
10/3/1991	1991	10	3	125	35	82	58.5	26.5	4393
10/4/1991	1991	10	4	126	33	82	57.5	25.5	4418.5
10/5/1991	1991	10	5	127	34	79	56.5	24.5	4443
10/6/1991	1991	10	6	128	34	83	58.5	26.5	4469.5
10/7/1991	1991	10	7	129	30	83	56.5	24.5	4494
10/8/1991	1991	10	8	130	33	84	58.5	26.5	4520.5
10/9/1991	1991	10	9	131	36	83	59.5	27.5	4548
10/10/1991	1991	10	10	132	35	84	59.5	27.5	4575.5
10/11/1991	1991	10	11	133	34	85	59.5	27.5	4603
10/12/1991	1991	10	12	134	34	76	55	23	4626
10/13/1991	1991	10	13	135	35	80	57.5	25.5	4651.5
10/14/1991	1991	10	14	136	33	77	55	23	4674.5
10/15/1991	1991	10	15	137	35	83	59	27	4701.5
10/16/1991	1991	10	16	138	31	87	59	27	4728.5
10/17/1991	1991	10	17	139	39	82	60.5	28.5	4757
10/18/1991	1991	10	18	140	31	80	55.5	23.5	4780.5
10/19/1991	1991	10	19	141	28	80	54	22	4802.5
10/20/1991	1991	10	20	142	28	70	49	17	4819.5
10/21/1991	1991	10	21	143	36	71	53.5	21.5	4841
10/22/1991	1991	10	22	144	35	70	52.5	20.5	4861.5
10/23/1991	1991	10	23	145	34	70	52	20	4881.5
10/24/1991	1991	10	24	146	41	68	54.5	22.5	4904
10/25/1991	1991	10	25	147	36	66	51	19	4923
10/26/1991	1991	10	26	148	25	69	47	15	4938
10/27/1991	1991	10	27	149	32	65	48.5	16.5	4954.5
10/28/1991	1991	10	28	150	32	40	36	4	4958.5
10/29/1991	1991	10	29	151	20	53	36.5	4.5	4963
10/30/1991	1991	10	30	152	32	48	40	8	4971
10/31/1991	1991	10	31	153	19	38	28.5	-3.5	4967.5
11/1/1991	1991	11	1	154	14	50	32	0	4967.5
11/2/1991	1991	11	2	155	20	59	39.5	7.5	4975
11/3/1991	1991	11	3	156	15	46	30.5	-1.5	4973.5
11/4/1991	1991	11	4	157	17	49	33	1	4974.5
11/5/1991	1991	11	5	158	23	60	41.5	9.5	4984
11/6/1991	1991	11	6	159	22	69	45.5	13.5	4997.5
11/7/1991	1991	11	7	160	25	69	47	15	5012.5
11/8/1991	1991	11	8	161	25	69	47	15	5027.5
11/9/1991	1991	11	9	162	24	73	48.5	16.5	5044
11/10/1991	1991	11	10	163	43	53	48	16	5060
11/11/1991	1991	11	11	164	39	49	44	12	5072
11/12/1991	1991	11	12	165	29	58	43.5	11.5	5083.5
11/13/1991	1991	11	13	166	27	64	45.5	13.5	5097
11/14/1991	1991	11	14	167	36	59	47.5	15.5	5112.5
11/15/1991	1991	11	15	168	37	51	44	12	5124.5
11/16/1991	1991	11	16	169	26	40	33	1	5125.5
11/17/1991	1991	11	17	170	25	59	42	10	5135.5
11/18/1991	1991	11	18	171	29	49	39	7	5142.5
11/19/1991	1991	11	19	172	26	47	36.5	4.5	5147
11/20/1991	1991	11	20	173	20	49	34.5	2.5	5149.5
11/21/1991	1991	11	21	174	20	64	42	10	5159.5
11/22/1991	1991	11	22	175	25	45	35	3	5162.5
11/23/1991	1991	11	23	176	20	43	31.5	-0.5	5162
11/24/1991	1991	11	24	177	18	50	34	2	5164
11/25/1991	1991	11	25	178	18	56	37	5	5169
11/26/1991	1991	11	26	179	18	61	39.5	7.5	5176.5
11/27/1991	1991	11	27	180	24	66	45	13	5189.5
11/28/1991	1991	11	28	181	28	64	46	14	5203.5
11/29/1991	1991	11	29	182	23	44	33.5	1.5	5205
11/30/1991	1991	11	30	183	22	38	30	-2	5203
12/1/1991	1991	12	1	184	16	35	25.5	-6.5	5196.5
12/2/1991	1991	12	2	185	2	38	20	-12	5184.5
12/3/1991	1991	12	3	186	5	39	22	-10	5174.5
12/4/1991	1991	12	4	187	5	49	27	-5	5169.5
12/5/1991	1991	12	5	188	15	50	32.5	0.5	5170
12/6/1991	1991	12	6	189	16	58	37	5	5175
12/7/1991	1991	12	7	190	16	55	35.5	3.5	5178.5
12/8/1991	1991	12	8	191	21	55	38	6	5184.5
12/9/1991	1991	12	9	192	19	58	38.5	6.5	5191
12/10/1991	1991	12	10	193	19	56	37.5	5.5	5196.5
12/11/1991	1991	12	11	194	28	40	34	2	5198.5
12/12/1991	1991	12	12	195	32	48	40	8	5206.5
12/13/1991	1991	12	13	196	19	45	32	0	5206.5
12/14/1991	1991	12	14	197	12	48	30	-2	5204.5
12/15/1991	1991	12	15	198	12	50	31	-1	5203.5
12/16/1991	1991	12	16	199	2	52	27	-5	5198.5
12/17/1991	1991	12	17	200	20	47	33.5	1.5	5200
12/18/1991	1991	12	18	201	32	40	36	4	5204

12/19/1991	1991	12	19	202	30	41	35.5	3.5	5207.5
12/20/1991	1991	12	20	203	31	40	35.5	3.5	5211
12/21/1991	1991	12	21	204	31	38	34.5	2.5	5213.5
12/22/1991	1991	12	22	205	30	46	38	6	5219.5
12/23/1991	1991	12	23	206	20	43	31.5	-0.5	5219
12/24/1991	1991	12	24	207	26	44	35	3	5222
12/25/1991	1991	12	25	208	20	37	28.5	-3.5	5218.5
12/26/1991	1991	12	26	209	24	45	34.5	2.5	5221
12/27/1991	1991	12	27	210	20	46	33	1	5222
12/28/1991	1991	12	28	211	21	43	32	0	5222
12/29/1991	1991	12	29	212	20	48	34	2	5224
12/30/1991	1991	12	30	213	18	43	30.5	-1.5	5222.5
12/31/1991	1991	12	31	214	25	43	34	2	5224.5
1/1/1992	1992	1	1	215	16	36	26	-6	5218.5
1/2/1992	1992	1	2	216	15	43	29	-3	5215.5
1/3/1992	1992	1	3	217	14	33	23.5	-8.5	5207
1/4/1992	1992	1	4	218	28	42	35	3	5210
1/5/1992	1992	1	5	219	15	43	29	-3	5207
1/6/1992	1992	1	6	220	25	47	36	4	5211
1/7/1992	1992	1	7	221	23	40	31.5	-0.5	5210.5
1/8/1992	1992	1	8	222	12	36	24	-8	5202.5
1/9/1992	1992	1	9	223	12	42	27	-5	5197.5
1/10/1992	1992	1	10	224	10	50	30	-2	5195.5
1/11/1992	1992	1	11	225	19	39	29	-3	5192.5
1/12/1992	1992	1	12	226	20	32	26	-6	5186.5
1/13/1992	1992	1	13	227	6	33	19.5	-12.5	5174
1/14/1992	1992	1	14	228	-9	37	14	-18	5156
1/15/1992	1992	1	15	229	-7	30	11.5	-20.5	5135.5
1/16/1992	1992	1	16	230	-8	37	14.5	-17.5	5118
1/17/1992	1992	1	17	231	0	35	17.5	-14.5	5103.5
1/18/1992	1992	1	18	232	-3	32	14.5	-17.5	5086
1/19/1992	1992	1	19	233	-2	36	17	-15	5071
1/20/1992	1992	1	20	234	-2	39	18.5	-13.5	5057.5
1/21/1992	1992	1	21	235	8	46	27	-5	5052.5
1/22/1992	1992	1	22	236	11	46	28.5	-3.5	5049
1/23/1992	1992	1	23	237	8	42	25	-7	5042
1/24/1992	1992	1	24	238	10	55	32.5	0.5	5042.5
1/25/1992	1992	1	25	239	15	49	32	0	5042.5
1/26/1992	1992	1	26	240	20	51	35.5	3.5	5046
1/27/1992	1992	1	27	241	20	52	36	4	5050
1/28/1992	1992	1	28	242	18	51	34.5	2.5	5052.5
1/29/1992	1992	1	29	243	20	55	37.5	5.5	5058
1/30/1992	1992	1	30	244	20	52	36	4	5062
1/31/1992	1992	1	31	245	19	58	38.5	6.5	5068.5
2/1/1992	1992	2	1	246	19	55	37	5	5073.5
2/2/1992	1992	2	2	247	25	49	37	5	5078.5
2/3/1992	1992	2	3	248	28	41	34.5	2.5	5081
2/4/1992	1992	2	4	249	26	42	34	2	5083
2/5/1992	1992	2	5	250	22	51	36.5	4.5	5087.5
2/6/1992	1992	2	6	251	19	49	34	2	5089.5
2/7/1992	1992	2	7	252	19	46	32.5	0.5	5090
2/8/1992	1992	2	8	253	21	51	36	4	5094
2/9/1992	1992	2	9	254	26	47	36.5	4.5	5098.5
2/10/1992	1992	2	10	255	27	49	38	6	5104.5
2/11/1992	1992	2	11	256	26	47	36.5	4.5	5109
2/12/1992	1992	2	12	257	28	52	40	8	5117
2/13/1992	1992	2	13	258	29	48	38.5	6.5	5123.5
2/14/1992	1992	2	14	259	34	47	40.5	8.5	5132
2/15/1992	1992	2	15	260	20	50	35	3	5135
2/16/1992	1992	2	16	261	24	43	33.5	1.5	5136.5
2/17/1992	1992	2	17	262	22	46	34	2	5138.5
2/18/1992	1992	2	18	263	15	46	30.5	-1.5	5137
2/19/1992	1992	2	19	264	16	58	37	5	5142
2/20/1992	1992	2	20	265	19	60	39.5	7.5	5149.5
2/21/1992	1992	2	21	266	29	59	44	12	5161.5
2/22/1992	1992	2	22	267	21	65	43	11	5172.5
2/23/1992	1992	2	23	268	33	49	41	9	5181.5
2/24/1992	1992	2	24	269	24	54	39	7	5188.5
2/25/1992	1992	2	25	270	19	52	35.5	3.5	5192
2/26/1992	1992	2	26	271	20	51	35.5	3.5	5195.5
2/27/1992	1992	2	27	272	16	63	39.5	7.5	5203
2/28/1992	1992	2	28	273	19	62	40.5	8.5	5211.5
2/29/1992	1992	2	29	274	20	64	42	10	5221.5
3/1/1992	1992	3	1	275	25	61	43	11	5232.5
3/2/1992	1992	3	2	276	23	61	42	10	5242.5
3/3/1992	1992	3	3	277	31	52	41.5	9.5	5252
3/4/1992	1992	3	4	278	32	52	42	10	5262
3/5/1992	1992	3	5	279	35	55	45	13	5275
3/6/1992	1992	3	6	280	25	63	44	12	5287
3/7/1992	1992	3	7	281	24	62	43	11	5298
3/8/1992	1992	3	8	282	28	48	38	6	5304
3/9/1992	1992	3	9	283	22	48	35	3	5307
3/10/1992	1992	3	10	284	17	58	37.5	5.5	5312.5
3/11/1992	1992	3	11	285	16	57	36.5	4.5	5317
3/12/1992	1992	3	12	286	15	66	40.5	8.5	5325.5
3/13/1992	1992	3	13	287	18	69	43.5	11.5	5337
3/14/1992	1992	3	14	288	21	70	45.5	13.5	5350.5
3/15/1992	1992	3	15	289	23	68	45.5	13.5	5364
3/16/1992	1992	3	16	290	24	68	46	14	5378
3/17/1992	1992	3	17	291	31	60	45.5	13.5	5391.5
3/18/1992	1992	3	18	292	30	55	42.5	10.5	5402
3/19/1992	1992	3	19	293	18	60	39	7	5409
3/20/1992	1992	3	20	294	17	69	43	11	5420

3/21/1992	1992	3	21	295	22	61	41.5	9.5	5429.5
3/22/1992	1992	3	22	296	33	56	44.5	12.5	5442
3/23/1992	1992	3	23	297	24	60	42	10	5452
3/24/1992	1992	3	24	298	25	62	43.5	11.5	5463.5
3/25/1992	1992	3	25	299	24	69	46.5	14.5	5478
3/26/1992	1992	3	26	300	27	67	47	15	5493
3/27/1992	1992	3	27	301	36	54	45	13	5506
3/28/1992	1992	3	28	302	37	51	44	12	5518
3/29/1992	1992	3	29	303	34	53	43.5	11.5	5529.5
3/30/1992	1992	3	30	304	29	62	45.5	13.5	5543
3/31/1992	1992	3	31	305	35	52	43.5	11.5	5554.5
4/1/1992	1992	4	1	306	30	53	41.5	9.5	5564
4/2/1992	1992	4	2	307	29	60	44.5	12.5	5576.5
4/3/1992	1992	4	3	308	34	69	51.5	19.5	5596
4/4/1992	1992	4	4	309	33	70	51.5	19.5	5615.5
4/5/1992	1992	4	5	310	34	65	49.5	17.5	5633
4/6/1992	1992	4	6	311	31	72	51.5	19.5	5652.5
4/7/1992	1992	4	7	312	31	77	54	22	5674.5
4/8/1992	1992	4	8	313	30	76	53	21	5695.5
4/9/1992	1992	4	9	314	36	75	55.5	23.5	5719
4/10/1992	1992	4	10	315	41	79	60	28	5747
4/11/1992	1992	4	11	316	37	78	57.5	25.5	5772.5
4/12/1992	1992	4	12	317	34	80	57	25	5797.5
4/13/1992	1992	4	13	318	36	74	55	23	5820.5
4/14/1992	1992	4	14	319	38	74	56	24	5844.5
4/15/1992	1992	4	15	320	37	67	52	20	5864.5
4/16/1992	1992	4	16	321	37	68	52.5	20.5	5885
4/17/1992	1992	4	17	322	34	73	53.5	21.5	5906.5
4/18/1992	1992	4	18	323	43	63	53	21	5927.5
4/19/1992	1992	4	19	324	33	62	47.5	15.5	5943
4/20/1992	1992	4	20	325	33	65	49	17	5960
4/21/1992	1992	4	21	326	33	74	53.5	21.5	5981.5
4/22/1992	1992	4	22	327	36	73	54.5	22.5	6004
4/23/1992	1992	4	23	328	37	78	57.5	25.5	6029.5
4/24/1992	1992	4	24	329	38	83	60.5	28.5	6058
4/25/1992	1992	4	25	330	37	80	58.5	26.5	6084.5
4/26/1992	1992	4	26	331	44	81	62.5	30.5	6115
4/27/1992	1992	4	27	332	34	87	60.5	28.5	6143.5
4/28/1992	1992	4	28	333	42	87	64.5	32.5	6176
4/29/1992	1992	4	29	334	39	89	64	32	6208
4/30/1992	1992	4	30	335	48	84	66	34	6242
5/1/1992	1992	5	1	336	45	86	65.5	33.5	6275.5
5/2/1992	1992	5	2	337	44	80	62	30	6305.5
5/3/1992	1992	5	3	338	43	70	56.5	24.5	6330
5/4/1992	1992	5	4	339	42	75	58.5	26.5	6356.5
5/5/1992	1992	5	5	340	40	76	58	26	6382.5
5/6/1992	1992	5	6	341	42	66	54	22	6404.5
5/7/1992	1992	5	7	342	42	67	54.5	22.5	6427
5/8/1992	1992	5	8	343	40	72	56	24	6451
5/9/1992	1992	5	9	344	43	70	56.5	24.5	6475.5
5/10/1992	1992	5	10	345	43	70	56.5	24.5	6500
5/11/1992	1992	5	11	346	39	78	58.5	26.5	6526.5
5/12/1992	1992	5	12	347	45	81	63	31	6557.5
5/13/1992	1992	5	13	348	45	83	64	32	6589.5
5/14/1992	1992	5	14	349	40	85	62.5	30.5	6620
5/15/1992	1992	5	15	350	39	81	60	28	6648
5/16/1992	1992	5	16	351	40	82	61	29	6677
5/17/1992	1992	5	17	352	40	82	61	29	6706
5/18/1992	1992	5	18	353	38	79	58.5	26.5	6732.5
5/19/1992	1992	5	19	354	42	80	61	29	6761.5
5/20/1992	1992	5	20	355	45	64	54.5	22.5	6784
5/21/1992	1992	5	21	356	42	67	54.5	22.5	6806.5
5/22/1992	1992	5	22	357	43	65	54	22	6828.5
5/23/1992	1992	5	23	358	43	60	51.5	19.5	6848
5/24/1992	1992	5	24	359	41	62	51.5	19.5	6867.5
5/25/1992	1992	5	25	360	39	67	53	21	6888.5
5/26/1992	1992	5	26	361	39	72	55.5	23.5	6912
5/27/1992	1992	5	27	362	48	74	61	29	6941
5/28/1992	1992	5	28	363	43	78	60.5	28.5	6969.5
5/29/1992	1992	5	29	364	48	72	60	28	6997.5
5/30/1992	1992	5	30	365	45	71	58	26	7023.5
5/31/1992	1992	5	31	366	40	80	60	28	7051.5
6/1/1992	1992	6	1	1	42	75	58.5	26.5	26.5
6/2/1992	1992	6	2	2	37	81	59	27	53.5
6/3/1992	1992	6	3	3	46	78	62	30	83.5
6/4/1992	1992	6	4	4	45	85	65	33	116.5
6/5/1992	1992	6	5	5	48	86	67	35	151.5
6/6/1992	1992	6	6	6	46	85	65.5	33.5	185
6/7/1992	1992	6	7	7	54	78	66	34	219
6/8/1992	1992	6	8	8	42	69	55.5	23.5	242.5
6/9/1992	1992	6	9	9	40	75	57.5	25.5	268
6/10/1992	1992	6	10	10	40	81	60.5	28.5	296.5
6/11/1992	1992	6	11	11	43	88	65.5	33.5	330
6/12/1992	1992	6	12	12	47	89	68	36	366
6/13/1992	1992	6	13	13	43	85	64	32	398
6/14/1992	1992	6	14	14	48	88	68	36	434
6/15/1992	1992	6	15	15	47	84	65.5	33.5	467.5
6/16/1992	1992	6	16	16	45	79	62	30	497.5
6/17/1992	1992	6	17	17	40	87	63.5	31.5	529
6/18/1992	1992	6	18	18	47	92	69.5	37.5	566.5
6/19/1992	1992	6	19	19	47	92	69.5	37.5	604
6/20/1992	1992	6	20	20	48	94	71	39	643
6/21/1992	1992	6	21	21	50	89	69.5	37.5	680.5

6/22/1992	1992	6	22	22	50	90	70	38	718.5
6/23/1992	1992	6	23	23	50	86	68	36	754.5
6/24/1992	1992	6	24	24	47	87	67	35	789.5
6/25/1992	1992	6	25	25	47	78	62.5	30.5	820
6/26/1992	1992	6	26	26	45	87	66	34	854
6/27/1992	1992	6	27	27	44	88	66	34	888
6/28/1992	1992	6	28	28	46	92	69	37	925
6/29/1992	1992	6	29	29	54	90	72	40	965
6/30/1992	1992	6	30	30	50	90	70	38	1003
7/1/1992	1992	7	1	31	49	86	67.5	35.5	1038.5
7/2/1992	1992	7	2	32	49	86	67.5	35.5	1074
7/3/1992	1992	7	3	33	48	86	67	35	1109
7/4/1992	1992	7	4	34	50	96	73	41	1150
7/5/1992	1992	7	5	35	50	99	74.5	42.5	1192.5
7/6/1992	1992	7	6	36	54	97	75.5	43.5	1236
7/7/1992	1992	7	7	37	60	92	76	44	1280
7/8/1992	1992	7	8	38	56	92	74	42	1322
7/9/1992	1992	7	9	39	57	88	72.5	40.5	1362.5
7/10/1992	1992	7	10	40	58	83	70.5	38.5	1401
7/11/1992	1992	7	11	41	56	77	66.5	34.5	1435.5
7/12/1992	1992	7	12	42	56	78	67	35	1470.5
7/13/1992	1992	7	13	43	49	82	65.5	33.5	1504
7/14/1992	1992	7	14	44	48	83	65.5	33.5	1537.5
7/15/1992	1992	7	15	45	47	83	65	33	1570.5
7/16/1992	1992	7	16	46	48	89	68.5	36.5	1607
7/17/1992	1992	7	17	47	45	85	65	33	1640
7/18/1992	1992	7	18	48	45	83	64	32	1672
7/19/1992	1992	7	19	49	48	89	68.5	36.5	1708.5
7/20/1992	1992	7	20	50	49	90	69.5	37.5	1746
7/21/1992	1992	7	21	51	60	86	73	41	1787
7/22/1992	1992	7	22	52	55	92	73.5	41.5	1828.5
7/23/1992	1992	7	23	53	58	83	70.5	38.5	1867
7/24/1992	1992	7	24	54	58	73	65.5	33.5	1900.5
7/25/1992	1992	7	25	55	56	77	66.5	34.5	1935
7/26/1992	1992	7	26	56	58	84	71	39	1974
7/27/1992	1992	7	27	57	54	89	71.5	39.5	2013.5
7/28/1992	1992	7	28	58	55	89	72	40	2053.5
7/29/1992	1992	7	29	59	53	92	72.5	40.5	2094
7/30/1992	1992	7	30	60	54	87	70.5	38.5	2132.5
7/31/1992	1992	7	31	61	58	87	72.5	40.5	2173
8/1/1992	1992	8	1	62	52	88	70	38	2211
8/2/1992	1992	8	2	63	58	92	75	43	2254
8/3/1992	1992	8	3	64	54	91	72.5	40.5	2294.5
8/4/1992	1992	8	4	65	51	90	70.5	38.5	2333
8/5/1992	1992	8	5	66	55	86	70.5	38.5	2371.5
8/6/1992	1992	8	6	67	54	86	70	38	2409.5
8/7/1992	1992	8	7	68	51	73	62	30	2439.5
8/8/1992	1992	8	8	69	50	85	67.5	35.5	2475
8/9/1992	1992	8	9	70	54	90	72	40	2515
8/10/1992	1992	8	10	71	52	92	72	40	2555
8/11/1992	1992	8	11	72	54	88	71	39	2594
8/12/1992	1992	8	12	73	51	86	68.5	36.5	2630.5
8/13/1992	1992	8	13	74	53	91	72	40	2670.5
8/14/1992	1992	8	14	75	58	90	74	42	2712.5
8/15/1992	1992	8	15	76	56	90	73	41	2753.5
8/16/1992	1992	8	16	77	54	87	70.5	38.5	2792
8/17/1992	1992	8	17	78	53	88	70.5	38.5	2830.5
8/18/1992	1992	8	18	79	50	90	70	38	2868.5
8/19/1992	1992	8	19	80	54	91	72.5	40.5	2909
8/20/1992	1992	8	20	81	56	92	74	42	2951
8/21/1992	1992	8	21	82	54	89	71.5	39.5	2990.5
8/22/1992	1992	8	22	83	50	85	67.5	35.5	3026
8/23/1992	1992	8	23	84	56	75	65.5	33.5	3059.5
8/24/1992	1992	8	24	85	52	67	59.5	27.5	3087
8/25/1992	1992	8	25	86	44	80	62	30	3117
8/26/1992	1992	8	26	87	50	82	66	34	3151
8/27/1992	1992	8	27	88	45	82	63.5	31.5	3182.5
8/28/1992	1992	8	28	89	41	87	64	32	3214.5
8/29/1992	1992	8	29	90	48	82	65	33	3247.5
8/30/1992	1992	8	30	91	46	79	62.5	30.5	3278
8/31/1992	1992	8	31	92	47	83	65	33	3311
9/1/1992	1992	9	1	93	46	82	64	32	3343
9/2/1992	1992	9	2	94	45	83	64	32	3375
9/3/1992	1992	9	3	95	43	93	68	36	3411
9/4/1992	1992	9	4	96	41	89	65	33	3444
9/5/1992	1992	9	5	97	42	83	62.5	30.5	3474.5
9/6/1992	1992	9	6	98	39	86	62.5	30.5	3505
9/7/1992	1992	9	7	99	44	88	66	34	3539
9/8/1992	1992	9	8	100	40	88	64	32	3571
9/9/1992	1992	9	9	101	41	89	65	33	3604
9/10/1992	1992	9	10	102	40	90	65	33	3637
9/11/1992	1992	9	11	103	55	90	72.5	40.5	3677.5
9/12/1992	1992	9	12	104	48	88	68	36	3713.5
9/13/1992	1992	9	13	105	46	84	65	33	3746.5
9/14/1992	1992	9	14	106	49	84	66.5	34.5	3781
9/15/1992	1992	9	15	107	49	80	64.5	32.5	3813.5
9/16/1992	1992	9	16	108	49	88	68.5	36.5	3850
9/17/1992	1992	9	17	109	45	86	65.5	33.5	3883.5
9/18/1992	1992	9	18	110	44	84	64	32	3915.5
9/19/1992	1992	9	19	111	54	66	60	28	3943.5
9/20/1992	1992	9	20	112	50	79	64.5	32.5	3976
9/21/1992	1992	9	21	113	42	82	62	30	4006
9/22/1992	1992	9	22	114	42	82	62	30	4036

9/23/1992	1992	9	23	115	42	86	64	32	4068
9/24/1992	1992	9	24	116	42	84	63	31	4099
9/25/1992	1992	9	25	117	43	84	63.5	31.5	4130.5
9/26/1992	1992	9	26	118	33	82	57.5	25.5	4156
9/27/1992	1992	9	27	119	33	85	59	27	4183
9/28/1992	1992	9	28	120	37	80	58.5	26.5	4209.5
9/29/1992	1992	9	29	121	45	81	63	31	4240.5
9/30/1992	1992	9	30	122	38	84	61	29	4269.5
10/1/1992	1992	10	1	123	36	86	61	29	4298.5
10/2/1992	1992	10	2	124	55	84	69.5	37.5	4336
10/3/1992	1992	10	3	125	33	83	58	26	4362
10/4/1992	1992	10	4	126	37	83	60	28	4390
10/5/1992	1992	10	5	127	35	80	57.5	25.5	4415.5
10/6/1992	1992	10	6	128	37	80	58.5	26.5	4442
10/7/1992	1992	10	7	129	38	75	56.5	24.5	4466.5
10/8/1992	1992	10	8	130	19	67	43	11	4477.5
10/9/1992	1992	10	9	131	22	78	50	18	4495.5
10/10/1992	1992	10	10	132	30	76	53	21	4516.5
10/11/1992	1992	10	11	133	28	79	53.5	21.5	4538
10/12/1992	1992	10	12	134	28	82	55	23	4561
10/13/1992	1992	10	13	135	28	80	54	22	4583
10/14/1992	1992	10	14	136	36	75	55.5	23.5	4606.5
10/15/1992	1992	10	15	137	36	75	55.5	23.5	4630
10/16/1992	1992	10	16	138	30	71	50.5	18.5	4648.5
10/17/1992	1992	10	17	139	29	77	53	21	4669.5
10/18/1992	1992	10	18	140	29	78	53.5	21.5	4691
10/19/1992	1992	10	19	141	34	75	54.5	22.5	4713.5
10/20/1992	1992	10	20	142	32	77	54.5	22.5	4736
10/21/1992	1992	10	21	143	40	72	56	24	4760
10/22/1992	1992	10	22	144	36	69	52.5	20.5	4780.5
10/23/1992	1992	10	23	145	41	71	56	24	4804.5
10/24/1992	1992	10	24	146	39	66	52.5	20.5	4825
10/25/1992	1992	10	25	147	40	70	55	23	4848
10/26/1992	1992	10	26	148	35	69	52	20	4868
10/27/1992	1992	10	27	149	33	73	53	21	4889
10/28/1992	1992	10	28	150	44	55	49.5	17.5	4906.5
10/29/1992	1992	10	29	151	41	58	49.5	17.5	4924
10/30/1992	1992	10	30	152	40	64	52	20	4944
10/31/1992	1992	10	31	153	40	59	49.5	17.5	4961.5
11/1/1992	1992	11	1	154	30	55	42.5	10.5	4972
11/2/1992	1992	11	2	155	26	61	43.5	11.5	4983.5
11/3/1992	1992	11	3	156	25	42	33.5	1.5	4985
11/4/1992	1992	11	4	157	19	45	32	0	4985
11/5/1992	1992	11	5	158	19	48	33.5	1.5	4986.5
11/6/1992	1992	11	6	159	17	50	33.5	1.5	4988
11/7/1992	1992	11	7	160	17	61	39	7	4995
11/8/1992	1992	11	8	161	20	65	42.5	10.5	5005.5
11/9/1992	1992	11	9	162	22	54	38	6	5011.5
11/10/1992	1992	11	10	163	25	55	40	8	5019.5
11/11/1992	1992	11	11	164	30	45	37.5	5.5	5025
11/12/1992	1992	11	12	165	18	52	35	3	5028
11/13/1992	1992	11	13	166	18	55	36.5	4.5	5032.5
11/14/1992	1992	11	14	167	22	66	44	12	5044.5
11/15/1992	1992	11	15	168	21	68	44.5	12.5	5057
11/16/1992	1992	11	16	169	20	53	36.5	4.5	5061.5
11/17/1992	1992	11	17	170	20	60	40	8	5069.5
11/18/1992	1992	11	18	171	16	56	36	4	5073.5
11/19/1992	1992	11	19	172	24	55	39.5	7.5	5081
11/20/1992	1992	11	20	173	32	44	38	6	5087
11/21/1992	1992	11	21	174	20	42	31	-1	5086
11/22/1992	1992	11	22	175	15	45	30	-2	5084
11/23/1992	1992	11	23	176	30	42	36	4	5088
11/24/1992	1992	11	24	177	11	38	24.5	-7.5	5080.5
11/25/1992	1992	11	25	178	11	34	22.5	-9.5	5071
11/26/1992	1992	11	26	179	12	38	25	-7	5064
11/27/1992	1992	11	27	180	12	45	28.5	-3.5	5060.5
11/28/1992	1992	11	28	181	7	49	28	-4	5056.5
11/29/1992	1992	11	29	182	12	44	28	-4	5052.5
11/30/1992	1992	11	30	183	10	44	27	-5	5047.5
12/1/1992	1992	12	1	184	8	52	30	-2	5045.5
12/2/1992	1992	12	2	185	10	53	31.5	-0.5	5045
12/3/1992	1992	12	3	186	30	55	42.5	10.5	5055.5
12/4/1992	1992	12	4	187	30	38	34	2	5057.5
12/5/1992	1992	12	5	188	15	30	22.5	-9.5	5048
12/6/1992	1992	12	6	189	2	35	18.5	-13.5	5034.5
12/7/1992	1992	12	7	190	0	33	16.5	-15.5	5019
12/8/1992	1992	12	8	191	14	36	25	-7	5012
12/9/1992	1992	12	9	192	12	45	28.5	-3.5	5008.5
12/10/1992	1992	12	10	193	13	43	28	-4	5004.5
12/11/1992	1992	12	11	194	7	42	24.5	-7.5	4997
12/12/1992	1992	12	12	195	16	39	27.5	-4.5	4992.5
12/13/1992	1992	12	13	196	5	33	19	-13	4979.5
12/14/1992	1992	12	14	197	11	32	21.5	-10.5	4969
12/15/1992	1992	12	15	198	-2	29	13.5	-18.5	4950.5
12/16/1992	1992	12	16	199	6	30	18	-14	4936.5
12/17/1992	1992	12	17	200	-8	29	10.5	-21.5	4915
12/18/1992	1992	12	18	201	15	43	29	-3	4912
12/19/1992	1992	12	19	202	23	32	27.5	-4.5	4907.5
12/20/1992	1992	12	20	203	-8	30	11	-21	4886.5
12/21/1992	1992	12	21	204	-4	34	15	-17	4869.5
12/22/1992	1992	12	22	205	0	40	20	-12	4857.5
12/23/1992	1992	12	23	206	-3	42	19.5	-12.5	4845
12/24/1992	1992	12	24	207	1	39	20	-12	4833

12/25/1992	1992	12	25	208	3	40	21.5	-10.5	4822.5
12/26/1992	1992	12	26	209	8	42	25	-7	4815.5
12/27/1992	1992	12	27	210	6	38	22	-10	4805.5
12/28/1992	1992	12	28	211	3	46	24.5	-7.5	4798
12/29/1992	1992	12	29	212	33	53	43	11	4809
12/30/1992	1992	12	30	213	33	54	43.5	11.5	4820.5
12/31/1992	1992	12	31	214	24	43	33.5	1.5	4822
1/1/1993	1993	1	1	215	29	42	35.5	3.5	4825.5
1/2/1993	1993	1	2	216	30	53	41.5	9.5	4835
1/3/1993	1993	1	3	217	7	44	25.5	-6.5	4828.5
1/4/1993	1993	1	4	218	-4	30	13	-19	4809.5
1/5/1993	1993	1	5	219	10	42	26	-6	4803.5
1/6/1993	1993	1	6	220	18	43	30.5	-1.5	4802
1/7/1993	1993	1	7	221	28	50	39	7	4809
1/8/1993	1993	1	8	222	34	54	44	12	4821
1/9/1993	1993	1	9	223	29	45	37	5	4826
1/10/1993	1993	1	10	224	28	37	32.5	0.5	4826.5
1/11/1993	1993	1	11	225	30	43	36.5	4.5	4831
1/12/1993	1993	1	12	226	18	46	32	0	4831
1/13/1993	1993	1	13	227	24	42	33	1	4832
1/14/1993	1993	1	14	228	29	45	37	5	4837
1/15/1993	1993	1	15	229	25	48	36.5	4.5	4841.5
1/16/1993	1993	1	16	230	23	47	35	3	4844.5
1/17/1993	1993	1	17	231	35	49	42	10	4854.5
1/18/1993	1993	1	18	232	32	48	40	8	4862.5
1/19/1993	1993	1	19	233	28	43	35.5	3.5	4866
1/20/1993	1993	1	20	234	24	44	34	2	4868
1/21/1993	1993	1	21	235	21	53	37	5	4873
1/22/1993	1993	1	22	236	24	62	43	11	4884
1/23/1993	1993	1	23	237	30	55	42.5	10.5	4894.5
1/24/1993	1993	1	24	238	21	52	36.5	4.5	4899
1/25/1993	1993	1	25	239	15	49	32	0	4899
1/26/1993	1993	1	26	240	16	57	36.5	4.5	4903.5
1/27/1993	1993	1	27	241	20	62	41	9	4912.5
1/28/1993	1993	1	28	242	18	60	39	7	4919.5
1/29/1993	1993	1	29	243	26	42	34	2	4921.5
1/30/1993	1993	1	30	244	30	42	36	4	4925.5
1/31/1993	1993	1	31	245	29	47	38	6	4931.5
2/1/1993	1993	2	1	246	27	48	37.5	5.5	4937
2/2/1993	1993	2	2	247	17	50	33.5	1.5	4938.5
2/3/1993	1993	2	3	248	18	48	33	1	4939.5
2/4/1993	1993	2	4	249	14	47	30.5	-1.5	4938
2/5/1993	1993	2	5	250	10	50	30	-2	4936
2/6/1993	1993	2	6	251	12	56	34	2	4938
2/7/1993	1993	2	7	252	18	61	39.5	7.5	4945.5
2/8/1993	1993	2	8	253	22	55	38.5	6.5	4952
2/9/1993	1993	2	9	254	29	53	41	9	4961
2/10/1993	1993	2	10	255	28	44	36	4	4965
2/11/1993	1993	2	11	256	28	48	38	6	4971
2/12/1993	1993	2	12	257	21	52	36.5	4.5	4975.5
2/13/1993	1993	2	13	258	21	51	36	4	4979.5
2/14/1993	1993	2	14	259	27	42	34.5	2.5	4982
2/15/1993	1993	2	15	260	21	42	31.5	-0.5	4981.5
2/16/1993	1993	2	16	261	31	50	40.5	8.5	4990
2/17/1993	1993	2	17	262	23	56	39.5	7.5	4997.5
2/18/1993	1993	2	18	263	19	51	35	3	5000.5
2/19/1993	1993	2	19	264	33	60	46.5	14.5	5015
2/20/1993	1993	2	20	265	37	48	42.5	10.5	5025.5
2/21/1993	1993	2	21	266	32	48	40	8	5033.5
2/22/1993	1993	2	22	267	28	51	39.5	7.5	5041
2/23/1993	1993	2	23	268	21	58	39.5	7.5	5048.5
2/24/1993	1993	2	24	269	25	44	34.5	2.5	5051
2/25/1993	1993	2	25	270	28	47	37.5	5.5	5056.5
2/26/1993	1993	2	26	271	19	57	38	6	5062.5
2/27/1993	1993	2	27	272	27	57	42	10	5072.5
2/28/1993	1993	2	28	273	32	42	37	5	5077.5
3/1/1993	1993	3	1	274	29	42	35.5	3.5	5081
3/2/1993	1993	3	2	275	23	51	37	5	5086
3/3/1993	1993	3	3	276	19	59	39	7	5093
3/4/1993	1993	3	4	277	17	54	35.5	3.5	5096.5
3/5/1993	1993	3	5	278	24	58	41	9	5105.5
3/6/1993	1993	3	6	279	28	60	44	12	5117.5
3/7/1993	1993	3	7	280	29	67	48	16	5133.5
3/8/1993	1993	3	8	281	18	70	44	12	5145.5
3/9/1993	1993	3	9	282	20	71	45.5	13.5	5159
3/10/1993	1993	3	10	283	28	62	45	13	5172
3/11/1993	1993	3	11	284	24	55	39.5	7.5	5179.5
3/12/1993	1993	3	12	285	26	51	38.5	6.5	5186
3/13/1993	1993	3	13	286	12	59	35.5	3.5	5189.5
3/14/1993	1993	3	14	287	18	58	38	6	5195.5
3/15/1993	1993	3	15	288	19	69	44	12	5207.5
3/16/1993	1993	3	16	289	30	67	48.5	16.5	5224
3/17/1993	1993	3	17	290	25	65	45	13	5237
3/18/1993	1993	3	18	291	30	65	47.5	15.5	5252.5
3/19/1993	1993	3	19	292	30	64	47	15	5267.5
3/20/1993	1993	3	20	293	25	65	45	13	5280.5
3/21/1993	1993	3	21	294	31	70	50.5	18.5	5299
3/22/1993	1993	3	22	295	24	70	47	15	5314
3/23/1993	1993	3	23	296	24	73	48.5	16.5	5330.5
3/24/1993	1993	3	24	297	35	63	49	17	5347.5
3/25/1993	1993	3	25	298	29	72	50.5	18.5	5366
3/26/1993	1993	3	26	299	32	68	50	18	5384
3/27/1993	1993	3	27	300	32	50	41	9	5393

3/28/1993	1993	3	28	301	31	60	45.5	13.5	5406.5
3/29/1993	1993	3	29	302	30	48	39	7	5413.5
3/30/1993	1993	3	30	303	29	59	44	12	5425.5
3/31/1993	1993	3	31	304	31	64	47.5	15.5	5441
4/1/1993	1993	4	1	305	24	69	46.5	14.5	5455.5
4/2/1993	1993	4	2	306	32	68	50	18	5473.5
4/3/1993	1993	4	3	307	30	63	46.5	14.5	5488
4/4/1993	1993	4	4	308	25	71	48	16	5504
4/5/1993	1993	4	5	309	30	68	49	17	5521
4/6/1993	1993	4	6	310	35	52	43.5	11.5	5532.5
4/7/1993	1993	4	7	311	22	53	37.5	5.5	5538
4/8/1993	1993	4	8	312	25	60	42.5	10.5	5548.5
4/9/1993	1993	4	9	313	24	71	47.5	15.5	5564
4/10/1993	1993	4	10	314	40	75	57.5	25.5	5589.5
4/11/1993	1993	4	11	315	34	72	53	21	5610.5
4/12/1993	1993	4	12	316	34	69	51.5	19.5	5630
4/13/1993	1993	4	13	317	28	59	43.5	11.5	5641.5
4/14/1993	1993	4	14	318	23	58	40.5	8.5	5650
4/15/1993	1993	4	15	319	20	65	42.5	10.5	5660.5
4/16/1993	1993	4	16	320	38	63	50.5	18.5	5679
4/17/1993	1993	4	17	321	35	74	54.5	22.5	5701.5
4/18/1993	1993	4	18	322	37	74	55.5	23.5	5725
4/19/1993	1993	4	19	323	33	61	47	15	5740
4/20/1993	1993	4	20	324	18	74	46	14	5754
4/21/1993	1993	4	21	325	24	72	48	16	5770
4/22/1993	1993	4	22	326	31	83	57	25	5795
4/23/1993	1993	4	23	327	36	76	56	24	5819
4/24/1993	1993	4	24	328	43	71	57	25	5844
4/25/1993	1993	4	25	329	38	75	56.5	24.5	5868.5
4/26/1993	1993	4	26	330	35	83	59	27	5895.5
4/27/1993	1993	4	27	331	38	78	58	26	5921.5
4/28/1993	1993	4	28	332	43	75	59	27	5948.5
4/29/1993	1993	4	29	333	31	77	54	22	5970.5
4/30/1993	1993	4	30	334	34	78	56	24	5994.5
5/1/1993	1993	5	1	335	33	64	48.5	16.5	6011
5/2/1993	1993	5	2	336	35	74	54.5	22.5	6033.5
5/3/1993	1993	5	3	337	30	72	51	19	6052.5
5/4/1993	1993	5	4	338	40	79	59.5	27.5	6080
5/5/1993	1993	5	5	339	39	68	53.5	21.5	6101.5
5/6/1993	1993	5	6	340	28	70	49	17	6118.5
5/7/1993	1993	5	7	341	38	69	53.5	21.5	6140
5/8/1993	1993	5	8	342	30	65	47.5	15.5	6155.5
5/9/1993	1993	5	9	343	28	68	48	16	6171.5
5/10/1993	1993	5	10	344	26	79	52.5	20.5	6192
5/11/1993	1993	5	11	345	31	81	56	24	6216
5/12/1993	1993	5	12	346	45	82	63.5	31.5	6247.5
5/13/1993	1993	5	13	347	44	80	62	30	6277.5
5/14/1993	1993	5	14	348	40	82	61	29	6306.5
5/15/1993	1993	5	15	349	48	75	61.5	29.5	6336
5/16/1993	1993	5	16	350	43	75	59	27	6363
5/17/1993	1993	5	17	351	43	75	59	27	6390
5/18/1993	1993	5	18	352	40	78	59	27	6417
5/19/1993	1993	5	19	353	46	81	63.5	31.5	6448.5
5/20/1993	1993	5	20	354	42	81	61.5	29.5	6478
5/21/1993	1993	5	21	355	42	82	62	30	6508
5/22/1993	1993	5	22	356	45	80	62.5	30.5	6538.5
5/23/1993	1993	5	23	357	45	81	63	31	6569.5
5/24/1993	1993	5	24	358	46	82	64	32	6601.5
5/25/1993	1993	5	25	359	48	79	63.5	31.5	6633
5/26/1993	1993	5	26	360	49	85	67	35	6668
5/27/1993	1993	5	27	361	51	83	67	35	6703
5/28/1993	1993	5	28	362	53	75	64	32	6735
5/29/1993	1993	5	29	363	48	84	66	34	6769
5/30/1993	1993	5	30	364	44	88	66	34	6803
5/31/1993	1993	5	31	365	41	91	66	34	6837
6/1/1993	1993	6	1	1	43	86	64.5	32.5	32.5
6/2/1993	1993	6	2	2	44	84	64	32	64.5
6/3/1993	1993	6	3	3	44	79	61.5	29.5	94
6/4/1993	1993	6	4	4	48	84	66	34	128
6/5/1993	1993	6	5	5	42	80	61	29	157
6/6/1993	1993	6	6	6	42	85	63.5	31.5	188.5
6/7/1993	1993	6	7	7	37	72	54.5	22.5	211
6/8/1993	1993	6	8	8	34	75	54.5	22.5	233.5
6/9/1993	1993	6	9	9	40	72	56	24	257.5
6/10/1993	1993	6	10	10	36	79	57.5	25.5	283
6/11/1993	1993	6	11	11	41	89	65	33	316
6/12/1993	1993	6	12	12	42	91	66.5	34.5	350.5
6/13/1993	1993	6	13	13	42	95	68.5	36.5	387
6/14/1993	1993	6	14	14	39	95	67	35	422
6/15/1993	1993	6	15	15	56	86	71	39	461
6/16/1993	1993	6	16	16	55	88	71.5	39.5	500.5
6/17/1993	1993	6	17	17	47	87	67	35	535.5
6/18/1993	1993	6	18	18	45	86	65.5	33.5	569
6/19/1993	1993	6	19	19	41	90	65.5	33.5	602.5
6/20/1993	1993	6	20	20	54	81	67.5	35.5	638
6/21/1993	1993	6	21	21	55	80	67.5	35.5	673.5
6/22/1993	1993	6	22	22	42	92	67	35	708.5
6/23/1993	1993	6	23	23	45	92	68.5	36.5	745
6/24/1993	1993	6	24	24	37	92	64.5	32.5	777.5
6/25/1993	1993	6	25	25	39	93	66	34	811.5
6/26/1993	1993	6	26	26	44	95	69.5	37.5	849
6/27/1993	1993	6	27	27	46	98	72	40	889
6/28/1993	1993	6	28	28	50	93	71.5	39.5	928.5

6/29/1993	1993	6	29	29	52	97	74.5	42.5	971
6/30/1993	1993	6	30	30	45	94	69.5	37.5	1008.5
7/1/1993	1993	7	1	31	45	98	71.5	39.5	1048
7/2/1993	1993	7	2	32	46	95	70.5	38.5	1086.5
7/3/1993	1993	7	3	33	45	98	71.5	39.5	1126
7/4/1993	1993	7	4	34	50	89	69.5	37.5	1163.5
7/5/1993	1993	7	5	35	55	91	73	41	1204.5
7/6/1993	1993	7	6	36	50	94	72	40	1244.5
7/7/1993	1993	7	7	37	50	97	73.5	41.5	1286
7/8/1993	1993	7	8	38	48	96	72	40	1326
7/9/1993	1993	7	9	39	56	96	76	44	1370
7/10/1993	1993	7	10	40	55	91	73	41	1411
7/11/1993	1993	7	11	41	50	91	70.5	38.5	1449.5
7/12/1993	1993	7	12	42	54	89	71.5	39.5	1489
7/13/1993	1993	7	13	43	56	88	72	40	1529
7/14/1993	1993	7	14	44	50	89	69.5	37.5	1566.5
7/15/1993	1993	7	15	45	40	87	63.5	31.5	1598
7/16/1993	1993	7	16	46	55	88	71.5	39.5	1637.5
7/17/1993	1993	7	17	47	55	87	71	39	1676.5
7/18/1993	1993	7	18	48	52	90	71	39	1715.5
7/19/1993	1993	7	19	49	51	92	71.5	39.5	1755
7/20/1993	1993	7	20	50	55	92	73.5	41.5	1796.5
7/21/1993	1993	7	21	51	54	91	72.5	40.5	1837
7/22/1993	1993	7	22	52	47	90	68.5	36.5	1873.5
7/23/1993	1993	7	23	53	48	92	70	38	1911.5
7/24/1993	1993	7	24	54	54	89	71.5	39.5	1951
7/25/1993	1993	7	25	55	54	94	74	42	1993
7/26/1993	1993	7	26	56	48	95	71.5	39.5	2032.5
7/27/1993	1993	7	27	57	50	93	71.5	39.5	2072
7/28/1993	1993	7	28	58	52	95	73.5	41.5	2113.5
7/29/1993	1993	7	29	59	53	95	74	42	2155.5
7/30/1993	1993	7	30	60	52	89	70.5	38.5	2194
7/31/1993	1993	7	31	61	55	97	76	44	2238
8/1/1993	1993	8	1	62	53	91	72	40	2278
8/2/1993	1993	8	2	63	55	96	75.5	43.5	2321.5
8/3/1993	1993	8	3	64	53	93	73	41	2362.5
8/4/1993	1993	8	4	65	58	84	71	39	2401.5
8/5/1993	1993	8	5	66	57	84	70.5	38.5	2440
8/6/1993	1993	8	6	67	56	91	73.5	41.5	2481.5
8/7/1993	1993	8	7	68	58	84	71	39	2520.5
8/8/1993	1993	8	8	69	50	80	65	33	2553.5
8/9/1993	1993	8	9	70	54	87	70.5	38.5	2592
8/10/1993	1993	8	10	71	57	86	71.5	39.5	2631.5
8/11/1993	1993	8	11	72	52	95	73.5	41.5	2673
8/12/1993	1993	8	12	73	50	91	70.5	38.5	2711.5
8/13/1993	1993	8	13	74	51	81	66	34	2745.5
8/14/1993	1993	8	14	75	51	81	66	34	2779.5
8/15/1993	1993	8	15	76	50	84	67	35	2814.5
8/16/1993	1993	8	16	77	50	82	66	34	2848.5
8/17/1993	1993	8	17	78	56	78	67	35	2883.5
8/18/1993	1993	8	18	79	17	84	50.5	18.5	2902
8/19/1993	1993	8	19	80	54	83	68.5	36.5	2938.5
8/20/1993	1993	8	20	81	56	76	66	34	2972.5
8/21/1993	1993	8	21	82	54	82	68	36	3008.5
8/22/1993	1993	8	22	83	51	83	67	35	3043.5
8/23/1993	1993	8	23	84	50	84	67	35	3078.5
8/24/1993	1993	8	24	85	46	90	68	36	3114.5
8/25/1993	1993	8	25	86	50	86	68	36	3150.5
8/26/1993	1993	8	26	87	53	71	62	30	3180.5
8/27/1993	1993	8	27	88	53	70	61.5	29.5	3210
8/28/1993	1993	8	28	89	54	71	62.5	30.5	3240.5
8/29/1993	1993	8	29	90	52	76	64	32	3272.5
8/30/1993	1993	8	30	91	49	75	62	30	3302.5
8/31/1993	1993	8	31	92	50	70	60	28	3330.5
9/1/1993	1993	9	1	93	50	83	66.5	34.5	3365
9/2/1993	1993	9	2	94	48	87	67.5	35.5	3400.5
9/3/1993	1993	9	3	95	48	86	67	35	3435.5
9/4/1993	1993	9	4	96	43	88	65.5	33.5	3469
9/5/1993	1993	9	5	97	52	82	67	35	3504
9/6/1993	1993	9	6	98	51	81	66	34	3538
9/7/1993	1993	9	7	99	48	80	64	32	3570
9/8/1993	1993	9	8	100	42	84	63	31	3601
9/9/1993	1993	9	9	101	50	86	68	36	3637
9/10/1993	1993	9	10	102	45	86	65.5	33.5	3670.5
9/11/1993	1993	9	11	103	48	84	66	34	3704.5
9/12/1993	1993	9	12	104	48	82	65	33	3737.5
9/13/1993	1993	9	13	105	44	69	56.5	24.5	3762
9/14/1993	1993	9	14	106	38	73	55.5	23.5	3785.5
9/15/1993	1993	9	15	107	39	73	56	24	3809.5
9/16/1993	1993	9	16	108	41	81	61	29	3838.5
9/17/1993	1993	9	17	109	40	81	60.5	28.5	3867
9/18/1993	1993	9	18	110	40	81	60.5	28.5	3895.5
9/19/1993	1993	9	19	111	41	82	61.5	29.5	3925
9/20/1993	1993	9	20	112	37	81	59	27	3952
9/21/1993	1993	9	21	113	38	89	63.5	31.5	3983.5
9/22/1993	1993	9	22	114	44	88	66	34	4017.5
9/23/1993	1993	9	23	115	47	89	68	36	4053.5
9/24/1993	1993	9	24	116	48	89	68.5	36.5	4090
9/25/1993	1993	9	25	117	48	89	68.5	36.5	4126.5
9/26/1993	1993	9	26	118	46	83	64.5	32.5	4159
9/27/1993	1993	9	27	119	35	81	58	26	4185
9/28/1993	1993	9	28	120	31	81	56	24	4209
9/29/1993	1993	9	29	121	31	82	56.5	24.5	4233.5

9/30/1993	1993	9	30	122	38	84	61	29	4262.5
10/1/1993	1993	10	1	123	38	84	61	29	4291.5
10/2/1993	1993	10	2	124	32	84	58	26	4317.5
10/3/1993	1993	10	3	125	39	87	63	31	4348.5
10/4/1993	1993	10	4	126	36	85	60.5	28.5	4377
10/5/1993	1993	10	5	127	39	83	61	29	4406
10/6/1993	1993	10	6	128	37	84	60.5	28.5	4434.5
10/7/1993	1993	10	7	129	41	80	60.5	28.5	4463
10/8/1993	1993	10	8	130	44	73	58.5	26.5	4489.5
10/9/1993	1993	10	9	131	44	73	58.5	26.5	4516
10/10/1993	1993	10	10	132	33	77	55	23	4539
10/11/1993	1993	10	11	133	44	79	61.5	29.5	4568.5
10/12/1993	1993	10	12	134	30	71	50.5	18.5	4587
10/13/1993	1993	10	13	135	30	73	51.5	19.5	4606.5
10/14/1993	1993	10	14	136	33	75	54	22	4628.5
10/15/1993	1993	10	15	137	35	65	50	18	4646.5
10/16/1993	1993	10	16	138	35	73	54	22	4668.5
10/17/1993	1993	10	17	139	35	73	54	22	4690.5
10/18/1993	1993	10	18	140	30	61	45.5	13.5	4704
10/19/1993	1993	10	19	141	34	64	49	17	4721
10/20/1993	1993	10	20	142	28	59	43.5	11.5	4732.5
10/21/1993	1993	10	21	143	24	65	44.5	12.5	4745
10/22/1993	1993	10	22	144	26	67	46.5	14.5	4759.5
10/23/1993	1993	10	23	145	27	67	47	15	4774.5
10/24/1993	1993	10	24	146	24	74	49	17	4791.5
10/25/1993	1993	10	25	147	24	73	48.5	16.5	4808
10/26/1993	1993	10	26	148	36	68	52	20	4828
10/27/1993	1993	10	27	149	30	56	43	11	4839
10/28/1993	1993	10	28	150	17	57	37	5	4844
10/29/1993	1993	10	29	151	36	67	51.5	19.5	4863.5
10/30/1993	1993	10	30	152	15	52	33.5	1.5	4865
10/31/1993	1993	10	31	153	11	53	32	0	4865
11/1/1993	1993	11	1	154	26	64	45	13	4878
11/2/1993	1993	11	2	155	22	66	44	12	4890
11/3/1993	1993	11	3	156	20	59	39.5	7.5	4897.5
11/4/1993	1993	11	4	157	29	68	48.5	16.5	4914
11/5/1993	1993	11	5	158	22	65	43.5	11.5	4925.5
11/6/1993	1993	11	6	159	12	63	37.5	5.5	4931
11/7/1993	1993	11	7	160	10	57	33.5	1.5	4932.5
11/8/1993	1993	11	8	161	16	65	40.5	8.5	4941
11/9/1993	1993	11	9	162	13	67	40	8	4949
11/10/1993	1993	11	10	163	14	63	38.5	6.5	4955.5
11/11/1993	1993	11	11	164	37	65	51	19	4974.5
11/12/1993	1993	11	12	165	35	64	49.5	17.5	4992
11/13/1993	1993	11	13	166	27	53	40	8	5000
11/15/1993	1993	11	15	167	27	50	38.5	6.5	5006.5
11/16/1993	1993	11	16	168	22	37	29.5	-2.5	5004
11/17/1993	1993	11	17	169	20	52	36	4	5008
11/18/1993	1993	11	18	170	26	58	42	10	5018
11/19/1993	1993	11	19	171	21	62	41.5	9.5	5027.5
11/20/1993	1993	11	20	172	12	51	31.5	-0.5	5027
11/21/1993	1993	11	21	173	12	55	33.5	1.5	5028.5
11/22/1993	1993	11	22	174	29	56	42.5	10.5	5039
11/23/1993	1993	11	23	175	44	66	55	23	5062
11/24/1993	1993	11	24	176	35	57	46	14	5076
11/25/1993	1993	11	25	177	9	52	30.5	-1.5	5074.5
11/26/1993	1993	11	26	178	2	35	18.5	-13.5	5061
11/27/1993	1993	11	27	179	9	40	24.5	-7.5	5053.5
11/28/1993	1993	11	28	180	13	52	32.5	0.5	5054
11/29/1993	1993	11	29	181	13	54	33.5	1.5	5055.5
11/30/1993	1993	11	30	182	16	61	38.5	6.5	5062
12/1/1993	1993	12	1	183	16	60	38	6	5068
12/2/1993	1993	12	2	184	11	52	31.5	-0.5	5067.5
12/3/1993	1993	12	3	185	19	57	38	6	5073.5
12/4/1993	1993	12	4	186	8	57	32.5	0.5	5074
12/5/1993	1993	12	5	187	12	60	36	4	5078
12/6/1993	1993	12	6	188	12	58	35	3	5081
12/7/1993	1993	12	7	189	15	62	38.5	6.5	5087.5
12/8/1993	1993	12	8	190	10	62	36	4	5091.5
12/9/1993	1993	12	9	191	16	54	35	3	5094.5
12/10/1993	1993	12	10	192	13	63	38	6	5100.5
12/11/1993	1993	12	11	193	21	62	41.5	9.5	5110
12/12/1993	1993	12	12	194	36	61	48.5	16.5	5126.5
12/13/1993	1993	12	13	195	16	42	29	-3	5123.5
12/14/1993	1993	12	14	196	10	46	28	-4	5119.5
12/15/1993	1993	12	15	197	31	51	41	9	5128.5
12/16/1993	1993	12	16	198	23	44	33.5	1.5	5130
12/17/1993	1993	12	17	199	6	37	21.5	-10.5	5119.5
12/18/1993	1993	12	18	200	10	47	28.5	-3.5	5116
12/19/1993	1993	12	19	201	12	50	31	-1	5115
12/20/1993	1993	12	20	202	17	49	33	1	5116
12/21/1993	1993	12	21	203	4	40	22	-10	5106
12/22/1993	1993	12	22	204	4	44	24	-8	5098
12/23/1993	1993	12	23	205	1	32	16.5	-15.5	5082.5
12/24/1993	1993	12	24	206	9	34	21.5	-10.5	5072
12/25/1993	1993	12	25	207	9	34	21.5	-10.5	5061.5
12/26/1993	1993	12	26	208	4	57	30.5	-1.5	5060
12/27/1993	1993	12	27	209	25	57	41	9	5069
12/28/1993	1993	12	28	210	30	51	40.5	8.5	5077.5
12/29/1993	1993	12	29	211	15	49	32	0	5077.5
12/30/1993	1993	12	30	212	7	50	28.5	-3.5	5074
12/31/1993	1993	12	31	213	12	55	33.5	1.5	5075.5
1/1/1994	1994	1	1	214	6	57	31.5	-0.5	5075

1/2/1994	1994	1	2	215	21	55	38	6	5081
1/3/1994	1994	1	3	216	11	52	31.5	-0.5	5080.5
1/4/1994	1994	1	4	217	14	61	37.5	5.5	5086
1/5/1994	1994	1	5	218	44	66	55	23	5109
1/6/1994	1994	1	6	219	23	66	44.5	12.5	5121.5
1/7/1994	1994	1	7	220	4	37	20.5	-11.5	5110
1/8/1994	1994	1	8	221	2	44	23	-9	5101
1/9/1994	1994	1	9	222	4	50	27	-5	5096
1/10/1994	1994	1	10	223	9	46	27.5	-4.5	5091.5
1/11/1994	1994	1	11	224	3	44	23.5	-8.5	5083
1/12/1994	1994	1	12	225	9	53	31	-1	5082
1/13/1994	1994	1	13	226	7	46	26.5	-5.5	5076.5
1/14/1994	1994	1	14	227	9	54	31.5	-0.5	5076
1/15/1994	1994	1	15	228	15	57	36	4	5080
1/16/1994	1994	1	16	229	9	49	29	-3	5077
1/17/1994	1994	1	17	230	9	49	29	-3	5074
1/18/1994	1994	1	18	231	9	56	32.5	0.5	5074.5
1/19/1994	1994	1	19	232	7	56	31.5	-0.5	5074
1/20/1994	1994	1	20	233	8	63	35.5	3.5	5077.5
1/21/1994	1994	1	21	234	5	63	34	2	5079.5
1/22/1994	1994	1	22	235	5	60	32.5	0.5	5080
1/23/1994	1994	1	23	236	10	62	36	4	5084
1/24/1994	1994	1	24	237	16	51	33.5	1.5	5085.5
1/25/1994	1994	1	25	238	10	62	36	4	5089.5
1/26/1994	1994	1	26	239	25	59	42	10	5099.5
1/27/1994	1994	1	27	240	23	59	41	9	5108.5
1/28/1994	1994	1	28	241	22	42	32	0	5108.5
1/29/1994	1994	1	29	242	22	28	25	-7	5101.5
1/30/1994	1994	1	30	243	14	42	28	-4	5097.5
1/31/1994	1994	1	31	244	0	36	18	-14	5083.5
2/1/1994	1994	2	1	245	-3	28	12.5	-19.5	5064
2/2/1994	1994	2	2	246	-1	36	17.5	-14.5	5049.5
2/3/1994	1994	2	3	247	10	41	25.5	-6.5	5043
2/4/1994	1994	2	4	248	20	55	37.5	5.5	5048.5
2/5/1994	1994	2	5	249	28	52	40	8	5056.5
2/6/1994	1994	2	6	250	9	44	26.5	-5.5	5051
2/7/1994	1994	2	7	251	16	57	36.5	4.5	5055.5
2/8/1994	1994	2	8	252	36	54	45	13	5068.5
2/9/1994	1994	2	9	253	21	46	33.5	1.5	5070
2/10/1994	1994	2	10	254	10	50	30	-2	5068
2/11/1994	1994	2	11	255	24	58	41	9	5077
2/12/1994	1994	2	12	256	13	52	32.5	0.5	5077.5
2/13/1994	1994	2	13	257	-2	40	19	-13	5064.5
2/14/1994	1994	2	14	258	0	44	22	-10	5054.5
2/15/1994	1994	2	15	259	7	57	32	0	5054.5
2/16/1994	1994	2	16	260	11	60	35.5	3.5	5058
2/17/1994	1994	2	17	261	26	66	46	14	5072
2/18/1994	1994	2	18	262	35	67	51	19	5091
2/19/1994	1994	2	19	263	8	54	31	-1	5090
2/20/1994	1994	2	20	264	-3	50	23.5	-8.5	5081.5
2/21/1994	1994	2	21	265	3	41	22	-10	5071.5
2/22/1994	1994	2	22	266	15	51	33	1	5072.5
2/23/1994	1994	2	23	267	6	41	23.5	-8.5	5064
2/24/1994	1994	2	24	268	9	44	26.5	-5.5	5058.5
2/25/1994	1994	2	25	269	16	62	39	7	5065.5
2/26/1994	1994	2	26	270	18	66	42	10	5075.5
2/27/1994	1994	2	27	271	6	65	35.5	3.5	5079
2/28/1994	1994	2	28	272	31	54	42.5	10.5	5089.5
3/1/1994	1994	3	1	273	15	47	31	-1	5088.5
3/2/1994	1994	3	2	274	15	57	36	4	5092.5
3/3/1994	1994	3	3	275	14	68	41	9	5101.5
3/4/1994	1994	3	4	276	20	70	45	13	5114.5
3/5/1994	1994	3	5	277	23	70	46.5	14.5	5129
3/6/1994	1994	3	6	278	19	67	43	11	5140
3/7/1994	1994	3	7	279	26	61	43.5	11.5	5151.5
3/8/1994	1994	3	8	280	31	57	44	12	5163.5
3/9/1994	1994	3	9	281	25	43	34	2	5165.5
3/10/1994	1994	3	10	282	17	54	35.5	3.5	5169
3/11/1994	1994	3	11	283	25	60	42.5	10.5	5179.5
3/12/1994	1994	3	12	284	32	59	45.5	13.5	5193
3/13/1994	1994	3	13	285	5	42	23.5	-8.5	5184.5
3/14/1994	1994	3	14	286	21	54	37.5	5.5	5190
3/15/1994	1994	3	15	287	23	68	45.5	13.5	5203.5
3/16/1994	1994	3	16	288	24	74	49	17	5220.5
3/17/1994	1994	3	17	289	33	76	54.5	22.5	5243
3/18/1994	1994	3	18	290	28	71	49.5	17.5	5260.5
3/19/1994	1994	3	19	291	32	71	51.5	19.5	5280
3/20/1994	1994	3	20	292	37	61	49	17	5297
3/21/1994	1994	3	21	293	21	57	39	7	5304
3/22/1994	1994	3	22	294	24	69	46.5	14.5	5318.5
3/23/1994	1994	3	23	295	43	68	55.5	23.5	5342
3/24/1994	1994	3	24	296	28	65	46.5	14.5	5356.5
3/25/1994	1994	3	25	297	25	65	45	13	5369.5
3/26/1994	1994	3	26	298	27	66	46.5	14.5	5384
3/27/1994	1994	3	27	299	25	55	40	8	5392
3/28/1994	1994	3	28	300	7	53	30	-2	5390
3/29/1994	1994	3	29	301	16	62	39	7	5397
3/30/1994	1994	3	30	302	30	67	48.5	16.5	5413.5
3/31/1994	1994	3	31	303	20	61	40.5	8.5	5422
4/1/1994	1994	4	1	304	23	69	46	14	5436
4/2/1994	1994	4	2	305	25	72	48.5	16.5	5452.5
4/3/1994	1994	4	3	306	28	65	46.5	14.5	5467
4/4/1994	1994	4	4	307	43	75	59	27	5494

4/5/1994	1994	4	5	308	27	66	46.5	14.5	5508.5
4/6/1994	1994	4	6	309	16	52	34	2	5510.5
4/7/1994	1994	4	7	310	26	67	46.5	14.5	5525
4/8/1994	1994	4	8	311	36	67	51.5	19.5	5544.5
4/9/1994	1994	4	9	312	36	57	46.5	14.5	5559
4/10/1994	1994	4	10	313	26	60	43	11	5570
4/11/1994	1994	4	11	314	27	60	43.5	11.5	5581.5
4/12/1994	1994	4	12	315	22	54	38	6	5587.5
4/13/1994	1994	4	13	316	25	66	45.5	13.5	5601
4/14/1994	1994	4	14	317	35	74	54.5	22.5	5623.5
4/15/1994	1994	4	15	318	33	74	53.5	21.5	5645
4/16/1994	1994	4	16	319	25	77	51	19	5664
4/17/1994	1994	4	17	320	36	81	58.5	26.5	5690.5
4/18/1994	1994	4	18	321	37	80	58.5	26.5	5717
4/19/1994	1994	4	19	322	45	83	64	32	5749
4/20/1994	1994	4	20	323	41	79	60	28	5777
4/21/1994	1994	4	21	324	33	78	55.5	23.5	5800.5
4/22/1994	1994	4	22	325	44	80	62	30	5830.5
4/23/1994	1994	4	23	326	42	77	59.5	27.5	5858
4/24/1994	1994	4	24	327	40	79	59.5	27.5	5885.5
4/25/1994	1994	4	25	328	29	75	52	20	5905.5
4/26/1994	1994	4	26	329	35	54	44.5	12.5	5918
4/27/1994	1994	4	27	330	31	61	46	14	5932
4/28/1994	1994	4	28	331	25	57	41	9	5941
4/29/1994	1994	4	29	332	28	77	52.5	20.5	5961.5
4/30/1994	1994	4	30	333	25	59	42	10	5971.5
5/1/1994	1994	5	1	334	37	73	55	23	5994.5
5/2/1994	1994	5	2	335	30	72	51	19	6013.5
5/3/1994	1994	5	3	336	42	70	56	24	6037.5
5/4/1994	1994	5	4	337	32	75	53.5	21.5	6059
5/5/1994	1994	5	5	338	39	82	60.5	28.5	6087.5
5/6/1994	1994	5	6	339	33	86	59.5	27.5	6115
5/7/1994	1994	5	7	340	31	84	57.5	25.5	6140.5
5/8/1994	1994	5	8	341	28	84	56	24	6164.5
5/9/1994	1994	5	9	342	30	82	56	24	6188.5
5/10/1994	1994	5	10	343	36	73	54.5	22.5	6211
5/11/1994	1994	5	11	344	38	68	53	21	6232
5/12/1994	1994	5	12	345	36	69	52.5	20.5	6252.5
5/13/1994	1994	5	13	346	39	66	52.5	20.5	6273
5/14/1994	1994	5	14	347	42	73	57.5	25.5	6298.5
5/15/1994	1994	5	15	348	40	80	60	28	6326.5
5/16/1994	1994	5	16	349	41	82	61.5	29.5	6356
5/17/1994	1994	5	17	350	44	83	63.5	31.5	6387.5
5/18/1994	1994	5	18	351	45	85	65	33	6420.5
5/19/1994	1994	5	19	352	40	85	62.5	30.5	6451
5/20/1994	1994	5	20	353	35	85	60	28	6479
5/21/1994	1994	5	21	354	31	80	55.5	23.5	6502.5
5/22/1994	1994	5	22	355	37	87	62	30	6532.5
5/23/1994	1994	5	23	356	40	87	63.5	31.5	6564
5/24/1994	1994	5	24	357	47	80	63.5	31.5	6595.5
5/25/1994	1994	5	25	358	47	77	62	30	6625.5
5/26/1994	1994	5	26	359	45	69	57	25	6650.5
5/27/1994	1994	5	27	360	44	63	53.5	21.5	6672
5/28/1994	1994	5	28	361	43	75	59	27	6699
5/29/1994	1994	5	29	362	46	83	64.5	32.5	6731.5
5/30/1994	1994	5	30	363	43	82	62.5	30.5	6762
5/31/1994	1994	5	31	364	46	91	68.5	36.5	6798.5
6/1/1994	1994	6	1	1	46	91	68.5	36.5	36.5
6/2/1994	1994	6	2	2	44	90	67	35	71.5
6/3/1994	1994	6	3	3	58	89	73.5	41.5	113
6/4/1994	1994	6	4	4	48	86	67	35	148
6/5/1994	1994	6	5	5	44	87	65.5	33.5	181.5
6/6/1994	1994	6	6	6	39	89	64	32	213.5
6/7/1994	1994	6	7	7	47	92	69.5	37.5	251
6/8/1994	1994	6	8	8	50	86	68	36	287
6/9/1994	1994	6	9	9	42	88	65	33	320
6/10/1994	1994	6	10	10	43	93	68	36	356
6/11/1994	1994	6	11	11	45	93	69	37	393
6/12/1994	1994	6	12	12	50	94	72	40	433
6/13/1994	1994	6	13	13	55	93	74	42	475
6/14/1994	1994	6	14	14	51	93	72	40	515
6/15/1994	1994	6	15	15	57	93	75	43	558
6/16/1994	1994	6	16	16	42	90	66	34	592
6/17/1994	1994	6	17	17	50	91	70.5	38.5	630.5
6/18/1994	1994	6	18	18	51	92	71.5	39.5	670
6/19/1994	1994	6	19	19	56	89	72.5	40.5	710.5
6/20/1994	1994	6	20	20	51	87	69	37	747.5
6/21/1994	1994	6	21	21	56	90	73	41	788.5
6/22/1994	1994	6	22	22	52	87	69.5	37.5	826
6/23/1994	1994	6	23	23	49	88	68.5	36.5	862.5
6/24/1994	1994	6	24	24	47	93	70	38	900.5
6/25/1994	1994	6	25	25	48	99	73.5	41.5	942
6/26/1994	1994	6	26	26	56	101	78.5	46.5	988.5
6/27/1994	1994	6	27	27	58	101	79.5	47.5	1036
6/28/1994	1994	6	28	28	54	100	77	45	1081
6/29/1994	1994	6	29	29	56	99	77.5	45.5	1126.5
6/30/1994	1994	6	30	30	49	98	73.5	41.5	1168
7/1/1994	1994	7	1	31	49	98	73.5	41.5	1209.5
7/2/1994	1994	7	2	32	60	97	78.5	46.5	1256
7/3/1994	1994	7	3	33	59	96	77.5	45.5	1301.5
7/4/1994	1994	7	4	34	53	96	74.5	42.5	1344
7/5/1994	1994	7	5	35	54	94	74	42	1386
7/6/1994	1994	7	6	36	53	93	73	41	1427

7/7/1994	1994	7	7	37	50	91	70.5	38.5	1465.5
7/8/1994	1994	7	8	38	55	91	73	41	1506.5
7/9/1994	1994	7	9	39	54	89	71.5	39.5	1546
7/10/1994	1994	7	10	40	58	96	77	45	1591
7/11/1994	1994	7	11	41	58	98	78	46	1637
7/12/1994	1994	7	12	42	58	98	78	46	1683
7/13/1994	1994	7	13	43	58	98	78	46	1729
7/14/1994	1994	7	14	44	62	96	79	47	1776
7/15/1994	1994	7	15	45	59	95	77	45	1821
7/16/1994	1994	7	16	46	56	97	76.5	44.5	1865.5
7/17/1994	1994	7	17	47	63	99	81	49	1914.5
7/18/1994	1994	7	18	48	58	87	72.5	40.5	1955
7/19/1994	1994	7	19	49	54	89	71.5	39.5	1994.5
7/20/1994	1994	7	20	50	52	93	72.5	40.5	2035
7/21/1994	1994	7	21	51	51	88	69.5	37.5	2072.5
7/22/1994	1994	7	22	52	49	88	68.5	36.5	2109
7/23/1994	1994	7	23	53	50	90	70	38	2147
7/24/1994	1994	7	24	54	45	90	67.5	35.5	2182.5
7/25/1994	1994	7	25	55	44	90	67	35	2217.5
7/26/1994	1994	7	26	56	50	91	70.5	38.5	2256
7/27/1994	1994	7	27	57	57	90	73.5	41.5	2297.5
7/28/1994	1994	7	28	58	53	92	72.5	40.5	2338
7/29/1994	1994	7	29	59	57	88	72.5	40.5	2378.5
7/30/1994	1994	7	30	60	47	92	69.5	37.5	2416
7/31/1994	1994	7	31	61	59	91	75	43	2459
8/1/1994	1994	8	1	62	59	90	74.5	42.5	2501.5
8/2/1994	1994	8	2	63	58	91	74.5	42.5	2544
8/3/1994	1994	8	3	64	52	94	73	41	2585
8/4/1994	1994	8	4	65	55	96	75.5	43.5	2628.5
8/5/1994	1994	8	5	66	52	92	72	40	2668.5
8/6/1994	1994	8	6	67	56	89	72.5	40.5	2709
8/7/1994	1994	8	7	68	56	93	74.5	42.5	2751.5
8/8/1994	1994	8	8	69	58	98	78	46	2797.5
8/9/1994	1994	8	9	70	59	89	74	42	2839.5
8/10/1994	1994	8	10	71	59	86	72.5	40.5	2880
8/11/1994	1994	8	11	72	60	87	73.5	41.5	2921.5
8/12/1994	1994	8	12	73	58	89	73.5	41.5	2963
8/13/1994	1994	8	13	74	59	93	76	44	3007
8/14/1994	1994	8	14	75	62	97	79.5	47.5	3054.5
8/15/1994	1994	8	15	76	55	89	72	40	3094.5
8/16/1994	1994	8	16	77	45	83	64	32	3126.5
8/17/1994	1994	8	17	78	57	91	74	42	3168.5
8/18/1994	1994	8	18	79	57	96	76.5	44.5	3213
8/19/1994	1994	8	19	80	58	94	76	44	3257
8/20/1994	1994	8	20	81	48	86	67	35	3292
8/21/1994	1994	8	21	82	54	80	67	35	3327
8/22/1994	1994	8	22	83	55	82	68.5	36.5	3363.5
8/23/1994	1994	8	23	84	51	85	68	36	3399.5
8/24/1994	1994	8	24	85	53	91	72	40	3439.5
8/25/1994	1994	8	25	86	59	87	73	41	3480.5
8/26/1994	1994	8	26	87	56	86	71	39	3519.5
8/27/1994	1994	8	27	88	55	89	72	40	3559.5
8/28/1994	1994	8	28	89	49	92	70.5	38.5	3598
8/29/1994	1994	8	29	90	57	88	72.5	40.5	3638.5
8/30/1994	1994	8	30	91	45	85	65	33	3671.5
8/31/1994	1994	8	31	92	44	84	64	32	3703.5
9/1/1994	1994	9	1	93	45	85	65	33	3736.5
9/2/1994	1994	9	2	94	55	83	69	37	3773.5
9/3/1994	1994	9	3	95	59	84	71.5	39.5	3813
9/4/1994	1994	9	4	96	53	63	58	26	3839
9/5/1994	1994	9	5	97	50	82	66	34	3873
9/6/1994	1994	9	6	98	53	87	70	38	3911
9/7/1994	1994	9	7	99	52	82	67	35	3946
9/8/1994	1994	9	8	100	47	86	66.5	34.5	3980.5
9/9/1994	1994	9	9	101	49	88	68.5	36.5	4017
9/10/1994	1994	9	10	102	50	89	69.5	37.5	4054.5
9/11/1994	1994	9	11	103	56	85	70.5	38.5	4093
9/12/1994	1994	9	12	104	53	85	69	37	4130
9/13/1994	1994	9	13	105	55	81	68	36	4166
9/14/1994	1994	9	14	106	51	75	63	31	4197
9/15/1994	1994	9	15	107	37	76	56.5	24.5	4221.5
9/16/1994	1994	9	16	108	38	76	57	25	4246.5
9/17/1994	1994	9	17	109	49	76	62.5	30.5	4277
9/18/1994	1994	9	18	110	43	76	59.5	27.5	4304.5
9/19/1994	1994	9	19	111	42	77	59.5	27.5	4332
9/20/1994	1994	9	20	112	52	81	66.5	34.5	4366.5
9/21/1994	1994	9	21	113	44	76	60	28	4394.5
9/22/1994	1994	9	22	114	39	76	57.5	25.5	4420
9/23/1994	1994	9	23	115	35	80	57.5	25.5	4445.5
9/24/1994	1994	9	24	116	36	80	58	26	4471.5
9/25/1994	1994	9	25	117	35	83	59	27	4498.5
9/26/1994	1994	9	26	118	37	83	60	28	4526.5
9/27/1994	1994	9	27	119	36	82	59	27	4553.5
9/28/1994	1994	9	28	120	36	86	61	29	4582.5
9/29/1994	1994	9	29	121	50	85	67.5	35.5	4618
9/30/1994	1994	9	30	122	50	85	67.5	35.5	4653.5
10/1/1994	1994	10	1	123	53	79	66	34	4687.5
10/2/1994	1994	10	2	124	36	76	56	24	4711.5
10/3/1994	1994	10	3	125	35	76	55.5	23.5	4735
10/4/1994	1994	10	4	126	50	72	61	29	4764
10/5/1994	1994	10	5	127	54	75	64.5	32.5	4796.5
10/6/1994	1994	10	6	128	39	70	54.5	22.5	4819
10/7/1994	1994	10	7	129	38	65	51.5	19.5	4838.5

10/8/1994	1994	10	8	130	28	67	47.5	15.5	4854
10/9/1994	1994	10	9	131	22	68	45	13	4867
10/10/1994	1994	10	10	132	28	71	49.5	17.5	4884.5
10/11/1994	1994	10	11	133	29	74	51.5	19.5	4904
10/12/1994	1994	10	12	134	29	74	51.5	19.5	4923.5
10/13/1994	1994	10	13	135	32	75	53.5	21.5	4945
10/14/1994	1994	10	14	136	46	72	59	27	4972
10/15/1994	1994	10	15	137	35	46	40.5	8.5	4980.5
10/16/1994	1994	10	16	138	33	55	44	12	4992.5
10/17/1994	1994	10	17	139	33	45	39	7	4999.5
10/18/1994	1994	10	18	140	26	53	39.5	7.5	5007
10/19/1994	1994	10	19	141	31	62	46.5	14.5	5021.5
10/20/1994	1994	10	20	142	30	66	48	16	5037.5
10/21/1994	1994	10	21	143	30	70	50	18	5055.5
10/22/1994	1994	10	22	144	34	71	52.5	20.5	5076
10/23/1994	1994	10	23	145	30	70	50	18	5094
10/24/1994	1994	10	24	146	34	71	52.5	20.5	5114.5
10/25/1994	1994	10	25	147	33	69	51	19	5133.5
10/26/1994	1994	10	26	148	40	62	51	19	5152.5
10/27/1994	1994	10	27	149	30	63	46.5	14.5	5167
10/28/1994	1994	10	28	150	34	70	52	20	5187
10/29/1994	1994	10	29	151	32	77	54.5	22.5	5209.5
10/30/1994	1994	10	30	152	34	74	54	22	5231.5
10/31/1994	1994	10	31	153	21	74	47.5	15.5	5247
11/1/1994	1994	11	1	154	25	70	47.5	15.5	5262.5
11/2/1994	1994	11	2	155	40	72	56	24	5286.5
11/3/1994	1994	11	3	156	39	67	53	21	5307.5
11/4/1994	1994	11	4	157	26	50	38	6	5313.5
11/5/1994	1994	11	5	158	25	49	37	5	5318.5
11/6/1994	1994	11	6	159	28	62	45	13	5331.5
11/7/1994	1994	11	7	160	35	68	51.5	19.5	5351
11/8/1994	1994	11	8	161	37	66	51.5	19.5	5370.5
11/9/1994	1994	11	9	162	22	58	40	8	5378.5
11/10/1994	1994	11	10	163	36	60	48	16	5394.5
11/11/1994	1994	11	11	164	36	61	48.5	16.5	5411
11/12/1994	1994	11	12	165	41	43	42	10	5421
11/13/1994	1994	11	13	166	32	53	42.5	10.5	5431.5
11/14/1994	1994	11	14	167	22	47	34.5	2.5	5434
11/15/1994	1994	11	15	168	15	44	29.5	-2.5	5431.5
11/16/1994	1994	11	16	169	33	47	40	8	5439.5
11/17/1994	1994	11	17	170	28	54	41	9	5448.5
11/18/1994	1994	11	18	171	25	44	34.5	2.5	5451
11/19/1994	1994	11	19	172	27	58	42.5	10.5	5461.5
11/20/1994	1994	11	20	173	20	42	31	-1	5460.5
11/21/1994	1994	11	21	174	16	45	30.5	-1.5	5459
11/22/1994	1994	11	22	175	20	59	39.5	7.5	5466.5
11/23/1994	1994	11	23	176	17	47	32	0	5466.5
11/24/1994	1994	11	24	177	19	44	31.5	-0.5	5466
11/25/1994	1994	11	25	178	28	64	46	14	5480
11/26/1994	1994	11	26	179	28	57	42.5	10.5	5490.5
11/27/1994	1994	11	27	180	15	55	35	3	5493.5
11/28/1994	1994	11	28	181	8	35	21.5	-10.5	5483
11/29/1994	1994	11	29	182	11	37	24	-8	5475
11/30/1994	1994	11	30	183	13	37	25	-7	5468
12/1/1994	1994	12	1	184	13	50	31.5	-0.5	5467.5
12/2/1994	1994	12	2	185	15	62	38.5	6.5	5474
12/3/1994	1994	12	3	186	15	63	39	7	5481
12/4/1994	1994	12	4	187	18	60	39	7	5488
12/5/1994	1994	12	5	188	33	58	45.5	13.5	5501.5
12/6/1994	1994	12	6	189	38	45	41.5	9.5	5511
12/7/1994	1994	12	7	190	23	55	39	7	5518
12/8/1994	1994	12	8	191	29	56	42.5	10.5	5528.5
12/9/1994	1994	12	9	192	9	48	28.5	-3.5	5525
12/10/1994	1994	12	10	193	8	58	33	1	5526
12/11/1994	1994	12	11	194	22	44	33	1	5527
12/12/1994	1994	12	12	195	16	50	33	1	5528
12/13/1994	1994	12	13	196	15	50	32.5	0.5	5528.5
12/14/1994	1994	12	14	197	23	53	38	6	5534.5
12/15/1994	1994	12	15	198	12	47	29.5	-2.5	5532
12/16/1994	1994	12	16	199	11	49	30	-2	5530
12/17/1994	1994	12	17	200	13	50	31.5	-0.5	5529.5
12/18/1994	1994	12	18	201	12	58	35	3	5532.5
12/19/1994	1994	12	19	202	14	58	36	4	5536.5
12/20/1994	1994	12	20	203	14	58	36	4	5540.5
12/21/1994	1994	12	21	204	14	53	33.5	1.5	5542
12/22/1994	1994	12	22	205	14	60	37	5	5547
12/23/1994	1994	12	23	206	37	60	48.5	16.5	5563.5
12/24/1994	1994	12	24	207	34	60	47	15	5578.5
12/25/1994	1994	12	25	208	24	60	42	10	5588.5
12/26/1994	1994	12	26	209	25	51	38	6	5594.5
12/27/1994	1994	12	27	210	20	56	38	6	5600.5
12/28/1994	1994	12	28	211	15	54	34.5	2.5	5603
12/29/1994	1994	12	29	212	15	58	36.5	4.5	5607.5
12/30/1994	1994	12	30	213	20	52	36	4	5611.5
12/31/1994	1994	12	31	214	19	39	29	-3	5608.5
1/1/1995	1995	1	1	215	14	53	33.5	1.5	5610
1/2/1995	1995	1	2	216	25	46	35.5	3.5	5613.5
1/3/1995	1995	1	3	217	16	48	32	0	5613.5
1/4/1995	1995	1	4	218	28	48	38	6	5619.5
1/5/1995	1995	1	5	219	26	38	32	0	5619.5
1/6/1995	1995	1	6	220	29	42	35.5	3.5	5623
1/7/1995	1995	1	7	221	11	40	25.5	-6.5	5616.5
1/8/1995	1995	1	8	222	31	47	39	7	5623.5

1/9/1995	1995	1	9	223	21	54	37.5	5.5	5629
1/10/1995	1995	1	10	224	19	53	36	4	5633
1/11/1995	1995	1	11	225	21	61	41	9	5642
1/12/1995	1995	1	12	226	34	54	44	12	5654
1/13/1995	1995	1	13	227	26	52	39	7	5661
1/14/1995	1995	1	14	228	21	49	35	3	5664
1/15/1995	1995	1	15	229	27	64	45.5	13.5	5677.5
1/16/1995	1995	1	16	230	27	58	42.5	10.5	5688
1/17/1995	1995	1	17	231	21	40	30.5	-1.5	5686.5
1/18/1995	1995	1	18	232	9	38	23.5	-8.5	5678
1/19/1995	1995	1	19	233	11	42	26.5	-5.5	5672.5
1/20/1995	1995	1	20	234	16	50	33	1	5673.5
1/21/1995	1995	1	21	235	24	51	37.5	5.5	5679
1/22/1995	1995	1	22	236	20	48	34	2	5681
1/23/1995	1995	1	23	237	12	43	27.5	-4.5	5676.5
1/24/1995	1995	1	24	238	27	49	38	6	5682.5
1/25/1995	1995	1	25	239	22	53	37.5	5.5	5688
1/26/1995	1995	1	26	240	24	55	39.5	7.5	5695.5
1/27/1995	1995	1	27	241	32	46	39	7	5702.5
1/28/1995	1995	1	28	242	17	48	32.5	0.5	5703
1/29/1995	1995	1	29	243	15	48	31.5	-0.5	5702.5
1/30/1995	1995	1	30	244	10	40	25	-7	5695.5
1/31/1995	1995	1	31	245	16	48	32	0	5695.5
2/1/1995	1995	2	1	246	25	61	43	11	5706.5
2/2/1995	1995	2	2	247	22	61	41.5	9.5	5716
2/3/1995	1995	2	3	248	25	64	44.5	12.5	5728.5
2/4/1995	1995	2	4	249	26	62	44	12	5740.5
2/5/1995	1995	2	5	250	13	67	40	8	5748.5
2/6/1995	1995	2	6	251	12	67	39.5	7.5	5756
2/7/1995	1995	2	7	252	16	67	41.5	9.5	5765.5
2/8/1995	1995	2	8	253	30	64	47	15	5780.5
2/9/1995	1995	2	9	254	26	57	41.5	9.5	5790
2/10/1995	1995	2	10	255	20	59	39.5	7.5	5797.5
2/11/1995	1995	2	11	256	27	55	41	9	5806.5
2/12/1995	1995	2	12	257	35	53	44	12	5818.5
2/13/1995	1995	2	13	258	28	58	43	11	5829.5
2/14/1995	1995	2	14	259	33	56	44.5	12.5	5842
2/15/1995	1995	2	15	260	35	59	47	15	5857
2/16/1995	1995	2	16	261	26	54	40	8	5865
2/17/1995	1995	2	17	262	18	55	36.5	4.5	5869.5
2/18/1995	1995	2	18	263	18	59	38.5	6.5	5876
2/19/1995	1995	2	19	264	19	62	40.5	8.5	5884.5
2/20/1995	1995	2	20	265	22	68	45	13	5897.5
2/21/1995	1995	2	21	266	24	69	46.5	14.5	5912
2/22/1995	1995	2	22	267	27	68	47.5	15.5	5927.5
2/23/1995	1995	2	23	268	27	68	47.5	15.5	5943
2/24/1995	1995	2	24	269	37	65	51	19	5962
2/25/1995	1995	2	25	270	32	60	46	14	5976
2/26/1995	1995	2	26	271	33	60	46.5	14.5	5990.5
2/27/1995	1995	2	27	272	27	57	42	10	6000.5
2/28/1995	1995	2	28	273	35	64	49.5	17.5	6018
3/1/1995	1995	3	1	274	37	59	48	16	6034
3/2/1995	1995	3	2	275	33	53	43	11	6045
3/3/1995	1995	3	3	276	37	57	47	15	6060
3/4/1995	1995	3	4	277	41	58	49.5	17.5	6077.5
3/5/1995	1995	3	5	278	38	58	48	16	6093.5
3/6/1995	1995	3	6	279	42	56	49	17	6110.5
3/7/1995	1995	3	7	280	17	54	35.5	3.5	6114
3/8/1995	1995	3	8	281	14	52	33	1	6115
3/9/1995	1995	3	9	282	28	62	45	13	6128
3/10/1995	1995	3	10	283	21	69	45	13	6141
3/11/1995	1995	3	11	284	28	73	50.5	18.5	6159.5
3/12/1995	1995	3	12	285	31	69	50	18	6177.5
3/13/1995	1995	3	13	286	24	56	40	8	6185.5
3/14/1995	1995	3	14	287	23	64	43.5	11.5	6197
3/15/1995	1995	3	15	288	31	71	51	19	6216
3/16/1995	1995	3	16	289	27	69	48	16	6232
3/17/1995	1995	3	17	290	40	70	55	23	6255
3/18/1995	1995	3	18	291	24	62	43	11	6266
3/19/1995	1995	3	19	292	34	72	53	21	6287
3/20/1995	1995	3	20	293	33	77	55	23	6310
3/21/1995	1995	3	21	294	38	71	54.5	22.5	6332.5
3/22/1995	1995	3	22	295	42	77	59.5	27.5	6360
3/23/1995	1995	3	23	296	22	62	42	10	6370
3/24/1995	1995	3	24	297	33	72	52.5	20.5	6390.5
3/25/1995	1995	3	25	298	27	63	45	13	6403.5
3/26/1995	1995	3	26	299	16	45	30.5	-1.5	6402
3/27/1995	1995	3	27	300	13	54	33.5	1.5	6403.5
3/28/1995	1995	3	28	301	20	59	39.5	7.5	6411
3/29/1995	1995	3	29	302	24	52	38	6	6417
3/30/1995	1995	3	30	303	16	56	36	4	6421
3/31/1995	1995	3	31	304	14	53	33.5	1.5	6422.5
4/1/1995	1995	4	1	305	15	62	38.5	6.5	6429
4/2/1995	1995	4	2	306	31	64	47.5	15.5	6444.5
4/3/1995	1995	4	3	307	25	60	42.5	10.5	6455
4/4/1995	1995	4	4	308	22	64	43	11	6466
4/5/1995	1995	4	5	309	24	69	46.5	14.5	6480.5
4/6/1995	1995	4	6	310	33	75	54	22	6502.5
4/7/1995	1995	4	7	311	35	76	55.5	23.5	6526
4/8/1995	1995	4	8	312	32	73	52.5	20.5	6546.5
4/9/1995	1995	4	9	313	44	74	59	27	6573.5
4/10/1995	1995	4	10	314	28	63	45.5	13.5	6587
4/11/1995	1995	4	11	315	20	51	35.5	3.5	6590.5

4/12/1995	1995	4	12	316	22	62	42	10	6600.5
4/13/1995	1995	4	13	317	33	74	53.5	21.5	6622
4/14/1995	1995	4	14	318	47	78	62.5	30.5	6652.5
4/15/1995	1995	4	15	319	37	70	53.5	21.5	6674
4/16/1995	1995	4	16	320	32	69	50.5	18.5	6692.5
4/17/1995	1995	4	17	321	30	72	51	19	6711.5
4/18/1995	1995	4	18	322	23	47	35	3	6714.5
4/19/1995	1995	4	19	323	32	62	47	15	6729.5
4/20/1995	1995	4	20	324	29	51	40	8	6737.5
4/21/1995	1995	4	21	325	33	54	43.5	11.5	6749
4/22/1995	1995	4	22	326	24	56	40	8	6757
4/23/1995	1995	4	23	327	28	52	40	8	6765
4/24/1995	1995	4	24	328	25	63	44	12	6777
4/25/1995	1995	4	25	329	21	63	42	10	6787
4/26/1995	1995	4	26	330	40	74	57	25	6812
4/27/1995	1995	4	27	331	40	75	57.5	25.5	6837.5
4/28/1995	1995	4	28	332	39	75	57	25	6862.5
4/29/1995	1995	4	29	333	41	76	58.5	26.5	6889
4/30/1995	1995	4	30	334	51	80	65.5	33.5	6922.5
5/1/1995	1995	5	1	335	40	76	58	26	6948.5
5/2/1995	1995	5	2	336	47	73	60	28	6976.5
5/3/1995	1995	5	3	337	36	73	54.5	22.5	6999
5/4/1995	1995	5	4	338	31	72	51.5	19.5	7018.5
5/5/1995	1995	5	5	339	48	78	63	31	7049.5
5/6/1995	1995	5	6	340	30	73	51.5	19.5	7069
5/7/1995	1995	5	7	341	32	65	48.5	16.5	7085.5
5/8/1995	1995	5	8	342	32	48	40	8	7093.5
5/9/1995	1995	5	9	343	37	63	50	18	7111.5
5/10/1995	1995	5	10	344	31	74	52.5	20.5	7132
5/11/1995	1995	5	11	345	32	71	51.5	19.5	7151.5
5/12/1995	1995	5	12	346	48	78	63	31	7182.5
5/13/1995	1995	5	13	347	45	75	60	28	7210.5
5/14/1995	1995	5	14	348	41	76	58.5	26.5	7237
5/15/1995	1995	5	15	349	34	84	59	27	7264
5/16/1995	1995	5	16	350	46	87	66.5	34.5	7298.5
5/17/1995	1995	5	17	351	37	81	59	27	7325.5
5/18/1995	1995	5	18	352	36	60	48	16	7341.5
5/19/1995	1995	5	19	353	34	74	54	22	7363.5
5/20/1995	1995	5	20	354	42	81	61.5	29.5	7393
5/21/1995	1995	5	21	355	43	82	62.5	30.5	7423.5
5/22/1995	1995	5	22	356	46	84	65	33	7456.5
5/23/1995	1995	5	23	357	34	85	59.5	27.5	7484
5/24/1995	1995	5	24	358	44	74	59	27	7511
5/25/1995	1995	5	25	359	35	73	54	22	7533
5/26/1995	1995	5	26	360	32	79	55.5	23.5	7556.5
5/27/1995	1995	5	27	361	39	79	59	27	7583.5
5/28/1995	1995	5	28	362	45	75	60	28	7611.5
5/29/1995	1995	5	29	363	40	69	54.5	22.5	7634
5/30/1995	1995	5	30	364	35	68	51.5	19.5	7653.5
5/31/1995	1995	5	31	365	35	75	55	23	7676.5
6/1/1995	1995	6	1	1	38	80	59	27	27
6/2/1995	1995	6	2	2	46	85	65.5	33.5	60.5
6/3/1995	1995	6	3	3	36	85	60.5	28.5	89
6/4/1995	1995	6	4	4	40	76	58	26	115
6/5/1995	1995	6	5	5	39	79	59	27	142
6/6/1995	1995	6	6	6	43	85	64	32	174
6/7/1995	1995	6	7	7	46	85	65.5	33.5	207.5
6/8/1995	1995	6	8	8	46	82	64	32	239.5
6/9/1995	1995	6	9	9	34	81	57.5	25.5	265
6/10/1995	1995	6	10	10	38	82	60	28	293
6/11/1995	1995	6	11	11	39	80	59.5	27.5	320.5
6/12/1995	1995	6	12	12	43	86	64.5	32.5	353
6/13/1995	1995	6	13	13	45	91	68	36	389
6/14/1995	1995	6	14	14	49	94	71.5	39.5	428.5
6/15/1995	1995	6	15	15	51	90	70.5	38.5	467
6/16/1995	1995	6	16	16	46	84	65	33	500
6/17/1995	1995	6	17	17	60	85	72.5	40.5	540.5
6/18/1995	1995	6	18	18	37	84	60.5	28.5	569
6/19/1995	1995	6	19	19	42	89	65.5	33.5	602.5
6/20/1995	1995	6	20	20	43	92	67.5	35.5	638
6/21/1995	1995	6	21	21	45	92	68.5	36.5	674.5
6/22/1995	1995	6	22	22	42	91	66.5	34.5	709
6/23/1995	1995	6	23	23	44	88	66	34	743
6/24/1995	1995	6	24	24	44	91	67.5	35.5	778.5
6/25/1995	1995	6	25	25	45	89	67	35	813.5
6/26/1995	1995	6	26	26	46	88	67	35	848.5
6/27/1995	1995	6	27	27	46	84	65	33	881.5
6/28/1995	1995	6	28	28	46	86	66	34	915.5
6/29/1995	1995	6	29	29	47	86	66.5	34.5	950
6/30/1995	1995	6	30	30	50	90	70	38	988
7/1/1995	1995	7	1	31	50	75	62.5	30.5	1018.5
7/2/1995	1995	7	2	32	42	85	63.5	31.5	1050
7/3/1995	1995	7	3	33	59	84	71.5	39.5	1089.5
7/4/1995	1995	7	4	34	49	86	67.5	35.5	1125
7/5/1995	1995	7	5	35	40	83	61.5	29.5	1154.5
7/6/1995	1995	7	6	36	42	87	64.5	32.5	1187
7/7/1995	1995	7	7	37	56	95	75.5	43.5	1230.5
7/8/1995	1995	7	8	38	53	96	74.5	42.5	1273
7/9/1995	1995	7	9	39		99	99	67	1340
7/10/1995	1995	7	10	40	53	95	74	42	1382
7/11/1995	1995	7	11	41	57	98	77.5	45.5	1427.5
7/12/1995	1995	7	12	42	56	95	75.5	43.5	1471
7/13/1995	1995	7	13	43	55	96	75.5	43.5	1514.5

7/14/1995	1995	7	14	44	59	92	75.5	43.5	1558
7/15/1995	1995	7	15	45	48	78	63	31	1589
7/16/1995	1995	7	16	46	48	88	68	36	1625
7/17/1995	1995	7	17	47	59	84	71.5	39.5	1664.5
7/18/1995	1995	7	18	48	57	78	67.5	35.5	1700
7/19/1995	1995	7	19	49	57	80	68.5	36.5	1736.5
7/20/1995	1995	7	20	50	50	87	68.5	36.5	1773
7/21/1995	1995	7	21	51	62	92	77	45	1818
7/22/1995	1995	7	22	52	62	87	74.5	42.5	1860.5
7/23/1995	1995	7	23	53	51	94	72.5	40.5	1901
7/24/1995	1995	7	24	54	46	91	68.5	36.5	1937.5
7/25/1995	1995	7	25	55	46	94	70	38	1975.5
7/26/1995	1995	7	26	56	46	97	71.5	39.5	2015
7/27/1995	1995	7	27	57	47	99	73	41	2056
7/28/1995	1995	7	28	58	52	102	77	45	2101
7/29/1995	1995	7	29	59	54	102	78	46	2147
7/30/1995	1995	7	30	60	54	99	76.5	44.5	2191.5
7/31/1995	1995	7	31	61	55	94	74.5	42.5	2234
8/1/1995	1995	8	1	62	58	98	78	46	2280
8/2/1995	1995	8	2	63	57	94	75.5	43.5	2323.5
8/3/1995	1995	8	3	64	56	92	74	42	2365.5
8/4/1995	1995	8	4	65	68	98	83	51	2416.5
8/5/1995	1995	8	5	66	52	96	74	42	2458.5
8/6/1995	1995	8	6	67	57	95	76	44	2502.5
8/7/1995	1995	8	7	68	62	96	79	47	2549.5
8/8/1995	1995	8	8	69	55	97	76	44	2593.5
8/9/1995	1995	8	9	70	60	94	77	45	2638.5
8/10/1995	1995	8	10	71	60	94	77	45	2683.5
8/11/1995	1995	8	11	72	59	92	75.5	43.5	2727
8/12/1995	1995	8	12	73	58	95	76.5	44.5	2771.5
8/13/1995	1995	8	13	74	56	90	73	41	2812.5
8/14/1995	1995	8	14	75	57	90	73.5	41.5	2854
8/15/1995	1995	8	15	76	54	78	66	34	2888
8/16/1995	1995	8	16	77	63	90	76.5	44.5	2932.5
8/17/1995	1995	8	17	78	58	89	73.5	41.5	2974
8/18/1995	1995	8	18	79	56	87	71.5	39.5	3013.5
8/19/1995	1995	8	19	80	56	87	71.5	39.5	3053
8/20/1995	1995	8	20	81	56	85	70.5	38.5	3091.5
8/21/1995	1995	8	21	82	57	85	71	39	3130.5
8/22/1995	1995	8	22	83	53	85	69	37	3167.5
8/23/1995	1995	8	23	84	53	84	68.5	36.5	3204
8/24/1995	1995	8	24	85	56	88	72	40	3244
8/25/1995	1995	8	25	86	56	82	69	37	3281
8/26/1995	1995	8	26	87	57	89	73	41	3322
8/27/1995	1995	8	27	88	58	87	72.5	40.5	3362.5
8/28/1995	1995	8	28	89	58	87	72.5	40.5	3403
8/29/1995	1995	8	29	90	57	89	73	41	3444
8/30/1995	1995	8	30	91	55	90	72.5	40.5	3484.5
8/31/1995	1995	8	31	92	56	94	75	43	3527.5
9/1/1995	1995	9	1	93	54	94	74	42	3569.5
9/2/1995	1995	9	2	94	49	93	71	39	3608.5
9/3/1995	1995	9	3	95	49	93	71	39	3647.5
9/4/1995	1995	9	4	96	50	92	71	39	3686.5
9/5/1995	1995	9	5	97	52	94	73	41	3727.5
9/6/1995	1995	9	6	98	53	87	70	38	3765.5
9/7/1995	1995	9	7	99	54	82	68	36	3801.5
9/8/1995	1995	9	8	100	54	87	70.5	38.5	3840
9/9/1995	1995	9	9	101	50	80	65	33	3873
9/10/1995	1995	9	10	102	46	82	64	32	3905
9/11/1995	1995	9	11	103	45	85	65	33	3938
9/12/1995	1995	9	12	104	39	85	62	30	3968
9/13/1995	1995	9	13	105	45	86	65.5	33.5	4001.5
9/14/1995	1995	9	14	106	49	83	66	34	4035.5
9/15/1995	1995	9	15	107	41	72	56.5	24.5	4060
9/16/1995	1995	9	16	108	47	82	64.5	32.5	4092.5
9/17/1995	1995	9	17	109	45	82	63.5	31.5	4124
9/18/1995	1995	9	18	110	39	80	59.5	27.5	4151.5
9/19/1995	1995	9	19	111	42	80	61	29	4180.5
9/20/1995	1995	9	20	112	44	84	64	32	4212.5
9/21/1995	1995	9	21	113	36	75	55.5	23.5	4236
9/22/1995	1995	9	22	114	37	70	53.5	21.5	4257.5
9/23/1995	1995	9	23	115	45	81	63	31	4288.5
9/24/1995	1995	9	24	116	36	81	58.5	26.5	4315
9/25/1995	1995	9	25	117	40	79	59.5	27.5	4342.5
9/26/1995	1995	9	26	118	41	79	60	28	4370.5
9/27/1995	1995	9	27	119	51	83	67	35	4405.5
9/28/1995	1995	9	28	120	48	83	65.5	33.5	4439
9/29/1995	1995	9	29	121	35	73	54	22	4461
9/30/1995	1995	9	30	122	33	73	53	21	4482
10/1/1995	1995	10	1	123	34	77	55.5	23.5	4505.5
10/2/1995	1995	10	2	124	32	75	53.5	21.5	4527
10/3/1995	1995	10	3	125	45	81	63	31	4558
10/4/1995	1995	10	4	126	28	75	51.5	19.5	4577.5
10/5/1995	1995	10	5	127	21	75	48	16	4593.5
10/6/1995	1995	10	6	128	30	74	52	20	4613.5
10/7/1995	1995	10	7	129	29	79	54	22	4635.5
10/8/1995	1995	10	8	130	26	79	52.5	20.5	4656
10/9/1995	1995	10	9	131	27	78	52.5	20.5	4676.5
10/10/1995	1995	10	10	132	27	79	53	21	4697.5
10/11/1995	1995	10	11	133	33	83	58	26	4723.5
10/12/1995	1995	10	12	134	34	83	58.5	26.5	4750
10/13/1995	1995	10	13	135	25	77	51	19	4769
10/14/1995	1995	10	14	136	25	79	52	20	4789

10/15/1995	1995	10	15	137	31	83	57	25	4814
10/16/1995	1995	10	16	138	32	81	56.5	24.5	4838.5
10/17/1995	1995	10	17	139	29	78	53.5	21.5	4860
10/18/1995	1995	10	18	140	32	81	56.5	24.5	4884.5
10/19/1995	1995	10	19	141	24	77	50.5	18.5	4903
10/20/1995	1995	10	20	142	24	77	50.5	18.5	4921.5
10/21/1995	1995	10	21	143	35	79	57	25	4946.5
10/22/1995	1995	10	22	144	23	68	45.5	13.5	4960
10/23/1995	1995	10	23	145	23	61	42	10	4970
10/24/1995	1995	10	24	146	21	72	46.5	14.5	4984.5
10/25/1995	1995	10	25	147	22	73	47.5	15.5	5000
10/26/1995	1995	10	26	148	23	75	49	17	5017
10/27/1995	1995	10	27	149	26	78	52	20	5037
10/28/1995	1995	10	28	150	30	76	53	21	5058
10/29/1995	1995	10	29	151	28	72	50	18	5076
10/30/1995	1995	10	30	152	28	77	52.5	20.5	5096.5
10/31/1995	1995	10	31	153	44	69	56.5	24.5	5121
11/1/1995	1995	11	1	154	37	58	47.5	15.5	5136.5
11/2/1995	1995	11	2	155	19	60	39.5	7.5	5144
11/3/1995	1995	11	3	156	20	62	41	9	5153
11/4/1995	1995	11	4	157	21	56	38.5	6.5	5159.5
11/5/1995	1995	11	5	158	22	54	38	6	5165.5
11/6/1995	1995	11	6	159	31	56	43.5	11.5	5177
11/7/1995	1995	11	7	160	25	65	45	13	5190
11/8/1995	1995	11	8	161	24	72	48	16	5206
11/9/1995	1995	11	9	162	45	68	56.5	24.5	5230.5
11/10/1995	1995	11	10	163	18	68	43	11	5241.5
11/11/1995	1995	11	11	164	20	64	42	10	5251.5
11/12/1995	1995	11	12	165	24	74	49	17	5268.5
11/13/1995	1995	11	13	166	25	75	50	18	5286.5
11/14/1995	1995	11	14	167	23	67	45	13	5299.5
11/15/1995	1995	11	15	168	23	65	44	12	5311.5
11/16/1995	1995	11	16	169	24	70	47	15	5326.5
11/17/1995	1995	11	17	170	20	68	44	12	5338.5
11/18/1995	1995	11	18	171	20	68	44	12	5350.5
11/19/1995	1995	11	19	172	20	69	44.5	12.5	5363
11/20/1995	1995	11	20	173	20	72	46	14	5377
11/21/1995	1995	11	21	174	20	67	43.5	11.5	5388.5
11/22/1995	1995	11	22	175	19	70	44.5	12.5	5401
11/23/1995	1995	11	23	176	16	70	43	11	5412
11/24/1995	1995	11	24	177	19	70	44.5	12.5	5424.5
11/25/1995	1995	11	25	178	31	73	52	20	5444.5
11/26/1995	1995	11	26	179	16	67	41.5	9.5	5454
11/27/1995	1995	11	27	180	9	45	27	-5	5449
11/28/1995	1995	11	28	181	19	54	36.5	4.5	5453.5
11/29/1995	1995	11	29	182	18	59	38.5	6.5	5460
11/30/1995	1995	11	30	183	16	69	42.5	10.5	5470.5
12/1/1995	1995	12	1	184	17	70	43.5	11.5	5482
12/2/1995	1995	12	2	185	22	66	44	12	5494
12/3/1995	1995	12	3	186	22	66	44	12	5506
12/4/1995	1995	12	4	187	22	68	45	13	5519
12/5/1995	1995	12	5	188	25	65	45	13	5532
12/6/1995	1995	12	6	189	24	68	46	14	5546
12/7/1995	1995	12	7	190	24	57	40.5	8.5	5554.5
12/8/1995	1995	12	8	191	14	52	33	1	5555.5
12/9/1995	1995	12	9	192	15	50	32.5	0.5	5556
12/10/1995	1995	12	10	193	13	60	36.5	4.5	5560.5
12/11/1995	1995	12	11	194	27	68	47.5	15.5	5576
12/12/1995	1995	12	12	195	34	56	45	13	5589
12/13/1995	1995	12	13	196	26	65	45.5	13.5	5602.5
12/14/1995	1995	12	14	197	16	61	38.5	6.5	5609
12/15/1995	1995	12	15	198	29	49	39	7	5616
12/16/1995	1995	12	16	199	21	44	32.5	0.5	5616.5
12/17/1995	1995	12	17	200	20	45	32.5	0.5	5617
12/18/1995	1995	12	18	201	10	45	27.5	-4.5	5612.5
12/19/1995	1995	12	19	202	10	43	26.5	-5.5	5607
12/20/1995	1995	12	20	203	10	42	26	-6	5601
12/21/1995	1995	12	21	204	11	40	25.5	-6.5	5594.5
12/22/1995	1995	12	22	205	8	36	22	-10	5584.5
12/23/1995	1995	12	23	206	12	41	26.5	-5.5	5579
12/24/1995	1995	12	24	207	3	44	23.5	-8.5	5570.5
12/25/1995	1995	12	25	208	2	46	24	-8	5562.5
12/26/1995	1995	12	26	209	4	52	28	-4	5558.5
12/27/1995	1995	12	27	210	7	52	29.5	-2.5	5556
12/28/1995	1995	12	28	211	17	46	31.5	-0.5	5555.5
12/29/1995	1995	12	29	212	15	43	29	-3	5552.5
12/30/1995	1995	12	30	213	20	51	35.5	3.5	5556
12/31/1995	1995	12	31	214	20	54	37	5	5561
1/1/1996	1996	1	1	215	16	44	30	-2	5559
1/2/1996	1996	1	2	216	12	36	24	-8	5551
1/3/1996	1996	1	3	217	33	57	45	13	5564
1/4/1996	1996	1	4	218	19	57	38	6	5570
1/5/1996	1996	1	5	219	21	55	38	6	5576
1/6/1996	1996	1	6	220	15	48	31.5	-0.5	5575.5
1/7/1996	1996	1	7	221	11	58	34.5	2.5	5578
1/8/1996	1996	1	8	222	12	66	39	7	5585
1/9/1996	1996	1	9	223	17	67	42	10	5595
1/10/1996	1996	1	10	224	14	67	40.5	8.5	5603.5
1/11/1996	1996	1	11	225	16	56	36	4	5607.5
1/12/1996	1996	1	12	226	14	59	36.5	4.5	5612
1/13/1996	1996	1	13	227	19	70	44.5	12.5	5624.5
1/14/1996	1996	1	14	228	13	70	41.5	9.5	5634
1/15/1996	1996	1	15	229	23	70	46.5	14.5	5648.5

1/16/1996	1996	1	16	230	35	61	48	16	5664.5
1/17/1996	1996	1	17	231	18	43	30.5	-1.5	5663
1/18/1996	1996	1	18	232	19	38	28.5	-3.5	5659.5
1/19/1996	1996	1	19	233	20	48	34	2	5661.5
1/20/1996	1996	1	20	234	10	45	27.5	-4.5	5657
1/21/1996	1996	1	21	235	17	51	34	2	5659
1/22/1996	1996	1	22	236	11	44	27.5	-4.5	5654.5
1/23/1996	1996	1	23	237	11	38	24.5	-7.5	5647
1/24/1996	1996	1	24	238	22	48	35	3	5650
1/25/1996	1996	1	25	239	6	49	27.5	-4.5	5645.5
1/26/1996	1996	1	26	240	6	41	23.5	-8.5	5637
1/27/1996	1996	1	27	241	35	55	45	13	5650
1/28/1996	1996	1	28	242	17	55	36	4	5654
1/29/1996	1996	1	29	243	26	55	40.5	8.5	5662.5
1/30/1996	1996	1	30	244	36	58	47	15	5677.5
1/31/1996	1996	1	31	245	34	55	44.5	12.5	5690
2/1/1996	1996	2	1	246	29	49	39	7	5697
2/2/1996	1996	2	2	247	16	47	31.5	-0.5	5696.5
2/3/1996	1996	2	3	248	8	46	27	-5	5691.5
2/4/1996	1996	2	4	249	20	58	39	7	5698.5
2/5/1996	1996	2	5	250	25	67	46	14	5712.5
2/6/1996	1996	2	6	251	22	66	44	12	5724.5
2/7/1996	1996	2	7	252	22	66	44	12	5736.5
2/8/1996	1996	2	8	253	21	67	44	12	5748.5
2/9/1996	1996	2	9	254	19	70	44.5	12.5	5761
2/10/1996	1996	2	10	255	30	67	48.5	16.5	5777.5
2/11/1996	1996	2	11	256	28	51	39.5	7.5	5785
2/12/1996	1996	2	12	257	30	58	44	12	5797
2/13/1996	1996	2	13	258	20	52	36	4	5801
2/14/1996	1996	2	14	259	21	67	44	12	5813
2/15/1996	1996	2	15	260	19	71	45	13	5826
2/16/1996	1996	2	16	261	23	72	47.5	15.5	5841.5
2/17/1996	1996	2	17	262	36	71	53.5	21.5	5863
2/18/1996	1996	2	18	263	19	65	42	10	5873
2/19/1996	1996	2	19	264	46	65	55.5	23.5	5896.5
2/20/1996	1996	2	20	265	40	63	51.5	19.5	5916
2/21/1996	1996	2	21	266	37	70	53.5	21.5	5937.5
2/22/1996	1996	2	22	267	22	61	41.5	9.5	5947
2/23/1996	1996	2	23	268	17	52	34.5	2.5	5949.5
2/24/1996	1996	2	24	269	32	58	45	13	5962.5
2/25/1996	1996	2	25	270	27	62	44.5	12.5	5975
2/26/1996	1996	2	26	271	7	40	23.5	-8.5	5966.5
2/27/1996	1996	2	27	272	23	43	33	1	5967.5
2/28/1996	1996	2	28	273	21	40	30.5	-1.5	5966
2/29/1996	1996	2	29	274	16	44	30	-2	5964
3/1/1996	1996	3	1	275	13	52	32.5	0.5	5964.5
3/2/1996	1996	3	2	276	13	59	36	4	5968.5
3/3/1996	1996	3	3	277	36	64	50	18	5986.5
3/4/1996	1996	3	4	278	36	57	46.5	14.5	6001
3/5/1996	1996	3	5	279	33	60	46.5	14.5	6015.5
3/6/1996	1996	3	6	280	14	46	30	-2	6013.5
3/7/1996	1996	3	7	281	20	56	38	6	6019.5
3/8/1996	1996	3	8	282	18	66	42	10	6029.5
3/9/1996	1996	3	9	283	21	70	45.5	13.5	6043
3/10/1996	1996	3	10	284	25	73	49	17	6060
3/11/1996	1996	3	11	285	38	72	55	23	6083
3/12/1996	1996	3	12	286	28	68	48	16	6099
3/13/1996	1996	3	13	287	27	51	39	7	6106
3/14/1996	1996	3	14	288	16	51	33.5	1.5	6107.5
3/15/1996	1996	3	15	289	25	51	38	6	6113.5
3/16/1996	1996	3	16	290	25	51	38	6	6119.5
3/17/1996	1996	3	17	291	22	63	42.5	10.5	6130
3/18/1996	1996	3	18	292	14	55	34.5	2.5	6132.5
3/19/1996	1996	3	19	293	17	62	39.5	7.5	6140
3/20/1996	1996	3	20	294	20	71	45.5	13.5	6153.5
3/21/1996	1996	3	21	295	30	70	50	18	6171.5
3/22/1996	1996	3	22	296	37	67	52	20	6191.5
3/23/1996	1996	3	23	297	25	68	46.5	14.5	6206
3/24/1996	1996	3	24	298	21	54	37.5	5.5	6211.5
3/25/1996	1996	3	25	299	27	61	44	12	6223.5
3/26/1996	1996	3	26	300	17	56	36.5	4.5	6228
3/27/1996	1996	3	27	301	32	70	51	19	6247
3/28/1996	1996	3	28	302	30	70	50	18	6265
3/29/1996	1996	3	29	303	27		27	-5	6260
3/30/1996	1996	3	30	304	21	64	42.5	10.5	6270.5
3/31/1996	1996	3	31	305	23	70	46.5	14.5	6285
4/1/1996	1996	4	1	306	30	75	52.5	20.5	6305.5
4/2/1996	1996	4	2	307	33	73	53	21	6326.5
4/3/1996	1996	4	3	308	36	66	51	19	6345.5
4/4/1996	1996	4	4	309	35	54	44.5	12.5	6358
4/5/1996	1996	4	5	310	16	48	32	0	6358
4/6/1996	1996	4	6	311	23	69	46	14	6372
4/7/1996	1996	4	7	312	28	75	51.5	19.5	6391.5
4/8/1996	1996	4	8	313	30	79	54.5	22.5	6414
4/9/1996	1996	4	9	314	39	82	60.5	28.5	6442.5
4/10/1996	1996	4	10	315	35	79	57	25	6467.5
4/11/1996	1996	4	11	316	29	67	48	16	6483.5
4/12/1996	1996	4	12	317	30	70	50	18	6501.5
4/13/1996	1996	4	13	318	29	53	41	9	6510.5
4/14/1996	1996	4	14	319	20	60	40	8	6518.5
4/15/1996	1996	4	15	320	20	66	43	11	6529.5
4/16/1996	1996	4	16	321	21	77	49	17	6546.5
4/17/1996	1996	4	17	322	40	77	58.5	26.5	6573

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4/19/1996	1996	4	19	324	24	64	44	12	6605.5
4/20/1996	1996	4	20	325	29	68	48.5	16.5	6622
4/21/1996	1996	4	21	326	25	67	46	14	6636
4/22/1996	1996	4	22	327	32	71	51.5	19.5	6655.5
4/23/1996	1996	4	23	328	30	82	56	24	6679.5
4/24/1996	1996	4	24	329	52	83	67.5	35.5	6715
4/25/1996	1996	4	25	330	38	85	61.5	29.5	6744.5
4/26/1996	1996	4	26	331	37	87	62	30	6774.5
4/27/1996	1996	4	27	332	39	85	62	30	6804.5
4/28/1996	1996	4	28	333	22	60	41	9	6813.5
4/29/1996	1996	4	29	334	25	69	47	15	6828.5
4/30/1996	1996	4	30	335	31	81	56	24	6852.5
5/1/1996	1996	5	1	336	32	82	57	25	6877.5
5/2/1996	1996	5	2	337	50	83	66.5	34.5	6912
5/3/1996	1996	5	3	338	43	84	63.5	31.5	6943.5
5/4/1996	1996	5	4	339	40	80	60	28	6971.5
5/5/1996	1996	5	5	340	37	85	61	29	7000.5
5/6/1996	1996	5	6	341	45	86	65.5	33.5	7034
5/7/1996	1996	5	7	342	40	87	63.5	31.5	7065.5
5/8/1996	1996	5	8	343	39	86	62.5	30.5	7096
5/9/1996	1996	5	9	344	41	85	63	31	7127
5/10/1996	1996	5	10	345	37	85	61	29	7156
5/11/1996	1996	5	11	346	41	92	66.5	34.5	7190.5
5/12/1996	1996	5	12	347	41	94	67.5	35.5	7226
5/13/1996	1996	5	13	348	45	91	68	36	7262
5/14/1996	1996	5	14	349	50	87	68.5	36.5	7298.5
5/15/1996	1996	5	15	350	53	88	70.5	38.5	7337
5/16/1996	1996	5	16	351	58	90	74	42	7379
5/17/1996	1996	5	17	352	47	87	67	35	7414
5/18/1996	1996	5	18	353	58	91	74.5	42.5	7456.5
5/19/1996	1996	5	19	354	55	90	72.5	40.5	7497
5/20/1996	1996	5	20	355	45	87	66	34	7531
5/21/1996	1996	5	21	356	48	90	69	37	7568
5/22/1996	1996	5	22	357	50	88	69	37	7605
5/23/1996	1996	5	23	358	42	83	62.5	30.5	7635.5
5/24/1996	1996	5	24	359	50	80	65	33	7668.5
5/25/1996	1996	5	25	360	38	76	57	25	7693.5
5/26/1996	1996	5	26	361	35	66	50.5	18.5	7712
5/27/1996	1996	5	27	362	40	80	60	28	7740
5/28/1996	1996	5	28	363	38	80	59	27	7767
5/29/1996	1996	5	29	364	40	88	64	32	7799
5/30/1996	1996	5	30	365	41	87	64	32	7831
5/31/1996	1996	5	31	366	38	82	60	28	7859
6/1/1996	1996	6	1	1	41	88	64.5	32.5	32.5
6/2/1996	1996	6	2	2	39	89	64	32	64.5
6/3/1996	1996	6	3	3	42	91	66.5	34.5	99
6/4/1996	1996	6	4	4	45	93	69	37	136
6/5/1996	1996	6	5	5	61	96	78.5	46.5	182.5
6/6/1996	1996	6	6	6	57	95	76	44	226.5
6/7/1996	1996	6	7	7	53	95	74	42	268.5
6/8/1996	1996	6	8	8	50	96	73	41	309.5
6/9/1996	1996	6	9	9	50	92	71	39	348.5
6/10/1996	1996	6	10	10	52	97	74.5	42.5	391
6/11/1996	1996	6	11	11	52	92	72	40	431
6/12/1996	1996	6	12	12	53	92	72.5	40.5	471.5
6/13/1996	1996	6	13	13	56	75	65.5	33.5	505
6/14/1996	1996	6	14	14	47	75	61	29	534
6/15/1996	1996	6	15	15	46	84	65	33	567
6/16/1996	1996	6	16	16	54	90	72	40	607
6/17/1996	1996	6	17	17	54	93	73.5	41.5	648.5
6/18/1996	1996	6	18	18	53	93	73	41	689.5
6/19/1996	1996	6	19	19	56	94	75	43	732.5
6/20/1996	1996	6	20	20	56	99	77.5	45.5	778
6/21/1996	1996	6	21	21	59	90	74.5	42.5	820.5
6/22/1996	1996	6	22	22	42	93	67.5	35.5	856
6/23/1996	1996	6	23	23	44	92	68	36	892
6/24/1996	1996	6	24	24	55	90	72.5	40.5	932.5
6/25/1996	1996	6	25	25	52	92	72	40	972.5
6/26/1996	1996	6	26	26	58	85	71.5	39.5	1012
6/27/1996	1996	6	27	27	57	77	67	35	1047
6/28/1996	1996	6	28	28	54	87	70.5	38.5	1085.5
6/29/1996	1996	6	29	29	61	80	70.5	38.5	1124
6/30/1996	1996	6	30	30	55	85	70	38	1162
7/1/1996	1996	7	1	31	55	90	72.5	40.5	1202.5
7/2/1996	1996	7	2	32	62	95	78.5	46.5	1249
7/3/1996	1996	7	3	33	57	92	74.5	42.5	1291.5
7/4/1996	1996	7	4	34	60	96	78	46	1337.5
7/5/1996	1996	7	5	35	62	100	81	49	1386.5
7/6/1996	1996	7	6	36	60	100	80	48	1434.5
7/7/1996	1996	7	7	37	62	93	77.5	45.5	1480
7/8/1996	1996	7	8	38	60	94	77	45	1525
7/9/1996	1996	7	9	39	55	83	69	37	1562
7/10/1996	1996	7	10	40	58	86	72	40	1602
7/11/1996	1996	7	11	41	61	96	78.5	46.5	1648.5
7/12/1996	1996	7	12	42	60	89	74.5	42.5	1691
7/13/1996	1996	7	13	43	54	81	67.5	35.5	1726.5
7/14/1996	1996	7	14	44	57	89	73	41	1767.5
7/15/1996	1996	7	15	45	56	80	68	36	1803.5
7/16/1996	1996	7	16	46	57	86	71.5	39.5	1843
7/17/1996	1996	7	17	47	56	90	73	41	1884
7/18/1996	1996	7	18	48	54	90	72	40	1924
7/19/1996	1996	7	19	49	54	90	72	40	1964

7/20/1996	1996	7	20	50	54	94	74	42	2006
7/21/1996	1996	7	21	51	50	98	74	42	2048
7/22/1996	1996	7	22	52	50	100	75	43	2091
7/23/1996	1996	7	23	53	65	101	83	51	2142
7/24/1996	1996	7	24	54	47	101	74	42	2184
7/25/1996	1996	7	25	55	43	101	72	40	2224
7/26/1996	1996	7	26	56	59	101	80	48	2272
7/27/1996	1996	7	27	57	57	87	72	40	2312
7/28/1996	1996	7	28	58	60	88	74	42	2354
7/29/1996	1996	7	29	59	62	91	76.5	44.5	2398.5
7/30/1996	1996	7	30	60	55	91	73	41	2439.5
7/31/1996	1996	7	31	61	55	91	73	41	2480.5
8/1/1996	1996	8	1	62	51	91	71	39	2519.5
8/2/1996	1996	8	2	63	64	92	78	46	2565.5
8/3/1996	1996	8	3	64	63	91	77	45	2610.5
8/4/1996	1996	8	4	65	64	89	76.5	44.5	2655
8/5/1996	1996	8	5	66	59	88	73.5	41.5	2696.5
8/6/1996	1996	8	6	67	56	93	74.5	42.5	2739
8/7/1996	1996	8	7	68	50	94	72	40	2779
8/8/1996	1996	8	8	69	56	93	74.5	42.5	2821.5
8/9/1996	1996	8	9	70	60	80	70	38	2859.5
8/10/1996	1996	8	10	71	52	76	64	32	2891.5
8/11/1996	1996	8	11	72	55	91	73	41	2932.5
8/12/1996	1996	8	12	73	51	94	72.5	40.5	2973
8/13/1996	1996	8	13	74	56	98	77	45	3018
8/14/1996	1996	8	14	75	58	99	78.5	46.5	3064.5
8/15/1996	1996	8	15	76	58	96	77	45	3109.5
8/16/1996	1996	8	16	77	50	96	73	41	3150.5
8/17/1996	1996	8	17	78	59	95	77	45	3195.5
8/18/1996	1996	8	18	79	54	90	72	40	3235.5
8/19/1996	1996	8	19	80	52	91	71.5	39.5	3275
8/20/1996	1996	8	20	81	60	88	74	42	3317
8/21/1996	1996	8	21	82	58	88	73	41	3358
8/22/1996	1996	8	22	83	55	85	70	38	3396
8/23/1996	1996	8	23	84	56	82	69	37	3433
8/24/1996	1996	8	24	85	57	81	69	37	3470
8/25/1996	1996	8	25	86	58	83	70.5	38.5	3508.5
8/26/1996	1996	8	26	87	53	81	67	35	3543.5
8/27/1996	1996	8	27	88	58	84	71	39	3582.5
8/28/1996	1996	8	28	89	56	84	70	38	3620.5
8/29/1996	1996	8	29	90	56	90	73	41	3661.5
8/30/1996	1996	8	30	91	56	93	74.5	42.5	3704
8/31/1996	1996	8	31	92	44	95	69.5	37.5	3741.5
9/1/1996	1996	9	1	93	59	89	74	42	3783.5
9/2/1996	1996	9	2	94	48	84	66	34	3817.5
9/3/1996	1996	9	3	95	49	91	70	38	3855.5
9/4/1996	1996	9	4	96	50	89	69.5	37.5	3893
9/5/1996	1996	9	5	97	49	82	65.5	33.5	3926.5
9/6/1996	1996	9	6	98	53	84	68.5	36.5	3963
9/7/1996	1996	9	7	99	43	83	63	31	3994
9/8/1996	1996	9	8	100	43	89	66	34	4028
9/9/1996	1996	9	9	101	53	85	69	37	4065
9/10/1996	1996	9	10	102	53	84	68.5	36.5	4101.5
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9/12/1996	1996	9	12	104	52	63	57.5	25.5	4162
9/13/1996	1996	9	13	105	50	72	61	29	4191
9/14/1996	1996	9	14	106	41	58	49.5	17.5	4208.5
9/15/1996	1996	9	15	107	41	76	58.5	26.5	4235
9/16/1996	1996	9	16	108	47	78	62.5	30.5	4265.5
9/17/1996	1996	9	17	109	43	66	54.5	22.5	4288
9/18/1996	1996	9	18	110	34	53	43.5	11.5	4299.5
9/19/1996	1996	9	19	111	34	71	52.5	20.5	4320
9/20/1996	1996	9	20	112	37	77	57	25	4345
9/21/1996	1996	9	21	113	40	83	61.5	29.5	4374.5
9/22/1996	1996	9	22	114	41	83	62	30	4404.5
9/23/1996	1996	9	23	115	42	83	62.5	30.5	4435
9/24/1996	1996	9	24	116	40	69	54.5	22.5	4457.5
9/25/1996	1996	9	25	117	41	76	58.5	26.5	4484
9/26/1996	1996	9	26	118	35	76	55.5	23.5	4507.5
9/27/1996	1996	9	27	119	31	65	48	16	4523.5
9/28/1996	1996	9	28	120	33	75	54	22	4545.5
9/29/1996	1996	9	29	121	38	78	58	26	4571.5
9/30/1996	1996	9	30	122	30	76	53	21	4592.5
10/1/1996	1996	10	1	123	30	83	56.5	24.5	4617
10/2/1996	1996	10	2	124	38	89	63.5	31.5	4648.5
10/3/1996	1996	10	3	125	39	71	55	23	4671.5
10/4/1996	1996	10	4	126	33	61	47	15	4686.5
10/5/1996	1996	10	5	127	30	75	52.5	20.5	4707
10/6/1996	1996	10	6	128	31	80	55.5	23.5	4730.5
10/7/1996	1996	10	7	129	28	82	55	23	4753.5
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10/9/1996	1996	10	9	131	28	83	55.5	23.5	4800.5
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10/11/1996	1996	10	11	133	28	85	56.5	24.5	4851
10/12/1996	1996	10	12	134	27	86	56.5	24.5	4875.5
10/13/1996	1996	10	13	135	34	83	58.5	26.5	4902
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10/15/1996	1996	10	15	137	27	76	51.5	19.5	4940.5
10/16/1996	1996	10	16	138	27	76	51.5	19.5	4960
10/17/1996	1996	10	17	139	29	73	51	19	4979
10/18/1996	1996	10	18	140	40	74	57	25	5004
10/19/1996	1996	10	19	141	42	71	56.5	24.5	5028.5
10/20/1996	1996	10	20	142	28	59	43.5	11.5	5040

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10/22/1996	1996	10	22	144	17	54	35.5	3.5	5040
10/23/1996	1996	10	23	145	18	61	39.5	7.5	5047.5
10/24/1996	1996	10	24	146	36	65	50.5	18.5	5066
10/25/1996	1996	10	25	147	22	65	43.5	11.5	5077.5
10/26/1996	1996	10	26	148	31	37	34	2	5079.5
10/27/1996	1996	10	27	149	36	39	37.5	5.5	5085
10/28/1996	1996	10	28	150	28	53	40.5	8.5	5093.5
10/29/1996	1996	10	29	151	25	50	37.5	5.5	5099
10/30/1996	1996	10	30	152	30	60	45	13	5112
10/31/1996	1996	10	31	153	22	59	40.5	8.5	5120.5
11/1/1996	1996	11	1	154	21	55	38	6	5126.5
11/2/1996	1996	11	2	155	22	52	37	5	5131.5
11/3/1996	1996	11	3	156	28	56	42	10	5141.5
11/4/1996	1996	11	4	157	22	63	42.5	10.5	5152
11/5/1996	1996	11	5	158	23	64	43.5	11.5	5163.5
11/6/1996	1996	11	6	159	18	57	37.5	5.5	5169
11/7/1996	1996	11	7	160	18	54	36	4	5173
11/8/1996	1996	11	8	161	23	60	41.5	9.5	5182.5
11/9/1996	1996	11	9	162	20	66	43	11	5193.5
11/10/1996	1996	11	10	163	18	70	44	12	5205.5
11/11/1996	1996	11	11	164	18	72	45	13	5218.5
11/12/1996	1996	11	12	165	20	73	46.5	14.5	5233
11/13/1996	1996	11	13	166	25	72	48.5	16.5	5249.5
11/14/1996	1996	11	14	167	25	66	45.5	13.5	5263
11/15/1996	1996	11	15	168	22	61	41.5	9.5	5272.5
11/16/1996	1996	11	16	169	11	44	27.5	-4.5	5268
11/17/1996	1996	11	17	170	16	58	37	5	5273
11/18/1996	1996	11	18	171	25	69	47	15	5288
11/19/1996	1996	11	19	172	24	74	49	17	5305
11/20/1996	1996	11	20	173	25	71	48	16	5321
11/21/1996	1996	11	21	174	39	72	55.5	23.5	5344.5
11/22/1996	1996	11	22	175	33	64	48.5	16.5	5361
11/23/1996	1996	11	23	176	22	51	36.5	4.5	5365.5
11/24/1996	1996	11	24	177	18	55	36.5	4.5	5370
11/25/1996	1996	11	25	178	26	56	41	9	5379
11/26/1996	1996	11	26	179	29	51	40	8	5387
11/27/1996	1996	11	27	180	23	52	37.5	5.5	5392.5
11/28/1996	1996	11	28	181	22	44	33	1	5393.5
11/29/1996	1996	11	29	182	23	40	31.5	-0.5	5393
11/30/1996	1996	11	30	183	13	40	26.5	-5.5	5387.5
12/1/1996	1996	12	1	184	27	53	40	8	5395.5
12/2/1996	1996	12	2	185	9	43	26	-6	5389.5
12/3/1996	1996	12	3	186	12	48	30	-2	5387.5
12/4/1996	1996	12	4	187	12	49	30.5	-1.5	5386
12/5/1996	1996	12	5	188	13	58	35.5	3.5	5389.5
12/6/1996	1996	12	6	189	14	55	34.5	2.5	5392
12/7/1996	1996	12	7	190	19	54	36.5	4.5	5396.5
12/8/1996	1996	12	8	191	20	65	42.5	10.5	5407
12/9/1996	1996	12	9	192	35	69	52	20	5427
12/10/1996	1996	12	10	193	43	60	51.5	19.5	5446.5
12/11/1996	1996	12	11	194	22	58	40	8	5454.5
12/12/1996	1996	12	12	195	18	61	39.5	7.5	5462
12/13/1996	1996	12	13	196	17	64	40.5	8.5	5470.5
12/14/1996	1996	12	14	197	10	48	29	-3	5467.5
12/15/1996	1996	12	15	198	12	40	26	-6	5461.5
12/16/1996	1996	12	16	199	18	59	38.5	6.5	5468
12/17/1996	1996	12	17	200	3	30	16.5	-15.5	5452.5
12/18/1996	1996	12	18	201	3	32	17.5	-14.5	5438
12/19/1996	1996	12	19	202	3	48	25.5	-6.5	5431.5
12/20/1996	1996	12	20	203	29	56	42.5	10.5	5442
12/21/1996	1996	12	21	204	18	55	36.5	4.5	5446.5
12/22/1996	1996	12	22	205	32	55	43.5	11.5	5458
12/23/1996	1996	12	23	206	10	49	29.5	-2.5	5455.5
12/24/1996	1996	12	24	207	13	44	28.5	-3.5	5452
12/25/1996	1996	12	25	208	13	37	25	-7	5445
12/26/1996	1996	12	26	209	13	59	36	4	5449
12/27/1996	1996	12	27	210	25	55	40	8	5457
12/28/1996	1996	12	28	211	16	51	33.5	1.5	5458.5
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12/31/1996	1996	12	31	214	23	60	41.5	9.5	5484.5
1/1/1997	1997	1	1	215	22	60	41	9	5493.5
1/2/1997	1997	1	2	216	31	63	47	15	5508.5
1/3/1997	1997	1	3	217	30	58	44	12	5520.5
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1/6/1997	1997	1	6	220	1	25	13	-19	5505
1/7/1997	1997	1	7	221	7	30	18.5	-13.5	5491.5
1/8/1997	1997	1	8	222	-1	29	14	-18	5473.5
1/9/1997	1997	1	9	223	17	40	28.5	-3.5	5470
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1/26/1997	1997	1	26	240	32	51	41.5	9.5	5396.5
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1/29/1997	1997	1	29	243	21	47	34	2	5410
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1/31/1997	1997	1	31	245	28	65	46.5	14.5	5428.5
2/1/1997	1997	2	1	246	21	58	39.5	7.5	5436
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2/6/1997	1997	2	6	251	18	45	31.5	-0.5	5461
2/7/1997	1997	2	7	252	18	44	31	-1	5460
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3/7/1997	1997	3	7	280	22	67	44.5	12.5	5578.5
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3/20/1997	1997	3	20	293	27	82	54.5	22.5	5795
3/21/1997	1997	3	21	294	27	82	54.5	22.5	5817.5
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3/24/1997	1997	3	24	297	25	67	46	14	5877
3/25/1997	1997	3	25	298	18	48	33	1	5878
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3/28/1997	1997	3	28	301	31	71	51	19	5930
3/29/1997	1997	3	29	302	18	65	41.5	9.5	5939.5
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4/17/1997	1997	4	17	321	31	74	52.5	20.5	6192.5
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4/19/1997	1997	4	19	323	39	74	56.5	24.5	6238.5
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4/21/1997	1997	4	21	325	36	76	56	24	6290
4/22/1997	1997	4	22	326	32	75	53.5	21.5	6311.5
4/23/1997	1997	4	23	327	35	63	49	17	6328.5
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4/26/1997	1997	4	26	330	32	64	48	16	6359
4/27/1997	1997	4	27	331	50	73	61.5	29.5	6388.5
4/28/1997	1997	4	28	332	51	77	64	32	6420.5
4/29/1997	1997	4	29	333	40	70	55	23	6443.5
4/30/1997	1997	4	30	334	46	75	60.5	28.5	6472
5/1/1997	1997	5	1	335	30	70	50	18	6490
5/2/1997	1997	5	2	336	29	69	49	17	6507
5/3/1997	1997	5	3	337	41	79	60	28	6535
5/4/1997	1997	5	4	338	37	84	60.5	28.5	6563.5
5/5/1997	1997	5	5	339	45	82	63.5	31.5	6595
5/6/1997	1997	5	6	340	47	85	66	34	6629
5/7/1997	1997	5	7	341	41	84	62.5	30.5	6659.5
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5/12/1997	1997	5	12	346	36	80	58	26	6786
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5/19/1997	1997	5	19	353	43	78	60.5	28.5	7006.5
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5/21/1997	1997	5	21	355	42	70	56	24	7058
5/22/1997	1997	5	22	356	39	70	54.5	22.5	7080.5
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5/24/1997	1997	5	24	358	40	73	56.5	24.5	7137.5
5/25/1997	1997	5	25	359	46	75	60.5	28.5	7166
5/26/1997	1997	5	26	360	36	77	56.5	24.5	7190.5
5/27/1997	1997	5	27	361	37	76	56.5	24.5	7215
5/28/1997	1997	5	28	362	43	83	63	31	7246
5/29/1997	1997	5	29	363	45	89	67	35	7281
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5/31/1997	1997	5	31	365	48	92	70	38	7356.5
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6/3/1997	1997	6	3	3	44	95	69.5	37.5	112.5
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6/5/1997	1997	6	5	5	58	85	71.5	39.5	194
6/6/1997	1997	6	6	6	51	66	58.5	26.5	220.5
6/7/1997	1997	6	7	7	42	65	53.5	21.5	242
6/8/1997	1997	6	8	8	40	70	55	23	265
6/9/1997	1997	6	9	9	51	80	65.5	33.5	298.5
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6/11/1997	1997	6	11	11	48	84	66	34	366.5
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6/13/1997	1997	6	13	13	47	85	66	34	427
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6/22/1997	1997	6	22	22	47	94	70.5	38.5	738.5
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6/24/1997	1997	6	24	24	48	91	69.5	37.5	811.5
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6/28/1997	1997	6	28	28	50	90	70	38	965.5
6/29/1997	1997	6	29	29	49	92	70.5	38.5	1004
6/30/1997	1997	6	30	30	53	97	75	43	1047
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7/3/1997	1997	7	3	33	58	96	77	45	1171
7/4/1997	1997	7	4	34	56	87	71.5	39.5	1210.5
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7/10/1997	1997	7	10	40	57	87	72	40	1456
7/11/1997	1997	7	11	41	49	86	67.5	35.5	1491.5
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7/24/1997	1997	7	24	54	55	91	73	41	2036
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7/26/1997	1997	7	26	56	51	80	65.5	33.5	2117

7/27/1997	1997	7	27	57	57	83	70	38	2155
7/28/1997	1997	7	28	58	57	72	64.5	32.5	2187.5
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8/5/1997	1997	8	5	66	54	82	68	36	2491.5
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8/9/1997	1997	8	9	70	55	90	72.5	40.5	2644.5
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8/13/1997	1997	8	13	74	55	85	70	38	2786
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8/16/1997	1997	8	16	77	49	89	69	37	2893
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8/18/1997	1997	8	18	79	50	84	67	35	2966
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8/23/1997	1997	8	23	84	58	89	73.5	41.5	3169.5
8/24/1997	1997	8	24	85	56	89	72.5	40.5	3210
8/25/1997	1997	8	25	86	54	89	71.5	39.5	3249.5
8/26/1997	1997	8	26	87	52	91	71.5	39.5	3289
8/27/1997	1997	8	27	88	56	93	74.5	42.5	3331.5
8/28/1997	1997	8	28	89	56	93	74.5	42.5	3374
8/29/1997	1997	8	29	90	50	90	70	38	3412
8/30/1997	1997	8	30	91	55	89	72	40	3452
8/31/1997	1997	8	31	92	53	80	66.5	34.5	3486.5
9/1/1997	1997	9	1	93	47	87	67	35	3521.5
9/2/1997	1997	9	2	94	60	89	74.5	42.5	3564
9/3/1997	1997	9	3	95	59	89	74	42	3606
9/4/1997	1997	9	4	96	55	85	70	38	3644
9/5/1997	1997	9	5	97	55	89	72	40	3684
9/6/1997	1997	9	6	98	58	87	72.5	40.5	3724.5
9/7/1997	1997	9	7	99	54	89	71.5	39.5	3764
9/8/1997	1997	9	8	100	57	88	72.5	40.5	3804.5
9/9/1997	1997	9	9	101	52	86	69	37	3841.5
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9/14/1997	1997	9	14	106	50	80	65	33	4014
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9/16/1997	1997	9	16	108	46	84	65	33	4079.5
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9/22/1997	1997	9	22	114	42	78	60	28	4274
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9/24/1997	1997	9	24	116	48	76	62	30	4335
9/25/1997	1997	9	25	117	57	89	73	41	4376
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1/28/1998	1998	1	28	239	14	63	38.5	6.5	5389.5
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3/9/1998	1998	3	9	276	13	51	32	0	5562
3/10/1998	1998	3	10	277	17	59	38	6	5568
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5/31/1998	1998	5	31	359	41	91	66	34	7075
6/1/1998	1998	6	1	1	43	92	67.5	35.5	35.5
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6/5/1998	1998	6	5	5	40	76	58	26	157
6/6/1998	1998	6	6	6	40	76	58	26	183
6/7/1998	1998	6	7	7	39	86	62.5	30.5	213.5
6/8/1998	1998	6	8	8	36	78	57	25	238.5
6/9/1998	1998	6	9	9	37	82	59.5	27.5	266
6/10/1998	1998	6	10	10	38	77	57.5	25.5	291.5
6/11/1998	1998	6	11	11	38	78	58	26	317.5
6/12/1998	1998	6	12	12	46	87	66.5	34.5	352
6/13/1998	1998	6	13	13	44	77	60.5	28.5	380.5
6/14/1998	1998	6	14	14	47	83	65	33	413.5
6/15/1998	1998	6	15	15	54	84	69	37	450.5
6/16/1998	1998	6	16	16	47	90	68.5	36.5	487
6/17/1998	1998	6	17	17	35	79	57	25	512
6/18/1998	1998	6	18	18	37	85	61	29	541
6/19/1998	1998	6	19	19	44	90	67	35	576
6/20/1998	1998	6	20	20	44	90	67	35	611
6/21/1998	1998	6	21	21	41	91	66	34	645
6/22/1998	1998	6	22	22	48	90	69	37	682
6/23/1998	1998	6	23	23	53	92	72.5	40.5	722.5
6/24/1998	1998	6	24	24	42	91	66.5	34.5	757
6/25/1998	1998	6	25	25	47	95	71	39	796
6/26/1998	1998	6	26	26	51	94	72.5	40.5	836.5
6/27/1998	1998	6	27	27	48	98	73	41	877.5
6/28/1998	1998	6	28	28	49	103	76	44	921.5
6/29/1998	1998	6	29	29	50	102	76	44	965.5
6/30/1998	1998	6	30	30	65	101	83	51	1016.5
7/1/1998	1998	7	1	31	57	92	74.5	42.5	1059
7/2/1998	1998	7	2	32	59	93	76	44	1103
7/3/1998	1998	7	3	33	61	91	76	44	1147
7/4/1998	1998	7	4	34	61	90	75.5	43.5	1190.5
7/5/1998	1998	7	5	35	58	95	76.5	44.5	1235
7/6/1998	1998	7	6	36	59	87	73	41	1276
7/7/1998	1998	7	7	37	59	81	70	38	1314
7/8/1998	1998	7	8	38	56	78	67	35	1349
7/9/1998	1998	7	9	39	51	69	60	28	1377
7/10/1998	1998	7	10	40	54	90	72	40	1417
7/11/1998	1998	7	11	41	54	90	72	40	1457
7/12/1998	1998	7	12	42	56	96	76	44	1501
7/13/1998	1998	7	13	43	57	95	76	44	1545
7/14/1998	1998	7	14	44	50	97	73.5	41.5	1586.5
7/15/1998	1998	7	15	45	62	100	81	49	1635.5
7/16/1998	1998	7	16	46	55	92	73.5	41.5	1677
7/17/1998	1998	7	17	47	52	91	71.5	39.5	1716.5
7/18/1998	1998	7	18	48	55	95	75	43	1759.5
7/19/1998	1998	7	19	49	54	99	76.5	44.5	1804
7/20/1998	1998	7	20	50	61	99	80	48	1852
7/21/1998	1998	7	21	51	55	96	75.5	43.5	1895.5
7/22/1998	1998	7	22	52	56	93	74.5	42.5	1938
7/23/1998	1998	7	23	53	56	86	71	39	1977
7/24/1998	1998	7	24	54	57	82	69.5	37.5	2014.5
7/25/1998	1998	7	25	55	60	82	71	39	2053.5
7/26/1998	1998	7	26	56	55	86	70.5	38.5	2092
7/27/1998	1998	7	27	57	58	85	71.5	39.5	2131.5
7/28/1998	1998	7	28	58	56	85	70.5	38.5	2170
7/29/1998	1998	7	29	59	57	84	70.5	38.5	2208.5
7/30/1998	1998	7	30	60	50	90	70	38	2246.5
7/31/1998	1998	7	31	61	60	82	71	39	2285.5
8/1/1998	1998	8	1	62	48	79	63.5	31.5	2317
8/2/1998	1998	8	2	63	51	90	70.5	38.5	2355.5
8/3/1998	1998	8	3	64	54	93	73.5	41.5	2397
8/4/1998	1998	8	4	65	56	89	72.5	40.5	2437.5
8/5/1998	1998	8	5	66	53	89	71	39	2476.5
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8/8/1998	1998	8	8	69	56	94	75	43	2601.5

8/9/1998	1998	8	9	70	53	94	73.5	41.5	2643
8/10/1998	1998	8	10	71	54	87	70.5	38.5	2681.5
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8/13/1998	1998	8	13	74	48	89	68.5	36.5	2791.5
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8/22/1998	1998	8	22	83	54	93	73.5	41.5	3148.5
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8/24/1998	1998	8	24	85	60	94	77	45	3235
8/25/1998	1998	8	25	86	52	87	69.5	37.5	3272.5
8/26/1998	1998	8	26	87	54	90	72	40	3312.5
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8/29/1998	1998	8	29	90	55	90	72.5	40.5	3432
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9/29/1998	1998	9	29	120	50	81	65.5	33.5	4483.5
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11/1/1998	1998	11	1	153	33	53	43	11	5149
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11/17/1998	1998	11	17	169	27	69	48	16	5303
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11/24/1998	1998	11	24	176	21	69	45	13	5379
11/25/1998	1998	11	25	177	21	68	44.5	12.5	5391.5
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11/30/1998	1998	11	30	182	30	60	45	13	5454.5
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12/2/1998	1998	12	2	184	31	59	45	13	5483
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12/16/1998	1998	12	16	198	14	61	37.5	5.5	5482.5
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12/21/1998	1998	12	21	203	10	35	22.5	-9.5	5506.5
12/22/1998	1998	12	22	204	8	40	24	-8	5498.5
12/23/1998	1998	12	23	205	6	47	26.5	-5.5	5493
12/24/1998	1998	12	24	206	10	45	27.5	-4.5	5488.5
12/25/1998	1998	12	25	207	11	49	30	-2	5486.5
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12/27/1998	1998	12	27	209	17	56	36.5	4.5	5492.5
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12/30/1998	1998	12	30	212	17	64	40.5	8.5	5518.5
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1/3/1999	1999	1	3	216	8	46	27	-5	5526.5
1/4/1999	1999	1	4	217	8	46	27	-5	5521.5
1/5/1999	1999	1	5	218	12	62	37	5	5526.5
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1/8/1999	1999	1	8	221	10	54	32	0	5536
1/9/1999	1999	1	9	222	16	55	35.5	3.5	5539.5
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1/13/1999	1999	1	13	226	11	54	32.5	0.5	5563
1/14/1999	1999	1	14	227	8	55	31.5	-0.5	5562.5
1/15/1999	1999	1	15	228	16	67	41.5	9.5	5572
1/16/1999	1999	1	16	229	27	64	45.5	13.5	5585.5
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1/19/1999	1999	1	19	232	29	63	46	14	5623
1/20/1999	1999	1	20	233	34	59	46.5	14.5	5637.5
1/21/1999	1999	1	21	234	22	45	33.5	1.5	5639
1/22/1999	1999	1	22	235	14	45	29.5	-2.5	5636.5
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1/24/1999	1999	1	24	237	29	65	47	15	5667
1/25/1999	1999	1	25	238	30	66	48	16	5683
1/26/1999	1999	1	26	239	11	52	31.5	-0.5	5682.5
1/27/1999	1999	1	27	240	16	49	32.5	0.5	5683
1/28/1999	1999	1	28	241	13	43	28	-4	5679
1/29/1999	1999	1	29	242	12	53	32.5	0.5	5679.5
1/30/1999	1999	1	30	243	11	57	34	2	5681.5
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2/2/1999	1999	2	2	246	15	53	34	2	5692
2/3/1999	1999	2	3	247	15	60	37.5	5.5	5697.5
2/4/1999	1999	2	4	248	33	64	48.5	16.5	5714
2/5/1999	1999	2	5	249	28	57	42.5	10.5	5724.5
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2/7/1999	1999	2	7	251	17	65	41	9	5733
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2/12/1999	1999	2	12	256	9	61	35	3	5753.5
2/13/1999	1999	2	13	257	14	62	38	6	5759.5
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2/15/1999	1999	2	15	259	9	55	32	0	5770.5
2/16/1999	1999	2	16	260	12	53	32.5	0.5	5771
2/17/1999	1999	2	17	261	18	61	39.5	7.5	5778.5
2/18/1999	1999	2	18	262	18	66	42	10	5788.5
2/19/1999	1999	2	19	263	20	64	42	10	5798.5
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2/21/1999	1999	2	21	265	21	56	38.5	6.5	5811.5
2/22/1999	1999	2	22	266	12	61	36.5	4.5	5816
2/23/1999	1999	2	23	267	15	63	39	7	5823
2/24/1999	1999	2	24	268	19	67	43	11	5834
2/25/1999	1999	2	25	269	17	67	42	10	5844
2/26/1999	1999	2	26	270	15	62	38.5	6.5	5850.5
2/27/1999	1999	2	27	271	17	67	42	10	5860.5
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3/1/1999	1999	3	1	273	21	71	46	14	5886
3/2/1999	1999	3	2	274	16	69	42.5	10.5	5896.5
3/3/1999	1999	3	3	275	34	70	52	20	5916.5
3/4/1999	1999	3	4	276	30	67	48.5	16.5	5933
3/5/1999	1999	3	5	277	30	66	48	16	5949
3/6/1999	1999	3	6	278	32	63	47.5	15.5	5964.5
3/7/1999	1999	3	7	279	29	63	46	14	5978.5
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3/9/1999	1999	3	9	281	5	53	29	-3	5981
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3/12/1999	1999	3	12	284	20	65	42.5	10.5	6011.5
3/13/1999	1999	3	13	285	14	61	37.5	5.5	6017
3/14/1999	1999	3	14	286	22	72	47	15	6032
3/15/1999	1999	3	15	287	20	70	45	13	6045
3/16/1999	1999	3	16	288	32	71	51.5	19.5	6064.5
3/17/1999	1999	3	17	289	30	53	41.5	9.5	6074
3/18/1999	1999	3	18	290	27	40	33.5	1.5	6075.5
3/19/1999	1999	3	19	291	28	67	47.5	15.5	6091
3/20/1999	1999	3	20	292	36	67	51.5	19.5	6110.5
3/21/1999	1999	3	21	293	32	77	54.5	22.5	6133
3/22/1999	1999	3	22	294	22	73	47.5	15.5	6148.5
3/23/1999	1999	3	23	295	23	76	49.5	17.5	6166
3/24/1999	1999	3	24	296	38	70	54	22	6188
3/25/1999	1999	3	25	297	32	66	49	17	6205
3/26/1999	1999	3	26	298	34	56	45	13	6218
3/27/1999	1999	3	27	299	28	71	49.5	17.5	6235.5
3/28/1999	1999	3	28	300	26	70	48	16	6251.5
3/29/1999	1999	3	29	301	38	72	55	23	6274.5
3/30/1999	1999	3	30	302	42	74	58	26	6300.5
3/31/1999	1999	3	31	303	35	72	53.5	21.5	6322
4/1/1999	1999	4	1	304	29	55	42	10	6332
4/2/1999	1999	4	2	305	23	47	35	3	6335
4/3/1999	1999	4	3	306	29	46	37.5	5.5	6340.5
4/4/1999	1999	4	4	307	24	51	37.5	5.5	6346
4/5/1999	1999	4	5	308	19	58	38.5	6.5	6352.5
4/6/1999	1999	4	6	309	30	70	50	18	6370.5
4/7/1999	1999	4	7	310	27	73	50	18	6388.5
4/8/1999	1999	4	8	311	28	63	45.5	13.5	6402
4/9/1999	1999	4	9	312	19	60	39.5	7.5	6409.5
4/10/1999	1999	4	10	313	16	63	39.5	7.5	6417
4/11/1999	1999	4	11	314	18	73	45.5	13.5	6430.5
4/12/1999	1999	4	12	315	35	76	55.5	23.5	6454
4/13/1999	1999	4	13	316	37	54	45.5	13.5	6467.5
4/14/1999	1999	4	14	317	22	66	44	12	6479.5
4/15/1999	1999	4	15	318	16	60	38	6	6485.5
4/16/1999	1999	4	16	319	23	59	41	9	6494.5
4/17/1999	1999	4	17	320	25	68	46.5	14.5	6509
4/18/1999	1999	4	18	321	25	75	50	18	6527
4/19/1999	1999	4	19	322	30	80	55	23	6550
4/20/1999	1999	4	20	323	43	80	61.5	29.5	6579.5
4/21/1999	1999	4	21	324	43	80	61.5	29.5	6609
4/22/1999	1999	4	22	325	31	78	54.5	22.5	6631.5
4/23/1999	1999	4	23	326	40	79	59.5	27.5	6659
4/24/1999	1999	4	24	327	29	60	44.5	12.5	6671.5
4/25/1999	1999	4	25	328	36		36	4	6675.5
4/26/1999	1999	4	26	329	32	72	52	20	6695.5
4/27/1999	1999	4	27	330	39	77	58	26	6721.5
4/28/1999	1999	4	28	331	42	74	58	26	6747.5
4/29/1999	1999	4	29	332	34	75	54.5	22.5	6770
4/30/1999	1999	4	30	333	35	69	52	20	6790
5/1/1999	1999	5	1	334	33	54	43.5	11.5	6801.5
5/2/1999	1999	5	2	335	32	70	51	19	6820.5
5/3/1999	1999	5	3	336	37	68	52.5	20.5	6841
5/4/1999	1999	5	4	337	33	57	45	13	6854
5/5/1999	1999	5	5	338	33	60	46.5	14.5	6868.5
5/6/1999	1999	5	6	339	33	60	46.5	14.5	6883
5/7/1999	1999	5	7	340	31	79	55	23	6906
5/8/1999	1999	5	8	341	40	83	61.5	29.5	6935.5
5/9/1999	1999	5	9	342	53	80	66.5	34.5	6970
5/10/1999	1999	5	10	343	36	73	54.5	22.5	6992.5
5/11/1999	1999	5	11	344	30	73	51.5	19.5	7012
5/12/1999	1999	5	12	345	44	81	62.5	30.5	7042.5
5/13/1999	1999	5	13	346	45	83	64	32	7074.5
5/14/1999	1999	5	14	347	42	80	61	29	7103.5
5/15/1999	1999	5	15	348	38	82	60	28	7131.5

5/16/1999	1999	5	16	349	32	76	54	22	7153.5
5/17/1999	1999	5	17	350	33	82	57.5	25.5	7179
5/18/1999	1999	5	18	351	42	83	62.5	30.5	7209.5
5/19/1999	1999	5	19	352	40	87	63.5	31.5	7241
5/20/1999	1999	5	20	353	33	86	59.5	27.5	7268.5
5/21/1999	1999	5	21	354	34	87	60.5	28.5	7297
5/22/1999	1999	5	22	355	43	83	63	31	7328
5/23/1999	1999	5	23	356	50	76	63	31	7359
5/24/1999	1999	5	24	357	37	74	55.5	23.5	7382.5
5/25/1999	1999	5	25	358	38	76	57	25	7407.5
5/26/1999	1999	5	26	359	35	79	57	25	7432.5
5/27/1999	1999	5	27	360	42	75	58.5	26.5	7459
5/28/1999	1999	5	28	361	42	77	59.5	27.5	7486.5
5/29/1999	1999	5	29	362	37	83	60	28	7514.5
5/30/1999	1999	5	30	363	52	82	67	35	7549.5
5/31/1999	1999	5	31	364	42	82	62	30	7579.5
6/1/1999	1999	6	1	1	42	83	62.5	30.5	30.5
6/2/1999	1999	6	2	2	40	85	62.5	30.5	61
6/3/1999	1999	6	3	3	41	87	64	32	93
6/4/1999	1999	6	4	4	32	81	56.5	24.5	117.5
6/5/1999	1999	6	5	5	36	71	53.5	21.5	139
6/6/1999	1999	6	6	6	35	83	59	27	166
6/7/1999	1999	6	7	7	39	91	65	33	199
6/8/1999	1999	6	8	8	40	91	65.5	33.5	232.5
6/9/1999	1999	6	9	9	42	86	64	32	264.5
6/10/1999	1999	6	10	10	40	87	63.5	31.5	296
6/11/1999	1999	6	11	11	45	88	66.5	34.5	330.5
6/12/1999	1999	6	12	12	41	84	62.5	30.5	361
6/13/1999	1999	6	13	13	50	85	67.5	35.5	396.5
6/14/1999	1999	6	14	14	46	84	65	33	429.5
6/15/1999	1999	6	15	15	54	87	70.5	38.5	468
6/16/1999	1999	6	16	16	52	86	69	37	505
6/17/1999	1999	6	17	17	47	78	62.5	30.5	535.5
6/18/1999	1999	6	18	18	50	84	67	35	570.5
6/19/1999	1999	6	19	19	52	88	70	38	608.5
6/20/1999	1999	6	20	20	57	85	71	39	647.5
6/21/1999	1999	6	21	21	59	85	72	40	687.5
6/22/1999	1999	6	22	22	52	89	70.5	38.5	726
6/23/1999	1999	6	23	23	47	91	69	37	763
6/24/1999	1999	6	24	24	60	95	77.5	45.5	808.5
6/25/1999	1999	6	25	25	57	93	75	43	851.5
6/26/1999	1999	6	26	26	58	94	76	44	895.5
6/27/1999	1999	6	27	27	59	94	76.5	44.5	940
6/28/1999	1999	6	28	28	57	97	77	45	985
6/29/1999	1999	6	29	29	49	97	73	41	1026
6/30/1999	1999	6	30	30	60	100	80	48	1074
7/1/1999	1999	7	1	31	72	101	86.5	54.5	1128.5
7/2/1999	1999	7	2	32	56	93	74.5	42.5	1171
7/3/1999	1999	7	3	33	59	88	73.5	41.5	1212.5
7/4/1999	1999	7	4	34	59	86	72.5	40.5	1253
7/5/1999	1999	7	5	35	55	90	72.5	40.5	1293.5
7/6/1999	1999	7	6	36	56	88	72	40	1333.5
7/7/1999	1999	7	7	37	59	89	74	42	1375.5
7/8/1999	1999	7	8	38	57	90	73.5	41.5	1417
7/9/1999	1999	7	9	39	58	84	71	39	1456
7/10/1999	1999	7	10	40	51	79	65	33	1489
7/11/1999	1999	7	11	41	55	85	70	38	1527
7/12/1999	1999	7	12	42	55	88	71.5	39.5	1566.5
7/13/1999	1999	7	13	43	61	93	77	45	1611.5
7/14/1999	1999	7	14	44	54	73	63.5	31.5	1643
7/15/1999	1999	7	15	45	50	85	67.5	35.5	1678.5
7/16/1999	1999	7	16	46	60	86	73	41	1719.5
7/17/1999	1999	7	17	47	56	81	68.5	36.5	1756
7/18/1999	1999	7	18	48	56	78	67	35	1791
7/19/1999	1999	7	19	49	56	78	67	35	1826
7/20/1999	1999	7	20	50	57	88	72.5	40.5	1866.5
7/21/1999	1999	7	21	51	52	80	66	34	1900.5
7/22/1999	1999	7	22	52	53	87	70	38	1938.5
7/23/1999	1999	7	23	53	52	87	69.5	37.5	1976
7/24/1999	1999	7	24	54	69	89	79	47	2023
7/25/1999	1999	7	25	55	52	96	74	42	2065
7/26/1999	1999	7	26	56	56	93	74.5	42.5	2107.5
7/27/1999	1999	7	27	57	55	90	72.5	40.5	2148
7/28/1999	1999	7	28	58	54	89	71.5	39.5	2187.5
7/29/1999	1999	7	29	59	51	91	71	39	2226.5
7/30/1999	1999	7	30	60	54	87	70.5	38.5	2265
7/31/1999	1999	7	31	61	57	87	72	40	2305
8/1/1999	1999	8	1	62	57	80	68.5	36.5	2341.5
8/2/1999	1999	8	2	63	56	76	66	34	2375.5
8/3/1999	1999	8	3	64	54	74	64	32	2407.5
8/4/1999	1999	8	4	65	56	73	64.5	32.5	2440
8/5/1999	1999	8	5	66	56	75	65.5	33.5	2473.5
8/6/1999	1999	8	6	67	49	83	66	34	2507.5
8/7/1999	1999	8	7	68	50	88	69	37	2544.5
8/8/1999	1999	8	8	69	58	85	71.5	39.5	2584
8/9/1999	1999	8	9	70	55	83	69	37	2621
8/10/1999	1999	8	10	71	53	75	64	32	2653
8/11/1999	1999	8	11	72	43	84	63.5	31.5	2684.5
8/12/1999	1999	8	12	73	43	87	65	33	2717.5
8/13/1999	1999	8	13	74	56	90	73	41	2758.5
8/14/1999	1999	8	14	75	56	80	68	36	2794.5
8/15/1999	1999	8	15	76	53	78	65.5	33.5	2828
8/16/1999	1999	8	16	77	53	88	70.5	38.5	2866.5

8/17/1999	1999	8	17	78	52	90	71	39	2905.5
8/18/1999	1999	8	18	79	52	90	71	39	2944.5
8/19/1999	1999	8	19	80	56	88	72	40	2984.5
8/20/1999	1999	8	20	81	50	82	66	34	3018.5
8/21/1999	1999	8	21	82	51	87	69	37	3055.5
8/22/1999	1999	8	22	83	51	87	69	37	3092.5
8/23/1999	1999	8	23	84	52	89	70.5	38.5	3131
8/24/1999	1999	8	24	85	53	90	71.5	39.5	3170.5
8/25/1999	1999	8	25	86	52	90	71	39	3209.5
8/26/1999	1999	8	26	87	54	89	71.5	39.5	3249
8/27/1999	1999	8	27	88	57	89	73	41	3290
8/28/1999	1999	8	28	89	57	86	71.5	39.5	3329.5
8/29/1999	1999	8	29	90	55	88	71.5	39.5	3369
8/30/1999	1999	8	30	91	50	90	70	38	3407
8/31/1999	1999	8	31	92	50	87	68.5	36.5	3443.5
9/1/1999	1999	9	1	93	60	74	67	35	3478.5
9/2/1999	1999	9	2	94	48	72	60	28	3506.5
9/3/1999	1999	9	3	95	47	73	60	28	3534.5
9/4/1999	1999	9	4	96	41	81	61	29	3563.5
9/5/1999	1999	9	5	97	42	82	62	30	3593.5
9/6/1999	1999	9	6	98	44	84	64	32	3625.5
9/7/1999	1999	9	7	99	42	76	59	27	3652.5
9/8/1999	1999	9	8	100	58	88	73	41	3693.5
9/9/1999	1999	9	9	101	43	64	53.5	21.5	3715
9/10/1999	1999	9	10	102	42	83	62.5	30.5	3745.5
9/11/1999	1999	9	11	103	45	76	60.5	28.5	3774
9/12/1999	1999	9	12	104	43	85	64	32	3806
9/13/1999	1999	9	13	105	42	85	63.5	31.5	3837.5
9/14/1999	1999	9	14	106	46	69	57.5	25.5	3863
9/15/1999	1999	9	15	107	40	77	58.5	26.5	3889.5
9/16/1999	1999	9	16	108	48	83	65.5	33.5	3923
9/17/1999	1999	9	17	109	40	77	52.25	20.25	3943.25
9/18/1999	1999	9	18	110	40	79	59.5	27.5	3970.75
9/19/1999	1999	9	19	111	44	78	61	29	3999.75
9/20/1999	1999	9	20	112	38	79	58.5	26.5	4026.25
9/21/1999	1999	9	21	113	40	80	60	28	4054.25
9/22/1999	1999	9	22	114	45	75	60	28	4082.25
9/23/1999	1999	9	23	115	45	70	57.5	25.5	4107.75
9/24/1999	1999	9	24	116	41	79	60	28	4135.75
9/25/1999	1999	9	25	117	40	83	61.5	29.5	4165.25
9/26/1999	1999	9	26	118	38	89	63.5	31.5	4196.75
9/27/1999	1999	9	27	119	38	86	62	30	4226.75
9/28/1999	1999	9	28	120	30	68	49	17	4243.75
9/29/1999	1999	9	29	121	30	76	53	21	4264.75
9/30/1999	1999	9	30	122	31	84	57.5	25.5	4290.25
10/1/1999	1999	10	1	123	35	89	62	30	4320.25
10/2/1999	1999	10	2	124	32	83	57.5	25.5	4345.75
10/3/1999	1999	10	3	125	31	81	56	24	4369.75
10/4/1999	1999	10	4	126	33	82	57.5	25.5	4395.25
10/5/1999	1999	10	5	127		85	85	53	4448.25
10/6/1999	1999	10	6	128	38	81	59.5	27.5	4475.75
10/7/1999	1999	10	7	129	35	68	51.5	19.5	4495.25
10/8/1999	1999	10	8	130	32	80	56	24	4519.25
10/9/1999	1999	10	9	131	28	80	54	22	4541.25
10/10/1999	1999	10	10	132	32	85	58.5	26.5	4567.75
10/11/1999	1999	10	11	133	30	84	57	25	4592.75
10/12/1999	1999	10	12	134	30	83	56.5	24.5	4617.25
10/13/1999	1999	10	13	135	39	83	61	29	4646.25
10/14/1999	1999	10	14	136	30	82	56	24	4670.25
10/15/1999	1999	10	15	137	36	76	56	24	4694.25
10/16/1999	1999	10	16	138	28	73	50.5	18.5	4712.75
10/17/1999	1999	10	17	139	16	43	29.5	-2.5	4710.25
10/18/1999	1999	10	18	140	22	66	44	12	4722.25
10/19/1999	1999	10	19	141	20	66	43	11	4733.25
10/20/1999	1999	10	20	142	21	72	46.5	14.5	4747.75
10/21/1999	1999	10	21	143	21	73	47	15	4762.75
10/22/1999	1999	10	22	144	25	77	51	19	4781.75
10/23/1999	1999	10	23	145	24	78	51	19	4800.75
10/24/1999	1999	10	24	146	24	78	51	19	4819.75
10/25/1999	1999	10	25	147	21	74	47.5	15.5	4835.25
10/26/1999	1999	10	26	148	30	77	53.5	21.5	4856.75
10/27/1999	1999	10	27	149	25	71	48	16	4872.75
10/28/1999	1999	10	28	150	27	76	51.5	19.5	4892.25
10/29/1999	1999	10	29	151	18	59	38.5	6.5	4898.75
10/30/1999	1999	10	30	152	19	62	40.5	8.5	4907.25
10/31/1999	1999	10	31	153	21	77	49	17	4924.25
11/1/1999	1999	11	1	154	30	78	54	22	4946.25
11/2/1999	1999	11	2	155	18	61	39.5	7.5	4953.75
11/3/1999	1999	11	3	156	19	72	45.5	13.5	4967.25
11/4/1999	1999	11	4	157	20	75	47.5	15.5	4982.75
11/5/1999	1999	11	5	158	21	77	49	17	4999.75
11/6/1999	1999	11	6	159	26	77	51.5	19.5	5019.25
11/7/1999	1999	11	7	160	26	71	48.5	16.5	5035.75
11/8/1999	1999	11	8	161	26	74	50	18	5053.75
11/9/1999	1999	11	9	162	18	70	44	12	5065.75
11/10/1999	1999	11	10	163	22	72	47	15	5080.75
11/11/1999	1999	11	11	164	22	78	50	18	5098.75
11/12/1999	1999	11	12	165	20	77	48.5	16.5	5115.25
11/13/1999	1999	11	13	166	19	76	47.5	15.5	5130.75
11/14/1999	1999	11	14	167	18	73	45.5	13.5	5144.25
11/15/1999	1999	11	15	168	18	75	46.5	14.5	5158.75
11/16/1999	1999	11	16	169	20	75	47.5	15.5	5174.25
11/17/1999	1999	11	17	170	40	75	57.5	25.5	5199.75

11/18/1999	1999	11	18	171	17	70	43.5	11.5	5211.25
11/19/1999	1999	11	19	172	19	67	43	11	5222.25
11/21/1999	1999	11	21	173	18	68	43	11	5233.25
11/22/1999	1999	11	22	174	6	45	25.5	-6.5	5226.75
11/23/1999	1999	11	23	175	11	49	30	-2	5224.75
11/24/1999	1999	11	24	176	4	49	26.5	-5.5	5219.25
11/25/1999	1999	11	25	177	15	52	33.5	1.5	5220.75
11/26/1999	1999	11	26	178	15	69	42	10	5230.75
11/27/1999	1999	11	27	179	17	70	43.5	11.5	5242.25
11/28/1999	1999	11	28	180	18	68	43	11	5253.25
11/29/1999	1999	11	29	181	15	61	38	6	5259.25
11/30/1999	1999	11	30	182	23	66	44.5	12.5	5271.75
12/1/1999	1999	12	1	183	19	64	41.5	9.5	5281.25
12/2/1999	1999	12	2	184	23	53	38	6	5287.25
12/3/1999	1999	12	3	185	14	47	30.5	-1.5	5285.75
12/4/1999	1999	12	4	186	4	46	25	-7	5278.75
12/5/1999	1999	12	5	187	12	51	31.5	-0.5	5278.25
12/6/1999	1999	12	6	188	8	53	30.5	-1.5	5276.75
12/7/1999	1999	12	7	189	4	56	30	-2	5274.75
12/8/1999	1999	12	8	190	5	31	18	-14	5260.75
12/9/1999	1999	12	9	191	23	41	32	0	5260.75
12/10/1999	1999	12	10	192	22	40	31	-1	5259.75
12/11/1999	1999	12	11	193	5	38	21.5	-10.5	5249.25
12/12/1999	1999	12	12	194	3	49	26	-6	5243.25
12/13/1999	1999	12	13	195	13	54	33.5	1.5	5244.75
12/14/1999	1999	12	14	196	-1	33	16	-16	5228.75
12/15/1999	1999	12	15	197	7	41	24	-8	5220.75
12/16/1999	1999	12	16	198	11	48	29.5	-2.5	5218.25
12/17/1999	1999	12	17	199	7	50	28.5	-3.5	5214.75
12/18/1999	1999	12	18	200	17	61	39	7	5221.75
12/19/1999	1999	12	19	201	5	42	23.5	-8.5	5213.25
12/20/1999	1999	12	20	202	3	42	22.5	-9.5	5203.75
12/21/1999	1999	12	21	203	-2	29	13.5	-18.5	5185.25
12/22/1999	1999	12	22	204	-6	36	15	-17	5168.25
12/23/1999	1999	12	23	205	-1	44	21.5	-10.5	5157.75
12/24/1999	1999	12	24	206	8	50	29	-3	5154.75
12/25/1999	1999	12	25	207	18	35	26.5	-5.5	5149.25
12/26/1999	1999	12	26	208	10	43	26.5	-5.5	5143.75
12/27/1999	1999	12	27	209	11	54	32.5	0.5	5144.25
12/28/1999	1999	12	28	210	11	59	35	3	5147.25
12/29/1999	1999	12	29	211	11	59	35	3	5150.25
12/30/1999	1999	12	30	212	8	57	32.5	0.5	5150.75
12/31/1999	1999	12	31	213	22	55	38.5	6.5	5157.25
1/1/2000	2000	1	1	214	15	53	34	2	5159.25
1/2/2000	2000	1	2	215	16	39	27.5	-4.5	5154.75
1/3/2000	2000	1	3	216	2	33	17.5	-14.5	5140.25
1/4/2000	2000	1	4	217	10	43	26.5	-5.5	5134.75
1/5/2000	2000	1	5	218	6	46	26	-6	5128.75
1/6/2000	2000	1	6	219	0	36	18	-14	5114.75
1/7/2000	2000	1	7	220	4	45	24.5	-7.5	5107.25
1/8/2000	2000	1	8	221	16	50	33	1	5108.25
1/9/2000	2000	1	9	222	16	53	34.5	2.5	5110.75
1/10/2000	2000	1	10	223	15	57	36	4	5114.75
1/11/2000	2000	1	11	224	15	65	40	8	5122.75
1/12/2000	2000	1	12	225	17	64	40.5	8.5	5131.25
1/13/2000	2000	1	13	226	14	65	39.5	7.5	5138.75
1/14/2000	2000	1	14	227	15	59	37	5	5143.75
1/15/2000	2000	1	15	228	17	71	44	12	5155.75
1/16/2000	2000	1	16	229	24	70	47	15	5170.75
1/17/2000	2000	1	17	230	23	69	46	14	5184.75
1/18/2000	2000	1	18	231	21	68	44.5	12.5	5197.25
1/19/2000	2000	1	19	232	21	67	44	12	5209.25
1/20/2000	2000	1	20	233	26	65	45.5	13.5	5222.75
1/21/2000	2000	1	21	234	24	60	42	10	5232.75
1/22/2000	2000	1	22	235	13	57	35	3	5235.75
1/23/2000	2000	1	23	236	19	52	35.5	3.5	5239.25
1/24/2000	2000	1	24	237	30	62	46	14	5253.25
1/25/2000	2000	1	25	238	40	60	50	18	5271.25
1/26/2000	2000	1	26	239	35	56	45.5	13.5	5284.75
1/27/2000	2000	1	27	240	13	60	36.5	4.5	5289.25
1/28/2000	2000	1	28	241	5	48	26.5	-5.5	5283.75
1/29/2000	2000	1	29	242	5	45	25	-7	5276.75
1/30/2000	2000	1	30	243	15	52	33.5	1.5	5278.25
1/31/2000	2000	1	31	244	25	43	34	2	5280.25
2/1/2000	2000	2	1	245	7	46	26.5	-5.5	5274.75
2/2/2000	2000	2	2	246	11	54	32.5	0.5	5275.25
2/3/2000	2000	2	3	247	16	71	43.5	11.5	5286.75
2/4/2000	2000	2	4	248	7	51	29	-3	5283.75
2/5/2000	2000	2	5	249	13	63	38	6	5289.75
2/6/2000	2000	2	6	250	14	60	37	5	5294.75
2/7/2000	2000	2	7	251	16	62	39	7	5301.75
2/8/2000	2000	2	8	252	20	65	42.5	10.5	5312.25
2/9/2000	2000	2	9	253	32	64	48	16	5328.25
2/10/2000	2000	2	10	254	24	60	42	10	5338.25
2/11/2000	2000	2	11	255	16	61	38.5	6.5	5344.75
2/12/2000	2000	2	12	256	30	54	42	10	5354.75
2/13/2000	2000	2	13	257	23	54	38.5	6.5	5361.25
2/14/2000	2000	2	14	258	19	67	43	11	5372.25
2/15/2000	2000	2	15	259	19	68	43.5	11.5	5383.75
2/16/2000	2000	2	16	260	34	64	49	17	5400.75
2/17/2000	2000	2	17	261	21	51	36	4	5404.75
2/18/2000	2000	2	18	262	19	61	40	8	5412.75
2/19/2000	2000	2	19	263	20	62	41	9	5421.75

2/20/2000	2000	2	20	264	21	61	41	9	5430.75
2/21/2000	2000	2	21	265	33	62	47.5	15.5	5446.25
2/22/2000	2000	2	22	266	15	50	32.5	0.5	5446.75
2/23/2000	2000	2	23	267	33	62	47.5	15.5	5462.25
2/24/2000	2000	2	24	268	21	52	36.5	4.5	5466.75
2/25/2000	2000	2	25	269	9	41	25	-7	5459.75
2/26/2000	2000	2	26	270	13	55	34	2	5461.75
2/27/2000	2000	2	27	271	30	64	47	15	5476.75
2/28/2000	2000	2	28	272	16	62	39	7	5483.75
2/29/2000	2000	2	29	273	24	60	42	10	5493.75
3/1/2000	2000	3	1	274	16	54	35	3	5496.75
3/2/2000	2000	3	2	275	14	59	36.5	4.5	5501.25
3/3/2000	2000	3	3	276	17	67	42	10	5511.25
3/4/2000	2000	3	4	277	32	70	51	19	5530.25
3/5/2000	2000	3	5	278	31	49	40	8	5538.25
3/6/2000	2000	3	6	279	32	58	45	13	5551.25
3/7/2000	2000	3	7	280	25	43	34	2	5553.25
3/8/2000	2000	3	8	281	25	55	40	8	5561.25
3/9/2000	2000	3	9	282	19	56	37.5	5.5	5566.75
3/10/2000	2000	3	10	283	11	48	29.5	-2.5	5564.25
3/11/2000	2000	3	11	284	15	58	36.5	4.5	5568.75
3/12/2000	2000	3	12	285	21	66	43.5	11.5	5580.25
3/13/2000	2000	3	13	286	23	67	45	13	5593.25
3/14/2000	2000	3	14	287	20	66	43	11	5604.25
3/15/2000	2000	3	15	288	16	68	42	10	5614.25
3/16/2000	2000	3	16	289	17	63	40	8	5622.25
3/17/2000	2000	3	17	290	18	66	42	10	5632.25
3/18/2000	2000	3	18	291	9	52	30.5	-1.5	5630.75
3/19/2000	2000	3	19	292	33	67	50	18	5648.75
3/20/2000	2000	3	20	293	27	62	44.5	12.5	5661.25
3/21/2000	2000	3	21	294	28	61	44.5	12.5	5673.75
3/22/2000	2000	3	22	295	19	36	27.5	-4.5	5669.25
3/23/2000	2000	3	23	296	22	54	38	6	5675.25
3/24/2000	2000	3	24	297	25	68	46.5	14.5	5689.75
3/25/2000	2000	3	25	298	24	70	47	15	5704.75
3/27/2000	2000	3	27	299	32	72	52	20	5724.75
3/28/2000	2000	3	28	300	35	56	45.5	13.5	5738.25
3/29/2000	2000	3	29	301	35	62	48.5	16.5	5754.75
3/30/2000	2000	3	30	302	32	58	45	13	5767.75
3/31/2000	2000	3	31	303	30	42	36	4	5771.75
4/1/2000	2000	4	1	304	20	55	37.5	5.5	5777.25
4/2/2000	2000	4	2	305	25	57	41	9	5786.25
4/3/2000	2000	4	3	306	25	65	45	13	5799.25
4/4/2000	2000	4	4	307	30	76	53	21	5820.25
4/5/2000	2000	4	5	308	38	77	57.5	25.5	5845.75
4/6/2000	2000	4	6	309	34	77	55.5	23.5	5869.25
4/7/2000	2000	4	7	310	36	76	56	24	5893.25
4/8/2000	2000	4	8	311	37	64	50.5	18.5	5911.75
4/9/2000	2000	4	9	312	37	80	58.5	26.5	5938.25
4/10/2000	2000	4	10	313	37	73	55	23	5961.25
4/11/2000	2000	4	11	314	28	65	46.5	14.5	5975.75
4/12/2000	2000	4	12	315	28	70	49	17	5992.75
4/13/2000	2000	4	13	316	33	77	55	23	6015.75
4/14/2000	2000	4	14	317	35	76	55.5	23.5	6039.25
4/15/2000	2000	4	15	318	25	65	45	13	6052.25
4/16/2000	2000	4	16	319	32	76	54	22	6074.25
4/17/2000	2000	4	17	320	38	82	60	28	6102.25
4/18/2000	2000	4	18	321	30	75	52.5	20.5	6122.75
4/19/2000	2000	4	19	322	24	65	44.5	12.5	6135.25
4/20/2000	2000	4	20	323	35	76	55.5	23.5	6158.75
4/21/2000	2000	4	21	324	37	73	55	23	6181.75
4/22/2000	2000	4	22	325	41	63	52	20	6201.75
4/23/2000	2000	4	23	326	30	78	54	22	6223.75
4/24/2000	2000	4	24	327	31	87	59	27	6250.75
4/25/2000	2000	4	25	328	32	87	59.5	27.5	6278.25
4/26/2000	2000	4	26	329	32	87	59.5	27.5	6305.75
4/27/2000	2000	4	27	330	51	90	70.5	38.5	6344.25
4/28/2000	2000	4	28	331	40	84	62	30	6374.25
4/29/2000	2000	4	29	332	38	73	55.5	23.5	6397.75
4/30/2000	2000	4	30	333	33	68	50.5	18.5	6416.25
5/1/2000	2000	5	1	334	31	81	56	24	6440.25
5/2/2000	2000	5	2	335	34	84	59	27	6467.25
5/3/2000	2000	5	3	336	36	88	62	30	6497.25
5/4/2000	2000	5	4	337	36	89	62.5	30.5	6527.75
5/5/2000	2000	5	5	338	37	90	63.5	31.5	6559.25
5/6/2000	2000	5	6	339	38	84	61	29	6588.25
5/7/2000	2000	5	7	340	44	80	62	30	6618.25
5/8/2000	2000	5	8	341	46	80	63	31	6649.25
5/9/2000	2000	5	9	342	50	85	67.5	35.5	6684.75
5/10/2000	2000	5	10	343	52	88	70	38	6722.75
5/11/2000	2000	5	11	344	32	81	56.5	24.5	6747.25
5/12/2000	2000	5	12	345	24	63	43.5	11.5	6758.75
5/13/2000	2000	5	13	346	29	63	46	14	6772.75
5/14/2000	2000	5	14	347	29	63	46	14	6786.75
5/15/2000	2000	5	15	348	53	88	70.5	38.5	6825.25
5/16/2000	2000	5	16	349	40	80	60	28	6853.25
5/17/2000	2000	5	17	350	32	70	51	19	6872.25
5/18/2000	2000	5	18	351	38	72	55	23	6895.25
5/19/2000	2000	5	19	352	35	75	55	23	6918.25
5/20/2000	2000	5	20	353	37	81	59	27	6945.25
5/21/2000	2000	5	21	354	38	87	62.5	30.5	6975.75
5/22/2000	2000	5	22	355	40	91	65.5	33.5	7009.25
5/23/2000	2000	5	23	356	54	96	75	43	7052.25

5/24/2000	2000	5	24	357	59	92	75.5	43.5	7095.75
5/25/2000	2000	5	25	358	45	88	66.5	34.5	7130.25
5/26/2000	2000	5	26	359	41	84	62.5	30.5	7160.75
5/27/2000	2000	5	27	360	40	86	63	31	7191.75
5/28/2000	2000	5	28	361	45	97	71	39	7230.75
5/29/2000	2000	5	29	362	54	97	75.5	43.5	7274.25
5/30/2000	2000	5	30	363	46	95	70.5	38.5	7312.75
5/31/2000	2000	5	31	364	49	94	71.5	39.5	7352.25
6/1/2000	2000	6	1	1	56	90	73	41	41
6/2/2000	2000	6	2	2	44	90	67	35	76
6/3/2000	2000	6	3	3	45	90	67.5	35.5	111.5
6/4/2000	2000	6	4	4	54	94	74	42	153.5
6/5/2000	2000	6	5	5	52	93	72.5	40.5	194
6/6/2000	2000	6	6	6	54	93	73.5	41.5	235.5
6/7/2000	2000	6	7	7	58	94	76	44	279.5
6/8/2000	2000	6	8	8	51	86	68.5	36.5	316
6/9/2000	2000	6	9	9	44	86	65	33	349
6/10/2000	2000	6	10	10	42	86	64	32	381
6/11/2000	2000	6	11	11	43	89	66	34	415
6/12/2000	2000	6	12	12	43	91	67	35	450
6/13/2000	2000	6	13	13	52	93	72.5	40.5	490.5
6/14/2000	2000	6	14	14	45	92	68.5	36.5	527
6/15/2000	2000	6	15	15	50	97	73.5	41.5	568.5
6/16/2000	2000	6	16	16	59	93	76	44	612.5
6/17/2000	2000	6	17	17	53	88	70.5	38.5	651
6/18/2000	2000	6	18	18	52	84	68	36	687
6/19/2000	2000	6	19	19	56	84	70	38	725
6/20/2000	2000	6	20	20	46	86	66	34	759
6/21/2000	2000	6	21	21	48	90	69	37	796
6/22/2000	2000	6	22	22	48	90	69	37	833
6/23/2000	2000	6	23	23	51	87	69	37	870
6/24/2000	2000	6	24	24	51	89	70	38	908
6/25/2000	2000	6	25	25	52	95	73.5	41.5	949.5
6/26/2000	2000	6	26	26	60	87	73.5	41.5	991
6/27/2000	2000	6	27	27	50	82	66	34	1025
6/28/2000	2000	6	28	28	56	90	73	41	1066
6/29/2000	2000	6	29	29	49	82	65.5	33.5	1099.5
6/30/2000	2000	6	30	30	59	87	73	41	1140.5
7/1/2000	2000	7	1	31	55	92	73.5	41.5	1182
7/2/2000	2000	7	2	32	54	90	72	40	1222
7/3/2000	2000	7	3	33	52	92	72	40	1262
7/4/2000	2000	7	4	34	55	92	73.5	41.5	1303.5
7/5/2000	2000	7	5	35	52	95	73.5	41.5	1345
7/6/2000	2000	7	6	36	47	95	71	39	1384
7/7/2000	2000	7	7	37	49	95	72	40	1424
7/8/2000	2000	7	8	38	56	84	70	38	1462
7/9/2000	2000	7	9	39	52	84	68	36	1498
7/10/2000	2000	7	10	40	54	88	71	39	1537
7/11/2000	2000	7	11	41	50	90	70	38	1575
7/12/2000	2000	7	12	42	58	90	74	42	1617
7/13/2000	2000	7	13	43	57	92	74.5	42.5	1659.5
7/14/2000	2000	7	14	44	58	91	74.5	42.5	1702
7/15/2000	2000	7	15	45	60	92	76	44	1746
7/16/2000	2000	7	16	46	50	93	71.5	39.5	1785.5
7/17/2000	2000	7	17	47	50	93	71.5	39.5	1825
7/18/2000	2000	7	18	48	51	93	72	40	1865
7/19/2000	2000	7	19	49	56	97	76.5	44.5	1909.5
7/20/2000	2000	7	20	50	54	95	74.5	42.5	1952
7/21/2000	2000	7	21	51	55	96	75.5	43.5	1995.5
7/22/2000	2000	7	22	52	54	99	76.5	44.5	2040
7/23/2000	2000	7	23	53	51	99	75	43	2083
7/24/2000	2000	7	24	54	55	96	75.5	43.5	2126.5
7/25/2000	2000	7	25	55	55	98	76.5	44.5	2171
7/26/2000	2000	7	26	56	55	91	73	41	2212
7/27/2000	2000	7	27	57	54	97	75.5	43.5	2255.5
7/28/2000	2000	7	28	58	62	98	80	48	2303.5
7/29/2000	2000	7	29	59	50	96	73	41	2344.5
7/30/2000	2000	7	30	60	56	92	74	42	2386.5
7/31/2000	2000	7	31	61	50	91	70.5	38.5	2425
8/1/2000	2000	8	1	62	52	95	73.5	41.5	2466.5
8/2/2000	2000	8	2	63	59	97	78	46	2512.5
8/3/2000	2000	8	3	64	55	100	77.5	45.5	2558
8/4/2000	2000	8	4	65	58	95	76.5	44.5	2602.5
8/5/2000	2000	8	5	66	55	96	75.5	43.5	2646
8/6/2000	2000	8	6	67	56	94	75	43	2689
8/7/2000	2000	8	7	68	52	95	73.5	41.5	2730.5
8/8/2000	2000	8	8	69	55	95	75	43	2773.5
8/9/2000	2000	8	9	70	53	95	74	42	2815.5
8/10/2000	2000	8	10	71	60	88	74	42	2857.5
8/11/2000	2000	8	11	72	54	94	74	42	2899.5
8/12/2000	2000	8	12	73	58	89	73.5	41.5	2941
8/13/2000	2000	8	13	74	52	91	71.5	39.5	2980.5
8/14/2000	2000	8	14	75	55	97	76	44	3024.5
8/15/2000	2000	8	15	76	55	97	76	44	3068.5
8/16/2000	2000	8	16	77	54	96	75	43	3111.5
8/17/2000	2000	8	17	78	57	86	71.5	39.5	3151
8/18/2000	2000	8	18	79	52	80	66	34	3185
8/19/2000	2000	8	19	80	47	86	66.5	34.5	3219.5
8/20/2000	2000	8	20	81	50	90	70	38	3257.5
8/21/2000	2000	8	21	82	49	93	71	39	3296.5
8/22/2000	2000	8	22	83	50	93	71.5	39.5	3336
8/23/2000	2000	8	23	84	49	90	69.5	37.5	3373.5
8/24/2000	2000	8	24	85	53	92	72.5	40.5	3414

8/25/2000	2000	8	25	86	50	88	69	37	3451
8/26/2000	2000	8	26	87	49	90	69.5	37.5	3488.5
8/27/2000	2000	8	27	88	54	93	73.5	41.5	3530
8/28/2000	2000	8	28	89	52	88	70	38	3568
8/29/2000	2000	8	29	90	49	84	66.5	34.5	3602.5
8/30/2000	2000	8	30	91	48	85	66.5	34.5	3637
8/31/2000	2000	8	31	92	44	86	65	33	3670
9/1/2000	2000	9	1	93	47	83	65	33	3703
9/2/2000	2000	9	2	94	52	90	71	39	3742
9/3/2000	2000	9	3	95	51	94	72.5	40.5	3782.5
9/4/2000	2000	9	4	96	50	93	71.5	39.5	3822
9/5/2000	2000	9	5	97	48	94	71	39	3861
9/6/2000	2000	9	6	98	47	90	68.5	36.5	3897.5
9/7/2000	2000	9	7	99	57	88	72.5	40.5	3938
9/8/2000	2000	9	8	100	47	84	65.5	33.5	3971.5
9/9/2000	2000	9	9	101	42	87	64.5	32.5	4004
9/10/2000	2000	9	10	102	51	87	69	37	4041
9/11/2000	2000	9	11	103	42	88	65	33	4074
9/12/2000	2000	9	12	104	42	91	66.5	34.5	4108.5
9/13/2000	2000	9	13	105	44	92	68	36	4144.5
9/14/2000	2000	9	14	106	47	92	69.5	37.5	4182
9/15/2000	2000	9	15	107	46	93	69.5	37.5	4219.5
9/16/2000	2000	9	16	108	46	86	66	34	4253.5
9/17/2000	2000	9	17	109	46	84	65	33	4286.5
9/18/2000	2000	9	18	110	40	78	59	27	4313.5
9/19/2000	2000	9	19	111	46	84	65	33	4346.5
9/20/2000	2000	9	20	112	50	90	70	38	4384.5
9/21/2000	2000	9	21	113	50	85	67.5	35.5	4420
9/22/2000	2000	9	22	114	50	85	67.5	35.5	4455.5
9/23/2000	2000	9	23	115	37	78	57.5	25.5	4481
9/24/2000	2000	9	24	116	26	65	45.5	13.5	4494.5
9/25/2000	2000	9	25	117	32	77	54.5	22.5	4517
9/26/2000	2000	9	26	118	48	85	66.5	34.5	4551.5
9/27/2000	2000	9	27	119	45	82	63.5	31.5	4583
9/28/2000	2000	9	28	120	45	89	67	35	4618
9/29/2000	2000	9	29	121	48	76	62	30	4648
9/30/2000	2000	9	30	122	40	84	62	30	4678
10/1/2000	2000	10	1	123	42	87	64.5	32.5	4710.5
10/2/2000	2000	10	2	124	45	86	65.5	33.5	4744
10/3/2000	2000	10	3	125	49	86	67.5	35.5	4779.5
10/4/2000	2000	10	4	126	34	66	50	18	4797.5
10/5/2000	2000	10	5	127	37	79	58	26	4823.5
10/6/2000	2000	10	6	128	37	79	58	26	4849.5
10/7/2000	2000	10	7	129	37	65	51	19	4868.5
10/8/2000	2000	10	8	130	36	64	50	18	4886.5
10/9/2000	2000	10	9	131	32	61	46.5	14.5	4901
10/10/2000	2000	10	10	132	34	63	48.5	16.5	4917.5
10/11/2000	2000	10	11	133	32	65	48.5	16.5	4934
10/12/2000	2000	10	12	134	37	70	53.5	21.5	4955.5
10/13/2000	2000	10	13	135	30	67	48.5	16.5	4972
10/14/2000	2000	10	14	136	30	72	51	19	4991
10/15/2000	2000	10	15	137	35	74	54.5	22.5	5013.5
10/16/2000	2000	10	16	138	28	72	50	18	5031.5
10/17/2000	2000	10	17	139	31	73	52	20	5051.5
10/18/2000	2000	10	18	140	36	70	53	21	5072.5
10/19/2000	2000	10	19	141	31	69	50	18	5090.5
10/20/2000	2000	10	20	142	35	75	55	23	5113.5
10/21/2000	2000	10	21	143	40	58	49	17	5130.5
10/22/2000	2000	10	22	144	40	59	49.5	17.5	5148
10/23/2000	2000	10	23	145	35	60	47.5	15.5	5163.5
10/24/2000	2000	10	24	146	36	58	47	15	5178.5
10/25/2000	2000	10	25	147	30	62	46	14	5192.5
10/26/2000	2000	10	26	148	32	66	49	17	5209.5
10/27/2000	2000	10	27	149	38	61	49.5	17.5	5227
10/28/2000	2000	10	28	150	37	50	43.5	11.5	5238.5
10/29/2000	2000	10	29	151	29	59	44	12	5250.5
10/30/2000	2000	10	30	152	34	66	50	18	5268.5
10/31/2000	2000	10	31	153	58	59	58.5	26.5	5295
11/1/2000	2000	11	1	154	21	50	35.5	3.5	5298.5
11/2/2000	2000	11	2	155	33	57	45	13	5311.5
11/3/2000	2000	11	3	156	34	45	39.5	7.5	5319
11/4/2000	2000	11	4	157	35	47	41	9	5328
11/5/2000	2000	11	5	158	28	47	37.5	5.5	5333.5
11/6/2000	2000	11	6	159	24	43	33.5	1.5	5335
11/7/2000	2000	11	7	160	7	35	21	-11	5324
11/8/2000	2000	11	8	161	18	47	32.5	0.5	5324.5
11/9/2000	2000	11	9	162	23	58	40.5	8.5	5333
11/10/2000	2000	11	10	163	33	43	38	6	5339
11/11/2000	2000	11	11	164	34	43	38.5	6.5	5345.5
11/12/2000	2000	11	12	165	10	41	25.5	-6.5	5339
11/13/2000	2000	11	13	166	13	46	29.5	-2.5	5336.5
11/14/2000	2000	11	14	167	23	51	37	5	5341.5
11/15/2000	2000	11	15	168	10	48	29	-3	5338.5
11/16/2000	2000	11	16	169	10	47	28.5	-3.5	5335
11/17/2000	2000	11	17	170	11	45	28	-4	5331
11/18/2000	2000	11	18	171	10	39	24.5	-7.5	5323.5
11/19/2000	2000	11	19	172	12	50	31	-1	5322.5
11/20/2000	2000	11	20	173	14	61	37.5	5.5	5328
11/21/2000	2000	11	21	174	27	56	41.5	9.5	5337.5
11/22/2000	2000	11	22	175	30	60	45	13	5350.5
11/23/2000	2000	11	23	176	18	39	28.5	-3.5	5347
11/24/2000	2000	11	24	177	18	39	28.5	-3.5	5343.5
11/25/2000	2000	11	25	178	14	44	29	-3	5340.5

11/26/2000	2000	11	26	179	16	55	35.5	3.5	5344
11/27/2000	2000	11	27	180	23	53	38	6	5350
11/28/2000	2000	11	28	181	20	58	39	7	5357
11/29/2000	2000	11	29	182	23	61	42	10	5367
11/30/2000	2000	11	30	183	19	61	40	8	5375
12/1/2000	2000	12	1	184	31	53	42	10	5385
12/2/2000	2000	12	2	185	20	42	31	-1	5384
12/3/2000	2000	12	3	186	17	55	36	4	5388
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12/5/2000	2000	12	5	188	17	57	37	5	5400
12/6/2000	2000	12	6	189	19	56	37.5	5.5	5405.5
12/7/2000	2000	12	7	190	22	63	42.5	10.5	5416
12/8/2000	2000	12	8	191	27	56	41.5	9.5	5425.5
12/9/2000	2000	12	9	192	24	54	39	7	5432.5
12/10/2000	2000	12	10	193	27	42	34.5	2.5	5435
12/11/2000	2000	12	11	194	15	55	35	3	5438
12/12/2000	2000	12	12	195	31	51	41	9	5447
12/13/2000	2000	12	13	196	15	52	33.5	1.5	5448.5
12/14/2000	2000	12	14	197	20	56	38	6	5454.5
12/15/2000	2000	12	15	198	20	53	36.5	4.5	5459
12/16/2000	2000	12	16	199	12	65	38.5	6.5	5465.5
12/17/2000	2000	12	17	200	9	58	33.5	1.5	5467
12/18/2000	2000	12	18	201	5	39	22	-10	5457
12/19/2000	2000	12	19	202	23	55	39	7	5464
12/20/2000	2000	12	20	203	10	51	30.5	-1.5	5462.5
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12/23/2000	2000	12	23	206	10	58	34	2	5471
12/24/2000	2000	12	24	207	25	61	43	11	5482
12/25/2000	2000	12	25	208	21	42	31.5	-0.5	5481.5
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12/28/2000	2000	12	28	211	-1	48	23.5	-8.5	5442.5
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12/30/2000	2000	12	30	213	13	50	31.5	-0.5	5435.5
12/31/2000	2000	12	31	214	10	50	30	-2	5433.5
1/1/2001	2001	1	1	215	10	37	23.5	-8.5	5425
1/2/2001	2001	1	2	216	11	38	24.5	-7.5	5417.5
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1/12/2001	2001	1	12	226	54	55	54.5	22.5	5435.5
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1/16/2001	2001	1	16	230	-2	33	15.5	-16.5	5405.5
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1/20/2001	2001	1	20	234	8	45	26.5	-5.5	5359.5
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1/27/2001	2001	1	27	241	14	32	23	-9	5339
1/28/2001	2001	1	28	242	16	30	23	-9	5330
1/29/2001	2001	1	29	243	21	45	33	1	5331
1/30/2001	2001	1	30	244	-5	30	12.5	-19.5	5311.5
1/31/2001	2001	1	31	245	-5	32	13.5	-18.5	5293
2/1/2001	2001	2	1	246	0	28	14	-18	5275
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2/7/2001	2001	2	7	252	31	57	44	12	5322
2/8/2001	2001	2	8	253	12	39	25.5	-6.5	5315.5
2/9/2001	2001	2	9	254	16	50	33	1	5316.5
2/10/2001	2001	2	10	255	25	52	38.5	6.5	5323
2/11/2001	2001	2	11	256	23	54	38.5	6.5	5329.5
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2/13/2001	2001	2	13	258	29	59	44	12	5355.5
2/14/2001	2001	2	14	259	18	37	27.5	-4.5	5351
2/15/2001	2001	2	15	260	17	45	31	-1	5350
2/16/2001	2001	2	16	261	16	47	31.5	-0.5	5349.5
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2/18/2001	2001	2	18	263	22	63	42.5	10.5	5370.5
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2/22/2001	2001	2	22	267	21	65	43	11	5410
2/23/2001	2001	2	23	268	22	54	38	6	5416
2/24/2001	2001	2	24	269	30	49	39.5	7.5	5423.5
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2/26/2001	2001	2	26	271	27	47	37	5	5437.5

2/27/2001	2001	2	27	272	33	50	41.5	9.5	5447
2/28/2001	2001	2	28	273	23	48	35.5	3.5	5450.5
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3/3/2001	2001	3	3	276	18	48	33	1	5462
3/4/2001	2001	3	4	277	31	58	44.5	12.5	5474.5
3/5/2001	2001	3	5	278	34	62	48	16	5490.5
3/6/2001	2001	3	6	279	27	64	45.5	13.5	5504
3/7/2001	2001	3	7	280	35	57	46	14	5518
3/8/2001	2001	3	8	281	24	55	39.5	7.5	5525.5
3/9/2001	2001	3	9	282	27	51	39	7	5532.5
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3/12/2001	2001	3	12	284	19	57	38	6	5544.5
3/13/2001	2001	3	13	285	23	63	43	11	5555.5
3/14/2001	2001	3	14	286	20	64	42	10	5565.5
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3/21/2001	2001	3	21	293	31	75	53	21	5639.5
3/22/2001	2001	3	22	294	31	74	52.5	20.5	5660
3/23/2001	2001	3	23	295	27	70	48.5	16.5	5676.5
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3/25/2001	2001	3	25	297	36	76	56	24	5716
3/26/2001	2001	3	26	298	30	67	48.5	16.5	5732.5
3/27/2001	2001	3	27	299	22	65	43.5	11.5	5744
3/28/2001	2001	3	28	300	24	64	44	12	5756
3/29/2001	2001	3	29	301	53	59	56	24	5780
3/30/2001	2001	3	30	302	23	67	45	13	5793
3/31/2001	2001	3	31	303	27	76	51.5	19.5	5812.5
4/1/2001	2001	4	1	304	30	77	53.5	21.5	5834
4/2/2001	2001	4	2	305	32	72	52	20	5854
4/3/2001	2001	4	3	306	34	75	54.5	22.5	5876.5
4/4/2001	2001	4	4	307	39	74	56.5	24.5	5901
4/5/2001	2001	4	5	308	38	64	51	19	5920
4/6/2001	2001	4	6	309	32	67	49.5	17.5	5937.5
4/7/2001	2001	4	7	310	28	67	47.5	15.5	5953
4/8/2001	2001	4	8	311	23	66	44.5	12.5	5965.5
4/9/2001	2001	4	9	312	30	72	51	19	5984.5
4/10/2001	2001	4	10	313	28	71	49.5	17.5	6002
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4/13/2001	2001	4	13	316	27	71	49	17	6036
4/14/2001	2001	4	14	317	30	72	51	19	6055
4/15/2001	2001	4	15	318	27	78	52.5	20.5	6075.5
4/16/2001	2001	4	16	319	42	83	62.5	30.5	6106
4/17/2001	2001	4	17	320	39	73	56	24	6130
4/18/2001	2001	4	18	321	41	84	62.5	30.5	6160.5
4/19/2001	2001	4	19	322	46	74	60	28	6188.5
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4/21/2001	2001	4	21	324	31	74	52.5	20.5	6229.5
4/22/2001	2001	4	22	325	23	56	39.5	7.5	6237
4/23/2001	2001	4	23	326	27	66	46.5	14.5	6251.5
4/24/2001	2001	4	24	327	30	76	53	21	6272.5
4/25/2001	2001	4	25	328	35	81	58	26	6298.5
4/26/2001	2001	4	26	329	38	80	59	27	6325.5
4/27/2001	2001	4	27	330	43	76	59.5	27.5	6353
4/28/2001	2001	4	28	331	38	77	57.5	25.5	6378.5
4/29/2001	2001	4	29	332	36	80	58	26	6404.5
4/30/2001	2001	4	30	333	36	82	59	27	6431.5
5/1/2001	2001	5	1	334	44	84	64	32	6463.5
5/2/2001	2001	5	2	335	36	80	58	26	6489.5
5/3/2001	2001	5	3	336	33	73	53	21	6510.5
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5/5/2001	2001	5	5	338	40	68	54	22	6544
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5/7/2001	2001	5	7	340	35	81	58	26	6590
5/8/2001	2001	5	8	341	42	85	63.5	31.5	6621.5
5/9/2001	2001	5	9	342	44	84	64	32	6653.5
5/10/2001	2001	5	10	343	41	87	64	32	6685.5
5/11/2001	2001	5	11	344	50	89	69.5	37.5	6723
5/12/2001	2001	5	12	345	47	85	66	34	6757
5/13/2001	2001	5	13	346	42	75	58.5	26.5	6783.5
5/14/2001	2001	5	14	347	38	73	55.5	23.5	6807
5/15/2001	2001	5	15	348	39	83	61	29	6836
5/16/2001	2001	5	16	349	39	83	61	29	6865
5/17/2001	2001	5	17	350	52	87	69.5	37.5	6902.5
5/18/2001	2001	5	18	351	54	85	69.5	37.5	6940
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5/21/2001	2001	5	21	354	37	77	57	25	7015
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5/23/2001	2001	5	23	356	39	87	63	31	7075
5/24/2001	2001	5	24	357	58	90	74	42	7117
5/25/2001	2001	5	25	358	54	88	71	39	7156
5/26/2001	2001	5	26	359	55	92	73.5	41.5	7197.5
5/27/2001	2001	5	27	360	47	90	68.5	36.5	7234
5/28/2001	2001	5	28	361	43	91	67	35	7269
5/29/2001	2001	5	29	362	42	85	63.5	31.5	7300.5
5/30/2001	2001	5	30	363	39	90	64.5	32.5	7333
5/31/2001	2001	5	31	364	40	91	65.5	33.5	7366.5

6/1/2001	2001	6	1	1	50	83	66.5	34.5	34.5
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6/3/2001	2001	6	3	3	44	85	64.5	32.5	109
6/4/2001	2001	6	4	4	48	83	65.5	33.5	142.5
6/5/2001	2001	6	5	5	43	88	65.5	33.5	176
6/6/2001	2001	6	6	6	47	94	70.5	38.5	214.5
6/7/2001	2001	6	7	7	60	95	77.5	45.5	260
6/8/2001	2001	6	8	8	60	93	76.5	44.5	304.5
6/9/2001	2001	6	9	9	52	95	73.5	41.5	346
6/10/2001	2001	6	10	10	50	91	70.5	38.5	384.5
6/11/2001	2001	6	11	11	50	93	71.5	39.5	424
6/12/2001	2001	6	12	12	50	90	70	38	462
6/13/2001	2001	6	13	13	32	81	56.5	24.5	486.5
6/14/2001	2001	6	14	14	34	76	55	23	509.5
6/15/2001	2001	6	15	15	38	90	64	32	541.5
6/16/2001	2001	6	16	16	45	95	70	38	579.5
6/17/2001	2001	6	17	17	50	96	73	41	620.5
6/18/2001	2001	6	18	18	48	90	69	37	657.5
6/19/2001	2001	6	19	19	58	97	77.5	45.5	703
6/20/2001	2001	6	20	20	50	92	71	39	742
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6/22/2001	2001	6	22	22	59	95	77	45	833
6/23/2001	2001	6	23	23	55	93	74	42	875
6/24/2001	2001	6	24	24	54	88	71	39	914
6/25/2001	2001	6	25	25	55	90	72.5	40.5	954.5
6/26/2001	2001	6	26	26	48	77	62.5	30.5	985
6/27/2001	2001	6	27	27	49	90	69.5	37.5	1022.5
6/28/2001	2001	6	28	28	56	94	75	43	1065.5
6/29/2001	2001	6	29	29	58	92	75	43	1108.5
6/30/2001	2001	6	30	30	58	98	78	46	1154.5
7/1/2001	2001	7	1	31	53	98	75.5	43.5	1198
7/2/2001	2001	7	2	32	55	96	75.5	43.5	1241.5
7/3/2001	2001	7	3	33	59	92	75.5	43.5	1285
7/4/2001	2001	7	4	34	55	92	73.5	41.5	1326.5
7/5/2001	2001	7	5	35	53	94	73.5	41.5	1368
7/6/2001	2001	7	6	36	58	97	77.5	45.5	1413.5
7/7/2001	2001	7	7	37	58	97	77.5	45.5	1459
7/8/2001	2001	7	8	38	56	98	77	45	1504
7/9/2001	2001	7	9	39	55	98	76.5	44.5	1548.5
7/10/2001	2001	7	10	40	55	93	74	42	1590.5
7/11/2001	2001	7	11	41	55	88	71.5	39.5	1630
7/12/2001	2001	7	12	42	57	90	73.5	41.5	1671.5
7/13/2001	2001	7	13	43	57	94	75.5	43.5	1715
7/14/2001	2001	7	14	44	56	88	72	40	1755
7/15/2001	2001	7	15	45	54	86	70	38	1793
7/16/2001	2001	7	16	46	64	91	77.5	45.5	1838.5
7/17/2001	2001	7	17	47	53	78	65.5	33.5	1872
7/18/2001	2001	7	18	48	55	89	72	40	1912
7/19/2001	2001	7	19	49	60	90	75	43	1955
7/20/2001	2001	7	20	50	60	91	75.5	43.5	1998.5
7/21/2001	2001	7	21	51	67	89	78	46	2044.5
7/22/2001	2001	7	22	52	60	91	75.5	43.5	2088
7/23/2001	2001	7	23	53	61	97	79	47	2135
7/24/2001	2001	7	24	54	56	88	72	40	2175
7/25/2001	2001	7	25	55	59	88	73.5	41.5	2216.5
7/26/2001	2001	7	26	56	57	87	72	40	2256.5
7/27/2001	2001	7	27	57	58	90	74	42	2298.5
7/28/2001	2001	7	28	58	60	94	77	45	2343.5
7/29/2001	2001	7	29	59	60	94	77	45	2388.5
7/30/2001	2001	7	30	60	58	85	71.5	39.5	2428
7/31/2001	2001	7	31	61	61	90	75.5	43.5	2471.5
8/1/2001	2001	8	1	62	57	89	73	41	2512.5
8/2/2001	2001	8	2	63	58	84	71	39	2551.5
8/3/2001	2001	8	3	64	59	88	73.5	41.5	2593
8/4/2001	2001	8	4	65	56	91	73.5	41.5	2634.5
8/5/2001	2001	8	5	66	59	93	76	44	2678.5
8/6/2001	2001	8	6	67	67	95	81	49	2727.5
8/7/2001	2001	8	7	68	61	91	76	44	2771.5
8/8/2001	2001	8	8	69	54	75	64.5	32.5	2804
8/9/2001	2001	8	9	70	54	87	70.5	38.5	2842.5
8/10/2001	2001	8	10	71	61	90	75.5	43.5	2886
8/11/2001	2001	8	11	72	62	86	74	42	2928
8/12/2001	2001	8	12	73	59	74	66.5	34.5	2962.5
8/13/2001	2001	8	13	74	58	83	70.5	38.5	3001
8/14/2001	2001	8	14	75	51	83	67	35	3036
8/15/2001	2001	8	15	76	58	88	73	41	3077
8/16/2001	2001	8	16	77	52	91	71.5	39.5	3116.5
8/17/2001	2001	8	17	78	50	90	70	38	3154.5
8/18/2001	2001	8	18	79	50	92	71	39	3193.5
8/19/2001	2001	8	19	80	55	90	72.5	40.5	3234
8/20/2001	2001	8	20	81	55	91	73	41	3275
8/21/2001	2001	8	21	82	50	82	66	34	3309
8/22/2001	2001	8	22	83	48	87	67.5	35.5	3344.5
8/23/2001	2001	8	23	84	48	90	69	37	3381.5
8/24/2001	2001	8	24	85	52	94	73	41	3422.5
8/25/2001	2001	8	25	86	54	94	74	42	3464.5
8/26/2001	2001	8	26	87	58	94	76	44	3508.5
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9/5/2001	2001	9	5	97	51	91	71	39	3874.5
9/6/2001	2001	9	6	98	47	87	67	35	3909.5
9/7/2001	2001	9	7	99	47	84	65.5	33.5	3943
9/8/2001	2001	9	8	100	32	81	56.5	24.5	3967.5
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9/10/2001	2001	9	10	102	44	87	65.5	33.5	4027
9/11/2001	2001	9	11	103	44	87	65.5	33.5	4060.5
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9/13/2001	2001	9	13	105	57	86	71.5	39.5	4139.5
9/14/2001	2001	9	14	106	50	87	68.5	36.5	4176
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9/16/2001	2001	9	16	108	52	81	66.5	34.5	4245
9/17/2001	2001	9	17	109	47	82	64.5	32.5	4277.5
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9/21/2001	2001	9	21	113	42	87	64.5	32.5	4399.5
9/22/2001	2001	9	22	114	43	87	65	33	4432.5
9/23/2001	2001	9	23	115	43	87	65	33	4465.5
9/24/2001	2001	9	24	116	42	87	64.5	32.5	4498
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9/27/2001	2001	9	27	119	43	91	67	35	4601
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9/29/2001	2001	9	29	121	41	87	64	32	4668
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10/27/2001	2001	10	27	149	47	76	61.5	29.5	5333.75
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11/18/2001	2001	11	18	171	21	67	44	12	5718.25
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11/22/2001	2001	11	22	175	32	60	46	14	5754.75
11/23/2001	2001	11	23	176	19	45	32	0	5754.75
11/24/2001	2001	11	24	177	34	53	43.5	11.5	5766.25
11/25/2001	2001	11	25	178	20	45	32.5	0.5	5766.75
11/26/2001	2001	11	26	179	17	42	29.5	-2.5	5764.25
11/27/2001	2001	11	27	180	1	33	17	-15	5749.25
11/28/2001	2001	11	28	181	8	35	21.5	-10.5	5738.75
11/29/2001	2001	11	29	182	21	45	33	1	5739.75
11/30/2001	2001	11	30	183	17	45	31	-1	5738.75
12/1/2001	2001	12	1	184	20	57	38.5	6.5	5745.25
12/2/2001	2001	12	2	185	25	63	44	12	5757.25
12/3/2001	2001	12	3	186	19	65	42	10	5767.25

12/4/2001	2001	12	4	187	20	59	39.5	7.5	5774.75
12/5/2001	2001	12	5	188	13	60	36.5	4.5	5779.25
12/6/2001	2001	12	6	189	15	53	34	2	5781.25
12/7/2001	2001	12	7	190	13	48	30.5	-1.5	5779.75
12/8/2001	2001	12	8	191	5	46	25.5	-6.5	5773.25
12/9/2001	2001	12	9	192	22	52	37	5	5778.25
12/10/2001	2001	12	10	193	17	45	31	-1	5777.25
12/11/2001	2001	12	11	194	10	35	22.5	-9.5	5767.75
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12/14/2001	2001	12	14	197	22	45	33.5	1.5	5751.25
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12/17/2001	2001	12	17	200	17	55	36	4	5743.25
12/18/2001	2001	12	18	201	11	50	30.5	-1.5	5741.75
12/19/2001	2001	12	19	202	12	58	35	3	5744.75
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12/24/2001	2001	12	24	207	10	44	27	-5	5752.25
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12/27/2001	2001	12	27	210	17	50	33.5	1.5	5757.25
12/28/2001	2001	12	28	211	25	50	37.5	5.5	5762.75
12/29/2001	2001	12	29	212	25	58	41.5	9.5	5772.25
12/30/2001	2001	12	30	213	23	50	36.5	4.5	5776.75
12/31/2001	2001	12	31	214	30	35	32.5	0.5	5777.25
1/1/2002	2002	1	1	215	18	38	28	-4	5773.25
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1/3/2002	2002	1	3	217	27	47	37	5	5775.25
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1/5/2002	2002	1	5	219	25	50	37.5	5.5	5777.25
1/6/2002	2002	1	6	220	25	50	37.5	5.5	5782.75
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1/8/2002	2002	1	8	222	20	63	41.5	9.5	5797.75
1/9/2002	2002	1	9	223	29	61	45	13	5810.75
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1/11/2002	2002	1	11	225	9	43	26	-6	5797.25
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1/23/2002	2002	1	23	237	5	43	24	-8	5799.75
1/24/2002	2002	1	24	238	9	35	22	-10	5789.75
1/25/2002	2002	1	25	239	12	53	32.5	0.5	5790.25
1/26/2002	2002	1	26	240	22	65	43.5	11.5	5801.75
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1/31/2002	2002	1	31	245	-3	25	11	-21	5790.75
2/1/2002	2002	2	1	246	16	39	27.5	-4.5	5786.25
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2/7/2002	2002	2	7	252	13	57	35	3	5768.25
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2/9/2002	2002	2	9	254	10	39	24.5	-7.5	5767.75
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2/11/2002	2002	2	11	256	13	62	37.5	5.5	5771.75
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2/16/2002	2002	2	16	261	19	64	41.5	9.5	5810.25
2/17/2002	2002	2	17	262	28	66	47	15	5825.25
2/18/2002	2002	2	18	263	27	52	39.5	7.5	5832.75
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2/24/2002	2002	2	24	269	15	63	39	7	5893.75
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3/1/2002	2002	3	1	274	6	46	26	-6	5914.75
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3/3/2002	2002	3	3	276	1	37	19	-13	5886.25
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3/9/2002	2002	3	9	282	14	61	37.5	5.5	5944.75
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3/11/2002	2002	3	11	284	19	63	41	9	5969.25
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3/13/2002	2002	3	13	286	30	74	52	20	6006.75
3/15/2002	2002	3	15	287	16	53	34.5	2.5	6009.25
3/16/2002	2002	3	16	288	15	53	34	2	6011.25
3/17/2002	2002	3	17	289	15	55	35	3	6014.25
3/18/2002	2002	3	18	290	20	54	37	5	6019.25
3/19/2002	2002	3	19	291	17	58	37.5	5.5	6024.75
3/20/2002	2002	3	20	292	18	69	43.5	11.5	6036.25
3/21/2002	2002	3	21	293	32	73	52.5	20.5	6056.75
3/22/2002	2002	3	22	294	31	73	52	20	6076.75
3/23/2002	2002	3	23	295	33	74	53.5	21.5	6098.25
3/24/2002	2002	3	24	296	32	54	43	11	6109.25
3/25/2002	2002	3	25	297	18	59	38.5	6.5	6115.75
3/26/2002	2002	3	26	298	22	68	45	13	6128.75
3/27/2002	2002	3	27	299	33	72	52.5	20.5	6149.25
3/28/2002	2002	3	28	300	33	75	54	22	6171.25
3/29/2002	2002	3	29	301	27	63	45	13	6184.25
3/30/2002	2002	3	30	302	29	73	51	19	6203.25
3/31/2002	2002	3	31	303	29	78	53.5	21.5	6224.75
4/1/2002	2002	4	1	304	29	79	54	22	6246.75
4/2/2002	2002	4	2	305	30	79	54.5	22.5	6269.25
4/3/2002	2002	4	3	306	38	74	56	24	6293.25
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4/5/2002	2002	4	5	308	36	65	50.5	18.5	6334.25
4/6/2002	2002	4	6	309	33	60	46.5	14.5	6348.75
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4/9/2002	2002	4	9	312	39	77	58	26	6408.25
4/10/2002	2002	4	10	313	41	75	58	26	6434.25
4/11/2002	2002	4	11	314	42	77	59.5	27.5	6461.75
4/12/2002	2002	4	12	315	37	78	57.5	25.5	6487.25
4/13/2002	2002	4	13	316	32	79	55.5	23.5	6510.75
4/14/2002	2002	4	14	317	41	84	62.5	30.5	6541.25
4/15/2002	2002	4	15	318	46	80	63	31	6572.25
4/16/2002	2002	4	16	319	33	69	51	19	6591.25
4/17/2002	2002	4	17	320	38	77	57.5	25.5	6616.75
4/18/2002	2002	4	18	321	37	80	58.5	26.5	6643.25
4/19/2002	2002	4	19	322	22	68	45	13	6656.25
4/20/2002	2002	4	20	323	22	72	47	15	6671.25
4/21/2002	2002	4	21	324	22	72	47	15	6686.25
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4/24/2002	2002	4	24	327	46	82	64	32	6764.25
4/25/2002	2002	4	25	328	41	67	54	22	6786.25
4/26/2002	2002	4	26	329	39	80	59.5	27.5	6813.75
4/27/2002	2002	4	27	330	35	66	50.5	18.5	6832.25
4/28/2002	2002	4	28	331	40	79	59.5	27.5	6859.75
4/29/2002	2002	4	29	332	40	79	59.5	27.5	6887.25
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5/1/2002	2002	5	1	334	26	82	54	22	6933.75
5/2/2002	2002	5	2	335	30	68	49	17	6950.75
5/3/2002	2002	5	3	336	29	78	53.5	21.5	6972.25
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6/5/2002	2002	6	5	5	45	85	65	33	174.5
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6/12/2002	2002	6	12	12	41	93	67	35	452.5
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6/24/2002	2002	6	24	24	46	97	71.5	39.5	961.5
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8/23/2002	2002	8	23	84	46	86	66	34	3480
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9/3/2002	2002	9	3	95	49	89	69	37	3903
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12/29/2002	2002	12	29	212	26	56	41	9	5707.5
12/30/2002	2002	12	30	213	23	53	38	6	5713.5
12/31/2002	2002	12	31	214	24	54	39	7	5720.5
1/1/2003	2003	1	1	215	14	49	31.5	-0.5	5720
1/2/2003	2003	1	2	216	14	49	31.5	-0.5	5719.5
1/3/2003	2003	1	3	217	14	49	31.5	-0.5	5719
1/4/2003	2003	1	4	218	21	64	42.5	10.5	5729.5
1/5/2003	2003	1	5	219	37	56	46.5	14.5	5744
1/6/2003	2003	1	6	220	20	52	36	4	5748
1/7/2003	2003	1	7	221	20	53	36.5	4.5	5752.5
1/8/2003	2003	1	8	222	22	50	36	4	5756.5
1/9/2003	2003	1	9	223	21	52	36.5	4.5	5761
1/10/2003	2003	1	10	224	21	57	39	7	5768
1/11/2003	2003	1	11	225	29	53	41	9	5777
1/12/2003	2003	1	12	226	20	55	37.5	5.5	5782.5
1/13/2003	2003	1	13	227	21	62	41.5	9.5	5792
1/14/2003	2003	1	14	228	19	62	40.5	8.5	5800.5
1/15/2003	2003	1	15	229	20	54	37	5	5805.5
1/16/2003	2003	1	16	230	19	60	39.5	7.5	5813
1/17/2003	2003	1	17	231	14	61	37.5	5.5	5818.5
1/18/2003	2003	1	18	232	16	59	37.5	5.5	5824
1/19/2003	2003	1	19	233	20	67	43.5	11.5	5835.5
1/20/2003	2003	1	20	234	27	61	44	12	5847.5
1/21/2003	2003	1	21	235	25	63	44	12	5859.5
1/22/2003	2003	1	22	236	21	66	43.5	11.5	5871
1/23/2003	2003	1	23	237	31	67	49	17	5888
1/24/2003	2003	1	24	238	20	66	43	11	5899
1/25/2003	2003	1	25	239	17	55	36	4	5903
1/26/2003	2003	1	26	240	19	67	43	11	5914
1/27/2003	2003	1	27	241	20	69	44.5	12.5	5926.5
1/28/2003	2003	1	28	242	19	67	43	11	5937.5
1/29/2003	2003	1	29	243	20	68	44	12	5949.5
1/30/2003	2003	1	30	244	22	67	44.5	12.5	5962
1/31/2003	2003	1	31	245	20	70	45	13	5975
2/1/2003	2003	2	1	246	56	71	63.5	31.5	6006.5
2/2/2003	2003	2	2	247	20	56	38	6	6012.5
2/3/2003	2003	2	3	248	17	61	39	7	6019.5
2/4/2003	2003	2	4	249	11	62	36.5	4.5	6024
2/5/2003	2003	2	5	250	9	51	30	-2	6022
2/6/2003	2003	2	6	251	8	47	27.5	-4.5	6017.5
2/7/2003	2003	2	7	252	15	43	29	-3	6014.5
2/8/2003	2003	2	8	253	12	40	26	-6	6008.5
2/9/2003	2003	2	9	254	7	42	24.5	-7.5	6001
2/10/2003	2003	2	10	255	20	52	36	4	6005
2/11/2003	2003	2	11	256	20	56	38	6	6011
2/12/2003	2003	2	12	257	40	57	48.5	16.5	6027.5
2/13/2003	2003	2	13	258	35	58	46.5	14.5	6042
2/14/2003	2003	2	14	259	26	59	42.5	10.5	6052.5
2/15/2003	2003	2	15	260	23	60	41.5	9.5	6062
2/16/2003	2003	2	16	261	28	60	44	12	6074
2/17/2003	2003	2	17	262	39	63	51	19	6093
2/18/2003	2003	2	18	263	21	54	37.5	5.5	6098.5
2/19/2003	2003	2	19	264	22	54	38	6	6104.5
2/20/2003	2003	2	20	265	19	40	29.5	-2.5	6102
2/21/2003	2003	2	21	266	17	58	37.5	5.5	6107.5
2/22/2003	2003	2	22	267	17	52	34.5	2.5	6110
2/23/2003	2003	2	23	268	20	57	38.5	6.5	6116.5
2/24/2003	2003	2	24	269	29	51	40	8	6124.5
2/25/2003	2003	2	25	270	28	51	39.5	7.5	6132
2/26/2003	2003	2	26	271	30	52	41	9	6141
2/27/2003	2003	2	27	272	25	50	37.5	5.5	6146.5
2/28/2003	2003	2	28	273	20	45	32.5	0.5	6147
3/1/2003	2003	3	1	274	19	51	35	3	6150
3/2/2003	2003	3	2	275	17	47	32	0	6150
3/3/2003	2003	3	3	276	32	57	44.5	12.5	6162.5
3/4/2003	2003	3	4	277	27	47	37	5	6167.5
3/5/2003	2003	3	5	278	15	53	34	2	6169.5
3/6/2003	2003	3	6	279	17	61	39	7	6176.5
3/7/2003	2003	3	7	280	23	68	45.5	13.5	6190
3/8/2003	2003	3	8	281	18	69	43.5	11.5	6201.5
3/9/2003	2003	3	9	282	19	74	46.5	14.5	6216
3/10/2003	2003	3	10	283	20	76	48	16	6232
3/11/2003	2003	3	11	284	23	75	49	17	6249
3/12/2003	2003	3	12	285	23	74	48.5	16.5	6265.5
3/13/2003	2003	3	13	286	27	72	49.5	17.5	6283
3/14/2003	2003	3	14	287	36	71	53.5	21.5	6304.5

3/15/2003	2003	3	15	288	35	68	51.5	19.5	6324
3/16/2003	2003	3	16	289	34	53	43.5	11.5	6335.5
3/17/2003	2003	3	17	290	35	49	42	10	6345.5
3/18/2003	2003	3	18	291	34	43	38.5	6.5	6352
3/19/2003	2003	3	19	292	26	46	36	4	6356
3/20/2003	2003	3	20	293	30	58	44	12	6368
3/21/2003	2003	3	21	294	20	55	37.5	5.5	6373.5
3/22/2003	2003	3	22	295	23	70	46.5	14.5	6388
3/23/2003	2003	3	23	296	34	72	53	21	6409
3/24/2003	2003	3	24	297	33	68	50.5	18.5	6427.5
3/25/2003	2003	3	25	298	21	69	45	13	6440.5
3/26/2003	2003	3	26	299	31	73	52	20	6460.5
3/27/2003	2003	3	27	300	14	53	33.5	1.5	6462
3/28/2003	2003	3	28	301	10	48	29	-3	6459
3/29/2003	2003	3	29	302	14	48	31	-1	6458
3/30/2003	2003	3	30	303	20	70	45	13	6471
3/31/2003	2003	3	31	304	34	77	55.5	23.5	6494.5
4/1/2003	2003	4	1	305	33	77	55	23	6517.5
4/2/2003	2003	4	2	306	55	68	61.5	29.5	6547
4/3/2003	2003	4	3	307	55	68	61.5	29.5	6576.5
4/4/2003	2003	4	4	308	26	64	45	13	6589.5
4/5/2003	2003	4	5	309	23	62	42.5	10.5	6600
4/6/2003	2003	4	6	310	22	63	42.5	10.5	6610.5
4/7/2003	2003	4	7	311	16	61	38.5	6.5	6617
4/8/2003	2003	4	8	312	22	62	42	10	6627
4/9/2003	2003	4	9	313	26	68	47	15	6642
4/10/2003	2003	4	10	314	34	81	57.5	25.5	6667.5
4/11/2003	2003	4	11	315	33	80	56.5	24.5	6692
4/12/2003	2003	4	12	316	42	78	60	28	6720
4/13/2003	2003	4	13	317	36	80	58	26	6746
4/14/2003	2003	4	14	318	38	71	54.5	22.5	6768.5
4/15/2003	2003	4	15	319	26	64	45	13	6781.5
4/16/2003	2003	4	16	320	24	76	50	18	6799.5
4/17/2003	2003	4	17	321	35	73	54	22	6821.5
4/18/2003	2003	4	18	322	35	64	49.5	17.5	6839
4/19/2003	2003	4	19	323	24	56	40	8	6847
4/20/2003	2003	4	20	324	45	65	55	23	6870
4/21/2003	2003	4	21	325	35	69	52	20	6890
4/22/2003	2003	4	22	326	26	71	48.5	16.5	6906.5
4/23/2003	2003	4	23	327	35	71	53	21	6927.5
4/24/2003	2003	4	24	328	32	71	51.5	19.5	6947
4/25/2003	2003	4	25	329	38	77	57.5	25.5	6972.5
4/26/2003	2003	4	26	330	36	78	57	25	6997.5
4/27/2003	2003	4	27	331	35	78	56.5	24.5	7022
4/28/2003	2003	4	28	332	31	78	54.5	22.5	7044.5
4/29/2003	2003	4	29	333	36	75	55.5	23.5	7068
4/30/2003	2003	4	30	334	28	70	49	17	7085
5/1/2003	2003	5	1	335	29	75	52	20	7105
5/2/2003	2003	5	2	336	37	77	57	25	7130
5/3/2003	2003	5	3	337	40	76	58	26	7156
5/4/2003	2003	5	4	338	42	70	56	24	7180
5/5/2003	2003	5	5	339	35	73	54	22	7202
5/6/2003	2003	5	6	340	36	69	52.5	20.5	7222.5
5/7/2003	2003	5	7	341	38	74	56	24	7246.5
5/8/2003	2003	5	8	342	46	74	60	28	7274.5
5/9/2003	2003	5	9	343	34	75	54.5	22.5	7297
5/10/2003	2003	5	10	344	25	75	50	18	7315
5/11/2003	2003	5	11	345	28	79	53.5	21.5	7336.5
5/12/2003	2003	5	12	346	45	84	64.5	32.5	7369
5/13/2003	2003	5	13	347	42	85	63.5	31.5	7400.5
5/14/2003	2003	5	14	348	48	79	63.5	31.5	7432
5/15/2003	2003	5	15	349	45	76	60.5	28.5	7460.5
5/16/2003	2003	5	16	350	40	88	64	32	7492.5
5/17/2003	2003	5	17	351	50	90	70	38	7530.5
5/18/2003	2003	5	18	352	39	80	59.5	27.5	7558
5/19/2003	2003	5	19	353	50	87	68.5	36.5	7594.5
5/20/2003	2003	5	20	354	48	68	58	26	7620.5
5/21/2003	2003	5	21	355	42	90	66	34	7654.5
5/22/2003	2003	5	22	356	50	91	70.5	38.5	7693
5/23/2003	2003	5	23	357	47	87	67	35	7728
5/24/2003	2003	5	24	358	57	90	73.5	41.5	7769.5
5/25/2003	2003	5	25	359	50	80	65	33	7802.5
5/26/2003	2003	5	26	360	49	90	69.5	37.5	7840
5/27/2003	2003	5	27	361	49	86	67.5	35.5	7875.5
5/28/2003	2003	5	28	362	51	86	68.5	36.5	7912
5/29/2003	2003	5	29	363	50	91	70.5	38.5	7950.5
5/30/2003	2003	5	30	364	54	92	73	41	7991.5
5/31/2003	2003	5	31	365	52	88	70	38	8029.5
6/1/2003	2003	6	1	1	46	92	69	37	37
6/2/2003	2003	6	2	2	54	92	73	41	78
6/3/2003	2003	6	3	3	48	93	70.5	38.5	116.5
6/4/2003	2003	6	4	4	54	93	73.5	41.5	158
6/5/2003	2003	6	5	5	54	92	73	41	199
6/6/2003	2003	6	6	6	50	83	66.5	34.5	233.5
6/7/2003	2003	6	7	7	49	90	69.5	37.5	271
6/8/2003	2003	6	8	8	48	94	71	39	310
6/9/2003	2003	6	9	9	50	86	68	36	346
6/10/2003	2003	6	10	10	46	88	67	35	381
6/11/2003	2003	6	11	11	51	86	68.5	36.5	417.5
6/12/2003	2003	6	12	12	51	91	71	39	456.5
6/13/2003	2003	6	13	13	51	91	71	39	495.5
6/14/2003	2003	6	14	14	59	94	76.5	44.5	540
6/15/2003	2003	6	15	15	63	95	79	47	587

6/16/2003	2003	6	16	16	60	86	73	41	628
6/17/2003	2003	6	17	17	52	82	67	35	663
6/18/2003	2003	6	18	18	53	77	65	33	696
6/19/2003	2003	6	19	19	52	80	66	34	730
6/20/2003	2003	6	20	20	48	84	66	34	764
6/21/2003	2003	6	21	21	47	89	68	36	800
6/22/2003	2003	6	22	22	45	90	67.5	35.5	835.5
6/23/2003	2003	6	23	23	50	93	71.5	39.5	875
6/24/2003	2003	6	24	24	51	90	70.5	38.5	913.5
6/25/2003	2003	6	25	25	45	90	67.5	35.5	949
6/26/2003	2003	6	26	26	57	91	74	42	991
6/27/2003	2003	6	27	27	47	96	71.5	39.5	1030.5
6/28/2003	2003	6	28	28	50	94	72	40	1070.5
6/29/2003	2003	6	29	29	61	98	79.5	47.5	1118
6/30/2003	2003	6	30	30	58	97	77.5	45.5	1163.5
7/1/2003	2003	7	1	31	54	99	76.5	44.5	1208
7/2/2003	2003	7	2	32	64	100	82	50	1258
7/3/2003	2003	7	3	33	54	101	77.5	45.5	1303.5
7/4/2003	2003	7	4	34	51	102	76.5	44.5	1348
7/5/2003	2003	7	5	35	60	104	82	50	1398
7/6/2003	2003	7	6	36	56	100	78	46	1444
7/7/2003	2003	7	7	37	60	100	80	48	1492
7/8/2003	2003	7	8	38	50	103	76.5	44.5	1536.5
7/9/2003	2003	7	9	39	53	105	79	47	1583.5
7/10/2003	2003	7	10	40	63	102	82.5	50.5	1634
7/11/2003	2003	7	11	41	64	99	81.5	49.5	1683.5
7/12/2003	2003	7	12	42	56	102	79	47	1730.5
7/13/2003	2003	7	13	43	59	103	81	49	1779.5
7/14/2003	2003	7	14	44	65	106	85.5	53.5	1833
7/15/2003	2003	7	15	45	65	100	82.5	50.5	1883.5
7/16/2003	2003	7	16	46	63	95	79	47	1930.5
7/17/2003	2003	7	17	47	60	90	75	43	1973.5
7/18/2003	2003	7	18	48	60	97	78.5	46.5	2020
7/19/2003	2003	7	19	49	56	101	78.5	46.5	2066.5
7/20/2003	2003	7	20	50	57	100	78.5	46.5	2113
7/21/2003	2003	7	21	51	57	100	78.5	46.5	2159.5
7/22/2003	2003	7	22	52	67	96	81.5	49.5	2209
7/23/2003	2003	7	23	53	62	98	80	48	2257
7/24/2003	2003	7	24	54	62	100	81	49	2306
7/25/2003	2003	7	25	55	66	97	81.5	49.5	2355.5
7/26/2003	2003	7	26	56	59	99	79	47	2402.5
7/27/2003	2003	7	27	57	59	88	73.5	41.5	2444
7/28/2003	2003	7	28	58	60	89	74.5	42.5	2486.5
7/29/2003	2003	7	29	59	60	90	75	43	2529.5
7/30/2003	2003	7	30	60	60	90	75	43	2572.5
7/31/2003	2003	7	31	61	60	91	75.5	43.5	2616
8/1/2003	2003	8	1	62	58	98	78	46	2662
8/2/2003	2003	8	2	63	55	95	75	43	2705
8/3/2003	2003	8	3	64	52	89	70.5	38.5	2743.5
8/4/2003	2003	8	4	65	54	96	75	43	2786.5
8/5/2003	2003	8	5	66	60	94	77	45	2831.5
8/6/2003	2003	8	6	67	61	93	77	45	2876.5
8/7/2003	2003	8	7	68	60	95	77.5	45.5	2922
8/8/2003	2003	8	8	69	62	97	79.5	47.5	2969.5
8/9/2003	2003	8	9	70	60	100	80	48	3017.5
8/10/2003	2003	8	10	71	56	97	76.5	44.5	3062
8/11/2003	2003	8	11	72	58	93	75.5	43.5	3105.5
8/12/2003	2003	8	12	73	58	93	75.5	43.5	3149
8/13/2003	2003	8	13	74	60	87	73.5	41.5	3190.5
8/14/2003	2003	8	14	75	55	87	71	39	3229.5
8/15/2003	2003	8	15	76	51	78	64.5	32.5	3262
8/16/2003	2003	8	16	77	52	75	63.5	31.5	3293.5
8/17/2003	2003	8	17	78	52	88	70	38	3331.5
8/18/2003	2003	8	18	79	52	93	72.5	40.5	3372
8/19/2003	2003	8	19	80	52	93	72.5	40.5	3412.5
8/20/2003	2003	8	20	81	53	94	73.5	41.5	3454
8/21/2003	2003	8	21	82	58	95	76.5	44.5	3498.5
8/22/2003	2003	8	22	83	60	91	75.5	43.5	3542
8/23/2003	2003	8	23	84	58	89	73.5	41.5	3583.5
8/24/2003	2003	8	24	85	60	90	75	43	3626.5
8/25/2003	2003	8	25	86	56	87	71.5	39.5	3666
8/26/2003	2003	8	26	87	60	85	72.5	40.5	3706.5
8/27/2003	2003	8	27	88	55	84	69.5	37.5	3744
8/28/2003	2003	8	28	89	57	82	69.5	37.5	3781.5
8/29/2003	2003	8	29	90	58	86	72	40	3821.5
8/30/2003	2003	8	30	91	55	79	67	35	3856.5
8/31/2003	2003	8	31	92	58	90	74	42	3898.5
9/1/2003	2003	9	1	93	58	92	75	43	3941.5
9/2/2003	2003	9	2	94	54	91	72.5	40.5	3982
9/3/2003	2003	9	3	95	56	88	72	40	4022
9/4/2003	2003	9	4	96	55	78	66.5	34.5	4056.5
9/5/2003	2003	9	5	97	51	76	63.5	31.5	4088
9/6/2003	2003	9	6	98	47	82	64.5	32.5	4120.5
9/7/2003	2003	9	7	99	46	83	64.5	32.5	4153
9/8/2003	2003	9	8	100	55	86	70.5	38.5	4191.5
9/9/2003	2003	9	9	101	55	79	67	35	4226.5
9/10/2003	2003	9	10	102	43	72	57.5	25.5	4252
9/11/2003	2003	9	11	103	40	75	57.5	25.5	4277.5
9/12/2003	2003	9	12	104	43	83	63	31	4308.5
9/13/2003	2003	9	13	105	44	86	65	33	4341.5
9/14/2003	2003	9	14	106	46	88	67	35	4376.5
9/15/2003	2003	9	15	107	43	88	65.5	33.5	4410
9/16/2003	2003	9	16	108	48	88	68	36	4446

9/17/2003	2003	9	17	109	48	86	67	35	4481
9/18/2003	2003	9	18	110	43	84	63.5	31.5	4512.5
9/19/2003	2003	9	19	111	41	88	64.5	32.5	4545
9/20/2003	2003	9	20	112	37	88	62.5	30.5	4575.5
9/21/2003	2003	9	21	113	43	83	63	31	4606.5
9/22/2003	2003	9	22	114	50	86	68	36	4642.5
9/23/2003	2003	9	23	115	44	90	67	35	4677.5
9/24/2003	2003	9	24	116	52	85	68.5	36.5	4714
9/25/2003	2003	9	25	117	38	85	61.5	29.5	4743.5
9/26/2003	2003	9	26	118	38	88	63	31	4774.5
9/27/2003	2003	9	27	119	40	88	64	32	4806.5
9/28/2003	2003	9	28	120	45	90	67.5	35.5	4842
9/29/2003	2003	9	29	121	41	92	66.5	34.5	4876.5
9/30/2003	2003	9	30	122	47	91	69	37	4913.5
10/1/2003	2003	10	1	123	54	89	71.5	39.5	4953
10/2/2003	2003	10	2	124	50	80	65	33	4986
10/3/2003	2003	10	3	125	45	79	62	30	5016
10/4/2003	2003	10	4	126	41	73	57	25	5041
10/5/2003	2003	10	5	127	40	79	59.5	27.5	5068.5
10/6/2003	2003	10	6	128	45	78	61.5	29.5	5098
10/7/2003	2003	10	7	129	49	68	58.5	26.5	5124.5
10/8/2003	2003	10	8	130	41	76	58.5	26.5	5151
10/9/2003	2003	10	9	131	42	78	60	28	5179
10/10/2003	2003	10	10	132	46	78	62	30	5209
10/11/2003	2003	10	11	133	45	81	63	31	5240
10/12/2003	2003	10	12	134	41	83	62	30	5270
10/13/2003	2003	10	13	135	27	79	53	21	5291
10/14/2003	2003	10	14	136	31	73	52	20	5311
10/15/2003	2003	10	15	137	27	84	55.5	23.5	5334.5
10/16/2003	2003	10	16	138	34	80	57	25	5359.5
10/17/2003	2003	10	17	139	35	81	58	26	5385.5
10/18/2003	2003	10	18	140	35	84	59.5	27.5	5413
10/19/2003	2003	10	19	141	36	89	62.5	30.5	5443.5
10/20/2003	2003	10	20	142	33	83	58	26	5469.5
10/21/2003	2003	10	21	143	33	83	58	26	5495.5
10/22/2003	2003	10	22	144	34	83	58.5	26.5	5522
10/23/2003	2003	10	23	145	33	87	60	28	5550
10/24/2003	2003	10	24	146	31	76	53.5	21.5	5571.5
10/25/2003	2003	10	25	147	20	62	41	9	5580.5
10/26/2003	2003	10	26	148	20	64	42	10	5590.5
10/27/2003	2003	10	27	149	32	72	52	20	5610.5
10/28/2003	2003	10	28	150	30	77	53.5	21.5	5632
10/29/2003	2003	10	29	151	42	76	59	27	5659
10/30/2003	2003	10	30	152	40	74	57	25	5684
10/31/2003	2003	10	31	153	37	72	54.5	22.5	5706.5
11/1/2003	2003	11	1	154	33	70	51.5	19.5	5726
11/2/2003	2003	11	2	155	38	69	53.5	21.5	5747.5
11/3/2003	2003	11	3	156	22	59	40.5	8.5	5756
11/4/2003	2003	11	4	157	15	58	36.5	4.5	5760.5
11/5/2003	2003	11	5	158	17	63	40	8	5768.5
11/6/2003	2003	11	6	159	20	63	41.5	9.5	5778
11/7/2003	2003	11	7	160	25	59	42	10	5788
11/8/2003	2003	11	8	161	25	59	42	10	5798
11/9/2003	2003	11	9	162	32	72	52	20	5818
11/10/2003	2003	11	10	163	38	72	55	23	5841
11/11/2003	2003	11	11	164	44	66	55	23	5864
11/12/2003	2003	11	12	165	34	52	43	11	5875
11/13/2003	2003	11	13	166	34	37	35.5	3.5	5878.5
11/14/2003	2003	11	14	167	25	61	43	11	5889.5
11/15/2003	2003	11	15	168	22	59	40.5	8.5	5898
11/16/2003	2003	11	16	169	22	59	40.5	8.5	5906.5
11/17/2003	2003	11	17	170	27	53	40	8	5914.5
11/18/2003	2003	11	18	171	21	58	39.5	7.5	5922
11/19/2003	2003	11	19	172	20	66	43	11	5933
11/20/2003	2003	11	20	173	20	70	45	13	5946
11/21/2003	2003	11	21	174	20	66	43	11	5957
11/22/2003	2003	11	22	175	12	54	33	1	5958
11/23/2003	2003	11	23	176	10	53	31.5	-0.5	5957.5
11/24/2003	2003	11	24	177	15	52	33.5	1.5	5959
11/25/2003	2003	11	25	178	27	59	43	11	5970
11/26/2003	2003	11	26	179	19	57	38	6	5976
11/27/2003	2003	11	27	180	10	43	26.5	-5.5	5970.5
11/28/2003	2003	11	28	181	12	50	31	-1	5969.5
11/29/2003	2003	11	29	182	21	67	44	12	5981.5
11/30/2003	2003	11	30	183	15	73	44	12	5993.5
12/1/2003	2003	12	1	184	32	61	46.5	14.5	6008
12/2/2003	2003	12	2	185	15	61	38	6	6014
12/3/2003	2003	12	3	186	15	59	37	5	6019
12/4/2003	2003	12	4	187	15	59	37	5	6024
12/5/2003	2003	12	5	188	20	46	33	1	6025
12/6/2003	2003	12	6	189	32	68	50	18	6043
12/7/2003	2003	12	7	190	31	64	47.5	15.5	6058.5
12/8/2003	2003	12	8	191	20	43	31.5	-0.5	6058
12/9/2003	2003	12	9	192	11	44	27.5	-4.5	6053.5
12/10/2003	2003	12	10	193	13	58	35.5	3.5	6057
12/11/2003	2003	12	11	194	26	52	39	7	6064
12/12/2003	2003	12	12	195	17	57	37	5	6069
12/13/2003	2003	12	13	196	17	57	37	5	6074
12/14/2003	2003	12	14	197	17	57	37	5	6079
12/15/2003	2003	12	15	198	10	37	23.5	-8.5	6070.5
12/16/2003	2003	12	16	199	10	42	26	-6	6064.5
12/17/2003	2003	12	17	200	15	57	36	4	6068.5
12/18/2003	2003	12	18	201	15	57	36	4	6072.5

12/19/2003	2003	12	19	202	16	60	38	6	6078.5
12/20/2003	2003	12	20	203	22	67	44.5	12.5	6091
12/21/2003	2003	12	21	204	23	58	40.5	8.5	6099.5
12/22/2003	2003	12	22	205	13	46	29.5	-2.5	6097
12/23/2003	2003	12	23	206	17	50	33.5	1.5	6098.5
12/24/2003	2003	12	24	207	22	57	39.5	7.5	6106
12/25/2003	2003	12	25	208	29	55	42	10	6116
12/26/2003	2003	12	26	209	16	51	33.5	1.5	6117.5
12/27/2003	2003	12	27	210	4	30	17	-15	6102.5
12/28/2003	2003	12	28	211	1	31	16	-16	6086.5
12/29/2003	2003	12	29	212	17	50	33.5	1.5	6088
12/30/2003	2003	12	30	213	16	51	33.5	1.5	6089.5
12/31/2003	2003	12	31	214	27	42	34.5	2.5	6092
1/1/2004	2004	1	1	215	31	56	43.5	11.5	6103.5
1/2/2004	2004	1	2	216	32	60	46	14	6117.5
1/3/2004	2004	1	3	217	3	52	27.5	-4.5	6113
1/4/2004	2004	1	4	218	6	40	23	-9	6104
1/5/2004	2004	1	5	219	6	37	21.5	-10.5	6093.5
1/6/2004	2004	1	6	220	19	48	33.5	1.5	6095
1/7/2004	2004	1	7	221	20	59	39.5	7.5	6102.5
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1/9/2004	2004	1	9	223	12	61	36.5	4.5	6112.5
1/10/2004	2004	1	10	224	15	55	35	3	6115.5
1/11/2004	2004	1	11	225	17	58	37.5	5.5	6121
1/12/2004	2004	1	12	226	16	59	37.5	5.5	6126.5
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1/19/2004	2004	1	19	233	29	54	41.5	9.5	6160.5
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1/21/2004	2004	1	21	235	16	47	31.5	-0.5	6158.5
1/22/2004	2004	1	22	236	16	53	34.5	2.5	6161
1/23/2004	2004	1	23	237	16	58	37	5	6166
1/24/2004	2004	1	24	238	31	53	42	10	6176
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1/26/2004	2004	1	26	240	6	33	19.5	-12.5	6158
1/27/2004	2004	1	27	241	12	47	29.5	-2.5	6155.5
1/28/2004	2004	1	28	242	18	56	37	5	6160.5
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1/30/2004	2004	1	30	244	29	59	44	12	6178
1/31/2004	2004	1	31	245	16	47	31.5	-0.5	6177.5
2/1/2004	2004	2	1	246	16	47	31.5	-0.5	6177
2/2/2004	2004	2	2	247	5	38	21.5	-10.5	6166.5
2/3/2004	2004	2	3	248	20	50	35	3	6169.5
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2/5/2004	2004	2	5	250	10	40	25	-7	6160
2/6/2004	2004	2	6	251	9	41	25	-7	6153
2/7/2004	2004	2	7	252	7	47	27	-5	6148
2/8/2004	2004	2	8	253	15	46	30.5	-1.5	6146.5
2/9/2004	2004	2	9	254	9	45	27	-5	6141.5
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2/11/2004	2004	2	11	256	12	48	30	-2	6138.5
2/12/2004	2004	2	12	257	19	48	33.5	1.5	6140
2/13/2004	2004	2	13	258	4	27	15.5	-16.5	6123.5
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2/15/2004	2004	2	15	260	15	54	34.5	2.5	6116.5
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2/17/2004	2004	2	17	262	17	59	38	6	6126
2/18/2004	2004	2	18	263	23	68	45.5	13.5	6139.5
2/19/2004	2004	2	19	264	44	68	56	24	6163.5
2/20/2004	2004	2	20	265	22	58	40	8	6171.5
2/21/2004	2004	2	21	266	35	54	44.5	12.5	6184
2/22/2004	2004	2	22	267	22	53	37.5	5.5	6189.5
2/23/2004	2004	2	23	268	18	55	36.5	4.5	6194
2/24/2004	2004	2	24	269	27	46	36.5	4.5	6198.5
2/25/2004	2004	2	25	270	20	45	32.5	0.5	6199
2/26/2004	2004	2	26	271	18	55	36.5	4.5	6203.5
2/27/2004	2004	2	27	272	22	62	42	10	6213.5
2/28/2004	2004	2	28	273	25	60	42.5	10.5	6224
2/29/2004	2004	2	29	274	24	42	33	1	6225
3/1/2004	2004	3	1	275	20	44	32	0	6225
3/2/2004	2004	3	2	276	27	54	40.5	8.5	6233.5
3/3/2004	2004	3	3	277	30	39	34.5	2.5	6236
3/4/2004	2004	3	4	278	32	53	42.5	10.5	6246.5
3/5/2004	2004	3	5	279	28	53	40.5	8.5	6255
3/7/2004	2004	3	7	280	24	63	43.5	11.5	6266.5
3/8/2004	2004	3	8	281	25	69	47	15	6281.5
3/9/2004	2004	3	9	282	33	74	53.5	21.5	6303
3/10/2004	2004	3	10	283	29	67	48	16	6319
3/11/2004	2004	3	11	284	40	74	57	25	6344
3/12/2004	2004	3	12	285	29	58	43.5	11.5	6355.5
3/13/2004	2004	3	13	286	26	70	48	16	6371.5
3/14/2004	2004	3	14	287	35	70	52.5	20.5	6392
3/15/2004	2004	3	15	288	35	70	52.5	20.5	6412.5
3/16/2004	2004	3	16	289	23	69	46	14	6426.5
3/17/2004	2004	3	17	290	23	73	48	16	6442.5
3/18/2004	2004	3	18	291	25	75	50	18	6460.5
3/19/2004	2004	3	19	292	26	79	52.5	20.5	6481
3/20/2004	2004	3	20	293	28	82	55	23	6504
3/21/2004	2004	3	21	294	42	80	61	29	6533

3/22/2004	2004	3	22	295	30	74	52	20	6553
3/23/2004	2004	3	23	296	35	75	55	23	6576
3/24/2004	2004	3	24	297	40	77	58.5	26.5	6602.5
3/25/2004	2004	3	25	298	46	78	62	30	6632.5
3/26/2004	2004	3	26	299	34	78	56	24	6656.5
3/27/2004	2004	3	27	300	38	76	57	25	6681.5
3/28/2004	2004	3	28	301	26	76	51	19	6700.5
3/29/2004	2004	3	29	302	25	63	44	12	6712.5
3/30/2004	2004	3	30	303	21	72	46.5	14.5	6727
3/31/2004	2004	3	31	304	20	75	47.5	15.5	6742.5
4/1/2004	2004	4	1	305	38	77	57.5	25.5	6768
4/2/2004	2004	4	2	306	33	68	50.5	18.5	6786.5
4/3/2004	2004	4	3	307	35	56	45.5	13.5	6800
4/4/2004	2004	4	4	308	32	52	42	10	6810
4/5/2004	2004	4	5	309	34	44	39	7	6817
4/6/2004	2004	4	6	310	32	58	45	13	6830
4/7/2004	2004	4	7	311	32	58	45	13	6843
4/8/2004	2004	4	8	312	35	57	46	14	6857
4/9/2004	2004	4	9	313	36	54	45	13	6870
4/10/2004	2004	4	10	314	32	60	46	14	6884
4/11/2004	2004	4	11	315	31	43	37	5	6889
4/12/2004	2004	4	12	316	27	52	39.5	7.5	6896.5
4/13/2004	2004	4	13	317	36	66	51	19	6915.5
4/14/2004	2004	4	14	318	36	66	51	19	6934.5
4/15/2004	2004	4	15	319	33	73	53	21	6955.5
4/16/2004	2004	4	16	320	32	72	52	20	6975.5
4/17/2004	2004	4	17	321	43	77	60	28	7003.5
4/18/2004	2004	4	18	322	40	77	58.5	26.5	7030
4/19/2004	2004	4	19	323	27	68	47.5	15.5	7045.5
4/20/2004	2004	4	20	324	34	73	53.5	21.5	7067
4/21/2004	2004	4	21	325	33	70	51.5	19.5	7086.5
4/22/2004	2004	4	22	326	37	71	54	22	7108.5
4/23/2004	2004	4	23	327	30	73	51.5	19.5	7128
4/24/2004	2004	4	24	328	35	62	48.5	16.5	7144.5
4/25/2004	2004	4	25	329	35	62	48.5	16.5	7161
4/26/2004	2004	4	26	330	35	62	48.5	16.5	7177.5
4/27/2004	2004	4	27	331	35	62	48.5	16.5	7194
4/28/2004	2004	4	28	332	41	78	59.5	27.5	7221.5
4/29/2004	2004	4	29	333	41	78	59.5	27.5	7249
4/30/2004	2004	4	30	334	28	72	50	18	7267
5/1/2004	2004	5	1	335	26	58	42	10	7277
5/2/2004	2004	5	2	336	30	70	50	18	7295
5/3/2004	2004	5	3	337	32	77	54.5	22.5	7317.5
5/4/2004	2004	5	4	338	34	82	58	26	7343.5
5/5/2004	2004	5	5	339	37	88	62.5	30.5	7374
5/6/2004	2004	5	6	340	44	89	66.5	34.5	7408.5
5/7/2004	2004	5	7	341	41	88	64.5	32.5	7441
5/8/2004	2004	5	8	342	46	88	67	35	7476
5/9/2004	2004	5	9	343	40	87	63.5	31.5	7507.5
5/10/2004	2004	5	10	344	47	84	65.5	33.5	7541
5/11/2004	2004	5	11	345	47	83	65	33	7574
5/12/2004	2004	5	12	346	46	80	63	31	7605
5/13/2004	2004	5	13	347	38	75	56.5	24.5	7629.5
5/14/2004	2004	5	14	348	30	76	53	21	7650.5
5/15/2004	2004	5	15	349	40	83	61.5	29.5	7680
5/16/2004	2004	5	16	350	43	86	64.5	32.5	7712.5
5/17/2004	2004	5	17	351	42	84	63	31	7743.5
5/18/2004	2004	5	18	352	40	83	61.5	29.5	7773
5/19/2004	2004	5	19	353	37	87	62	30	7803
5/20/2004	2004	5	20	354	41	90	65.5	33.5	7836.5
5/21/2004	2004	5	21	355	40	86	63	31	7867.5
5/22/2004	2004	5	22	356	46	84	65	33	7900.5
5/23/2004	2004	5	23	357	46	84	65	33	7933.5
5/24/2004	2004	5	24	358	42	80	61	29	7962.5
5/25/2004	2004	5	25	359	44	81	62.5	30.5	7993
5/26/2004	2004	5	26	360	45	75	60	28	8021
5/27/2004	2004	5	27	361	42	82	62	30	8051
5/28/2004	2004	5	28	362	39	83	61	29	8080
5/29/2004	2004	5	29	363	47	87	67	35	8115
5/30/2004	2004	5	30	364	40	78	59	27	8142
5/31/2004	2004	5	31	365	43	80	61.5	29.5	8171.5
6/1/2004	2004	6	1	1	41	88	64.5	32.5	32.5
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6/3/2004	2004	6	3	3	41	94	67.5	35.5	102
6/4/2004	2004	6	4	4	57	97	77	45	147
6/5/2004	2004	6	5	5	51	97	74	42	189
6/6/2004	2004	6	6	6	47	98	72.5	40.5	229.5
6/7/2004	2004	6	7	7	53	96	74.5	42.5	272
6/8/2004	2004	6	8	8	46	94	70	38	310
6/9/2004	2004	6	9	9	48	92	70	38	348
6/10/2004	2004	6	10	10	45	90	67.5	35.5	383.5
6/11/2004	2004	6	11	11	43	80	61.5	29.5	413
6/12/2004	2004	6	12	12	46	81	63.5	31.5	444.5
6/13/2004	2004	6	13	13	46	90	68	36	480.5
6/14/2004	2004	6	14	14	45	92	68.5	36.5	517
6/15/2004	2004	6	15	15	50	96	73	41	558
6/16/2004	2004	6	16	16	47	94	70.5	38.5	596.5
6/17/2004	2004	6	17	17	49	93	71	39	635.5
6/18/2004	2004	6	18	18	46	92	69	37	672.5
6/19/2004	2004	6	19	19	47	94	70.5	38.5	711
6/20/2004	2004	6	20	20	63	94	78.5	46.5	757.5
6/21/2004	2004	6	21	21	53	91	72	40	797.5
6/22/2004	2004	6	22	22	48	92	70	38	835.5

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6/24/2004	2004	6	24	24	48	90	69	37	905
6/25/2004	2004	6	25	25	60	92	76	44	949
6/26/2004	2004	6	26	26	50	85	67.5	35.5	984.5
6/27/2004	2004	6	27	27	55	82	68.5	36.5	1021
6/28/2004	2004	6	28	28	55	82	68.5	36.5	1057.5
6/29/2004	2004	6	29	29	57	74	65.5	33.5	1091
6/30/2004	2004	6	30	30	49	81	65	33	1124
7/1/2004	2004	7	1	31	43	88	65.5	33.5	1157.5
7/2/2004	2004	7	2	32	41	91	66	34	1191.5
7/3/2004	2004	7	3	33	47	92	69.5	37.5	1229
7/4/2004	2004	7	4	34	56	91	73.5	41.5	1270.5
7/5/2004	2004	7	5	35	43	89	66	34	1304.5
7/6/2004	2004	7	6	36	48	95	71.5	39.5	1344
7/7/2004	2004	7	7	37	49	90	69.5	37.5	1381.5
7/8/2004	2004	7	8	38	49	90	69.5	37.5	1419
7/9/2004	2004	7	9	39	55	93	74	42	1461
7/10/2004	2004	7	10	40	57	90	73.5	41.5	1502.5
7/11/2004	2004	7	11	41	57	90	73.5	41.5	1544
7/12/2004	2004	7	12	42	59	92	75.5	43.5	1587.5
7/13/2004	2004	7	13	43	54	95	74.5	42.5	1630
7/14/2004	2004	7	14	44	57	91	74	42	1672
7/15/2004	2004	7	15	45	69	98	83.5	51.5	1723.5
7/16/2004	2004	7	16	46	71	97	84	52	1775.5
7/17/2004	2004	7	17	47	61	99	80	48	1823.5
7/18/2004	2004	7	18	48	60	93	76.5	44.5	1868
7/19/2004	2004	7	19	49	55	95	75	43	1911
7/20/2004	2004	7	20	50	56	95	75.5	43.5	1954.5
7/21/2004	2004	7	21	51	58	95	76.5	44.5	1999
7/22/2004	2004	7	22	52	58	99	78.5	46.5	2045.5
7/23/2004	2004	7	23	53	61	90	75.5	43.5	2089
7/24/2004	2004	7	24	54	54	84	69	37	2126
7/25/2004	2004	7	25	55	53	82	67.5	35.5	2161.5
7/26/2004	2004	7	26	56	52	76	64	32	2193.5
7/27/2004	2004	7	27	57	55	82	68.5	36.5	2230
7/28/2004	2004	7	28	58	51	85	68	36	2266
7/29/2004	2004	7	29	59	49	82	65.5	33.5	2299.5
7/30/2004	2004	7	30	60	49	91	70	38	2337.5
7/31/2004	2004	7	31	61	62	97	79.5	47.5	2385
8/1/2004	2004	8	1	62	55	92	73.5	41.5	2426.5
8/2/2004	2004	8	2	63	57	90	73.5	41.5	2468
8/3/2004	2004	8	3	64	55	77	66	34	2502
8/4/2004	2004	8	4	65	51	88	69.5	37.5	2539.5
8/5/2004	2004	8	5	66	60	93	76.5	44.5	2584
8/6/2004	2004	8	6	67	55	86	70.5	38.5	2622.5
8/7/2004	2004	8	7	68	55	93	74	42	2664.5
8/8/2004	2004	8	8	69	56	97	76.5	44.5	2709
8/9/2004	2004	8	9	70	61	97	79	47	2756
8/10/2004	2004	8	10	71	51	94	72.5	40.5	2796.5
8/11/2004	2004	8	11	72	53	95	74	42	2838.5
8/12/2004	2004	8	12	73	59	97	78	46	2884.5
8/13/2004	2004	8	13	74	57	94	75.5	43.5	2928
8/14/2004	2004	8	14	75	53	85	69	37	2965
8/15/2004	2004	8	15	76	53	82	67.5	35.5	3000.5
8/16/2004	2004	8	16	77	55	81	68	36	3036.5
8/17/2004	2004	8	17	78	50	81	65.5	33.5	3070
8/18/2004	2004	8	18	79	50	81	65.5	33.5	3103.5
8/19/2004	2004	8	19	80	48	88	68	36	3139.5
8/20/2004	2004	8	20	81	50	83	66.5	34.5	3174
8/21/2004	2004	8	21	82	50	82	66	34	3208
8/22/2004	2004	8	22	83	45	79	62	30	3238
8/23/2004	2004	8	23	84	48	84	66	34	3272
8/24/2004	2004	8	24	85	54	81	67.5	35.5	3307.5
8/25/2004	2004	8	25	86	52	84	68	36	3343.5
8/26/2004	2004	8	26	87	45	83	64	32	3375.5
8/27/2004	2004	8	27	88	48	89	68.5	36.5	3412
8/28/2004	2004	8	28	89	45	89	67	35	3447
8/29/2004	2004	8	29	90	47	87	67	35	3482
8/30/2004	2004	8	30	91	52	92	72	40	3522
8/31/2004	2004	8	31	92	44	84	64	32	3554
9/1/2004	2004	9	1	93	47	85	66	34	3588
9/2/2004	2004	9	2	94	49	85	67	35	3623
9/3/2004	2004	9	3	95	56	91	73.5	41.5	3664.5
9/4/2004	2004	9	4	96	55	81	68	36	3700.5
9/5/2004	2004	9	5	97	40	75	57.5	25.5	3726
9/6/2004	2004	9	6	98	40	80	60	28	3754
9/7/2004	2004	9	7	99	49	80	64.5	32.5	3786.5
9/8/2004	2004	9	8	100	42	82	62	30	3816.5
9/9/2004	2004	9	9	101	47	92	69.5	37.5	3854
9/10/2004	2004	9	10	102	50	86	68	36	3890
9/11/2004	2004	9	11	103	48	93	70.5	38.5	3928.5
9/12/2004	2004	9	12	104	50	89	69.5	37.5	3966
9/13/2004	2004	9	13	105	47	93	70	38	4004
9/14/2004	2004	9	14	106	48	89	68.5	36.5	4040.5
9/15/2004	2004	9	15	107	50	88	69	37	4077.5
9/16/2004	2004	9	16	108	42	88	65	33	4110.5
9/17/2004	2004	9	17	109	44	90	67	35	4145.5
9/18/2004	2004	9	18	110	49	90	69.5	37.5	4183
9/19/2004	2004	9	19	111	57	81	69	37	4220
9/20/2004	2004	9	20	112	44	71	57.5	25.5	4245.5
9/21/2004	2004	9	21	113	47	80	63.5	31.5	4277
9/22/2004	2004	9	22	114	31	73	52	20	4297
9/23/2004	2004	9	23	115	30	73	51.5	19.5	4316.5

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9/27/2004	2004	9	27	119	37	71	54	22	4413.5
9/28/2004	2004	9	28	120	45	82	63.5	31.5	4445
9/29/2004	2004	9	29	121	47	72	59.5	27.5	4472.5
9/30/2004	2004	9	30	122	39	63	51	19	4491.5
10/1/2004	2004	10	1	123	32	70	51	19	4510.5
10/2/2004	2004	10	2	124	41	76	58.5	26.5	4537
10/3/2004	2004	10	3	125	42	72	57	25	4562
10/4/2004	2004	10	4	126	41	74	57.5	25.5	4587.5
10/5/2004	2004	10	5	127	42	75	58.5	26.5	4614
10/6/2004	2004	10	6	128	36	76	56	24	4638
10/7/2004	2004	10	7	129	34	76	55	23	4661
10/8/2004	2004	10	8	130	35	77	56	24	4685
10/9/2004	2004	10	9	131	32	73	52.5	20.5	4705.5
10/10/2004	2004	10	10	132	34	79	56.5	24.5	4730
10/11/2004	2004	10	11	133	35	76	55.5	23.5	4753.5
10/12/2004	2004	10	12	134	33	61	47	15	4768.5
10/13/2004	2004	10	13	135	33	73	53	21	4789.5
10/14/2004	2004	10	14	136	28	57	42.5	10.5	4800
10/15/2004	2004	10	15	137	29	68	48.5	16.5	4816.5
10/16/2004	2004	10	16	138	32	82	57	25	4841.5
10/17/2004	2004	10	17	139	45	79	62	30	4871.5
10/18/2004	2004	10	18	140	52	69	60.5	28.5	4900
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10/21/2004	2004	10	21	143	41	73	57	25	4959
10/22/2004	2004	10	22	144	39	65	52	20	4979
10/23/2004	2004	10	23	145	24	57	40.5	8.5	4987.5
10/24/2004	2004	10	24	146	24	67	45.5	13.5	5001
10/25/2004	2004	10	25	147	30	70	50	18	5019
10/26/2004	2004	10	26	148	35	70	52.5	20.5	5039.5
10/27/2004	2004	10	27	149	45	67	56	24	5063.5
10/28/2004	2004	10	28	150	39	65	52	20	5083.5
10/29/2004	2004	10	29	151	30	46	38	6	5089.5
10/30/2004	2004	10	30	152	20	56	38	6	5095.5
10/31/2004	2004	10	31	153	20	63	41.5	9.5	5105
11/1/2004	2004	11	1	154	20	62	41	9	5114
11/2/2004	2004	11	2	155	16	44	30	-2	5112
11/3/2004	2004	11	3	156	10	54	32	0	5112
11/4/2004	2004	11	4	157	15	65	40	8	5120
11/5/2004	2004	11	5	158	15	60	37.5	5.5	5125.5
11/6/2004	2004	11	6	159	26	68	47	15	5140.5
11/7/2004	2004	11	7	160	26	68	47	15	5155.5
11/8/2004	2004	11	8	161	26	68	47	15	5170.5
11/9/2004	2004	11	9	162	38	66	52	20	5190.5
11/10/2004	2004	11	10	163	25	52	38.5	6.5	5197
11/11/2004	2004	11	11	164	32	59	45.5	13.5	5210.5
11/12/2004	2004	11	12	165	32	59	45.5	13.5	5224
11/13/2004	2004	11	13	166	30	50	40	8	5232
11/14/2004	2004	11	14	167	32	37	34.5	2.5	5234.5
11/15/2004	2004	11	15	168	30	39	34.5	2.5	5237
11/16/2004	2004	11	16	169	36	43	39.5	7.5	5244.5
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11/18/2004	2004	11	18	171	26	62	44	12	5266
11/19/2004	2004	11	19	172	28	58	43	11	5277
11/20/2004	2004	11	20	173	25	64	44.5	12.5	5289.5
11/21/2004	2004	11	21	174	33	57	45	13	5302.5
11/22/2004	2004	11	22	175	35	54	44.5	12.5	5315
11/23/2004	2004	11	23	176	33	50	41.5	9.5	5324.5
11/24/2004	2004	11	24	177	22	52	37	5	5329.5
11/25/2004	2004	11	25	178	22	52	37	5	5334.5
11/26/2004	2004	11	26	179	22	52	37	5	5339.5
11/27/2004	2004	11	27	180	22	52	37	5	5344.5
11/28/2004	2004	11	28	181	27	60	43.5	11.5	5356
11/29/2004	2004	11	29	182	16	46	31	-1	5355
11/30/2004	2004	11	30	183	6	32	19	-13	5342
12/1/2004	2004	12	1	184	7	42	24.5	-7.5	5334.5
12/2/2004	2004	12	2	185	5	48	26.5	-5.5	5329
12/3/2004	2004	12	3	186	8	44	26	-6	5323
12/4/2004	2004	12	4	187	9	53	31	-1	5322
12/5/2004	2004	12	5	188	15	43	29	-3	5319
12/6/2004	2004	12	6	189	22	44	33	1	5320
12/7/2004	2004	12	7	190	26	45	35.5	3.5	5323.5
12/8/2004	2004	12	8	191	27	48	37.5	5.5	5329
12/9/2004	2004	12	9	192	23	52	37.5	5.5	5334.5
12/10/2004	2004	12	10	193	22	57	39.5	7.5	5342
12/11/2004	2004	12	11	194	20	59	39.5	7.5	5349.5
12/12/2004	2004	12	12	195	21	66	43.5	11.5	5361
12/13/2004	2004	12	13	196	20	68	44	12	5373
12/14/2004	2004	12	14	197	26	49	37.5	5.5	5378.5
12/15/2004	2004	12	15	198	15	49	32	0	5378.5
12/16/2004	2004	12	16	199	17	54	35.5	3.5	5382
12/17/2004	2004	12	17	200	13	54	33.5	1.5	5383.5
12/18/2004	2004	12	18	201	16	50	33	1	5384.5
12/19/2004	2004	12	19	202	12	62	37	5	5389.5
12/20/2004	2004	12	20	203	12	58	35	3	5392.5
12/21/2004	2004	12	21	204	23	62	42.5	10.5	5403
12/22/2004	2004	12	22	205	2	44	23	-9	5394
12/23/2004	2004	12	23	206	3	39	21	-11	5383
12/24/2004	2004	12	24	207	0	32	16	-16	5367
12/25/2004	2004	12	25	208	6	37	21.5	-10.5	5356.5

12/26/2004	2004	12	26	209	9	54	31.5	-0.5	5356
12/27/2004	2004	12	27	210	24	50	37	5	5361
12/28/2004	2004	12	28	211	18	49	33.5	1.5	5362.5
12/29/2004	2004	12	29	212	30	58	44	12	5374.5
12/30/2004	2004	12	30	213	37	59	48	16	5390.5
12/31/2004	2004	12	31	214	26	54	40	8	5398.5
1/1/2005	2005	1	1	215	26	46	36	4	5402.5
1/2/2005	2005	1	2	216	26	54	40	8	5410.5
1/3/2005	2005	1	3	217	33	39	36	4	5414.5
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1/5/2005	2005	1	5	219	24	51	37.5	5.5	5426
1/6/2005	2005	1	6	220	15	43	29	-3	5423
1/7/2005	2005	1	7	221	13	44	28.5	-3.5	5419.5
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1/9/2005	2005	1	9	223	35	50	42.5	10.5	5426.5
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1/11/2005	2005	1	11	225	36	63	49.5	17.5	5457.5
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1/14/2005	2005	1	14	228	21	55	38	6	5468.5
1/15/2005	2005	1	15	229	14	52	33	1	5469.5
1/16/2005	2005	1	16	230	17	59	38	6	5475.5
1/17/2005	2005	1	17	231	17	61	39	7	5482.5
1/18/2005	2005	1	18	232	18	64	41	9	5491.5
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1/21/2005	2005	1	21	235	27	62	44.5	12.5	5525.5
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1/23/2005	2005	1	23	237	20	54	37	5	5548.5
1/24/2005	2005	1	24	238	27	65	46	14	5562.5
1/25/2005	2005	1	25	239	32	63	47.5	15.5	5578
1/26/2005	2005	1	26	240	29	60	44.5	12.5	5590.5
1/27/2005	2005	1	27	241	37	60	48.5	16.5	5607
1/28/2005	2005	1	28	242	27	50	38.5	6.5	5613.5
1/29/2005	2005	1	29	243	19	54	36.5	4.5	5618
1/30/2005	2005	1	30	244	17	47	32	0	5618
1/31/2005	2005	1	31	245	26	45	35.5	3.5	5621.5
2/1/2005	2005	2	1	246	22	38	30	-2	5619.5
2/2/2005	2005	2	2	247	22	41	31.5	-0.5	5619
2/3/2005	2005	2	3	248	13	45	29	-3	5616
2/4/2005	2005	2	4	249	13	45	29	-3	5613
2/5/2005	2005	2	5	250	30	48	39	7	5620
2/6/2005	2005	2	6	251	28	56	42	10	5630
2/7/2005	2005	2	7	252	28	55	41.5	9.5	5639.5
2/8/2005	2005	2	8	253	28	41	34.5	2.5	5642
2/9/2005	2005	2	9	254	15	52	33.5	1.5	5643.5
2/10/2005	2005	2	10	255	22	54	38	6	5649.5
2/11/2005	2005	2	11	256	34	47	40.5	8.5	5658
2/12/2005	2005	2	12	257	38	45	41.5	9.5	5667.5
2/13/2005	2005	2	13	258	32	54	43	11	5678.5
2/14/2005	2005	2	14	259	25	58	41.5	9.5	5688
2/15/2005	2005	2	15	260	34	61	47.5	15.5	5703.5
2/16/2005	2005	2	16	261	33	60	46.5	14.5	5718
2/17/2005	2005	2	17	262	28	60	44	12	5730
2/18/2005	2005	2	18	263	38	53	45.5	13.5	5743.5
2/19/2005	2005	2	19	264	41	50	45.5	13.5	5757
2/20/2005	2005	2	20	265	26	57	41.5	9.5	5766.5
2/21/2005	2005	2	21	266	32	56	44	12	5778.5
2/22/2005	2005	2	22	267	27	56	41.5	9.5	5788
2/23/2005	2005	2	23	268	27	56	41.5	9.5	5797.5
2/24/2005	2005	2	24	269	30	53	41.5	9.5	5807
2/25/2005	2005	2	25	270	28	54	41	9	5816
2/26/2005	2005	2	26	271	27	40	33.5	1.5	5817.5
2/27/2005	2005	2	27	272	27	40	33.5	1.5	5819
2/28/2005	2005	2	28	273	19	55	37	5	5824
3/1/2005	2005	3	1	274	23	60	41.5	9.5	5833.5
3/2/2005	2005	3	2	275	20	56	38	6	5839.5
3/3/2005	2005	3	3	276	21	60	40.5	8.5	5848
3/4/2005	2005	3	4	277	21	60	40.5	8.5	5856.5
3/5/2005	2005	3	5	278	21	60	40.5	8.5	5865
3/6/2005	2005	3	6	279	21	60	40.5	8.5	5873.5
3/7/2005	2005	3	7	280	21	53	37	5	5878.5
3/8/2005	2005	3	8	281	24	63	43.5	11.5	5890
3/9/2005	2005	3	9	282	25	64	44.5	12.5	5902.5
3/10/2005	2005	3	10	283	24	70	47	15	5917.5
3/11/2005	2005	3	11	284	26	71	48.5	16.5	5934
3/12/2005	2005	3	12	285	22	73	47.5	15.5	5949.5
3/13/2005	2005	3	13	286	29	73	51	19	5968.5
3/15/2005	2005	3	15	287	20	39	29.5	-2.5	5966
3/16/2005	2005	3	16	288	14	38	26	-6	5960
3/17/2005	2005	3	17	289	24	52	38	6	5966
3/18/2005	2005	3	18	290	33	57	45	13	5979
3/19/2005	2005	3	19	291	32	52	42	10	5989
3/20/2005	2005	3	20	292	31	53	42	10	5999
3/21/2005	2005	3	21	293	32	54	43	11	6010
3/22/2005	2005	3	22	294	20	54	37	5	6015
3/23/2005	2005	3	23	295	28	61	44.5	12.5	6027.5
3/24/2005	2005	3	24	296	32	58	45	13	6040.5
3/25/2005	2005	3	25	297	28	55	41.5	9.5	6050
3/26/2005	2005	3	26	298	28	55	41.5	9.5	6059.5
3/27/2005	2005	3	27	299	17	52	34.5	2.5	6062
3/28/2005	2005	3	28	300	25	65	45	13	6075
3/29/2005	2005	3	29	301	33	70	51.5	19.5	6094.5

3/30/2005	2005	3	30	302	30	54	42	10	6104.5
3/31/2005	2005	3	31	303	20	53	36.5	4.5	6109
4/1/2005	2005	4	1	304	15	53	34	2	6111
4/2/2005	2005	4	2	305	18	66	42	10	6121
4/3/2005	2005	4	3	306	33	70	51.5	19.5	6140.5
4/4/2005	2005	4	4	307	31	73	52	20	6160.5
4/5/2005	2005	4	5	308	34	70	52	20	6180.5
4/6/2005	2005	4	6	309	24	71	47.5	15.5	6196
4/7/2005	2005	4	7	310	35	75	55	23	6219
4/8/2005	2005	4	8	311	34	71	52.5	20.5	6239.5
4/9/2005	2005	4	9	312	33	65	49	17	6256.5
4/10/2005	2005	4	10	313	30	59	44.5	12.5	6269
4/11/2005	2005	4	11	314	24	53	38.5	6.5	6275.5
4/12/2005	2005	4	12	315	20	65	42.5	10.5	6286
4/13/2005	2005	4	13	316	23	72	47.5	15.5	6301.5
4/14/2005	2005	4	14	317	34	75	54.5	22.5	6324
4/15/2005	2005	4	15	318	36	75	55.5	23.5	6347.5
4/16/2005	2005	4	16	319	37	76	56.5	24.5	6372
4/17/2005	2005	4	17	320	40	74	57	25	6397
4/18/2005	2005	4	18	321	31	77	54	22	6419
4/19/2005	2005	4	19	322	35	76	55.5	23.5	6442.5
4/20/2005	2005	4	20	323	30	77	53.5	21.5	6464
4/21/2005	2005	4	21	324	24	73	48.5	16.5	6480.5
4/22/2005	2005	4	22	325	28	74	51	19	6499.5
4/23/2005	2005	4	23	326	40	74	57	25	6524.5
4/24/2005	2005	4	24	327	40	73	56.5	24.5	6549
4/25/2005	2005	4	25	328	38	68	53	21	6570
4/26/2005	2005	4	26	329	32	61	46.5	14.5	6584.5
4/27/2005	2005	4	27	330	32	68	50	18	6602.5
4/28/2005	2005	4	28	331	34	67	50.5	18.5	6621
4/29/2005	2005	4	29	332	32	63	47.5	15.5	6636.5
4/30/2005	2005	4	30	333	30	64	47	15	6651.5
5/1/2005	2005	5	1	334	32	70	51	19	6670.5
5/2/2005	2005	5	2	335	38	71	54.5	22.5	6693
5/3/2005	2005	5	3	336	35	59	47	15	6708
5/4/2005	2005	5	4	337	31	56	43.5	11.5	6719.5
5/5/2005	2005	5	5	338	41	73	57	25	6744.5
5/6/2005	2005	5	6	339	42	74	58	26	6770.5
5/7/2005	2005	5	7	340	48	75	61.5	29.5	6800
5/8/2005	2005	5	8	341	40	76	58	26	6826
5/9/2005	2005	5	9	342	38	77	57.5	25.5	6851.5
5/10/2005	2005	5	10	343	41	78	59.5	27.5	6879
5/11/2005	2005	5	11	344	38	80	59	27	6906
5/12/2005	2005	5	12	345	26	68	47	15	6921
5/13/2005	2005	5	13	346	32	78	55	23	6944
5/14/2005	2005	5	14	347	38	80	59	27	6971
5/15/2005	2005	5	15	348	37	74	55.5	23.5	6994.5
5/16/2005	2005	5	16	349	43	79	61	29	7023.5
5/17/2005	2005	5	17	350	49	84	66.5	34.5	7058
5/18/2005	2005	5	18	351	49	77	63	31	7089
5/19/2005	2005	5	19	352	42	85	63.5	31.5	7120.5
5/20/2005	2005	5	20	353	44	93	68.5	36.5	7157
5/21/2005	2005	5	21	354	47	94	70.5	38.5	7195.5
5/22/2005	2005	5	22	355	45	96	70.5	38.5	7234
5/23/2005	2005	5	23	356	52	97	74.5	42.5	7276.5
5/24/2005	2005	5	24	357	51	94	72.5	40.5	7317
5/25/2005	2005	5	25	358	55	96	75.5	43.5	7360.5
5/26/2005	2005	5	26	359	57	95	76	44	7404.5
5/27/2005	2005	5	27	360	51	96	73.5	41.5	7446
5/28/2005	2005	5	28	361	48	80	64	32	7478
5/29/2005	2005	5	29	362	44	78	61	29	7507
5/30/2005	2005	5	30	363	52	86	69	37	7544
5/31/2005	2005	5	31	364	50	81	65.5	33.5	7577.5
6/1/2005	2005	6	1	1	38	86	62	30	30
6/2/2005	2005	6	2	2	45	87	66	34	64
6/3/2005	2005	6	3	3	48	83	65.5	33.5	97.5
6/4/2005	2005	6	4	4	37	81	59	27	124.5
6/5/2005	2005	6	5	5	38	80	59	27	151.5
6/6/2005	2005	6	6	6	46	84	65	33	184.5
6/7/2005	2005	6	7	7	47	86	66.5	34.5	219
6/8/2005	2005	6	8	8	44	84	64	32	251
6/9/2005	2005	6	9	9	43	83	63	31	282
6/10/2005	2005	6	10	10	43	83	63	31	313
6/11/2005	2005	6	11	11	49	78	63.5	31.5	344.5
6/12/2005	2005	6	12	12	47	78	62.5	30.5	375
6/13/2005	2005	6	13	13	46	77	61.5	29.5	404.5
6/14/2005	2005	6	14	14	43	88	65.5	33.5	438
6/15/2005	2005	6	15	15	43	88	65.5	33.5	471.5
6/16/2005	2005	6	16	16	47	95	71	39	510.5
6/17/2005	2005	6	17	17	45	88	66.5	34.5	545
6/18/2005	2005	6	18	18	45	90	67.5	35.5	580.5
6/19/2005	2005	6	19	19	40	93	66.5	34.5	615
6/20/2005	2005	6	20	20	52	96	74	42	657
6/21/2005	2005	6	21	21	61	96	78.5	46.5	703.5
6/22/2005	2005	6	22	22	52	95	73.5	41.5	745
6/23/2005	2005	6	23	23	54	90	72	40	785
6/24/2005	2005	6	24	24	62	92	77	45	830
6/25/2005	2005	6	25	25	58	91	74.5	42.5	872.5
6/26/2005	2005	6	26	26	57	90	73.5	41.5	914
6/27/2005	2005	6	27	27	46	90	68	36	950
6/28/2005	2005	6	28	28	53	92	72.5	40.5	990.5
6/29/2005	2005	6	29	29	47	91	69	37	1027.5
6/30/2005	2005	6	30	30	43	95	69	37	1064.5

7/1/2005	2005	7	1	31	44	97	70.5	38.5	1103
7/2/2005	2005	7	2	32	47	98	72.5	40.5	1143.5
7/3/2005	2005	7	3	33	53	97	75	43	1186.5
7/4/2005	2005	7	4	34	51	96	73.5	41.5	1228
7/5/2005	2005	7	5	35	48	99	73.5	41.5	1269.5
7/6/2005	2005	7	6	36	54	96	75	43	1312.5
7/7/2005	2005	7	7	37	52	98	75	43	1355.5
7/8/2005	2005	7	8	38	58	98	78	46	1401.5
7/9/2005	2005	7	9	39	50	95	72.5	40.5	1442
7/10/2005	2005	7	10	40	54	97	75.5	43.5	1485.5
7/11/2005	2005	7	11	41	47	93	70	38	1523.5
7/12/2005	2005	7	12	42	52	99	75.5	43.5	1567
7/13/2005	2005	7	13	43	65	98	81.5	49.5	1616.5
7/14/2005	2005	7	14	44	52	105	78.5	46.5	1663
7/15/2005	2005	7	15	45	56	103	79.5	47.5	1710.5
7/16/2005	2005	7	16	46	57	95	76	44	1754.5
7/17/2005	2005	7	17	47	59	101	80	48	1802.5
7/18/2005	2005	7	18	48	56	102	79	47	1849.5
7/19/2005	2005	7	19	49	66	100	83	51	1900.5
7/20/2005	2005	7	20	50	59	105	82	50	1950.5
7/21/2005	2005	7	21	51	60	102	81	49	1999.5
7/22/2005	2005	7	22	52	62	101	81.5	49.5	2049
7/23/2005	2005	7	23	53	62	96	79	47	2096
7/24/2005	2005	7	24	54	59	93	76	44	2140
7/25/2005	2005	7	25	55	60	93	76.5	44.5	2184.5
7/26/2005	2005	7	26	56	65	87	76	44	2228.5
7/27/2005	2005	7	27	57	61	87	74	42	2270.5
7/28/2005	2005	7	28	58	50	90	70	38	2308.5
7/29/2005	2005	7	29	59	55	93	74	42	2350.5
7/30/2005	2005	7	30	60	55	90	72.5	40.5	2391
7/31/2005	2005	7	31	61	60	91	75.5	43.5	2434.5
8/1/2005	2005	8	1	62	58	90	74	42	2476.5
8/2/2005	2005	8	2	63	51	92	71.5	39.5	2516
8/3/2005	2005	8	3	64	60	91	75.5	43.5	2559.5
8/4/2005	2005	8	4	65	55	87	71	39	2598.5
8/5/2005	2005	8	5	66	58	90	74	42	2640.5
8/6/2005	2005	8	6	67	58	88	73	41	2681.5
8/7/2005	2005	8	7	68	57	87	72	40	2721.5
8/8/2005	2005	8	8	69	60	84	72	40	2761.5
8/9/2005	2005	8	9	70	60	91	75.5	43.5	2805
8/10/2005	2005	8	10	71	60	94	77	45	2850
8/11/2005	2005	8	11	72	58	91	74.5	42.5	2892.5
8/12/2005	2005	8	12	73	60	89	74.5	42.5	2935
8/13/2005	2005	8	13	74	57	88	72.5	40.5	2975.5
8/14/2005	2005	8	14	75	58	85	71.5	39.5	3015
8/15/2005	2005	8	15	76	57	81	69	37	3052
8/16/2005	2005	8	16	77	56	76	66	34	3086
8/17/2005	2005	8	17	78	56	76	66	34	3120
8/18/2005	2005	8	18	79	51	87	69	37	3157
8/19/2005	2005	8	19	80	51	88	69.5	37.5	3194.5
8/20/2005	2005	8	20	81	50	84	67	35	3229.5
8/21/2005	2005	8	21	82	52	88	70	38	3267.5
8/22/2005	2005	8	22	83	52	90	71	39	3306.5
8/23/2005	2005	8	23	84	58	88	73	41	3347.5
8/24/2005	2005	8	24	85	57	90	73.5	41.5	3389
8/25/2005	2005	8	25	86	47	91	69	37	3426
8/26/2005	2005	8	26	87	51	91	71	39	3465
8/27/2005	2005	8	27	88	50	94	72	40	3505
8/28/2005	2005	8	28	89	48	96	72	40	3545
8/29/2005	2005	8	29	90	48	96	72	40	3585
8/30/2005	2005	8	30	91	48	92	70	38	3623
8/31/2005	2005	8	31	92	55	95	75	43	3666
9/1/2005	2005	9	1	93	60	93	76.5	44.5	3710.5
9/2/2005	2005	9	2	94	57	95	76	44	3754.5
9/3/2005	2005	9	3	95	57	80	68.5	36.5	3791
9/4/2005	2005	9	4	96	53	83	68	36	3827
9/5/2005	2005	9	5	97	52	83	67.5	35.5	3862.5
9/6/2005	2005	9	6	98	52	85	68.5	36.5	3899
9/7/2005	2005	9	7	99	51	88	69.5	37.5	3936.5
9/8/2005	2005	9	8	100	60	82	71	39	3975.5
9/9/2005	2005	9	9	101	60	82	71	39	4014.5
9/10/2005	2005	9	10	102	57	79	68	36	4050.5
9/11/2005	2005	9	11	103	49	83	66	34	4084.5
9/12/2005	2005	9	12	104	48	81	64.5	32.5	4117
9/13/2005	2005	9	13	105	38	82	60	28	4145
9/14/2005	2005	9	14	106	37	81	59	27	4172
9/15/2005	2005	9	15	107	34	80	57	25	4197
9/16/2005	2005	9	16	108	37	85	61	29	4226
9/17/2005	2005	9	17	109	36	87	61.5	29.5	4255.5
9/18/2005	2005	9	18	110	37	88	62.5	30.5	4286
9/19/2005	2005	9	19	111	43	89	66	34	4320
9/20/2005	2005	9	20	112	43	88	65.5	33.5	4353.5
9/21/2005	2005	9	21	113	43	89	66	34	4387.5
9/22/2005	2005	9	22	114	55	89	72	40	4427.5
9/23/2005	2005	9	23	115	50	83	66.5	34.5	4462
9/24/2005	2005	9	24	116	48	89	68.5	36.5	4498.5
9/25/2005	2005	9	25	117	39	87	63	31	4529.5
9/26/2005	2005	9	26	118	44	88	66	34	4563.5
9/27/2005	2005	9	27	119	48	89	68.5	36.5	4600
9/28/2005	2005	9	28	120	49	87	68	36	4636
9/29/2005	2005	9	29	121	47	81	64	32	4668
9/30/2005	2005	9	30	122	43	57	50	18	4686
10/1/2005	2005	10	1	123	46	79	62.5	30.5	4716.5

10/2/2005	2005	10	2	124	43	83	63	31	4747.5
10/3/2005	2005	10	3	125	42	77	59.5	27.5	4775
10/4/2005	2005	10	4	126	44	76	60	28	4803
10/5/2005	2005	10	5	127	45	83	64	32	4835
10/6/2005	2005	10	6	128	44	79	61.5	29.5	4864.5
10/7/2005	2005	10	7	129	42	60	51	19	4883.5
10/8/2005	2005	10	8	130	41	74	57.5	25.5	4909
10/9/2005	2005	10	9	131	41	81	61	29	4938
10/10/2005	2005	10	10	132	40	67	53.5	21.5	4959.5
10/11/2005	2005	10	11	133	37	57	47	15	4974.5
10/12/2005	2005	10	12	134	27	68	47.5	15.5	4990
10/13/2005	2005	10	13	135	30	72	51	19	5009
10/14/2005	2005	10	14	136	30	74	52	20	5029
10/15/2005	2005	10	15	137	39	71	55	23	5052
10/16/2005	2005	10	16	138	43	58	50.5	18.5	5070.5
10/17/2005	2005	10	17	139	37	70	53.5	21.5	5092
10/18/2005	2005	10	18	140	39	77	58	26	5118
10/19/2005	2005	10	19	141	40	68	54	22	5140
10/20/2005	2005	10	20	142	30	67	48.5	16.5	5156.5
10/21/2005	2005	10	21	143	32	71	51.5	19.5	5176
10/22/2005	2005	10	22	144	31	72	51.5	19.5	5195.5
10/23/2005	2005	10	23	145	32	79	55.5	23.5	5219
10/24/2005	2005	10	24	146	28	72	50	18	5237
10/25/2005	2005	10	25	147	28	72	50	18	5255
10/26/2005	2005	10	26	148	33	70	51.5	19.5	5274.5
10/27/2005	2005	10	27	149	35	71	53	21	5295.5
10/28/2005	2005	10	28	150	40	73	56.5	24.5	5320
10/29/2005	2005	10	29	151	26	71	48.5	16.5	5336.5
10/30/2005	2005	10	30	152	26	71	48.5	16.5	5353
10/31/2005	2005	10	31	153	29	70	49.5	17.5	5370.5
11/1/2005	2005	11	1	154	25	67	46	14	5384.5
11/2/2005	2005	11	2	155	26	71	48.5	16.5	5401
11/3/2005	2005	11	3	156	40	76	58	26	5427
11/4/2005	2005	11	4	157	44	67	55.5	23.5	5450.5
11/5/2005	2005	11	5	158	32	70	51	19	5469.5
11/6/2005	2005	11	6	159	24	72	48	16	5485.5
11/7/2005	2005	11	7	160	34	74	54	22	5507.5
11/8/2005	2005	11	8	161	27	76	51.5	19.5	5527
11/9/2005	2005	11	9	162	32	77	54.5	22.5	5549.5
11/10/2005	2005	11	10	163	28	71	49.5	17.5	5567
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11/13/2005	2005	11	13	166	24	68	46	14	5620.5
11/14/2005	2005	11	14	167	25	64	44.5	12.5	5633
11/15/2005	2005	11	15	168	28	70	49	17	5650
11/16/2005	2005	11	16	169	12	50	31	-1	5649
11/17/2005	2005	11	17	170	16	64	40	8	5657
11/18/2005	2005	11	18	171	14	60	37	5	5662
11/19/2005	2005	11	19	172	11	60	35.5	3.5	5665.5
11/20/2005	2005	11	20	173	14	64	39	7	5672.5
11/21/2005	2005	11	21	174	13	66	39.5	7.5	5680
11/22/2005	2005	11	22	175	13	70	41.5	9.5	5689.5
11/23/2005	2005	11	23	176	14	71	42.5	10.5	5700
11/24/2005	2005	11	24	177	17	69	43	11	5711
11/25/2005	2005	11	25	178	13	68	40.5	8.5	5719.5
11/26/2005	2005	11	26	179	17	53	35	3	5722.5
11/27/2005	2005	11	27	180	6	36	21	-11	5711.5
11/28/2005	2005	11	28	181	9	38	23.5	-8.5	5703
11/29/2005	2005	11	29	182	9	38	23.5	-8.5	5694.5
11/30/2005	2005	11	30	183	15	60	37.5	5.5	5700
12/1/2005	2005	12	1	184	15	60	37.5	5.5	5705.5
12/2/2005	2005	12	2	185	15	60	37.5	5.5	5711
12/3/2005	2005	12	3	186	42	65	53.5	21.5	5732.5
12/4/2005	2005	12	4	187	13	57	35	3	5735.5
12/5/2005	2005	12	5	188	3	41	22	-10	5725.5
12/6/2005	2005	12	6	189	2	44	23	-9	5716.5
12/7/2005	2005	12	7	190	5	52	28.5	-3.5	5713
12/8/2005	2005	12	8	191	-1	43	21	-11	5702
12/9/2005	2005	12	9	192	9	45	27	-5	5697
12/10/2005	2005	12	10	193	10	56	33	1	5698
12/11/2005	2005	12	11	194	10	59	34.5	2.5	5700.5
12/12/2005	2005	12	12	195	15	47	31	-1	5699.5
12/13/2005	2005	12	13	196	30	47	38.5	6.5	5706
12/14/2005	2005	12	14	197	15	50	32.5	0.5	5706.5
12/15/2005	2005	12	15	198	8	44	26	-6	5700.5
12/16/2005	2005	12	16	199	5	42	23.5	-8.5	5692
12/17/2005	2005	12	17	200	3	47	25	-7	5685
12/18/2005	2005	12	18	201	4	49	26.5	-5.5	5679.5
12/19/2005	2005	12	19	202	16	58	37	5	5684.5
12/20/2005	2005	12	20	203	18	57	37.5	5.5	5690
12/21/2005	2005	12	21	204	17	59	38	6	5696
12/22/2005	2005	12	22	205	25	64	44.5	12.5	5708.5
12/23/2005	2005	12	23	206	19	68	43.5	11.5	5720
12/24/2005	2005	12	24	207	19	68	43.5	11.5	5731.5
12/25/2005	2005	12	25	208	15	64	39.5	7.5	5739
12/26/2005	2005	12	26	209	17	68	42.5	10.5	5749.5
12/27/2005	2005	12	27	210	17	66	41.5	9.5	5759
12/28/2005	2005	12	28	211	17	65	41	9	5768
12/29/2005	2005	12	29	212	24	65	44.5	12.5	5780.5
12/30/2005	2005	12	30	213	10	64	37	5	5785.5
12/31/2005	2005	12	31	214	10	64	37	5	5790.5
1/1/2006	2006	1	1	215	35	63	49	17	5807.5
1/2/2006	2006	1	2	216	24	61	42.5	10.5	5818

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1/4/2006	2006	1	4	218	10	60	35	3	5840.5
1/5/2006	2006	1	5	219	12	60	36	4	5844.5
1/6/2006	2006	1	6	220	13	60	36.5	4.5	5849
1/7/2006	2006	1	7	221	17	67	42	10	5859
1/8/2006	2006	1	8	222	17	67	42	10	5869
1/9/2006	2006	1	9	223	17	67	42	10	5879
1/10/2006	2006	1	10	224	3	52	27.5	-4.5	5874.5
1/11/2006	2006	1	11	225	3	55	29	-3	5871.5
1/12/2006	2006	1	12	226	18	63	40.5	8.5	5880
1/13/2006	2006	1	13	227	9	53	31	-1	5879
1/14/2006	2006	1	14	228	19	61	40	8	5887
1/15/2006	2006	1	15	229	29	60	44.5	12.5	5899.5
1/16/2006	2006	1	16	230	19	59	39	7	5906.5
1/17/2006	2006	1	17	231	5	43	24	-8	5898.5
1/18/2006	2006	1	18	232	11	54	32.5	0.5	5899
1/19/2006	2006	1	19	233	43	51	47	15	5914
1/20/2006	2006	1	20	234	19	53	36	4	5918
1/21/2006	2006	1	21	235	0	45	22.5	-9.5	5908.5
1/22/2006	2006	1	22	236	2	46	24	-8	5900.5
1/23/2006	2006	1	23	237	6	53	29.5	-2.5	5898
1/24/2006	2006	1	24	238	5	55	30	-2	5896
1/25/2006	2006	1	25	239	15	51	33	1	5897
1/26/2006	2006	1	26	240	19	36	27.5	-4.5	5892.5
1/27/2006	2006	1	27	241	15	50	32.5	0.5	5893
1/28/2006	2006	1	28	242	23	47	35	3	5896
1/29/2006	2006	1	29	243	20	50	35	3	5899
1/30/2006	2006	1	30	244	18	53	35.5	3.5	5902.5
1/31/2006	2006	1	31	245	19	60	39.5	7.5	5910
2/1/2006	2006	2	1	246	17	62	39.5	7.5	5917.5
2/2/2006	2006	2	2	247	21	60	40.5	8.5	5926
2/3/2006	2006	2	3	248	24	60	42	10	5936
2/4/2006	2006	2	4	249	13	56	34.5	2.5	5938.5
2/5/2006	2006	2	5	250	15	68	41.5	9.5	5948
2/6/2006	2006	2	6	251	14	60	37	5	5953
2/7/2006	2006	2	7	252	9	55	32	0	5953
2/8/2006	2006	2	8	253	10	60	35	3	5956
2/9/2006	2006	2	9	254	11	66	38.5	6.5	5962.5
2/10/2006	2006	2	10	255	9	56	32.5	0.5	5963
2/11/2006	2006	2	11	256	9	63	36	4	5967
2/12/2006	2006	2	12	257	5	50	27.5	-4.5	5962.5
2/13/2006	2006	2	13	258	7	60	33.5	1.5	5964
2/14/2006	2006	2	14	259	9	64	36.5	4.5	5968.5
2/15/2006	2006	2	15	260	26	66	46	14	5982.5
2/16/2006	2006	2	16	261	26	64	45	13	5995.5
2/17/2006	2006	2	17	262	26	52	39	7	6002.5
2/18/2006	2006	2	18	263	25	40	32.5	0.5	6003
2/19/2006	2006	2	19	264	17	60	38.5	6.5	6009.5
2/20/2006	2006	2	20	265	19	60	39.5	7.5	6017
2/21/2006	2006	2	21	266	10	56	33	1	6018
2/22/2006	2006	2	22	267	9	54	31.5	-0.5	6017.5
2/23/2006	2006	2	23	268	10	56	33	1	6018.5
2/24/2006	2006	2	24	269	10	52	31	-1	6017.5
2/25/2006	2006	2	25	270	12	65	38.5	6.5	6024
2/26/2006	2006	2	26	271	15	66	40.5	8.5	6032.5
2/27/2006	2006	2	27	272	20	62	41	9	6041.5
2/28/2006	2006	2	28	273	29	75	52	20	6061.5
3/1/2006	2006	3	1	274	36	75	55.5	23.5	6085
3/2/2006	2006	3	2	275	22	63	42.5	10.5	6095.5
3/3/2006	2006	3	3	276	26	65	45.5	13.5	6109
3/4/2006	2006	3	4	277	28	63	45.5	13.5	6122.5
3/5/2006	2006	3	5	278	13	63	38	6	6128.5
3/6/2006	2006	3	6	279	41	74	57.5	25.5	6154
3/7/2006	2006	3	7	280	41	74	57.5	25.5	6179.5
3/8/2006	2006	3	8	281	31	63	47	15	6194.5
3/9/2006	2006	3	9	282	21	53	37	5	6199.5
3/10/2006	2006	3	10	283	42	50	46	14	6213.5
3/11/2006	2006	3	11	284	23	52	37.5	5.5	6219
3/12/2006	2006	3	12	285	22	47	34.5	2.5	6221.5
3/13/2006	2006	3	13	286	5	34	19.5	-12.5	6209
3/14/2006	2006	3	14	287	9	45	27	-5	6204
3/15/2006	2006	3	15	288	36	53	44.5	12.5	6216.5
3/16/2006	2006	3	16	289	36	53	44.5	12.5	6229
3/17/2006	2006	3	17	290	36	53	44.5	12.5	6241.5
3/18/2006	2006	3	18	291	22	65	43.5	11.5	6253
3/19/2006	2006	3	19	292	23	63	43	11	6264
3/20/2006	2006	3	20	293	23	63	43	11	6275
3/21/2006	2006	3	21	294	23	53	38	6	6281
3/22/2006	2006	3	22	295	26	54	40	8	6289
3/23/2006	2006	3	23	296	16	57	36.5	4.5	6293.5
3/24/2006	2006	3	24	297	20	62	41	9	6302.5
3/25/2006	2006	3	25	298	23	70	46.5	14.5	6317
3/26/2006	2006	3	26	299	32	70	51	19	6336
3/27/2006	2006	3	27	300	32	66	49	17	6353
3/28/2006	2006	3	28	301	41	66	53.5	21.5	6374.5
3/29/2006	2006	3	29	302	32	60	46	14	6388.5
3/30/2006	2006	3	30	303	33	65	49	17	6405.5
3/31/2006	2006	3	31	304	28	60	44	12	6417.5
4/1/2006	2006	4	1	305	43	68	55.5	23.5	6441
4/2/2006	2006	4	2	306	28	64	46	14	6455
4/3/2006	2006	4	3	307	33	70	51.5	19.5	6474.5
4/4/2006	2006	4	4	308	43	70	56.5	24.5	6499
4/5/2006	2006	4	5	309	38	73	55.5	23.5	6522.5

4/6/2006	2006	4	6	310	36	68	52	20	6542.5
4/7/2006	2006	4	7	311	32	64	48	16	6558.5
4/8/2006	2006	4	8	312	35	72	53.5	21.5	6580
4/9/2006	2006	4	9	313	37	77	57	25	6605
4/10/2006	2006	4	10	314	36	79	57.5	25.5	6630.5
4/11/2006	2006	4	11	315	33	74	53.5	21.5	6652
4/12/2006	2006	4	12	316	27	71	49	17	6669
4/13/2006	2006	4	13	317	32	80	56	24	6693
4/14/2006	2006	4	14	318	43	80	61.5	29.5	6722.5
4/15/2006	2006	4	15	319	44	77	60.5	28.5	6751
4/16/2006	2006	4	16	320	32	75	53.5	21.5	6772.5
4/17/2006	2006	4	17	321	41	78	59.5	27.5	6800
4/18/2006	2006	4	18	322	22	67	44.5	12.5	6812.5
4/19/2006	2006	4	19	323	28	72	50	18	6830.5
4/20/2006	2006	4	20	324	30	78	54	22	6852.5
4/21/2006	2006	4	21	325	27	78	52.5	20.5	6873
4/22/2006	2006	4	22	326	40	80	60	28	6901
4/23/2006	2006	4	23	327	35	80	57.5	25.5	6926.5
4/24/2006	2006	4	24	328	35	80	57.5	25.5	6952
4/25/2006	2006	4	25	329	25	80	52.5	20.5	6972.5
4/26/2006	2006	4	26	330	34	74	54	22	6994.5
4/27/2006	2006	4	27	331	32	75	53.5	21.5	7016
4/28/2006	2006	4	28	332	34	77	55.5	23.5	7039.5
4/29/2006	2006	4	29	333	32	67	49.5	17.5	7057
4/30/2006	2006	4	30	334	30	73	51.5	19.5	7076.5
5/1/2006	2006	5	1	335	41	83	62	30	7106.5
5/2/2006	2006	5	2	336	40	84	62	30	7136.5
5/3/2006	2006	5	3	337	38	84	61	29	7165.5
5/4/2006	2006	5	4	338	40	81	60.5	28.5	7194
5/5/2006	2006	5	5	339	38	83	60.5	28.5	7222.5
5/6/2006	2006	5	6	340	34	74	54	22	7244.5
5/7/2006	2006	5	7	341	39	81	60	28	7272.5
5/8/2006	2006	5	8	342	37	80	58.5	26.5	7299
5/9/2006	2006	5	9	343	40	88	64	32	7331
5/10/2006	2006	5	10	344	33	73	53	21	7352
5/11/2006	2006	5	11	345	38	78	58	26	7378
5/12/2006	2006	5	12	346	38	81	59.5	27.5	7405.5
5/13/2006	2006	5	13	347	38	81	59.5	27.5	7433
5/14/2006	2006	5	14	348	42	90	66	34	7467
5/15/2006	2006	5	15	349	50	92	71	39	7506
5/16/2006	2006	5	16	350	42	73	57.5	25.5	7531.5
5/17/2006	2006	5	17	351	52	90	71	39	7570.5
5/18/2006	2006	5	18	352	51	91	71	39	7609.5
5/19/2006	2006	5	19	353	50	93	71.5	39.5	7649
5/20/2006	2006	5	20	354	51	91	71	39	7688
5/21/2006	2006	5	21	355	51	92	71.5	39.5	7727.5
5/22/2006	2006	5	22	356	48	90	69	37	7764.5
5/23/2006	2006	5	23	357	42	78	60	28	7792.5
5/24/2006	2006	5	24	358	42	88	65	33	7825.5
5/25/2006	2006	5	25	359	42	94	68	36	7861.5
5/26/2006	2006	5	26	360	50	94	72	40	7901.5
5/27/2006	2006	5	27	361	49	88	68.5	36.5	7938
5/28/2006	2006	5	28	362	49	88	68.5	36.5	7974.5
5/29/2006	2006	5	29	363	36	85	60.5	28.5	8003
5/30/2006	2006	5	30	364	40	84	62	30	8033
5/31/2006	2006	5	31	365	43	86	64.5	32.5	8065.5
6/1/2006	2006	6	1	1	50	87	68.5	36.5	36.5
6/2/2006	2006	6	2	2	49	89	69	37	73.5
6/3/2006	2006	6	3	3	50	91	70.5	38.5	112
6/4/2006	2006	6	4	4	49	95	72	40	152
6/5/2006	2006	6	5	5	50	97	73.5	41.5	193.5
6/6/2006	2006	6	6	6	50	99	74.5	42.5	236
6/7/2006	2006	6	7	7	59	97	78	46	282
6/8/2006	2006	6	8	8	46	86	66	34	316
6/9/2006	2006	6	9	9	54	86	70	38	354
6/10/2006	2006	6	10	10	48	86	67	35	389
6/11/2006	2006	6	11	11	48	91	69.5	37.5	426.5
6/12/2006	2006	6	12	12	48	94	71	39	465.5
6/13/2006	2006	6	13	13	57	97	77	45	510.5
6/14/2006	2006	6	14	14	59	96	77.5	45.5	556
6/15/2006	2006	6	15	15	58	95	76.5	44.5	600.5
6/16/2006	2006	6	16	16	50	96	73	41	641.5
6/17/2006	2006	6	17	17	45	91	68	36	677.5
6/18/2006	2006	6	18	18	49	92	70.5	38.5	716
6/19/2006	2006	6	19	19	44	98	71	39	755
6/20/2006	2006	6	20	20	50	97	73.5	41.5	796.5
6/21/2006	2006	6	21	21	49	98	73.5	41.5	838
6/22/2006	2006	6	22	22	54	98	76	44	882
6/23/2006	2006	6	23	23	60	98	79	47	929
6/24/2006	2006	6	24	24	70	99	84.5	52.5	981.5
6/25/2006	2006	6	25	25	71	99	85	53	1034.5
6/26/2006	2006	6	26	26	61	84	72.5	40.5	1075
6/27/2006	2006	6	27	27	52	84	68	36	1111
6/28/2006	2006	6	28	28	49	85	67	35	1146
6/29/2006	2006	6	29	29	56	90	73	41	1187
6/30/2006	2006	6	30	30	55	95	75	43	1230
7/1/2006	2006	7	1	31	55	96	75.5	43.5	1273.5
7/2/2006	2006	7	2	32	54	84	69	37	1310.5
7/3/2006	2006	7	3	33	59	96	77.5	45.5	1356
7/4/2006	2006	7	4	34	57	96	76.5	44.5	1400.5
7/5/2006	2006	7	5	35	65	96	80.5	48.5	1449
7/6/2006	2006	7	6	36	56	84	70	38	1487
7/7/2006	2006	7	7	37	60	79	69.5	37.5	1524.5

7/8/2006	2006	7	8	38	54	74	64	32	1556.5
7/9/2006	2006	7	9	39	55	78	66.5	34.5	1591
7/10/2006	2006	7	10	40	56	86	71	39	1630
7/11/2006	2006	7	11	41	56	86	71	39	1669
7/12/2006	2006	7	12	42	55	93	74	42	1711
7/13/2006	2006	7	13	43	56	96	76	44	1755
7/14/2006	2006	7	14	44	54	99	76.5	44.5	1799.5
7/15/2006	2006	7	15	45	64	99	81.5	49.5	1849
7/16/2006	2006	7	16	46	61	93	77	45	1894
7/17/2006	2006	7	17	47	60	95	77.5	45.5	1939.5
7/18/2006	2006	7	18	48	63	98	80.5	48.5	1988
7/19/2006	2006	7	19	49	65	94	79.5	47.5	2035.5
7/20/2006	2006	7	20	50	57	90	73.5	41.5	2077
7/21/2006	2006	7	21	51	55	95	75	43	2120
7/22/2006	2006	7	22	52	64	99	81.5	49.5	2169.5
7/23/2006	2006	7	23	53	58	90	74	42	2211.5
7/24/2006	2006	7	24	54	56	96	76	44	2255.5
7/25/2006	2006	7	25	55	61	99	80	48	2303.5
7/26/2006	2006	7	26	56	58	96	77	45	2348.5
7/27/2006	2006	7	27	57	62	97	79.5	47.5	2396
7/28/2006	2006	7	28	58	59	94	76.5	44.5	2440.5
7/29/2006	2006	7	29	59	60	80	70	38	2478.5
7/30/2006	2006	7	30	60	59	81	70	38	2516.5
7/31/2006	2006	7	31	61	65	85	75	43	2559.5
8/1/2006	2006	8	1	62	63	88	75.5	43.5	2603
8/2/2006	2006	8	2	63	53	84	68.5	36.5	2639.5
8/3/2006	2006	8	3	64	60	91	75.5	43.5	2683
8/4/2006	2006	8	4	65	58	84	71	39	2722
8/5/2006	2006	8	5	66	57	84	70.5	38.5	2760.5
8/6/2006	2006	8	6	67	58	85	71.5	39.5	2800
8/7/2006	2006	8	7	68	57	78	67.5	35.5	2835.5
8/8/2006	2006	8	8	69	57	78	67.5	35.5	2871
8/9/2006	2006	8	9	70	59	90	74.5	42.5	2913.5
8/10/2006	2006	8	10	71	56	88	72	40	2953.5
8/11/2006	2006	8	11	72	58	90	74	42	2995.5
8/12/2006	2006	8	12	73	57	91	74	42	3037.5
8/13/2006	2006	8	13	74	56	88	72	40	3077.5
8/14/2006	2006	8	14	75	55	87	71	39	3116.5
8/15/2006	2006	8	15	76	58	84	71	39	3155.5
8/16/2006	2006	8	16	77	58	72	65	33	3188.5
8/17/2006	2006	8	17	78	59	88	73.5	41.5	3230
8/18/2006	2006	8	18	79	58	86	72	40	3270
8/19/2006	2006	8	19	80	56	84	70	38	3308
8/20/2006	2006	8	20	81	55	78	66.5	34.5	3342.5
8/21/2006	2006	8	21	82	53	82	67.5	35.5	3378
8/22/2006	2006	8	22	83	55	80	67.5	35.5	3413.5
8/23/2006	2006	8	23	84	54	72	63	31	3444.5
8/24/2006	2006	8	24	85	57	80	68.5	36.5	3481
8/25/2006	2006	8	25	86	54	84	69	37	3518
8/26/2006	2006	8	26	87	50	77	63.5	31.5	3549.5
8/27/2006	2006	8	27	88	47	81	64	32	3581.5
8/28/2006	2006	8	28	89	44	86	65	33	3614.5
8/29/2006	2006	8	29	90	58	86	72	40	3654.5
8/30/2006	2006	8	30	91	53	85	69	37	3691.5
8/31/2006	2006	8	31	92	55	88	71.5	39.5	3731
9/1/2006	2006	9	1	93	55	88	71.5	39.5	3770.5
9/2/2006	2006	9	2	94	54	84	69	37	3807.5
9/3/2006	2006	9	3	95	54	86	70	38	3845.5
9/4/2006	2006	9	4	96	51	82	66.5	34.5	3880
9/5/2006	2006	9	5	97	49	83	66	34	3914
9/6/2006	2006	9	6	98	45	83	64	32	3946
9/7/2006	2006	9	7	99	50	84	67	35	3981
9/8/2006	2006	9	8	100	52	76	64	32	4013
9/9/2006	2006	9	9	101	44	77	60.5	28.5	4041.5
9/10/2006	2006	9	10	102	45	79	62	30	4071.5
9/11/2006	2006	9	11	103	47	80	63.5	31.5	4103
9/12/2006	2006	9	12	104	42	84	63	31	4134
9/13/2006	2006	9	13	105	46	85	65.5	33.5	4167.5
9/14/2006	2006	9	14	106	45	78	61.5	29.5	4197
9/15/2006	2006	9	15	107	47	75	61	29	4226
9/16/2006	2006	9	16	108	42	77	59.5	27.5	4253.5
9/17/2006	2006	9	17	109	35	78	56.5	24.5	4278
9/18/2006	2006	9	18	110	28	71	49.5	17.5	4295.5
9/19/2006	2006	9	19	111	27	78	52.5	20.5	4316
9/20/2006	2006	9	20	112	32	81	56.5	24.5	4340.5
9/21/2006	2006	9	21	113	37	78	57.5	25.5	4366
9/22/2006	2006	9	22	114	42	73	57.5	25.5	4391.5
9/23/2006	2006	9	23	115	38	61	49.5	17.5	4409
9/24/2006	2006	9	24	116	29	65	47	15	4424
9/25/2006	2006	9	25	117	34	69	51.5	19.5	4443.5
9/26/2006	2006	9	26	118	37	80	58.5	26.5	4470
9/27/2006	2006	9	27	119	40	83	61.5	29.5	4499.5
9/28/2006	2006	9	28	120	31	82	56.5	24.5	4524
9/29/2006	2006	9	29	121	31	84	57.5	25.5	4549.5
9/30/2006	2006	9	30	122	31	88	59.5	27.5	4577
10/1/2006	2006	10	1	123	33	89	61	29	4606
10/2/2006	2006	10	2	124	36	86	61	29	4635
10/3/2006	2006	10	3	125	42	83	62.5	30.5	4665.5
10/4/2006	2006	10	4	126	41	82	61.5	29.5	4695
10/5/2006	2006	10	5	127	53	81	67	35	4730
10/6/2006	2006	10	6	128	50	76	63	31	4761
10/7/2006	2006	10	7	129	45	74	59.5	27.5	4788.5
10/8/2006	2006	10	8	130	47	75	61	29	4817.5

10/9/2006	2006	10	9	131	45	70	57.5	25.5	4843
10/10/2006	2006	10	10	132	32	59	45.5	13.5	4856.5
10/11/2006	2006	10	11	133	33	71	52	20	4876.5
10/12/2006	2006	10	12	134	32	72	52	20	4896.5
10/13/2006	2006	10	13	135	31	74	52.5	20.5	4917
10/14/2006	2006	10	14	136	36	77	56.5	24.5	4941.5
10/15/2006	2006	10	15	137	43	71	57	25	4966.5
10/16/2006	2006	10	16	138	33	63	48	16	4982.5
10/17/2006	2006	10	17	139	35	71	53	21	5003.5
10/18/2006	2006	10	18	140	34	69	51.5	19.5	5023
10/19/2006	2006	10	19	141	24	62	43	11	5034
10/20/2006	2006	10	20	142	26	63	44.5	12.5	5046.5
10/21/2006	2006	10	21	143	32	74	53	21	5067.5
10/22/2006	2006	10	22	144	23	63	43	11	5078.5
10/23/2006	2006	10	23	145	22	67	44.5	12.5	5091
10/24/2006	2006	10	24	146	40	76	58	26	5117
10/25/2006	2006	10	25	147	40	76	58	26	5143
10/26/2006	2006	10	26	148	20	66	43	11	5154
10/27/2006	2006	10	27	149	26	54	40	8	5162
10/28/2006	2006	10	28	150	24	59	41.5	9.5	5171.5
10/29/2006	2006	10	29	151	24	70	47	15	5186.5
10/30/2006	2006	10	30	152	30	63	46.5	14.5	5201
10/31/2006	2006	10	31	153	27	67	47	15	5216
11/1/2006	2006	11	1	154	24	67	45.5	13.5	5229.5
11/2/2006	2006	11	2	155	23	66	44.5	12.5	5242
11/3/2006	2006	11	3	156	24	69	46.5	14.5	5256.5
11/4/2006	2006	11	4	157	24	69	46.5	14.5	5271
11/5/2006	2006	11	5	158	27	73	50	18	5289
11/6/2006	2006	11	6	159	25	64	44.5	12.5	5301.5
11/7/2006	2006	11	7	160	30	68	49	17	5318.5
11/8/2006	2006	11	8	161	29	69	49	17	5335.5
11/9/2006	2006	11	9	162	38	69	53.5	21.5	5357
11/10/2006	2006	11	10	163	38	69	53.5	21.5	5378.5
11/11/2006	2006	11	11	164	12	69	40.5	8.5	5387
11/12/2006	2006	11	12	165	34	59	46.5	14.5	5401.5
11/13/2006	2006	11	13	166	21	60	40.5	8.5	5410
11/14/2006	2006	11	14	167	27	55	41	9	5419
11/15/2006	2006	11	15	168	18	63	40.5	8.5	5427.5
11/16/2006	2006	11	16	169	16	65	40.5	8.5	5436
11/17/2006	2006	11	17	170	20	70	45	13	5449
11/18/2006	2006	11	18	171	21	71	46	14	5463
11/19/2006	2006	11	19	172	19	74	46.5	14.5	5477.5
11/20/2006	2006	11	20	173	19	60	39.5	7.5	5485
11/21/2006	2006	11	21	174	18	63	40.5	8.5	5493.5
11/22/2006	2006	11	22	175	19	73	46	14	5507.5
11/23/2006	2006	11	23	176	18	72	45	13	5520.5
11/24/2006	2006	11	24	177	23	71	47	15	5535.5
11/25/2006	2006	11	25	178	25	62	43.5	11.5	5547
11/26/2006	2006	11	26	179	19	62	40.5	8.5	5555.5
11/27/2006	2006	11	27	180	18	61	39.5	7.5	5563
11/28/2006	2006	11	28	181	22	55	38.5	6.5	5569.5
11/29/2006	2006	11	29	182	21	50	35.5	3.5	5573
11/30/2006	2006	11	30	183	-10	28	9	-23	5550
12/1/2006	2006	12	1	184	-1	41	20	-12	5538
12/2/2006	2006	12	2	185	-2	43	20.5	-11.5	5526.5
12/3/2006	2006	12	3	186	-1	39	19	-13	5513.5
12/4/2006	2006	12	4	187	-1	39	19	-13	5500.5
12/5/2006	2006	12	5	188	2	43	22.5	-9.5	5491
12/6/2006	2006	12	6	189	10	55	32.5	0.5	5491.5
12/7/2006	2006	12	7	190	16	55	35.5	3.5	5495
12/8/2006	2006	12	8	191	15	48	31.5	-0.5	5494.5
12/9/2006	2006	12	9	192	18	54	36	4	5498.5
12/10/2006	2006	12	10	193	18	53	35.5	3.5	5502
12/11/2006	2006	12	11	194	22	51	36.5	4.5	5506.5
12/12/2006	2006	12	12	195	18	52	35	3	5509.5
12/13/2006	2006	12	13	196	5	50	27.5	-4.5	5505
12/14/2006	2006	12	14	197	20	52	36	4	5509
12/15/2006	2006	12	15	198	21	56	38.5	6.5	5515.5
12/16/2006	2006	12	16	199	19	58	38.5	6.5	5522
12/17/2006	2006	12	17	200	22	56	39	7	5529
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12/22/2006	2006	12	22	205	-7	43	18	-14	5513
12/23/2006	2006	12	23	206	-1	42	20.5	-11.5	5501.5
12/24/2006	2006	12	24	207	-2	44	21	-11	5490.5
12/25/2006	2006	12	25	208	-2	45	21.5	-10.5	5480
12/26/2006	2006	12	26	209	5	45	25	-7	5473
12/27/2006	2006	12	27	210	10	48	29	-3	5470
12/28/2006	2006	12	28	211	17	53	35	3	5473
12/29/2006	2006	12	29	212	10	40	25	-7	5466
12/30/2006	2006	12	30	213	20	40	30	-2	5464
12/31/2006	2006	12	31	214	-6	38	16	-16	5448
1/1/2007	2007	1	1	215	0	38	19	-13	5435
1/2/2007	2007	1	2	216	6	32	19	-13	5422
1/3/2007	2007	1	3	217	-3	40	18.5	-13.5	5408.5
1/4/2007	2007	1	4	218	5	44	24.5	-7.5	5401
1/5/2007	2007	1	5	219	22	56	39	7	5408
1/6/2007	2007	1	6	220	6	47	26.5	-5.5	5402.5
1/7/2007	2007	1	7	221	9	41	25	-7	5395.5
1/8/2007	2007	1	8	222	7	36	21.5	-10.5	5385
1/9/2007	2007	1	9	223	5	47	26	-6	5379

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1/11/2007	2007	1	11	225	26	45	35.5	3.5	5376
1/12/2007	2007	1	12	226	34	47	40.5	8.5	5384.5
1/13/2007	2007	1	13	227	28	52	40	8	5392.5
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1/15/2007	2007	1	15	229	1	31	16	-16	5373.5
1/16/2007	2007	1	16	230	-1	32	15.5	-16.5	5357
1/17/2007	2007	1	17	231	8	31	19.5	-12.5	5344.5
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1/19/2007	2007	1	19	233	16	40	28	-4	5336
1/20/2007	2007	1	20	234	26	39	32.5	0.5	5336.5
1/21/2007	2007	1	21	235	23	42	32.5	0.5	5337
1/22/2007	2007	1	22	236	8	32	20	-12	5325
1/23/2007	2007	1	23	237		45	45	13	5338
1/24/2007	2007	1	24	238	3	47	25	-7	5331
1/25/2007	2007	1	25	239	8	52	30	-2	5329
1/26/2007	2007	1	26	240	10	53	31.5	-0.5	5328.5
1/27/2007	2007	1	27	241	13	54	33.5	1.5	5330
1/28/2007	2007	1	28	242	13	51	32	0	5330
1/29/2007	2007	1	29	243	15	54	34.5	2.5	5332.5
1/30/2007	2007	1	30	244	17	50	33.5	1.5	5334
1/31/2007	2007	1	31	245	20	41	30.5	-1.5	5332.5
2/1/2007	2007	2	1	246	15	44	29.5	-2.5	5330
2/2/2007	2007	2	2	247	4	38	21	-11	5319
2/3/2007	2007	2	3	248	7	33	20	-12	5307
2/4/2007	2007	2	4	249	10	33	21.5	-10.5	5296.5
2/5/2007	2007	2	5	250	19	56	37.5	5.5	5302
2/6/2007	2007	2	6	251	29	60	44.5	12.5	5314.5
2/7/2007	2007	2	7	252	24	61	42.5	10.5	5325
2/8/2007	2007	2	8	253	27	62	44.5	12.5	5337.5
2/9/2007	2007	2	9	254	32	60	46	14	5351.5
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2/13/2007	2007	2	13	258	27	41	34	2	5386
2/14/2007	2007	2	14	259	28	44	36	4	5390
2/15/2007	2007	2	15	260	20	43	31.5	-0.5	5389.5
2/16/2007	2007	2	16	261	21	47	34	2	5391.5
2/17/2007	2007	2	17	262	27	56	41.5	9.5	5401
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2/21/2007	2007	2	21	266	23	56	39.5	7.5	5429.5
2/22/2007	2007	2	22	267	22	62	42	10	5439.5
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3/1/2007	2007	3	1	274	18	44	31	-1	5502.5
3/2/2007	2007	3	2	275	10	45	27.5	-4.5	5498
3/3/2007	2007	3	3	276	10	48	29	-3	5495
3/4/2007	2007	3	4	277	9	44	26.5	-5.5	5489.5
3/5/2007	2007	3	5	278	13	55	34	2	5491.5
3/6/2007	2007	3	6	279	14	59	36.5	4.5	5496
3/7/2007	2007	3	7	280	30	76	53	21	5517
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3/9/2007	2007	3	9	282	23	70	46.5	14.5	5549.5
3/10/2007	2007	3	10	283	29	72	50.5	18.5	5568
3/11/2007	2007	3	11	284	28	64	46	14	5582
3/12/2007	2007	3	12	285	22	65	43.5	11.5	5593.5
3/13/2007	2007	3	13	286	27	78	52.5	20.5	5614
3/14/2007	2007	3	14	287	30	79	54.5	22.5	5636.5
3/15/2007	2007	3	15	288	33	80	56.5	24.5	5661
3/16/2007	2007	3	16	289	26	79	52.5	20.5	5681.5
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3/20/2007	2007	3	20	293	26	71	48.5	16.5	5768.5
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3/25/2007	2007	3	25	298	36	60	48	16	5864.5
3/26/2007	2007	3	26	299	36	60	48	16	5880.5
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3/28/2007	2007	3	28	301	28	73	50.5	18.5	5917.5
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3/30/2007	2007	3	30	303	29	54	41.5	9.5	5942.5
3/31/2007	2007	3	31	304	24	46	35	3	5945.5
4/1/2007	2007	4	1	305	25	70	47.5	15.5	5961
4/2/2007	2007	4	2	306	29	75	52	20	5981
4/3/2007	2007	4	3	307	37	75	56	24	6005
4/4/2007	2007	4	4	308	34	77	55.5	23.5	6028.5
4/5/2007	2007	4	5	309	34	79	56.5	24.5	6053
4/6/2007	2007	4	6	310	37	80	58.5	26.5	6079.5
4/7/2007	2007	4	7	311	38	74	56	24	6103.5
4/8/2007	2007	4	8	312	38	71	54.5	22.5	6126
4/9/2007	2007	4	9	313	37	62	49.5	17.5	6143.5
4/10/2007	2007	4	10	314	53	64	58.5	26.5	6170
4/11/2007	2007	4	11	315	25	64	44.5	12.5	6182.5
4/12/2007	2007	4	12	316	25	61	43	11	6193.5

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4/14/2007	2007	4	14	318	29	59	44	12	6221.5
4/15/2007	2007	4	15	319	30	65	47.5	15.5	6237
4/16/2007	2007	4	16	320	28	70	49	17	6254
4/17/2007	2007	4	17	321	30	64	47	15	6269
4/18/2007	2007	4	18	322	32	73	52.5	20.5	6289.5
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4/21/2007	2007	4	21	325	32	72	52	20	6351
4/22/2007	2007	4	22	326	28	60	44	12	6363
4/23/2007	2007	4	23	327	34	70	52	20	6383
4/24/2007	2007	4	24	328	36	68	52	20	6403
4/25/2007	2007	4	25	329	31	63	47	15	6418
4/26/2007	2007	4	26	330	32	66	49	17	6435
4/27/2007	2007	4	27	331	33	79	56	24	6459
4/28/2007	2007	4	28	332	36	81	58.5	26.5	6485.5
4/29/2007	2007	4	29	333	45	77	61	29	6514.5
4/30/2007	2007	4	30	334	41	74	57.5	25.5	6540
5/1/2007	2007	5	1	335	41	85	63	31	6571
5/2/2007	2007	5	2	336	46	79	62.5	30.5	6601.5
5/3/2007	2007	5	3	337	56	78	67	35	6636.5
5/4/2007	2007	5	4	338	59	76	67.5	35.5	6672
5/5/2007	2007	5	5	339	37	72	54.5	22.5	6694.5
5/6/2007	2007	5	6	340	27	56	41.5	9.5	6704
5/7/2007	2007	5	7	341	29	60	44.5	12.5	6716.5
5/8/2007	2007	5	8	342	37	66	51.5	19.5	6736
5/9/2007	2007	5	9	343	38	70	54	22	6758
5/10/2007	2007	5	10	344	34	78	56	24	6782
5/11/2007	2007	5	11	345	38	85	61.5	29.5	6811.5
5/12/2007	2007	5	12	346	44	85	64.5	32.5	6844
5/13/2007	2007	5	13	347	46	85	65.5	33.5	6877.5
5/14/2007	2007	5	14	348	46	83	64.5	32.5	6910
5/15/2007	2007	5	15	349	47	81	64	32	6942
5/16/2007	2007	5	16	350	46	74	60	28	6970
5/17/2007	2007	5	17	351	46	74	60	28	6998
5/18/2007	2007	5	18	352	43	74	58.5	26.5	7024.5
5/19/2007	2007	5	19	353	43	79	61	29	7053.5
5/20/2007	2007	5	20	354	46	80	63	31	7084.5
5/21/2007	2007	5	21	355	45	75	60	28	7112.5
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5/23/2007	2007	5	23	357	42	76	59	27	7173
5/24/2007	2007	5	24	358	28	73	50.5	18.5	7191.5
5/25/2007	2007	5	25	359	47	73	60	28	7219.5
5/26/2007	2007	5	26	360	45	82	63.5	31.5	7251
5/27/2007	2007	5	27	361	41	84	62.5	30.5	7281.5
5/28/2007	2007	5	28	362	54	84	69	37	7318.5
5/29/2007	2007	5	29	363	40	84	62	30	7348.5
5/30/2007	2007	5	30	364	40	85	62.5	30.5	7379
5/31/2007	2007	5	31	365	39	86	62.5	30.5	7409.5
6/1/2007	2007	6	1	1	39	85	62	30	30
6/2/2007	2007	6	2	2	40	91	65.5	33.5	63.5
6/3/2007	2007	6	3	3	63	91	77	45	108.5
6/4/2007	2007	6	4	4	47	84	65.5	33.5	142
6/5/2007	2007	6	5	5	53	89	71	39	181
6/6/2007	2007	6	6	6	55	90	72.5	40.5	221.5
6/7/2007	2007	6	7	7	55	83	69	37	258.5
6/8/2007	2007	6	8	8	32	81	56.5	24.5	283
6/9/2007	2007	6	9	9	47	84	65.5	33.5	316.5
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6/11/2007	2007	6	11	11	48	66	57	25	366
6/12/2007	2007	6	12	12	47	75	61	29	395
6/13/2007	2007	6	13	13	42	82	62	30	425
6/14/2007	2007	6	14	14	46	86	66	34	459
6/15/2007	2007	6	15	15	47	91	69	37	496
6/16/2007	2007	6	16	16	58	96	77	45	541
6/17/2007	2007	6	17	17	60	93	76.5	44.5	585.5
6/18/2007	2007	6	18	18	57	94	75.5	43.5	629
6/19/2007	2007	6	19	19	51	96	73.5	41.5	670.5
6/20/2007	2007	6	20	20	50	95	72.5	40.5	711
6/21/2007	2007	6	21	21	57	97	77	45	756
6/22/2007	2007	6	22	22	58	96	77	45	801
6/23/2007	2007	6	23	23	56	93	74.5	42.5	843.5
6/24/2007	2007	6	24	24	51	99	75	43	886.5
6/25/2007	2007	6	25	25	49	100	74.5	42.5	929
6/26/2007	2007	6	26	26	45	97	71	39	968
6/27/2007	2007	6	27	27	42	100	71	39	1007
6/28/2007	2007	6	28	28	55	86	70.5	38.5	1045.5
6/29/2007	2007	6	29	29	55	97	76	44	1089.5
6/30/2007	2007	6	30	30	53	98	75.5	43.5	1133
7/1/2007	2007	7	1	31	50	101	75.5	43.5	1176.5
7/2/2007	2007	7	2	32	52	102	77	45	1221.5
7/3/2007	2007	7	3	33	55	102	78.5	46.5	1268
7/4/2007	2007	7	4	34	65	103	84	52	1320
7/5/2007	2007	7	5	35	56	93	74.5	42.5	1362.5
7/6/2007	2007	7	6	36	53	95	74	42	1404.5
7/7/2007	2007	7	7	37	56	88	72	40	1444.5
7/8/2007	2007	7	8	38	54	96	75	43	1487.5
7/9/2007	2007	7	9	39	53	99	76	44	1531.5
7/10/2007	2007	7	10	40	57	98	77.5	45.5	1577
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7/12/2007	2007	7	12	42	60	90	75	43	1668
7/13/2007	2007	7	13	43	59	95	77	45	1713
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7/17/2007	2007	7	17	47	55	99	77	45	1895.5
7/18/2007	2007	7	18	48	56	101	78.5	46.5	1942
7/19/2007	2007	7	19	49	58	100	79	47	1989
7/20/2007	2007	7	20	50	58	89	73.5	41.5	2030.5
7/21/2007	2007	7	21	51	61	90	75.5	43.5	2074
7/22/2007	2007	7	22	52	57	89	73	41	2115
7/23/2007	2007	7	23	53	57	82	69.5	37.5	2152.5
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7/25/2007	2007	7	25	55	53	93	73	41	2235.5
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7/27/2007	2007	7	27	57	60	95	77.5	45.5	2324
7/28/2007	2007	7	28	58	60	87	73.5	41.5	2365.5
7/29/2007	2007	7	29	59	58	92	75	43	2408.5
7/30/2007	2007	7	30	60	59	94	76.5	44.5	2453
7/31/2007	2007	7	31	61	57	79	68	36	2489
8/1/2007	2007	8	1	62	59	91	75	43	2532
8/2/2007	2007	8	2	63	60	90	75	43	2575
8/3/2007	2007	8	3	64	59	89	74	42	2617
8/4/2007	2007	8	4	65	58	88	73	41	2658
8/5/2007	2007	8	5	66	57	91	74	42	2700
8/6/2007	2007	8	6	67	59	89	74	42	2742
8/7/2007	2007	8	7	68	57	90	73.5	41.5	2783.5
8/8/2007	2007	8	8	69	53	84	68.5	36.5	2820
8/9/2007	2007	8	9	70	54	91	72.5	40.5	2860.5
8/10/2007	2007	8	10	71	57	91	74	42	2902.5
8/11/2007	2007	8	11	72	59	92	75.5	43.5	2946
8/12/2007	2007	8	12	73	55	91	73	41	2987
8/13/2007	2007	8	13	74	56	95	75.5	43.5	3030.5
8/14/2007	2007	8	14	75	54	96	75	43	3073.5
8/15/2007	2007	8	15	76	55	96	75.5	43.5	3117
8/16/2007	2007	8	16	77	57	95	76	44	3161
8/17/2007	2007	8	17	78	56	95	75.5	43.5	3204.5
8/18/2007	2007	8	18	79	57	95	76	44	3248.5
8/19/2007	2007	8	19	80	57	95	76	44	3292.5
8/20/2007	2007	8	20	81	67	94	80.5	48.5	3341
8/21/2007	2007	8	21	82	59	95	77	45	3386
8/22/2007	2007	8	22	83	52	98	75	43	3429
8/23/2007	2007	8	23	84	62	98	80	48	3477
8/24/2007	2007	8	24	85	58	95	76.5	44.5	3521.5
8/25/2007	2007	8	25	86	53	96	74.5	42.5	3564
8/26/2007	2007	8	26	87	54	92	73	41	3605
8/27/2007	2007	8	27	88	53	90	71.5	39.5	3644.5
8/28/2007	2007	8	28	89	52	86	69	37	3681.5
8/29/2007	2007	8	29	90	58	86	72	40	3721.5
8/30/2007	2007	8	30	91	56	90	73	41	3762.5
8/31/2007	2007	8	31	92	61	86	73.5	41.5	3804
9/1/2007	2007	9	1	93	53	87	70	38	3842
9/2/2007	2007	9	2	94	56	89	72.5	40.5	3882.5
9/3/2007	2007	9	3	95	52	85	68.5	36.5	3919
9/4/2007	2007	9	4	96	52	87	69.5	37.5	3956.5
9/5/2007	2007	9	5	97	53	88	70.5	38.5	3995
9/6/2007	2007	9	6	98	55	86	70.5	38.5	4033.5
9/7/2007	2007	9	7	99	51	80	65.5	33.5	4067
9/8/2007	2007	9	8	100	47	74	60.5	28.5	4095.5
9/9/2007	2007	9	9	101	43	68	55.5	23.5	4119
9/10/2007	2007	9	10	102	50	88	69	37	4156
9/11/2007	2007	9	11	103	52	87	69.5	37.5	4193.5
9/12/2007	2007	9	12	104	49	78	63.5	31.5	4225
9/13/2007	2007	9	13	105	49	78	63.5	31.5	4256.5
9/14/2007	2007	9	14	106	42	91	66.5	34.5	4291
9/15/2007	2007	9	15	107	50	88	69	37	4328
9/16/2007	2007	9	16	108	50	88	69	37	4365
9/17/2007	2007	9	17	109	62	87	74.5	42.5	4407.5
9/18/2007	2007	9	18	110	50	88	69	37	4444.5
9/19/2007	2007	9	19	111	40	82	61	29	4473.5
9/20/2007	2007	9	20	112	52	80	66	34	4507.5
9/21/2007	2007	9	21	113	51	73	62	30	4537.5
9/22/2007	2007	9	22	114	47	77	62	30	4567.5
9/23/2007	2007	9	23	115	44	78	61	29	4596.5
9/24/2007	2007	9	24	116	43	80	61.5	29.5	4626
9/25/2007	2007	9	25	117	33	78	55.5	23.5	4649.5
9/26/2007	2007	9	26	118	34	83	58.5	26.5	4676
9/27/2007	2007	9	27	119	34	84	59	27	4703
9/28/2007	2007	9	28	120	53	82	67.5	35.5	4738.5
9/29/2007	2007	9	29	121	56	80	68	36	4774.5
9/30/2007	2007	9	30	122	39	81	60	28	4802.5
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10/2/2007	2007	10	2	124	47	74	60.5	28.5	4862
10/3/2007	2007	10	3	125	34	80	57	25	4887
10/4/2007	2007	10	4	126	43	86	64.5	32.5	4919.5
10/5/2007	2007	10	5	127	47	80	63.5	31.5	4951
10/6/2007	2007	10	6	128	48	80	64	32	4983
10/7/2007	2007	10	7	129	28	76	52	20	5003
10/8/2007	2007	10	8	130	24	66	45	13	5016
10/9/2007	2007	10	9	131	32	72	52	20	5036
10/10/2007	2007	10	10	132	42	76	59	27	5063
10/11/2007	2007	10	11	133	35	78	56.5	24.5	5087.5
10/12/2007	2007	10	12	134	32	86	59	27	5114.5
10/13/2007	2007	10	13	135	31	84	57.5	25.5	5140
10/14/2007	2007	10	14	136	29	72	50.5	18.5	5158.5
10/15/2007	2007	10	15	137	25	69	47	15	5173.5

10/16/2007	2007	10	16	138	25	72	48.5	16.5	5190
10/17/2007	2007	10	17	139	29	70	49.5	17.5	5207.5
10/18/2007	2007	10	18	140	28	66	47	15	5222.5
10/19/2007	2007	10	19	141	26	65	45.5	13.5	5236
10/20/2007	2007	10	20	142	26	81	53.5	21.5	5257.5
10/21/2007	2007	10	21	143	33	80	56.5	24.5	5282
10/22/2007	2007	10	22	144	19	53	36	4	5286
10/23/2007	2007	10	23	145	21	60	40.5	8.5	5294.5
10/24/2007	2007	10	24	146	26	76	51	19	5313.5
10/25/2007	2007	10	25	147	26	78	52	20	5333.5
10/26/2007	2007	10	26	148	23	80	51.5	19.5	5353
10/27/2007	2007	10	27	149	25	83	54	22	5375
10/28/2007	2007	10	28	150	29	84	56.5	24.5	5399.5
10/29/2007	2007	10	29	151	28	78	53	21	5420.5
10/30/2007	2007	10	30	152	36	75	55.5	23.5	5444
10/31/2007	2007	10	31	153	29	75	52	20	5464
11/1/2007	2007	11	1	154	26	70	48	16	5480
11/2/2007	2007	11	2	155	31	67	49	17	5497
11/3/2007	2007	11	3	156	26	70	48	16	5513
11/4/2007	2007	11	4	157	27	71	49	17	5530
11/5/2007	2007	11	5	158	27	77	52	20	5550
11/6/2007	2007	11	6	159	34	77	55.5	23.5	5573.5
11/7/2007	2007	11	7	160	26	67	46.5	14.5	5588
11/8/2007	2007	11	8	161	27	76	51.5	19.5	5607.5
11/9/2007	2007	11	9	162	26	78	52	20	5627.5
11/10/2007	2007	11	10	163	26	75	50.5	18.5	5646
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11/12/2007	2007	11	12	165	26	73	49.5	17.5	5682
11/13/2007	2007	11	13	166	25	68	46.5	14.5	5696.5
11/14/2007	2007	11	14	167	26	75	50.5	18.5	5715
11/15/2007	2007	11	15	168	34	73	53.5	21.5	5736.5
11/16/2007	2007	11	16	169	34	71	52.5	20.5	5757
11/17/2007	2007	11	17	170	24	64	44	12	5769
11/18/2007	2007	11	18	171	22	70	46	14	5783
11/19/2007	2007	11	19	172	21	70	45.5	13.5	5796.5
11/20/2007	2007	11	20	173	21	79	50	18	5814.5
11/21/2007	2007	11	21	174	32	71	51.5	19.5	5834
11/22/2007	2007	11	22	175	21	54	37.5	5.5	5839.5
11/23/2007	2007	11	23	176	31	48	39.5	7.5	5847
11/24/2007	2007	11	24	177	21	41	31	-1	5846
11/25/2007	2007	11	25	178	8	42	25	-7	5839
11/26/2007	2007	11	26	179	10	48	29	-3	5836
11/27/2007	2007	11	27	180	9	54	31.5	-0.5	5835.5
11/28/2007	2007	11	28	181	27	55	41	9	5844.5
11/29/2007	2007	11	29	182	14	57	35.5	3.5	5848
11/30/2007	2007	11	30	183	36	52	44	12	5860
12/1/2007	2007	12	1	184	41	55	48	16	5876
12/2/2007	2007	12	2	185	28	54	41	9	5885
12/3/2007	2007	12	3	186	20	57	38.5	6.5	5891.5
12/4/2007	2007	12	4	187	21	60	40.5	8.5	5900
12/5/2007	2007	12	5	188	24	67	45.5	13.5	5913.5
12/6/2007	2007	12	6	189	32	62	47	15	5928.5
12/7/2007	2007	12	7	190	37	60	48.5	16.5	5945
12/8/2007	2007	12	8	191	39	60	49.5	17.5	5962.5
12/9/2007	2007	12	9	192	20	49	34.5	2.5	5965
12/10/2007	2007	12	10	193	25	49	37	5	5970
12/11/2007	2007	12	11	194	30	40	35	3	5973
12/12/2007	2007	12	12	195	18	43	30.5	-1.5	5971.5
12/13/2007	2007	12	13	196	15	45	30	-2	5969.5
12/14/2007	2007	12	14	197	24	42	33	1	5970.5
12/15/2007	2007	12	15	198	8	39	23.5	-8.5	5962
12/16/2007	2007	12	16	199	8	45	26.5	-5.5	5956.5
12/17/2007	2007	12	17	200	13	47	30	-2	5954.5
12/18/2007	2007	12	18	201	15	47	31	-1	5953.5
12/19/2007	2007	12	19	202	15	56	35.5	3.5	5957
12/20/2007	2007	12	20	203	15	53	34	2	5959
12/21/2007	2007	12	21	204	15	53	34	2	5961
12/22/2007	2007	12	22	205	13	60	36.5	4.5	5965.5
12/23/2007	2007	12	23	206	10	48	29	-3	5962.5
12/24/2007	2007	12	24	207	18	51	34.5	2.5	5965
12/25/2007	2007	12	25	208	17	53	35	3	5968
12/26/2007	2007	12	26	209	1	33	17	-15	5953
12/27/2007	2007	12	27	210	9	43	26	-6	5947
12/28/2007	2007	12	28	211	0	31	15.5	-16.5	5930.5
12/29/2007	2007	12	29	212	12	36	24	-8	5922.5
12/30/2007	2007	12	30	213	15	46	30.5	-1.5	5921
12/31/2007	2007	12	31	214	20	52	36	4	5925
1/1/2008	2008	1	1	215	-2	36	17	-15	5910
1/2/2008	2008	1	2	216	7	44	25.5	-6.5	5903.5
1/3/2008	2008	1	3	217	10	39	24.5	-7.5	5896
1/4/2008	2008	1	4	218	28	51	39.5	7.5	5903.5
1/5/2008	2008	1	5	219	28	58	43	11	5914.5
1/6/2008	2008	1	6	220	40	57	48.5	16.5	5931
1/7/2008	2008	1	7	221	32	55	43.5	11.5	5942.5
1/8/2008	2008	1	8	222	11	40	25.5	-6.5	5936
1/9/2008	2008	1	9	223	13	44	28.5	-3.5	5932.5
1/10/2008	2008	1	10	224	11	43	27	-5	5927.5
1/11/2008	2008	1	11	225	14	45	29.5	-2.5	5925
1/12/2008	2008	1	12	226	13	43	28	-4	5921
1/13/2008	2008	1	13	227	15	45	30	-2	5919
1/14/2008	2008	1	14	228	10	44	27	-5	5914
1/15/2008	2008	1	15	229	6	28	17	-15	5899
1/16/2008	2008	1	16	230	13	32	22.5	-9.5	5889.5

1/17/2008	2008	1	17	231	-2	31	14.5	-17.5	5872
1/18/2008	2008	1	18	232	3	33	18	-14	5858
1/19/2008	2008	1	19	233	2	40	21	-11	5847
1/20/2008	2008	1	20	234	3	43	23	-9	5838
1/21/2008	2008	1	21	235	17	52	34.5	2.5	5840.5
1/22/2008	2008	1	22	236	13	50	31.5	-0.5	5840
1/23/2008	2008	1	23	237	9	46	27.5	-4.5	5835.5
1/24/2008	2008	1	24	238	29	53	41	9	5844.5
1/25/2008	2008	1	25	239	19	46	32.5	0.5	5845
1/26/2008	2008	1	26	240	10	50	30	-2	5843
1/27/2008	2008	1	27	241	29	55	42	10	5853
1/28/2008	2008	1	28	242	37	52	44.5	12.5	5865.5
1/29/2008	2008	1	29	243	12	39	25.5	-6.5	5859
1/30/2008	2008	1	30	244	28	41	34.5	2.5	5861.5
1/31/2008	2008	1	31	245	8	38	23	-9	5852.5
2/1/2008	2008	2	1	246	6	50	28	-4	5848.5
2/2/2008	2008	2	2	247	18	51	34.5	2.5	5851
2/3/2008	2008	2	3	248	17	52	34.5	2.5	5853.5
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2/5/2008	2008	2	5	250	4	30	17	-15	5844.5
2/6/2008	2008	2	6	251	4	30	17	-15	5829.5
2/7/2008	2008	2	7	252	4	30	17	-15	5814.5
2/8/2008	2008	2	8	253	4	30	17	-15	5799.5
2/9/2008	2008	2	9	254	20	52	36	4	5803.5
2/10/2008	2008	2	10	255	20	59	39.5	7.5	5811
2/11/2008	2008	2	11	256	20	60	40	8	5819
2/12/2008	2008	2	12	257	21	60	40.5	8.5	5827.5
2/13/2008	2008	2	13	258	22	58	40	8	5835.5
2/14/2008	2008	2	14	259	32	55	43.5	11.5	5847
2/15/2008	2008	2	15	260	30	53	41.5	9.5	5856.5
2/16/2008	2008	2	16	261	30	58	44	12	5868.5
2/17/2008	2008	2	17	262	22	57	39.5	7.5	5876
2/18/2008	2008	2	18	263	15	52	33.5	1.5	5877.5
2/19/2008	2008	2	19	264	19	58	38.5	6.5	5884
2/20/2008	2008	2	20	265	30	60	45	13	5897
2/21/2008	2008	2	21	266	29	60	44.5	12.5	5909.5
2/22/2008	2008	2	22	267	27	54	40.5	8.5	5918
2/23/2008	2008	2	23	268	28	43	35.5	3.5	5921.5
2/24/2008	2008	2	24	269	29	55	42	10	5931.5
2/25/2008	2008	2	25	270	32	59	45.5	13.5	5945
2/26/2008	2008	2	26	271	22	62	42	10	5955
2/27/2008	2008	2	27	272	20	59	39.5	7.5	5962.5
2/28/2008	2008	2	28	273	20	68	44	12	5974.5
2/29/2008	2008	2	29	274	22	71	46.5	14.5	5989
3/1/2008	2008	3	1	275	22	72	47	15	6004
3/2/2008	2008	3	2	276	28	79	53.5	21.5	6025.5
3/3/2008	2008	3	3	277	18	35	26.5	-5.5	6020
3/4/2008	2008	3	4	278	18	35	26.5	-5.5	6014.5
3/5/2008	2008	3	5	279	17	60	38.5	6.5	6021
3/6/2008	2008	3	6	280	16	45	30.5	-1.5	6019.5
3/7/2008	2008	3	7	281	17	50	33.5	1.5	6021
3/8/2008	2008	3	8	282	15	55	35	3	6024
3/9/2008	2008	3	9	283	20	59	39.5	7.5	6031.5
3/10/2008	2008	3	10	284	18	64	41	9	6040.5
3/11/2008	2008	3	11	285	18	64	41	9	6049.5
3/12/2008	2008	3	12	286	22	67	44.5	12.5	6062
3/13/2008	2008	3	13	287	30	71	50.5	18.5	6080.5
3/14/2008	2008	3	14	288	35	70	52.5	20.5	6101
3/15/2008	2008	3	15	289	17	65	41	9	6110
3/16/2008	2008	3	16	290	20	60	40	8	6118
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3/18/2008	2008	3	18	292	24	52	38	6	6136
3/19/2008	2008	3	19	293	15	60	37.5	5.5	6141.5
3/20/2008	2008	3	20	294	15	68	41.5	9.5	6151
3/21/2008	2008	3	21	295	17	70	43.5	11.5	6162.5
3/22/2008	2008	3	22	296	18	72	45	13	6175.5
3/23/2008	2008	3	23	297	16	67	41.5	9.5	6185
3/24/2008	2008	3	24	298	16	74	45	13	6198
3/25/2008	2008	3	25	299	22	74	48	16	6214
3/26/2008	2008	3	26	300	34	74	54	22	6236
3/27/2008	2008	3	27	301	30	74	52	20	6256
3/28/2008	2008	3	28	302	28	74	51	19	6275
3/29/2008	2008	3	29	303	28	70	49	17	6292
3/30/2008	2008	3	30	304	28	70	49	17	6309
3/31/2008	2008	3	31	305	32	70	51	19	6328
4/1/2008	2008	4	1	306	21	65	43	11	6339
4/2/2008	2008	4	2	307	35	71	53	21	6360
4/3/2008	2008	4	3	308	35	71	53	21	6381
4/4/2008	2008	4	4	309	22	63	42.5	10.5	6391.5
4/5/2008	2008	4	5	310	45	69	57	25	6416.5
4/6/2008	2008	4	6	311	44	72	58	26	6442.5
4/7/2008	2008	4	7	312	47	73	60	28	6470.5
4/8/2008	2008	4	8	313	35	70	52.5	20.5	6491
4/9/2008	2008	4	9	314	35	70	52.5	20.5	6511.5
4/10/2008	2008	4	10	315	29	59	44	12	6523.5
4/11/2008	2008	4	11	316	22	59	40.5	8.5	6532
4/12/2008	2008	4	12	317	17	56	36.5	4.5	6536.5
4/13/2008	2008	4	13	318	21	65	43	11	6547.5
4/14/2008	2008	4	14	319	24	70	47	15	6562.5
4/15/2008	2008	4	15	320	28	81	54.5	22.5	6585
4/16/2008	2008	4	16	321	28	80	54	22	6607
4/17/2008	2008	4	17	322	31	69	50	18	6625
4/18/2008	2008	4	18	323	31	69	50	18	6643

4/19/2008	2008	4	19	324	31	69	50	18	6661
4/20/2008	2008	4	20	325	31	69	50	18	6679
4/21/2008	2008	4	21	326	37	67	52	20	6699
4/22/2008	2008	4	22	327	37	67	52	20	6719
4/23/2008	2008	4	23	328	28	78	53	21	6740
4/24/2008	2008	4	24	329	37	77	57	25	6765
4/25/2008	2008	4	25	330	37	77	57	25	6790
4/26/2008	2008	4	26	331	37	77	57	25	6815
4/27/2008	2008	4	27	332	37	77	57	25	6840
4/28/2008	2008	4	28	333	19	71	45	13	6853
4/29/2008	2008	4	29	334	19	71	45	13	6866
4/30/2008	2008	4	30	335	45	81	63	31	6897
5/1/2008	2008	5	1	336	45	81	63	31	6928
5/2/2008	2008	5	2	337	24	63	43.5	11.5	6939.5
5/3/2008	2008	5	3	338	21	63	42	10	6949.5
5/4/2008	2008	5	4	339	44	79	61.5	29.5	6979
5/5/2008	2008	5	5	340	30	82	56	24	7003
5/6/2008	2008	5	6	341	30	82	56	24	7027
5/7/2008	2008	5	7	342	33	73	53	21	7048
5/8/2008	2008	5	8	343	50	79	64.5	32.5	7080.5
5/9/2008	2008	5	9	344	43	75	59	27	7107.5
5/10/2008	2008	5	10	345	37	75	56	24	7131.5
5/11/2008	2008	5	11	346	30	75	52.5	20.5	7152
5/12/2008	2008	5	12	347	36	82	59	27	7179
5/13/2008	2008	5	13	348	44	76	60	28	7207
5/14/2008	2008	5	14	349	49	74	61.5	29.5	7236.5
5/15/2008	2008	5	15	350	49	74	61.5	29.5	7266
5/16/2008	2008	5	16	351	39	77	58	26	7292
5/17/2008	2008	5	17	352	37	81	59	27	7319
5/18/2008	2008	5	18	353	38	82	60	28	7347
5/19/2008	2008	5	19	354	38	89	63.5	31.5	7378.5
5/20/2008	2008	5	20	355	42	96	69	37	7415.5
5/21/2008	2008	5	21	356	41	83	62	30	7445.5
5/22/2008	2008	5	22	357	39	52	45.5	13.5	7459
5/23/2008	2008	5	23	358	35	54	44.5	12.5	7471.5
5/24/2008	2008	5	24	359	45	68	56.5	24.5	7496
5/25/2008	2008	5	25	360	41	72	56.5	24.5	7520.5
5/26/2008	2008	5	26	361	38	70	54	22	7542.5
5/27/2008	2008	5	27	362	41	79	60	28	7570.5
5/28/2008	2008	5	28	363	44	82	63	31	7601.5
5/29/2008	2008	5	29	364	40	84	62	30	7631.5
5/30/2008	2008	5	30	365	37	88	62.5	30.5	7662
5/31/2008	2008	5	31	366	39	86	62.5	30.5	7692.5
6/1/2008	2008	6	1	1	40	89	64.5	32.5	32.5
6/2/2008	2008	6	2	2	46	93	69.5	37.5	70
6/3/2008	2008	6	3	3	48	88	68	36	106
6/4/2008	2008	6	4	4	60	86	73	41	147
6/5/2008	2008	6	5	5	39	83	61	29	176
6/6/2008	2008	6	6	6	36	67	51.5	19.5	195.5
6/7/2008	2008	6	7	7	40	84	62	30	225.5
6/8/2008	2008	6	8	8	44	86	65	33	258.5
6/9/2008	2008	6	9	9	38	90	64	32	290.5
6/10/2008	2008	6	10	10	38	93	65.5	33.5	324
6/11/2008	2008	6	11	11	38	92	65	33	357
6/12/2008	2008	6	12	12	37	90	63.5	31.5	388.5
6/13/2008	2008	6	13	13	37	88	62.5	30.5	419
6/14/2008	2008	6	14	14	40	93	66.5	34.5	453.5
6/15/2008	2008	6	15	15	44	95	69.5	37.5	491
6/16/2008	2008	6	16	16	48	96	72	40	531
6/17/2008	2008	6	17	17	29	96	62.5	30.5	561.5
6/18/2008	2008	6	18	18	51	96	73.5	41.5	603
6/19/2008	2008	6	19	19	50	95	72.5	40.5	643.5
6/20/2008	2008	6	20	20	49	98	73.5	41.5	685
6/21/2008	2008	6	21	21	50	96	73	41	726
6/22/2008	2008	6	22	22	58	88	73	41	767
6/23/2008	2008	6	23	23	51	95	73	41	808
6/24/2008	2008	6	24	24	49	94	71.5	39.5	847.5
6/25/2008	2008	6	25	25	54	97	75.5	43.5	891
6/26/2008	2008	6	26	26	53	96	74.5	42.5	933.5
6/27/2008	2008	6	27	27	55	95	75	43	976.5
6/28/2008	2008	6	28	28	54	89	71.5	39.5	1016
6/29/2008	2008	6	29	29	54	89	71.5	39.5	1055.5
6/30/2008	2008	6	30	30	56	96	76	44	1099.5
7/1/2008	2008	7	1	31	53	97	75	43	1142.5
7/2/2008	2008	7	2	32	56	92	74	42	1184.5
7/3/2008	2008	7	3	33	51	90	70.5	38.5	1223
7/4/2008	2008	7	4	34	54	94	74	42	1265
7/5/2008	2008	7	5	35	55	95	75	43	1308
7/6/2008	2008	7	6	36	61	95	78	46	1354
7/7/2008	2008	7	7	37	59	90	74.5	42.5	1396.5
7/8/2008	2008	7	8	38	58	85	71.5	39.5	1436
7/9/2008	2008	7	9	39	58	90	74	42	1478
7/10/2008	2008	7	10	40	50	81	65.5	33.5	1511.5
7/11/2008	2008	7	11	41	57	84	70.5	38.5	1550
7/12/2008	2008	7	12	42	55	84	69.5	37.5	1587.5
7/13/2008	2008	7	13	43	56	83	69.5	37.5	1625
7/14/2008	2008	7	14	44	54	84	69	37	1662
7/15/2008	2008	7	15	45	56	83	69.5	37.5	1699.5
7/16/2008	2008	7	16	46	63	92	77.5	45.5	1745
7/17/2008	2008	7	17	47	58	92	75	43	1788
7/18/2008	2008	7	18	48	55	93	74	42	1830
7/19/2008	2008	7	19	49	62	96	79	47	1877
7/20/2008	2008	7	20	50	57	98	77.5	45.5	1922.5

7/21/2008	2008	7	21	51	63	85	74	42	1964.5
7/22/2008	2008	7	22	52	61	88	74.5	42.5	2007
7/23/2008	2008	7	23	53	60	90	75	43	2050
7/24/2008	2008	7	24	54	55	88	71.5	39.5	2089.5
7/25/2008	2008	7	25	55	63	90	76.5	44.5	2134
7/26/2008	2008	7	26	56	60	95	77.5	45.5	2179.5
7/27/2008	2008	7	27	57	57	83	70	38	2217.5
7/28/2008	2008	7	28	58	64	87	75.5	43.5	2261
7/29/2008	2008	7	29	59	55	94	74.5	42.5	2303.5
7/30/2008	2008	7	30	60	51	96	73.5	41.5	2345
7/31/2008	2008	7	31	61	54	98	76	44	2389
8/1/2008	2008	8	1	62	62	98	80	48	2437
8/2/2008	2008	8	2	63	55	94	74.5	42.5	2479.5
8/3/2008	2008	8	3	64	54	99	76.5	44.5	2524
8/4/2008	2008	8	4	65	55	94	74.5	42.5	2566.5
8/5/2008	2008	8	5	66	60	92	76	44	2610.5
8/6/2008	2008	8	6	67	58	86	72	40	2650.5
8/7/2008	2008	8	7	68	55	88	71.5	39.5	2690
8/8/2008	2008	8	8	69	59	87	73	41	2731
8/9/2008	2008	8	9	70	61	88	74.5	42.5	2773.5
8/10/2008	2008	8	10	71	53	89	71	39	2812.5
8/11/2008	2008	8	11	72	54	92	73	41	2853.5
8/12/2008	2008	8	12	73	50	96	73	41	2894.5
8/13/2008	2008	8	13	74	64	94	79	47	2941.5
8/14/2008	2008	8	14	75	53	92	72.5	40.5	2982
8/15/2008	2008	8	15	76	68	96	82	50	3032
8/16/2008	2008	8	16	77	62	94	78	46	3078
8/17/2008	2008	8	17	78	60	93	76.5	44.5	3122.5
8/18/2008	2008	8	18	79	43	90	66.5	34.5	3157
8/19/2008	2008	8	19	80	46	89	67.5	35.5	3192.5
8/20/2008	2008	8	20	81	55	92	73.5	41.5	3234
8/21/2008	2008	8	21	82	46	90	68	36	3270
8/22/2008	2008	8	22	83	52	93	72.5	40.5	3310.5
8/23/2008	2008	8	23	84	49	96	72.5	40.5	3351
8/24/2008	2008	8	24	85	50	92	71	39	3390
8/25/2008	2008	8	25	86	50	91	70.5	38.5	3428.5
8/26/2008	2008	8	26	87	56	90	73	41	3469.5
8/27/2008	2008	8	27	88	57	89	73	41	3510.5
8/28/2008	2008	8	28	89	60	94	77	45	3555.5
8/29/2008	2008	8	29	90	59	94	76.5	44.5	3600
8/30/2008	2008	8	30	91	58	87	72.5	40.5	3640.5
8/31/2008	2008	8	31	92	61	89	75	43	3683.5
9/1/2008	2008	9	1	93	52	76	64	32	3715.5
9/2/2008	2008	9	2	94	48	85	66.5	34.5	3750
9/3/2008	2008	9	3	95	56	88	72	40	3790
9/4/2008	2008	9	4	96	44	80	62	30	3820
9/5/2008	2008	9	5	97	40	78	59	27	3847
9/6/2008	2008	9	6	98	38	89	63.5	31.5	3878.5
9/7/2008	2008	9	7	99	44	93	68.5	36.5	3915
9/8/2008	2008	9	8	100	47	89	68	36	3951
9/9/2008	2008	9	9	101	57	90	73.5	41.5	3992.5
9/10/2008	2008	9	10	102	51	76	63.5	31.5	4024
9/11/2008	2008	9	11	103	51	81	66	34	4058
9/12/2008	2008	9	12	104	53	72	62.5	30.5	4088.5
9/13/2008	2008	9	13	105	39	79	59	27	4115.5
9/14/2008	2008	9	14	106	46	80	63	31	4146.5
9/15/2008	2008	9	15	107	47	80	63.5	31.5	4178
9/16/2008	2008	9	16	108	44	79	61.5	29.5	4207.5
9/17/2008	2008	9	17	109	48	80	64	32	4239.5
9/18/2008	2008	9	18	110	49	81	65	33	4272.5
9/19/2008	2008	9	19	111	42	80	61	29	4301.5
9/20/2008	2008	9	20	112	44	83	63.5	31.5	4333
9/21/2008	2008	9	21	113	46	85	65.5	33.5	4366.5
9/22/2008	2008	9	22	114	49	84	66.5	34.5	4401
9/23/2008	2008	9	23	115	41	83	62	30	4431
9/24/2008	2008	9	24	116	40	84	62	30	4461
9/25/2008	2008	9	25	117	46	86	66	34	4495
9/26/2008	2008	9	26	118	47	84	65.5	33.5	4528.5
9/27/2008	2008	9	27	119	48	85	66.5	34.5	4563
9/28/2008	2008	9	28	120	41	81	61	29	4592
9/29/2008	2008	9	29	121	39	84	61.5	29.5	4621.5
9/30/2008	2008	9	30	122	38	79	58.5	26.5	4648
10/1/2008	2008	10	1	123	37	78	57.5	25.5	4673.5
10/2/2008	2008	10	2	124	38	80	59	27	4700.5
10/3/2008	2008	10	3	125	44	82	63	31	4731.5
10/4/2008	2008	10	4	126	43	83	63	31	4762.5
10/5/2008	2008	10	5	127	43	79	61	29	4791.5
10/6/2008	2008	10	6	128	42	65	53.5	21.5	4813
10/7/2008	2008	10	7	129	32	68	50	18	4831
10/8/2008	2008	10	8	130	34	78	56	24	4855
10/9/2008	2008	10	9	131	33	80	56.5	24.5	4879.5
10/10/2008	2008	10	10	132	36	81	58.5	26.5	4906
10/11/2008	2008	10	11	133	51	77	64	32	4938
10/12/2008	2008	10	12	134	36	68	52	20	4958
10/13/2008	2008	10	13	135	23	65	44	12	4970
10/14/2008	2008	10	14	136	26	66	46	14	4984
10/15/2008	2008	10	15	137	15	61	38	6	4990
10/16/2008	2008	10	16	138	29	66	47.5	15.5	5005.5
10/17/2008	2008	10	17	139	31	76	53.5	21.5	5027
10/18/2008	2008	10	18	140	29	81	55	23	5050
10/19/2008	2008	10	19	141	32	78	55	23	5073
10/20/2008	2008	10	20	142	33	80	56.5	24.5	5097.5
10/21/2008	2008	10	21	143	31	75	53	21	5118.5

10/22/2008	2008	10	22	144	33	76	54.5	22.5	5141
10/23/2008	2008	10	23	145	28	71	49.5	17.5	5158.5
10/24/2008	2008	10	24	146	19	68	43.5	11.5	5170
10/25/2008	2008	10	25	147	23	75	49	17	5187
10/26/2008	2008	10	26	148	25	77	51	19	5206
10/27/2008	2008	10	27	149	31	78	54.5	22.5	5228.5
10/28/2008	2008	10	28	150	27	80	53.5	21.5	5250
10/29/2008	2008	10	29	151	30	79	54.5	22.5	5272.5
10/30/2008	2008	10	30	152	29	80	54.5	22.5	5295
10/31/2008	2008	10	31	153	29	81	55	23	5318
11/1/2008	2008	11	1	154	28	80	54	22	5340
11/2/2008	2008	11	2	155	30	78	54	22	5362
11/3/2008	2008	11	3	156	43	77	60	28	5390
11/4/2008	2008	11	4	157	39	73	56	24	5414
11/5/2008	2008	11	5	158	36	67	51.5	19.5	5433.5
11/6/2008	2008	11	6	159	16	51	33.5	1.5	5435
11/7/2008	2008	11	7	160	10	50	30	-2	5433
11/8/2008	2008	11	8	161	18	56	37	5	5438
11/9/2008	2008	11	9	162	17	66	41.5	9.5	5447.5
11/10/2008	2008	11	10	163	23	57	40	8	5455.5
11/11/2008	2008	11	11	164	16	56	36	4	5459.5
11/12/2008	2008	11	12	165	20	58	39	7	5466.5
11/13/2008	2008	11	13	166	26	61	43.5	11.5	5478
11/14/2008	2008	11	14	167	32	69	50.5	18.5	5496.5
11/15/2008	2008	11	15	168	16	64	40	8	5504.5
11/16/2008	2008	11	16	169	15	62	38.5	6.5	5511
11/17/2008	2008	11	17	170	20	60	40	8	5519
11/18/2008	2008	11	18	171	21	71	46	14	5533
11/19/2008	2008	11	19	172	19	69	44	12	5545
11/20/2008	2008	11	20	173	15	74	44.5	12.5	5557.5
11/21/2008	2008	11	21	174	17	60	38.5	6.5	5564
11/22/2008	2008	11	22	175	14	56	35	3	5567
11/23/2008	2008	11	23	176	19	67	43	11	5578
11/24/2008	2008	11	24	177	13	70	41.5	9.5	5587.5
11/25/2008	2008	11	25	178	17	58	37.5	5.5	5593
11/26/2008	2008	11	26	179	25	59	42	10	5603
11/27/2008	2008	11	27	180	37	62	49.5	17.5	5620.5
11/28/2008	2008	11	28	181	36	53	44.5	12.5	5633
11/29/2008	2008	11	29	182	28	45	36.5	4.5	5637.5
11/30/2008	2008	11	30	183	27	52	39.5	7.5	5645
12/1/2008	2008	12	1	184	27	60	43.5	11.5	5656.5
12/2/2008	2008	12	2	185	22	60	41	9	5665.5
12/3/2008	2008	12	3	186	35	69	52	20	5685.5
12/4/2008	2008	12	4	187	15	59	37	5	5690.5
12/5/2008	2008	12	5	188	15	54	34.5	2.5	5693
12/6/2008	2008	12	6	189	19	55	37	5	5698
12/7/2008	2008	12	7	190	17	63	40	8	5706
12/8/2008	2008	12	8	191	27	61	44	12	5718
12/9/2008	2008	12	9	192	37	51	44	12	5730
12/10/2008	2008	12	10	193	8	48	28	-4	5726
12/11/2008	2008	12	11	194	11	45	28	-4	5722
12/12/2008	2008	12	12	195	15	50	32.5	0.5	5722.5
12/13/2008	2008	12	13	196	18	51	34.5	2.5	5725
12/14/2008	2008	12	14	197	25	55	40	8	5733
12/15/2008	2008	12	15	198	17	34	25.5	-6.5	5726.5
12/16/2008	2008	12	16	199	23	35	29	-3	5723.5
12/17/2008	2008	12	17	200	28	48	38	6	5729.5
12/18/2008	2008	12	18	201	15	35	25	-7	5722.5
12/19/2008	2008	12	19	202	20	47	33.5	1.5	5724
12/20/2008	2008	12	20	203	24	50	37	5	5729
12/21/2008	2008	12	21	204	22	50	36	4	5733
12/22/2008	2008	12	22	205	20	51	35.5	3.5	5736.5
12/23/2008	2008	12	23	206	28	41	34.5	2.5	5739
12/24/2008	2008	12	24	207	11	37	24	-8	5731
12/25/2008	2008	12	25	208	11	37	24	-8	5723
12/26/2008	2008	12	26	209	22	51	36.5	4.5	5727.5
12/27/2008	2008	12	27	210	7	32	19.5	-12.5	5715
12/28/2008	2008	12	28	211	7	29	18	-14	5701
12/29/2008	2008	12	29	212	11	43	27	-5	5696
12/30/2008	2008	12	30	213	11	51	31	-1	5695
12/31/2008	2008	12	31	214	16	55	35.5	3.5	5698.5
1/1/2009	2009	1	1	215	16	53	34.5	2.5	5701
1/2/2009	2009	1	2	216	25	56	40.5	8.5	5709.5
1/3/2009	2009	1	3	217	30	63	46.5	14.5	5724
1/4/2009	2009	1	4	218	28	51	39.5	7.5	5731.5
1/5/2009	2009	1	5	219	21	31	26	-6	5725.5
1/6/2009	2009	1	6	220	17	40	28.5	-3.5	5722
1/7/2009	2009	1	7	221	23	47	35	3	5725
1/8/2009	2009	1	8	222	24	51	37.5	5.5	5730.5
1/9/2009	2009	1	9	223	26	53	39.5	7.5	5738
1/10/2009	2009	1	10	224	25	51	38	6	5744
1/11/2009	2009	1	11	225	15	43	29	-3	5741
1/12/2009	2009	1	12	226	20	47	33.5	1.5	5742.5
1/13/2009	2009	1	13	227	18	47	32.5	0.5	5743
1/14/2009	2009	1	14	228	17	51	34	2	5745
1/15/2009	2009	1	15	229	18	51	34.5	2.5	5747.5
1/16/2009	2009	1	16	230	18	57	37.5	5.5	5753
1/17/2009	2009	1	17	231	15	56	35.5	3.5	5756.5
1/18/2009	2009	1	18	232	17	60	38.5	6.5	5763
1/19/2009	2009	1	19	233	16	58	37	5	5768
1/20/2009	2009	1	20	234	17	63	40	8	5776
1/21/2009	2009	1	21	235	17	60	38.5	6.5	5782.5
1/22/2009	2009	1	22	236	20	57	38.5	6.5	5789

1/23/2009	2009	1	23	237	33	56	44.5	12.5	5801.5
1/24/2009	2009	1	24	238	27	63	45	13	5814.5
1/25/2009	2009	1	25	239	29	56	42.5	10.5	5825
1/26/2009	2009	1	26	240	21	57	39	7	5832
1/27/2009	2009	1	27	241	17	53	35	3	5835
1/28/2009	2009	1	28	242	12	41	26.5	-5.5	5829.5
1/29/2009	2009	1	29	243	13	47	30	-2	5827.5
1/30/2009	2009	1	30	244	14	45	29.5	-2.5	5825
1/31/2009	2009	1	31	245	16	48	32	0	5825
2/1/2009	2009	2	1	246	17	63	40	8	5833
2/2/2009	2009	2	2	247	12	64	38	6	5839
2/3/2009	2009	2	3	248	13	59	36	4	5843
2/4/2009	2009	2	4	249	13	60	36.5	4.5	5847.5
2/5/2009	2009	2	5	250	15	65	40	8	5855.5
2/6/2009	2009	2	6	251	14	65	39.5	7.5	5863
2/7/2009	2009	2	7	252	19	63	41	9	5872
2/8/2009	2009	2	8	253	28	62	45	13	5885
2/9/2009	2009	2	9	254	27	52	39.5	7.5	5892.5
2/10/2009	2009	2	10	255	22	47	34.5	2.5	5895
2/11/2009	2009	2	11	256	10	45	27.5	-4.5	5890.5
2/12/2009	2009	2	12	257	22	58	40	8	5898.5
2/13/2009	2009	2	13	258	15	57	36	4	5902.5
2/14/2009	2009	2	14	259	18	52	35	3	5905.5
2/15/2009	2009	2	15	260	17	47	32	0	5905.5
2/16/2009	2009	2	16	261	17	47	32	0	5905.5
2/17/2009	2009	2	17	262	19	58	38.5	6.5	5912
2/18/2009	2009	2	18	263	22	60	41	9	5921
2/19/2009	2009	2	19	264	10	51	30.5	-1.5	5919.5
2/20/2009	2009	2	20	265	8	55	31.5	-0.5	5919
2/21/2009	2009	2	21	266	14	66	40	8	5927
2/22/2009	2009	2	22	267	17	66	41.5	9.5	5936.5
2/23/2009	2009	2	23	268	33	66	49.5	17.5	5954
2/24/2009	2009	2	24	269	30	73	51.5	19.5	5973.5
2/25/2009	2009	2	25	270	28	72	50	18	5991.5
2/26/2009	2009	2	26	271	18	73	45.5	13.5	6005
2/27/2009	2009	2	27	272	21	66	43.5	11.5	6016.5
2/28/2009	2009	2	28	273	16	66	41	9	6025.5
3/1/2009	2009	3	1	274	17	76	46.5	14.5	6040
3/2/2009	2009	3	2	275	18	77	47.5	15.5	6055.5
3/3/2009	2009	3	3	276	25	82	53.5	21.5	6077
3/4/2009	2009	3	4	277	25	72	48.5	16.5	6093.5
3/5/2009	2009	3	5	278	29	65	47	15	6108.5
3/6/2009	2009	3	6	279	17	65	41	9	6117.5
3/7/2009	2009	3	7	280	36	60	48	16	6133.5
3/8/2009	2009	3	8	281	11	45	28	-4	6129.5
3/9/2009	2009	3	9	282	27	61	44	12	6141.5
3/10/2009	2009	3	10	283	37	50	43.5	11.5	6153
3/11/2009	2009	3	11	284	18	51	34.5	2.5	6155.5
3/12/2009	2009	3	12	285	25	60	42.5	10.5	6166
3/13/2009	2009	3	13	286	27	60	43.5	11.5	6177.5
3/14/2009	2009	3	14	287	30	45	37.5	5.5	6183
3/15/2009	2009	3	15	288	25	45	35	3	6186
3/16/2009	2009	3	16	289	26	60	43	11	6197
3/17/2009	2009	3	17	290	27	70	48.5	16.5	6213.5
3/18/2009	2009	3	18	291	26	73	49.5	17.5	6231
3/19/2009	2009	3	19	292	25	75	50	18	6249
3/20/2009	2009	3	20	293	32	71	51.5	19.5	6268.5
3/21/2009	2009	3	21	294	30	72	51	19	6287.5
3/22/2009	2009	3	22	295	28	75	51.5	19.5	6307
3/23/2009	2009	3	23	296	32	73	52.5	20.5	6327.5
3/24/2009	2009	3	24	297	22	58	40	8	6335.5
3/25/2009	2009	3	25	298	19	60	39.5	7.5	6343
3/26/2009	2009	3	26	299	32	60	46	14	6357
3/27/2009	2009	3	27	300	19	55	37	5	6362
3/28/2009	2009	3	28	301	20	50	35	3	6365
3/29/2009	2009	3	29	302	26	67	46.5	14.5	6379.5
3/30/2009	2009	3	30	303	25	60	42.5	10.5	6390
3/31/2009	2009	3	31	304	19	63	41	9	6399
4/1/2009	2009	4	1	305	35	46	40.5	8.5	6407.5
4/2/2009	2009	4	2	306	17	55	36	4	6411.5
4/3/2009	2009	4	3	307	27	68	47.5	15.5	6427
4/4/2009	2009	4	4	308	26	66	46	14	6441
4/5/2009	2009	4	5	309	28	68	48	16	6457
4/6/2009	2009	4	6	310	17	55	36	4	6461
4/7/2009	2009	4	7	311	20	64	42	10	6471
4/8/2009	2009	4	8	312	33	78	55.5	23.5	6494.5
4/9/2009	2009	4	9	313	32	73	52.5	20.5	6515
4/10/2009	2009	4	10	314	34	70	52	20	6535
4/11/2009	2009	4	11	315	30	68	49	17	6552
4/12/2009	2009	4	12	316	27	60	43.5	11.5	6563.5
4/13/2009	2009	4	13	317	23	65	44	12	6575.5
4/14/2009	2009	4	14	318	35	70	52.5	20.5	6596
4/15/2009	2009	4	15	319	40	71	55.5	23.5	6619.5
4/16/2009	2009	4	16	320	20	62	41	9	6628.5
4/17/2009	2009	4	17	321	30	44	37	5	6633.5
4/18/2009	2009	4	18	322	35	51	43	11	6644.5
4/19/2009	2009	4	19	323	28	68	48	16	6660.5
4/20/2009	2009	4	20	324	27	73	50	18	6678.5
4/21/2009	2009	4	21	325	29	80	54.5	22.5	6701
4/22/2009	2009	4	22	326	32	81	56.5	24.5	6725.5
4/23/2009	2009	4	23	327	37	83	60	28	6753.5
4/24/2009	2009	4	24	328	28	81	54.5	22.5	6776
4/25/2009	2009	4	25	329	23	74	48.5	16.5	6792.5

4/26/2009	2009	4	26	330	26	76	51	19	6811.5
4/27/2009	2009	4	27	331	30	66	48	16	6827.5
4/28/2009	2009	4	28	332	34	71	52.5	20.5	6848
4/29/2009	2009	4	29	333	41	76	58.5	26.5	6874.5
4/30/2009	2009	4	30	334	32	81	56.5	24.5	6899
5/1/2009	2009	5	1	335	35	86	60.5	28.5	6927.5
5/2/2009	2009	5	2	336	55	82	68.5	36.5	6964
5/3/2009	2009	5	3	337	37	81	59	27	6991
5/4/2009	2009	5	4	338	54	80	67	35	7026
5/5/2009	2009	5	5	339	46	83	64.5	32.5	7058.5
5/6/2009	2009	5	6	340	46	84	65	33	7091.5
5/7/2009	2009	5	7	341	43	90	66.5	34.5	7126
5/8/2009	2009	5	8	342	50	89	69.5	37.5	7163.5
5/9/2009	2009	5	9	343	43	89	66	34	7197.5
5/10/2009	2009	5	10	344	36	87	61.5	29.5	7227
5/11/2009	2009	5	11	345	42	90	66	34	7261
5/12/2009	2009	5	12	346	45	88	66.5	34.5	7295.5
5/13/2009	2009	5	13	347	49	86	67.5	35.5	7331
5/14/2009	2009	5	14	348	50	88	69	37	7368
5/15/2009	2009	5	15	349	46	87	66.5	34.5	7402.5
5/16/2009	2009	5	16	350	53	89	71	39	7441.5
5/17/2009	2009	5	17	351	48	74	61	29	7470.5
5/18/2009	2009	5	18	352	48	88	68	36	7506.5
5/19/2009	2009	5	19	353	49	84	66.5	34.5	7541
5/20/2009	2009	5	20	354	48	84	66	34	7575
5/21/2009	2009	5	21	355	52	78	65	33	7608
5/22/2009	2009	5	22	356	49	75	62	30	7638
5/23/2009	2009	5	23	357	50	65	57.5	25.5	7663.5
5/24/2009	2009	5	24	358	47	64	55.5	23.5	7687
5/25/2009	2009	5	25	359	43	70	56.5	24.5	7711.5
5/26/2009	2009	5	26	360	38	73	55.5	23.5	7735
5/27/2009	2009	5	27	361	38	73	55.5	23.5	7758.5
5/28/2009	2009	5	28	362	38	73	55.5	23.5	7782
5/29/2009	2009	5	29	363	42	78	60	28	7810
5/30/2009	2009	5	30	364	40	74	57	25	7835
5/31/2009	2009	5	31	365	42	77	59.5	27.5	7862.5
6/1/2009	2009	6	1	1	38	78	58	26	26
6/2/2009	2009	6	2	2	45	81	63	31	57
6/3/2009	2009	6	3	3	44	84	64	32	89
6/4/2009	2009	6	4	4	45	85	65	33	122
6/5/2009	2009	6	5	5	47	85	66	34	156
6/6/2009	2009	6	6	6	46	85	65.5	33.5	189.5
6/7/2009	2009	6	7	7	38	84	61	29	218.5
6/8/2009	2009	6	8	8	46	78	62	30	248.5
6/9/2009	2009	6	9	9	42	78	60	28	276.5
6/10/2009	2009	6	10	10	46	72	59	27	303.5
6/11/2009	2009	6	11	11	46	75	60.5	28.5	332
6/12/2009	2009	6	12	12	45	74	59.5	27.5	359.5
6/13/2009	2009	6	13	13	45	74	59.5	27.5	387
6/14/2009	2009	6	14	14	42	83	62.5	30.5	417.5
6/15/2009	2009	6	15	15	45	84	64.5	32.5	450
6/16/2009	2009	6	16	16	44	84	64	32	482
6/17/2009	2009	6	17	17	44	88	66	34	516
6/18/2009	2009	6	18	18	42	85	63.5	31.5	547.5
6/19/2009	2009	6	19	19	48	86	67	35	582.5
6/20/2009	2009	6	20	20	40	91	65.5	33.5	616
6/21/2009	2009	6	21	21	47	90	68.5	36.5	652.5
6/22/2009	2009	6	22	22	44	89	66.5	34.5	687
6/23/2009	2009	6	23	23	65	91	78	46	733
6/24/2009	2009	6	24	24	62	84	73	41	774
6/25/2009	2009	6	25	25	59	89	74	42	816
6/26/2009	2009	6	26	26	58	93	75.5	43.5	859.5
6/27/2009	2009	6	27	27	59	90	74.5	42.5	902
6/28/2009	2009	6	28	28	57	87	72	40	942
6/29/2009	2009	6	29	29	50	82	66	34	976
6/30/2009	2009	6	30	30	53	88	70.5	38.5	1014.5
7/1/2009	2009	7	1	31	58	88	73	41	1055.5
7/2/2009	2009	7	2	32	56	90	73	41	1096.5
7/3/2009	2009	7	3	33	60	91	75.5	43.5	1140
7/4/2009	2009	7	4	34	56	91	73.5	41.5	1181.5
7/5/2009	2009	7	5	35	55	92	73.5	41.5	1223
7/6/2009	2009	7	6	36	54	93	73.5	41.5	1264.5
7/7/2009	2009	7	7	37	53	96	74.5	42.5	1307
7/8/2009	2009	7	8	38	57	97	77	45	1352
7/9/2009	2009	7	9	39	65	98	81.5	49.5	1401.5
7/10/2009	2009	7	10	40	62	97	79.5	47.5	1449
7/11/2009	2009	7	11	41	52	92	72	40	1489
7/12/2009	2009	7	12	42	58	95	76.5	44.5	1533.5
7/13/2009	2009	7	13	43	55	96	75.5	43.5	1577
7/14/2009	2009	7	14	44	68	97	82.5	50.5	1627.5
7/15/2009	2009	7	15	45	55	93	74	42	1669.5
7/16/2009	2009	7	16	46	67	98	82.5	50.5	1720
7/17/2009	2009	7	17	47	54	99	76.5	44.5	1764.5
7/18/2009	2009	7	18	48	63	100	81.5	49.5	1814
7/19/2009	2009	7	19	49	64	102	83	51	1865
7/20/2009	2009	7	20	50	68	98	83	51	1916
7/21/2009	2009	7	21	51	67	97	82	50	1966
7/22/2009	2009	7	22	52	55	88	71.5	39.5	2005.5
7/23/2009	2009	7	23	53	58	92	75	43	2048.5
7/24/2009	2009	7	24	54	55	92	73.5	41.5	2090
7/25/2009	2009	7	25	55	57	96	76.5	44.5	2134.5
7/26/2009	2009	7	26	56	62	97	79.5	47.5	2182
7/27/2009	2009	7	27	57	55	85	70	38	2220

7/28/2009	2009	7	28	58	56	92	74	42	2262
7/29/2009	2009	7	29	59	52	85	68.5	36.5	2298.5
7/30/2009	2009	7	30	60	48	92	70	38	2336.5
7/31/2009	2009	7	31	61	48	87	67.5	35.5	2372
8/1/2009	2009	8	1	62	52	90	71	39	2411
8/2/2009	2009	8	2	63	49	95	72	40	2451
8/3/2009	2009	8	3	64	59	96	77.5	45.5	2496.5
8/4/2009	2009	8	4	65	56	98	77	45	2541.5
8/5/2009	2009	8	5	66	64	101	82.5	50.5	2592
8/6/2009	2009	8	6	67	54	97	75.5	43.5	2635.5
8/7/2009	2009	8	7	68	54	97	75.5	43.5	2679
8/8/2009	2009	8	8	69	47	88	67.5	35.5	2714.5
8/9/2009	2009	8	9	70	45	91	68	36	2750.5
8/10/2009	2009	8	10	71	45	94	69.5	37.5	2788
8/11/2009	2009	8	11	72	48	94	71	39	2827
8/12/2009	2009	8	12	73	58	99	78.5	46.5	2873.5
8/13/2009	2009	8	13	74	60	90	75	43	2916.5
8/14/2009	2009	8	14	75	57	89	73	41	2957.5
8/15/2009	2009	8	15	76	55	79	67	35	2992.5
8/16/2009	2009	8	16	77	51	88	69.5	37.5	3030
8/17/2009	2009	8	17	78	47	87	67	35	3065
8/18/2009	2009	8	18	79	44	90	67	35	3100
8/19/2009	2009	8	19	80	45	93	69	37	3137
8/20/2009	2009	8	20	81	45	94	69.5	37.5	3174.5
8/21/2009	2009	8	21	82	64	95	79.5	47.5	3222
8/22/2009	2009	8	22	83	57	94	75.5	43.5	3265.5
8/23/2009	2009	8	23	84	59	91	75	43	3308.5
8/24/2009	2009	8	24	85	57	80	68.5	36.5	3345
8/25/2009	2009	8	25	86	65	80	72.5	40.5	3385.5
8/26/2009	2009	8	26	87	50	75	62.5	30.5	3416
8/27/2009	2009	8	27	88	50	90	70	38	3454
8/28/2009	2009	8	28	89	71	92	81.5	49.5	3503.5
8/29/2009	2009	8	29	90	71	84	77.5	45.5	3549
8/30/2009	2009	8	30	91	52	95	73.5	41.5	3590.5
8/31/2009	2009	8	31	92	52	92	72	40	3630.5
9/1/2009	2009	9	1	93	59	86	72.5	40.5	3671
9/2/2009	2009	9	2	94	54	91	72.5	40.5	3711.5
9/3/2009	2009	9	3	95	60	85	72.5	40.5	3752
9/4/2009	2009	9	4	96	51	89	70	38	3790
9/5/2009	2009	9	5	97	52	87	69.5	37.5	3827.5
9/6/2009	2009	9	6	98	51	81	66	34	3861.5
9/7/2009	2009	9	7	99	65	83	74	42	3903.5
9/8/2009	2009	9	8	100	59	83	71	39	3942.5
9/9/2009	2009	9	9	101	58	83	70.5	38.5	3981
9/10/2009	2009	9	10	102	56	78	67	35	4016
9/11/2009	2009	9	11	103	55	81	68	36	4052
9/12/2009	2009	9	12	104	47	78	62.5	30.5	4082.5
9/13/2009	2009	9	13	105	52	79	65.5	33.5	4116
9/14/2009	2009	9	14	106	51	81	66	34	4150
9/15/2009	2009	9	15	107	52	82	67	35	4185
9/16/2009	2009	9	16	108	53	85	69	37	4222
9/17/2009	2009	9	17	109	48	77	62.5	30.5	4252.5
9/18/2009	2009	9	18	110	44	65	54.5	22.5	4275
9/19/2009	2009	9	19	111	43	72	57.5	25.5	4300.5
9/20/2009	2009	9	20	112	41	80	60.5	28.5	4329
9/21/2009	2009	9	21	113	33	83	58	26	4355
9/22/2009	2009	9	22	114	34	76	55	23	4378
9/23/2009	2009	9	23	115	26	73	49.5	17.5	4395.5
9/24/2009	2009	9	24	116	43	73	58	26	4421.5
9/25/2009	2009	9	25	117	33	76	54.5	22.5	4444
9/26/2009	2009	9	26	118	34	84	59	27	4471
9/27/2009	2009	9	27	119	36	81	58.5	26.5	4497.5
9/28/2009	2009	9	28	120	39	89	64	32	4529.5
9/29/2009	2009	9	29	121	42	77	59.5	27.5	4557
9/30/2009	2009	9	30	122	31	80	55.5	23.5	4580.5
10/1/2009	2009	10	1	123	30	78	54	22	4602.5
10/2/2009	2009	10	2	124	24	70	47	15	4617.5
10/3/2009	2009	10	3	125	26	79	52.5	20.5	4638
10/4/2009	2009	10	4	126	41	77	59	27	4665
10/5/2009	2009	10	5	127	38	76	57	25	4690
10/6/2009	2009	10	6	128	34	79	56.5	24.5	4714.5
10/7/2009	2009	10	7	129	37	67	52	20	4734.5
10/8/2009	2009	10	8	130	36	77	56.5	24.5	4759
10/9/2009	2009	10	9	131	29	68	48.5	16.5	4775.5
10/10/2009	2009	10	10	132	26	76	51	19	4794.5
10/11/2009	2009	10	11	133	31	73	52	20	4814.5
10/12/2009	2009	10	12	134	32	75	53.5	21.5	4836
10/13/2009	2009	10	13	135	34	75	54.5	22.5	4858.5
10/14/2009	2009	10	14	136	38	75	56.5	24.5	4883
10/15/2009	2009	10	15	137	37	78	57.5	25.5	4908.5
10/16/2009	2009	10	16	138	29	82	55.5	23.5	4932
10/17/2009	2009	10	17	139	31	74	52.5	20.5	4952.5
10/18/2009	2009	10	18	140	30	73	51.5	19.5	4972
10/19/2009	2009	10	19	141	39	76	57.5	25.5	4997.5
10/20/2009	2009	10	20	142	40	80	60	28	5025.5
10/21/2009	2009	10	21	143	29	67	48	16	5041.5
10/22/2009	2009	10	22	144	27	67	47	15	5056.5
10/23/2009	2009	10	23	145	25	65	45	13	5069.5
10/24/2009	2009	10	24	146	24	67	45.5	13.5	5083
10/25/2009	2009	10	25	147	24	72	48	16	5099
10/26/2009	2009	10	26	148	19	66	42.5	10.5	5109.5
10/27/2009	2009	10	27	149	29	65	47	15	5124.5
10/28/2009	2009	10	28	150	15	41	28	-4	5120.5

10/29/2009	2009	10	29	151	19	44	31.5	-0.5	5120
10/30/2009	2009	10	30	152	13	43	28	-4	5116
10/31/2009	2009	10	31	153	13	61	37	5	5121
11/1/2009	2009	11	1	154	19	64	41.5	9.5	5130.5
11/2/2009	2009	11	2	155	21	71	46	14	5144.5
11/3/2009	2009	11	3	156	21	73	47	15	5159.5
11/4/2009	2009	11	4	157	20	73	46.5	14.5	5174
11/5/2009	2009	11	5	158	20	78	49	17	5191
11/6/2009	2009	11	6	159	24	76	50	18	5209
11/7/2009	2009	11	7	160	27	79	53	21	5230
11/8/2009	2009	11	8	161	25	74	49.5	17.5	5247.5
11/9/2009	2009	11	9	162	25	74	49.5	17.5	5265
11/10/2009	2009	11	10	163	24	70	47	15	5280
11/11/2009	2009	11	11	164	26	70	48	16	5296
11/12/2009	2009	11	12	165	35	70	52.5	20.5	5316.5
11/13/2009	2009	11	13	166	28	60	44	12	5328.5
11/14/2009	2009	11	14	167	24	58	41	9	5337.5
11/15/2009	2009	11	15	168	23	54	38.5	6.5	5344
11/16/2009	2009	11	16	169	9	42	25.5	-6.5	5337.5
11/17/2009	2009	11	17	170	11	52	31.5	-0.5	5337
11/18/2009	2009	11	18	171	11	54	32.5	0.5	5337.5
11/19/2009	2009	11	19	172	13	68	40.5	8.5	5346
11/20/2009	2009	11	20	173	13	62	37.5	5.5	5351.5
11/21/2009	2009	11	21	174	11	64	37.5	5.5	5357
11/22/2009	2009	11	22	175	17	63	40	8	5365
11/23/2009	2009	11	23	176	22	65	43.5	11.5	5376.5
11/24/2009	2009	11	24	177	5	51	28	-4	5372.5
11/25/2009	2009	11	25	178	8	52	30	-2	5370.5
11/26/2009	2009	11	26	179	8	60	34	2	5372.5
11/27/2009	2009	11	27	180	9	63	36	4	5376.5
11/28/2009	2009	11	28	181	20	66	43	11	5387.5
11/29/2009	2009	11	29	182	22	54	38	6	5393.5
11/30/2009	2009	11	30	183	21	41	31	-1	5392.5
12/1/2009	2009	12	1	184	12	47	29.5	-2.5	5390
12/2/2009	2009	12	2	185	9	59	34	2	5392
12/3/2009	2009	12	3	186	6	49	27.5	-4.5	5387.5
12/4/2009	2009	12	4	187	-11	41	15	-17	5370.5
12/5/2009	2009	12	5	188	-6	48	21	-11	5359.5
12/6/2009	2009	12	6	189	12	52	32	0	5359.5
12/7/2009	2009	12	7	190	21	41	31	-1	5358.5
12/8/2009	2009	12	8	191	16	45	30.5	-1.5	5357
12/9/2009	2009	12	9	192	13	44	28.5	-3.5	5353.5
12/10/2009	2009	12	10	193	2	42	22	-10	5343.5
12/11/2009	2009	12	11	194	9	40	24.5	-7.5	5336
12/12/2009	2009	12	12	195	9	40	24.5	-7.5	5328.5
12/13/2009	2009	12	13	196	30	50	40	8	5336.5
12/14/2009	2009	12	14	197	30	50	40	8	5344.5
12/15/2009	2009	12	15	198	30	50	40	8	5352.5
12/16/2009	2009	12	16	199	10	55	32.5	0.5	5353
12/17/2009	2009	12	17	200	13	56	34.5	2.5	5355.5
12/18/2009	2009	12	18	201	14	55	34.5	2.5	5358
12/19/2009	2009	12	19	202	14	51	32.5	0.5	5358.5
12/20/2009	2009	12	20	203	11	53	32	0	5358.5
12/21/2009	2009	12	21	204	14	59	36.5	4.5	5363
12/22/2009	2009	12	22	205	28	59	43.5	11.5	5374.5
12/23/2009	2009	12	23	206	28	59	43.5	11.5	5386
12/24/2009	2009	12	24	207	17	37	27	-5	5381
12/25/2009	2009	12	25	208	4	36	20	-12	5369
12/26/2009	2009	12	26	209	0	36	18	-14	5355
12/27/2009	2009	12	27	210	-1	32	15.5	-16.5	5338.5
12/28/2009	2009	12	28	211	1	36	18.5	-13.5	5325
12/29/2009	2009	12	29	212	4	37	20.5	-11.5	5313.5
12/30/2009	2009	12	30	213	21	35	28	-4	5309.5
12/31/2009	2009	12	31	214	14	42	28	-4	5305.5
1/1/2010	2010	1	1	215	5	40	22.5	-9.5	5296
1/2/2010	2010	1	2	216	15	49	32	0	5296
1/3/2010	2010	1	3	217	10	56	33	1	5297
1/4/2010	2010	1	4	218	8	49	28.5	-3.5	5293.5
1/5/2010	2010	1	5	219	8	48	28	-4	5289.5
1/6/2010	2010	1	6	220	10	48	29	-3	5286.5
1/7/2010	2010	1	7	221	10	48	29	-3	5283.5
1/8/2010	2010	1	8	222	5	46	25.5	-6.5	5277
1/9/2010	2010	1	9	223	8	45	26.5	-5.5	5271.5
1/10/2010	2010	1	10	224	8	54	31	-1	5270.5
1/11/2010	2010	1	11	225	11	52	31.5	-0.5	5270
1/12/2010	2010	1	12	226	7	56	31.5	-0.5	5269.5
1/13/2010	2010	1	13	227	10	49	29.5	-2.5	5267
1/14/2010	2010	1	14	228	18	48	33	1	5268
1/15/2010	2010	1	15	229	15	52	33.5	1.5	5269.5
1/16/2010	2010	1	16	230	15	52	33.5	1.5	5271
1/17/2010	2010	1	17	231	11	52	31.5	-0.5	5270.5
1/18/2010	2010	1	18	232	11	52	31.5	-0.5	5270
1/19/2010	2010	1	19	233	11	52	31.5	-0.5	5269.5
1/20/2010	2010	1	20	234	11	52	31.5	-0.5	5269
1/21/2010	2010	1	21	235	11	52	31.5	-0.5	5268.5
1/22/2010	2010	1	22	236	26	41	33.5	1.5	5270
1/23/2010	2010	1	23	237	15	38	26.5	-5.5	5264.5
1/24/2010	2010	1	24	238	10	34	22	-10	5254.5
1/25/2010	2010	1	25	239	9	39	24	-8	5246.5
1/26/2010	2010	1	26	240	13	47	30	-2	5244.5
1/27/2010	2010	1	27	241	10	40	25	-7	5237.5
1/28/2010	2010	1	28	242	16	35	25.5	-6.5	5231
1/29/2010	2010	1	29	243	24	36	30	-2	5229

1/30/2010	2010	1	30	244	28	48	38	6	5235
1/31/2010	2010	1	31	245	20	43	31.5	-0.5	5234.5
2/1/2010	2010	2	1	246	20	57	38.5	6.5	5241
2/2/2010	2010	2	2	247	24	48	36	4	5245
2/3/2010	2010	2	3	248	21	47	34	2	5247
2/4/2010	2010	2	4	249	23	46	34.5	2.5	5249.5
2/5/2010	2010	2	5	250	22	52	37	5	5254.5
2/6/2010	2010	2	6	251	24	52	38	6	5260.5
2/7/2010	2010	2	7	252	27	57	42	10	5270.5
2/8/2010	2010	2	8	253	20	50	35	3	5273.5
2/9/2010	2010	2	9	254	26	40	33	1	5274.5
2/10/2010	2010	2	10	255	18	48	33	1	5275.5
2/11/2010	2010	2	11	256	15	52	33.5	1.5	5277
2/12/2010	2010	2	12	257	18	50	34	2	5279
2/13/2010	2010	2	13	258	17	54	35.5	3.5	5282.5
2/14/2010	2010	2	14	259	18	52	35	3	5285.5
2/15/2010	2010	2	15	260	12	56	34	2	5287.5
2/16/2010	2010	2	16	261	15	55	35	3	5290.5
2/17/2010	2010	2	17	262	15	58	36.5	4.5	5295
2/18/2010	2010	2	18	263	24	58	41	9	5304
2/19/2010	2010	2	19	264	26	60	43	11	5315
2/20/2010	2010	2	20	265	23	55	39	7	5322
2/21/2010	2010	2	21	266	31	48	39.5	7.5	5329.5
2/22/2010	2010	2	22	267	29	50	39.5	7.5	5337
2/23/2010	2010	2	23	268	0	29	14.5	-17.5	5319.5
2/24/2010	2010	2	24	269	8	40	24	-8	5311.5
2/25/2010	2010	2	25	270	28	42	35	3	5314.5
2/26/2010	2010	2	26	271	18	53	35.5	3.5	5318
2/27/2010	2010	2	27	272	21	48	34.5	2.5	5320.5
2/28/2010	2010	2	28	273	28	45	36.5	4.5	5325
3/1/2010	2010	3	1	274	22	52	37	5	5330
3/2/2010	2010	3	2	275	20	55	37.5	5.5	5335.5
3/3/2010	2010	3	3	276	18	58	38	6	5341.5
3/4/2010	2010	3	4	277	18	61	39.5	7.5	5349
3/5/2010	2010	3	5	278	25	62	43.5	11.5	5360.5
3/6/2010	2010	3	6	279	18	61	39.5	7.5	5368
3/7/2010	2010	3	7	280	34	60	47	15	5383
3/8/2010	2010	3	8	281	28	65	46.5	14.5	5397.5
3/9/2010	2010	3	9	282	25	65	45	13	5410.5
3/10/2010	2010	3	10	283	22	55	38.5	6.5	5417
3/11/2010	2010	3	11	284	19	50	34.5	2.5	5419.5
3/12/2010	2010	3	12	285	17	51	34	2	5421.5
3/13/2010	2010	3	13	286	19	56	37.5	5.5	5427
3/14/2010	2010	3	14	287	26	62	44	12	5439
3/15/2010	2010	3	15	288	19	55	37	5	5444
3/16/2010	2010	3	16	289	18	57	37.5	5.5	5449.5
3/17/2010	2010	3	17	290	19	58	38.5	6.5	5456
3/18/2010	2010	3	18	291	24	60	42	10	5466
3/19/2010	2010	3	19	292	40	70	55	23	5489
3/20/2010	2010	3	20	293	20	59	39.5	7.5	5496.5
3/21/2010	2010	3	21	294	12	52	32	0	5496.5
3/22/2010	2010	3	22	295	19	71	45	13	5509.5
3/23/2010	2010	3	23	296	20	53	36.5	4.5	5514
3/24/2010	2010	3	24	297	11	54	32.5	0.5	5514.5
3/25/2010	2010	3	25	298	12	64	38	6	5520.5
3/26/2010	2010	3	26	299	12	57	34.5	2.5	5523
3/27/2010	2010	3	27	300	17	55	36	4	5527
3/28/2010	2010	3	28	301	17	55	36	4	5531
3/29/2010	2010	3	29	302	15	60	37.5	5.5	5536.5
3/30/2010	2010	3	30	303	25	75	50	18	5554.5
3/31/2010	2010	3	31	304	21	78	49.5	17.5	5572
4/1/2010	2010	4	1	305	33	71	52	20	5592
4/2/2010	2010	4	2	306	16	50	33	1	5593
4/3/2010	2010	4	3	307	25	50	37.5	5.5	5598.5
4/4/2010	2010	4	4	308	32	69	50.5	18.5	5617
4/5/2010	2010	4	5	309	28	72	50	18	5635
4/6/2010	2010	4	6	310	23	55	39	7	5642
4/7/2010	2010	4	7	311	17	57	37	5	5647
4/8/2010	2010	4	8	312	15	55	35	3	5650
4/9/2010	2010	4	9	313	20	71	45.5	13.5	5663.5
4/10/2010	2010	4	10	314	24	75	49.5	17.5	5681
4/11/2010	2010	4	11	315	27	74	50.5	18.5	5699.5
4/12/2010	2010	4	12	316	28	60	44	12	5711.5
4/13/2010	2010	4	13	317	25	67	46	14	5725.5
4/14/2010	2010	4	14	318	23	69	46	14	5739.5
4/15/2010	2010	4	15	319	17	75	46	14	5753.5
4/16/2010	2010	4	16	320	37	79	58	26	5779.5
4/17/2010	2010	4	17	321	37	75	56	24	5803.5
4/18/2010	2010	4	18	322	31	69	50	18	5821.5
4/19/2010	2010	4	19	323	35	71	53	21	5842.5
4/20/2010	2010	4	20	324	43	71	57	25	5867.5
4/21/2010	2010	4	21	325	32	71	51.5	19.5	5887
4/22/2010	2010	4	22	326	21	41	31	-1	5886
4/23/2010	2010	4	23	327	29	71	50	18	5904
4/24/2010	2010	4	24	328	26	67	46.5	14.5	5918.5
4/25/2010	2010	4	25	329	29	70	49.5	17.5	5936
4/26/2010	2010	4	26	330	36	71	53.5	21.5	5957.5
4/27/2010	2010	4	27	331	27	77	52	20	5977.5
4/28/2010	2010	4	28	332	29	79	54	22	5999.5
4/29/2010	2010	4	29	333	47	75	61	29	6028.5
4/30/2010	2010	4	30	334	27	62	44.5	12.5	6041
5/1/2010	2010	5	1	335	22	53	37.5	5.5	6046.5
5/2/2010	2010	5	2	336	30	61	45.5	13.5	6060

5/3/2010	2010	5	3	337	27	47	37	5	6065
5/4/2010	2010	5	4	338	29	71	50	18	6083
5/5/2010	2010	5	5	339	36	80	58	26	6109
5/6/2010	2010	5	6	340	38	81	59.5	27.5	6136.5
5/7/2010	2010	5	7	341	39	81	60	28	6164.5
5/8/2010	2010	5	8	342	36	80	58	26	6190.5
5/9/2010	2010	5	9	343	41	75	58	26	6216.5
5/10/2010	2010	5	10	344	40	77	58.5	26.5	6243
5/11/2010	2010	5	11	345	35	73	54	22	6265
5/12/2010	2010	5	12	346	23	77	50	18	6283
5/13/2010	2010	5	13	347	30	68	49	17	6300
5/14/2010	2010	5	14	348	41	72	56.5	24.5	6324.5
5/15/2010	2010	5	15	349	37	76	56.5	24.5	6349
5/16/2010	2010	5	16	350	33	79	56	24	6373
5/17/2010	2010	5	17	351	35	80	57.5	25.5	6398.5
5/18/2010	2010	5	18	352	47	83	65	33	6431.5
5/19/2010	2010	5	19	353	42	74	58	26	6457.5
5/20/2010	2010	5	20	354	32	78	55	23	6480.5
5/21/2010	2010	5	21	355	37	87	62	30	6510.5
5/22/2010	2010	5	22	356	39	86	62.5	30.5	6541
5/23/2010	2010	5	23	357	43	87	65	33	6574
5/24/2010	2010	5	24	358	40	82	61	29	6603
5/25/2010	2010	5	25	359	37	85	61	29	6632
5/26/2010	2010	5	26	360	35	87	61	29	6661
5/27/2010	2010	5	27	361	37	88	62.5	30.5	6691.5
5/28/2010	2010	5	28	362	51	90	70.5	38.5	6730
5/29/2010	2010	5	29	363	41	81	61	29	6759
5/30/2010	2010	5	30	364	39	86	62.5	30.5	6789.5
5/31/2010	2010	5	31	365	37	87	62	30	6819.5
6/1/2010	2010	6	1	1	41	88	64.5	32.5	32.5
6/2/2010	2010	6	2	2	56	88	72	40	72.5
6/3/2010	2010	6	3	3	41	88	64.5	32.5	105
6/4/2010	2010	6	4	4	45	91	68	36	141
6/5/2010	2010	6	5	5	54	97	75.5	43.5	184.5
6/6/2010	2010	6	6	6	52	101	76.5	44.5	229
6/7/2010	2010	6	7	7	65	102	83.5	51.5	280.5
6/8/2010	2010	6	8	8	51	98	74.5	42.5	323
6/9/2010	2010	6	9	9	54	100	77	45	368
6/10/2010	2010	6	10	10	55	96	75.5	43.5	411.5
6/11/2010	2010	6	11	11	50	90	70	38	449.5
6/12/2010	2010	6	12	12	52	88	70	38	487.5
6/13/2010	2010	6	13	13	42	83	62.5	30.5	518
6/14/2010	2010	6	14	14	41	79	60	28	546
6/15/2010	2010	6	15	15	43	84	63.5	31.5	577.5
6/16/2010	2010	6	16	16	45	87	66	34	611.5
6/17/2010	2010	6	17	17	47	90	68.5	36.5	648
6/18/2010	2010	6	18	18	43	93	68	36	684
6/19/2010	2010	6	19	19	46	96	71	39	723
6/20/2010	2010	6	20	20	44	95	69.5	37.5	760.5
6/21/2010	2010	6	21	21	47	94	70.5	38.5	799
6/22/2010	2010	6	22	22	50	94	72	40	839
6/23/2010	2010	6	23	23	43	94	68.5	36.5	875.5
6/24/2010	2010	6	24	24	60	98	79	47	922.5
6/25/2010	2010	6	25	25	64	93	78.5	46.5	969
6/26/2010	2010	6	26	26	51	95	73	41	1010
6/27/2010	2010	6	27	27	45	91	68	36	1046
6/28/2010	2010	6	28	28	54	94	74	42	1088
6/29/2010	2010	6	29	29	53	85	69	37	1125
6/30/2010	2010	6	30	30	58	85	71.5	39.5	1164.5
7/1/2010	2010	7	1	31	58	84	71	39	1203.5
7/2/2010	2010	7	2	32	58	84	71	39	1242.5
7/3/2010	2010	7	3	33	56	86	71	39	1281.5
7/4/2010	2010	7	4	34	54	92	73	41	1322.5
7/5/2010	2010	7	5	35	52	89	70.5	38.5	1361
7/6/2010	2010	7	6	36	44	91	67.5	35.5	1396.5
7/7/2010	2010	7	7	37	50	93	71.5	39.5	1436
7/8/2010	2010	7	8	38	60	90	75	43	1479
7/9/2010	2010	7	9	39	60	89	74.5	42.5	1521.5
7/10/2010	2010	7	10	40	62	90	76	44	1565.5
7/11/2010	2010	7	11	41	60	93	76.5	44.5	1610
7/12/2010	2010	7	12	42	51	89	70	38	1648
7/13/2010	2010	7	13	43	58	96	77	45	1693
7/14/2010	2010	7	14	44	63	96	79.5	47.5	1740.5
7/15/2010	2010	7	15	45	63	97	80	48	1788.5
7/16/2010	2010	7	16	46	61	99	80	48	1836.5
7/17/2010	2010	7	17	47	62	96	79	47	1883.5
7/18/2010	2010	7	18	48	57	95	76	44	1927.5
7/19/2010	2010	7	19	49	62	102	82	50	1977.5
7/20/2010	2010	7	20	50	62	99	80.5	48.5	2026
7/21/2010	2010	7	21	51	62	100	81	49	2075
7/22/2010	2010	7	22	52	64	92	78	46	2121
7/23/2010	2010	7	23	53	57	89	73	41	2162
7/24/2010	2010	7	24	54	57	85	71	39	2201
7/25/2010	2010	7	25	55	60	83	71.5	39.5	2240.5
7/26/2010	2010	7	26	56	56	81	68.5	36.5	2277
7/27/2010	2010	7	27	57	56	75	65.5	33.5	2310.5
7/28/2010	2010	7	28	58	56	88	72	40	2350.5
7/29/2010	2010	7	29	59	58	90	74	42	2392.5
7/30/2010	2010	7	30	60	59	90	74.5	42.5	2435
7/31/2010	2010	7	31	61	56	89	72.5	40.5	2475.5
8/1/2010	2010	8	1	62	57	85	71	39	2514.5
8/2/2010	2010	8	2	63	58	85	71.5	39.5	2554
8/3/2010	2010	8	3	64	53	85	69	37	2591

8/4/2010	2010	8	4	65	54	84	69	37	2628
8/5/2010	2010	8	5	66	54	91	72.5	40.5	2668.5
8/6/2010	2010	8	6	67	52	82	67	35	2703.5
8/7/2010	2010	8	7	68	54	90	72	40	2743.5
8/8/2010	2010	8	8	69	52	84	68	36	2779.5
8/9/2010	2010	8	9	70	51	80	65.5	33.5	2813
8/10/2010	2010	8	10	71	51	84	67.5	35.5	2848.5
8/11/2010	2010	8	11	72	51	90	70.5	38.5	2887
8/12/2010	2010	8	12	73	51	90	70.5	38.5	2925.5
8/13/2010	2010	8	13	74	54	92	73	41	2966.5
8/14/2010	2010	8	14	75	51	91	71	39	3005.5
8/15/2010	2010	8	15	76	51	95	73	41	3046.5
8/16/2010	2010	8	16	77	55	92	73.5	41.5	3088
8/17/2010	2010	8	17	78	55	78	66.5	34.5	3122.5
8/18/2010	2010	8	18	79	55	78	66.5	34.5	3157
8/19/2010	2010	8	19	80	55	79	67	35	3192
8/20/2010	2010	8	20	81	52	92	72	40	3232
8/21/2010	2010	8	21	82	48	92	70	38	3270
8/22/2010	2010	8	22	83	48	89	68.5	36.5	3306.5
8/23/2010	2010	8	23	84	56	86	71	39	3345.5
8/24/2010	2010	8	24	85	57	95	76	44	3389.5
8/25/2010	2010	8	25	86	49	79	64	32	3421.5
8/26/2010	2010	8	26	87	45	82	63.5	31.5	3453
8/27/2010	2010	8	27	88	45	87	66	34	3487
8/28/2010	2010	8	28	89	52	86	69	37	3524
8/29/2010	2010	8	29	90	54	82	68	36	3560
8/30/2010	2010	8	30	91	50	85	67.5	35.5	3595.5
8/31/2010	2010	8	31	92	53	84	68.5	36.5	3632
9/1/2010	2010	9	1	93	45	89	67	35	3667
9/2/2010	2010	9	2	94	42	93	67.5	35.5	3702.5
9/3/2010	2010	9	3	95	55	95	75	43	3745.5
9/4/2010	2010	9	4	96	46	86	66	34	3779.5
9/5/2010	2010	9	5	97	46	94	70	38	3817.5
9/6/2010	2010	9	6	98	46	94	70	38	3855.5
9/7/2010	2010	9	7	99	46	94	70	38	3893.5
9/8/2010	2010	9	8	100	46	94	70	38	3931.5
9/9/2010	2010	9	9	101	52	88	70	38	3969.5
9/10/2010	2010	9	10	102	44	84	64	32	4001.5
9/11/2010	2010	9	11	103	37	83	60	28	4029.5
9/12/2010	2010	9	12	104	39	84	61.5	29.5	4059
9/13/2010	2010	9	13	105	50	88	69	37	4096
9/14/2010	2010	9	14	106	42	84	63	31	4127
9/15/2010	2010	9	15	107	43	93	68	36	4163
9/16/2010	2010	9	16	108	42	94	68	36	4199
9/17/2010	2010	9	17	109	43	88	65.5	33.5	4232.5
9/18/2010	2010	9	18	110	43	92	67.5	35.5	4268
9/19/2010	2010	9	19	111	43	93	68	36	4304
9/20/2010	2010	9	20	112	40	94	67	35	4339
9/21/2010	2010	9	21	113	51	89	70	38	4377
9/22/2010	2010	9	22	114	58	91	74.5	42.5	4419.5
9/23/2010	2010	9	23	115	50	70	60	28	4447.5
9/24/2010	2010	9	24	116	48	78	63	31	4478.5
9/25/2010	2010	9	25	117	42	83	62.5	30.5	4509
9/26/2010	2010	9	26	118	44	86	65	33	4542
9/27/2010	2010	9	27	119	44	89	66.5	34.5	4576.5
9/28/2010	2010	9	28	120	42	90	66	34	4610.5
9/29/2010	2010	9	29	121	42	94	68	36	4646.5
9/30/2010	2010	9	30	122	45	87	66	34	4680.5
10/1/2010	2010	10	1	123	48	90	69	37	4717.5
10/2/2010	2010	10	2	124	45	89	67	35	4752.5
10/3/2010	2010	10	3	125	46	83	64.5	32.5	4785
10/4/2010	2010	10	4	126	42	78	60	28	4813
10/5/2010	2010	10	5	127	47	83	65	33	4846
10/6/2010	2010	10	6	128	48	71	59.5	27.5	4873.5
10/7/2010	2010	10	7	129	44	74	59	27	4900.5
10/8/2010	2010	10	8	130	43	80	61.5	29.5	4930
10/9/2010	2010	10	9	131	34	78	56	24	4954
10/10/2010	2010	10	10	132	36	77	56.5	24.5	4978.5
10/11/2010	2010	10	11	133	33	74	53.5	21.5	5000
10/12/2010	2010	10	12	134	34	78	56	24	5024
10/13/2010	2010	10	13	135	34	79	56.5	24.5	5048.5
10/14/2010	2010	10	14	136	33	80	56.5	24.5	5073
10/15/2010	2010	10	15	137	35	83	59	27	5100
10/16/2010	2010	10	16	138	33	75	54	22	5122
10/17/2010	2010	10	17	139	33	80	56.5	24.5	5146.5
10/18/2010	2010	10	18	140	43	80	61.5	29.5	5176
10/19/2010	2010	10	19	141	47	74	60.5	28.5	5204.5
10/20/2010	2010	10	20	142	34	74	54	22	5226.5
10/21/2010	2010	10	21	143	38	70	54	22	5248.5
10/22/2010	2010	10	22	144	40	68	54	22	5270.5
10/23/2010	2010	10	23	145	37	66	51.5	19.5	5290
10/24/2010	2010	10	24	146	33	64	48.5	16.5	5306.5
10/25/2010	2010	10	25	147	24	60	42	10	5316.5
10/26/2010	2010	10	26	148	28	62	45	13	5329.5
10/27/2010	2010	10	27	149	28	62	45	13	5342.5
10/28/2010	2010	10	28	150	15	55	35	3	5345.5
10/29/2010	2010	10	29	151	24	84	54	22	5367.5
10/30/2010	2010	10	30	152	27	78	52.5	20.5	5388
10/31/2010	2010	10	31	153	29	77	53	21	5409
11/1/2010	2010	11	1	154	24	71	47.5	15.5	5424.5
11/2/2010	2010	11	2	155	22	72	47	15	5439.5
11/3/2010	2010	11	3	156	24	74	49	17	5456.5
11/4/2010	2010	11	4	157	29	71	50	18	5474.5

11/5/2010	2010	11	5	158	26	72	49	17	5491.5
11/6/2010	2010	11	6	159	24	68	46	14	5505.5
11/7/2010	2010	11	7	160	27	77	52	20	5525.5
11/8/2010	2010	11	8	161	22	73	47.5	15.5	5541
11/9/2010	2010	11	9	162	35	72	53.5	21.5	5562.5
11/10/2010	2010	11	10	163	12	55	33.5	1.5	5564
11/11/2010	2010	11	11	164	27	60	43.5	11.5	5575.5
11/12/2010	2010	11	12	165	13	50	31.5	-0.5	5575
11/13/2010	2010	11	13	166	13	53	33	1	5576
11/14/2010	2010	11	14	167	15	62	38.5	6.5	5582.5
11/15/2010	2010	11	15	168	21	60	40.5	8.5	5591
11/16/2010	2010	11	16	169	23	51	37	5	5596
11/17/2010	2010	11	17	170	22	62	42	10	5606
11/18/2010	2010	11	18	171	10	63	36.5	4.5	5610.5
11/19/2010	2010	11	19	172	10	64	37	5	5615.5
11/20/2010	2010	11	20	173	10	56	33	1	5616.5
11/21/2010	2010	11	21	174	31	55	43	11	5627.5
11/22/2010	2010	11	22	175	32	56	44	12	5639.5
11/23/2010	2010	11	23	176	10	49	29.5	-2.5	5637
11/24/2010	2010	11	24	177	35	57	46	14	5651
11/25/2010	2010	11	25	178	18	49	33.5	1.5	5652.5
11/26/2010	2010	11	26	179	8	36	22	-10	5642.5
11/27/2010	2010	11	27	180	15	46	30.5	-1.5	5641
11/28/2010	2010	11	28	181	22	56	39	7	5648
11/29/2010	2010	11	29	182	25	40	32.5	0.5	5648.5
11/30/2010	2010	11	30	183	13	32	22.5	-9.5	5639
12/1/2010	2010	12	1	184	13	58	35.5	3.5	5642.5
12/2/2010	2010	12	2	185	13	62	37.5	5.5	5648
12/3/2010	2010	12	3	186	13	66	39.5	7.5	5655.5
12/4/2010	2010	12	4	187	13	69	41	9	5664.5
12/5/2010	2010	12	5	188	13	70	41.5	9.5	5674
12/6/2010	2010	12	6	189	20	66	43	11	5685
12/7/2010	2010	12	7	190	20	65	42.5	10.5	5695.5
12/8/2010	2010	12	8	191	12	60	36	4	5699.5
12/9/2010	2010	12	9	192	16	61	38.5	6.5	5706
12/10/2010	2010	12	10	193	15	66	40.5	8.5	5714.5
12/11/2010	2010	12	11	194	21	64	42.5	10.5	5725
12/12/2010	2010	12	12	195	12	57	34.5	2.5	5727.5
12/13/2010	2010	12	13	196	20	60	40	8	5735.5
12/14/2010	2010	12	14	197	37	70	53.5	21.5	5757
12/15/2010	2010	12	15	198	41	71	56	24	5781
12/16/2010	2010	12	16	199	41	71	56	24	5805
12/17/2010	2010	12	17	200	41	71	56	24	5829
12/18/2010	2010	12	18	201	34	43	38.5	6.5	5835.5
12/19/2010	2010	12	19	202	39	52	45.5	13.5	5849
12/20/2010	2010	12	20	203	35	55	45	13	5862
12/21/2010	2010	12	21	204	32	60	46	14	5876
12/22/2010	2010	12	22	205	40	55	47.5	15.5	5891.5
12/23/2010	2010	12	23	206	29	56	42.5	10.5	5902
12/24/2010	2010	12	24	207	24	53	38.5	6.5	5908.5
12/25/2010	2010	12	25	208	28	60	44	12	5920.5
12/26/2010	2010	12	26	209	35	57	46	14	5934.5
12/27/2010	2010	12	27	210	24	56	40	8	5942.5
12/28/2010	2010	12	28	211	20	50	35	3	5945.5
12/29/2010	2010	12	29	212	21	51	36	4	5949.5
12/30/2010	2010	12	30	213	21	51	36	4	5953.5
12/31/2010	2010	12	31	214	4	26	15	-17	5936.5
1/1/2011	2011	1	1	215	-14	25	5.5	-26.5	5910
1/2/2011	2011	1	2	216	-9	28	9.5	-22.5	5887.5
1/3/2011	2011	1	3	217	-8	40	16	-16	5871.5
1/4/2011	2011	1	4	218	4	48	26	-6	5865.5
1/5/2011	2011	1	5	219	0	43	21.5	-10.5	5855
1/6/2011	2011	1	6	220	0	43	21.5	-10.5	5844.5
1/7/2011	2011	1	7	221	0	43	21.5	-10.5	5834
1/8/2011	2011	1	8	222	12	43	27.5	-4.5	5829.5
1/9/2011	2011	1	9	223	11	43	27	-5	5824.5
1/10/2011	2011	1	10	224	17	47	32	0	5824.5
1/11/2011	2011	1	11	225	-1	40	19.5	-12.5	5812
1/12/2011	2011	1	12	226	7	43	25	-7	5805
1/13/2011	2011	1	13	227	12	37	24.5	-7.5	5797.5
1/14/2011	2011	1	14	228	17	53	35	3	5800.5
1/15/2011	2011	1	15	229	15	47	31	-1	5799.5
1/16/2011	2011	1	16	230	15	58	36.5	4.5	5804
1/17/2011	2011	1	17	231	25	60	42.5	10.5	5814.5
1/18/2011	2011	1	18	232	26	63	44.5	12.5	5827
1/19/2011	2011	1	19	233	27	65	46	14	5841
1/20/2011	2011	1	20	234	24	61	42.5	10.5	5851.5
1/21/2011	2011	1	21	235	14	52	33	1	5852.5
1/22/2011	2011	1	22	236	11	52	31.5	-0.5	5852
1/23/2011	2011	1	23	237	16	57	36.5	4.5	5856.5
1/24/2011	2011	1	24	238	8	49	28.5	-3.5	5853
1/25/2011	2011	1	25	239	7	47	27	-5	5848
1/26/2011	2011	1	26	240	11	52	31.5	-0.5	5847.5
1/27/2011	2011	1	27	241	9	54	31.5	-0.5	5847
1/28/2011	2011	1	28	242	8	56	32	0	5847
1/29/2011	2011	1	29	243	12	62	37	5	5852
1/30/2011	2011	1	30	244	22	59	40.5	8.5	5860.5
1/31/2011	2011	1	31	245	24	57	40.5	8.5	5869
2/1/2011	2011	2	1	246	15	51	33	1	5870
2/2/2011	2011	2	2	247	-5	10	2.5	-29.5	5840.5
2/3/2011	2011	2	3	248	-18	11	-3.5	-35.5	5805
2/4/2011	2011	2	4	249	22	45	33.5	1.5	5806.5
2/5/2011	2011	2	5	250	20	48	34	2	5808.5

2/6/2011	2011	2	6	251	19	43	31	-1	5807.5
2/7/2011	2011	2	7	252	14	55	34.5	2.5	5810
2/8/2011	2011	2	8	253	11	59	35	3	5813
2/9/2011	2011	2	9	254	22	61	41.5	9.5	5822.5
2/10/2011	2011	2	10	255	35	58	46.5	14.5	5837
2/11/2011	2011	2	11	256	39	70	54.5	22.5	5859.5
2/12/2011	2011	2	12	257	36	55	45.5	13.5	5873
2/13/2011	2011	2	13	258	39	48	43.5	11.5	5884.5
2/14/2011	2011	2	14	259	36	44	40	8	5892.5
2/15/2011	2011	2	15	260	33	73	53	21	5913.5
2/16/2011	2011	2	16	261	29	71	50	18	5931.5
2/17/2011	2011	2	17	262	32	66	49	17	5948.5
2/18/2011	2011	2	18	263	24	62	43	11	5959.5
2/19/2011	2011	2	19	264	31	67	49	17	5976.5
2/20/2011	2011	2	20	265	28	62	45	13	5989.5
2/21/2011	2011	2	21	266	28	61	44.5	12.5	6002
2/22/2011	2011	2	22	267	28	59	43.5	11.5	6013.5
2/23/2011	2011	2	23	268	13	61	37	5	6018.5
2/24/2011	2011	2	24	269	13	61	37	5	6023.5
2/25/2011	2011	2	25	270	30	57	43.5	11.5	6035
2/26/2011	2011	2	26	271	25	54	39.5	7.5	6042.5
2/27/2011	2011	2	27	272	19	61	40	8	6050.5
2/28/2011	2011	2	28	273	19	61	40	8	6058.5
3/1/2011	2011	3	1	274	17	51	34	2	6060.5
3/2/2011	2011	3	2	275	17	61	39	7	6067.5
3/3/2011	2011	3	3	276	29	54	41.5	9.5	6077
3/4/2011	2011	3	4	277	21	55	38	6	6083
3/5/2011	2011	3	5	278	16	61	38.5	6.5	6089.5
3/6/2011	2011	3	6	279	16	63	39.5	7.5	6097
3/7/2011	2011	3	7	280	26	56	41	9	6106
3/8/2011	2011	3	8	281	28	61	44.5	12.5	6118.5
3/9/2011	2011	3	9	282	17	61	39	7	6125.5
3/10/2011	2011	3	10	283	15	62	38.5	6.5	6132
3/11/2011	2011	3	11	284	21	73	47	15	6147
3/12/2011	2011	3	12	285	21	73	47	15	6162
3/13/2011	2011	3	13	286	21	73	47	15	6177
3/14/2011	2011	3	14	287	22	77	49.5	17.5	6194.5
3/15/2011	2011	3	15	288	25	76	50.5	18.5	6213
3/16/2011	2011	3	16	289	23	74	48.5	16.5	6229.5
3/17/2011	2011	3	17	290	34	77	55.5	23.5	6253
3/18/2011	2011	3	18	291	31	73	52	20	6273
3/19/2011	2011	3	19	292	34	73	53.5	21.5	6294.5
3/20/2011	2011	3	20	293	25	70	47.5	15.5	6310
3/21/2011	2011	3	21	294	28	71	49.5	17.5	6327.5
3/22/2011	2011	3	22	295	31	73	52	20	6347.5
3/23/2011	2011	3	23	296	15	55	35	3	6350.5
3/24/2011	2011	3	24	297	15	55	35	3	6353.5
3/25/2011	2011	3	25	298	17	67	42	10	6363.5
3/26/2011	2011	3	26	299	27	64	45.5	13.5	6377
3/27/2011	2011	3	27	300	35	70	52.5	20.5	6397.5
3/28/2011	2011	3	28	301	36	71	53.5	21.5	6419
3/29/2011	2011	3	29	302	31	72	51.5	19.5	6438.5
3/30/2011	2011	3	30	303	35	68	51.5	19.5	6458
3/31/2011	2011	3	31	304	24	70	47	15	6473
4/1/2011	2011	4	1	305	24	74	49	17	6490
4/2/2011	2011	4	2	306	23	80	51.5	19.5	6509.5
4/3/2011	2011	4	3	307	34	84	59	27	6536.5
4/4/2011	2011	4	4	308	21	72	46.5	14.5	6551
4/5/2011	2011	4	5	309	22	82	52	20	6571
4/6/2011	2011	4	6	310	42	83	62.5	30.5	6601.5
4/7/2011	2011	4	7	311	38	72	55	23	6624.5
4/8/2011	2011	4	8	312	37	66	51.5	19.5	6644
4/9/2011	2011	4	9	313	32	71	51.5	19.5	6663.5
4/10/2011	2011	4	10	314	20	61	40.5	8.5	6672
4/11/2011	2011	4	11	315	17	56	36.5	4.5	6676.5
4/12/2011	2011	4	12	316	33	76	54.5	22.5	6699
4/13/2011	2011	4	13	317	29	74	51.5	19.5	6718.5
4/14/2011	2011	4	14	318	36	71	53.5	21.5	6740
4/15/2011	2011	4	15	319	23	69	46	14	6754
4/16/2011	2011	4	16	320	24	70	47	15	6769
4/17/2011	2011	4	17	321	45	81	63	31	6800
4/20/2011	2011	4	20	322	40	79	59.5	27.5	6827.5
4/21/2011	2011	4	21	323	33	71	52	20	6847.5
4/22/2011	2011	4	22	324	44	79	61.5	29.5	6877
4/23/2011	2011	4	23	325	39	78	58.5	26.5	6903.5
4/24/2011	2011	4	24	326	36	73	54.5	22.5	6926
4/25/2011	2011	4	25	327	37	70	53.5	21.5	6947.5
4/26/2011	2011	4	26	328	35	71	53	21	6968.5
4/27/2011	2011	4	27	329	24	67	45.5	13.5	6982
4/28/2011	2011	4	28	330	23	68	45.5	13.5	6995.5
4/29/2011	2011	4	29	331	43	80	61.5	29.5	7025
4/30/2011	2011	4	30	332	22	77	49.5	17.5	7042.5
5/1/2011	2011	5	1	333	24	66	45	13	7055.5
5/2/2011	2011	5	2	334	23	53	38	6	7061.5
5/3/2011	2011	5	3	335	18	62	40	8	7069.5
5/4/2011	2011	5	4	336	34	70	52	20	7089.5
5/5/2011	2011	5	5	337	36	82	59	27	7116.5
5/6/2011	2011	5	6	338	31	85	58	26	7142.5
5/7/2011	2011	5	7	339	38	84	61	29	7171.5
5/8/2011	2011	5	8	340	44	82	63	31	7202.5
5/9/2011	2011	5	9	341	36	79	57.5	25.5	7228
5/10/2011	2011	5	10	342	35	80	57.5	25.5	7253.5
5/11/2011	2011	5	11	343	32	75	53.5	21.5	7275

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5/13/2011	2011	5	13	345	32	76	54	22	7314
5/14/2011	2011	5	14	346	46	84	65	33	7347
5/15/2011	2011	5	15	347	40	80	60	28	7375
5/16/2011	2011	5	16	348	44	81	62.5	30.5	7405.5
5/17/2011	2011	5	17	349	39	82	60.5	28.5	7434
5/18/2011	2011	5	18	350	37	82	59.5	27.5	7461.5
5/19/2011	2011	5	19	351	34	65	49.5	17.5	7479
5/20/2011	2011	5	20	352	33	60	46.5	14.5	7493.5
5/21/2011	2011	5	21	353	33	67	50	18	7511.5
5/22/2011	2011	5	22	354	35	81	58	26	7537.5
5/23/2011	2011	5	23	355	36	84	60	28	7565.5
5/24/2011	2011	5	24	356	37	80	58.5	26.5	7592
5/25/2011	2011	5	25	357	42	74	58	26	7618
5/26/2011	2011	5	26	358	41	82	61.5	29.5	7647.5
5/27/2011	2011	5	27	359	41	84	62.5	30.5	7678
5/28/2011	2011	5	28	360	41	90	65.5	33.5	7711.5
5/29/2011	2011	5	29	361	60	88	74	42	7753.5
5/30/2011	2011	5	30	362	44	84	64	32	7785.5
5/31/2011	2011	5	31	363	28	74	51	19	7804.5
6/1/2011	2011	6	1	1	51	85	68	36	36
6/2/2011	2011	6	2	2	39	87	63	31	67
6/3/2011	2011	6	3	3	42	93	67.5	35.5	102.5
6/4/2011	2011	6	4	4	39	87	63	31	133.5
6/5/2011	2011	6	5	5	41	92	66.5	34.5	168
6/6/2011	2011	6	6	6	55	90	72.5	40.5	208.5
6/7/2011	2011	6	7	7	40	87	63.5	31.5	240
6/8/2011	2011	6	8	8	38	89	63.5	31.5	271.5
6/9/2011	2011	6	9	9	39	88	63.5	31.5	303
6/10/2011	2011	6	10	10	39	88	63.5	31.5	334.5
6/11/2011	2011	6	11	11	49	90	69.5	37.5	372
6/12/2011	2011	6	12	12	39	89	64	32	404
6/13/2011	2011	6	13	13	42	92	67	35	439
6/14/2011	2011	6	14	14	47	90	68.5	36.5	475.5
6/15/2011	2011	6	15	15	43	89	66	34	509.5
6/16/2011	2011	6	16	16	51	96	73.5	41.5	551
6/17/2011	2011	6	17	17	54	93	73.5	41.5	592.5
6/18/2011	2011	6	18	18	43	89	66	34	626.5
6/19/2011	2011	6	19	19	60	91	75.5	43.5	670
6/20/2011	2011	6	20	20	42	86	64	32	702
6/21/2011	2011	6	21	21	42	88	65	33	735
6/22/2011	2011	6	22	22	44	90	67	35	770
6/23/2011	2011	6	23	23	49	98	73.5	41.5	811.5
6/24/2011	2011	6	24	24	59	100	79.5	47.5	859
6/25/2011	2011	6	25	25	58	99	78.5	46.5	905.5
6/26/2011	2011	6	26	26	53	96	74.5	42.5	948
6/27/2011	2011	6	27	27	50	99	74.5	42.5	990.5
6/28/2011	2011	6	28	28	52	97	74.5	42.5	1033
6/29/2011	2011	6	29	29	51	99	75	43	1076
6/30/2011	2011	6	30	30	55	96	75.5	43.5	1119.5
7/1/2011	2011	7	1	31	47	94	70.5	38.5	1158
7/2/2011	2011	7	2	32	58	100	79	47	1205
7/3/2011	2011	7	3	33	62	94	78	46	1251
7/4/2011	2011	7	4	34	65	95	80	48	1299
7/5/2011	2011	7	5	35	60	97	78.5	46.5	1345.5
7/6/2011	2011	7	6	36	56	94	75	43	1388.5
7/7/2011	2011	7	7	37	63	97	80	48	1436.5
7/8/2011	2011	7	8	38	56	99	77.5	45.5	1482
7/9/2011	2011	7	9	39	55	92	73.5	41.5	1523.5
7/10/2011	2011	7	10	40	52	94	73	41	1564.5
7/11/2011	2011	7	11	41	58	92	75	43	1607.5
7/12/2011	2011	7	12	42	52	90	71	39	1646.5
7/13/2011	2011	7	13	43	50	85	67.5	35.5	1682
7/14/2011	2011	7	14	44	52	92	72	40	1722
7/15/2011	2011	7	15	45	50	95	72.5	40.5	1762.5
7/16/2011	2011	7	16	46	54	95	74.5	42.5	1805
7/17/2011	2011	7	17	47	55	95	75	43	1848
7/18/2011	2011	7	18	48	60	90	75	43	1891
7/19/2011	2011	7	19	49	59	95	77	45	1936
7/20/2011	2011	7	20	50	57	97	77	45	1981
7/21/2011	2011	7	21	51	55	94	74.5	42.5	2023.5
7/22/2011	2011	7	22	52	57	81	69	37	2060.5
7/23/2011	2011	7	23	53	57	98	77.5	45.5	2106
7/24/2011	2011	7	24	54	60	99	79.5	47.5	2153.5
7/25/2011	2011	7	25	55	60	94	77	45	2198.5
7/26/2011	2011	7	26	56	55	91	73	41	2239.5
7/27/2011	2011	7	27	57	53	93	73	41	2280.5
7/28/2011	2011	7	28	58	53	93	73	41	2321.5
7/29/2011	2011	7	29	59	53	90	71.5	39.5	2361
7/30/2011	2011	7	30	60	53	90	71.5	39.5	2400.5
7/31/2011	2011	7	31	61	55	90	72.5	40.5	2441
8/1/2011	2011	8	1	62	54	90	72	40	2481
8/2/2011	2011	8	2	63	54	89	71.5	39.5	2520.5
8/3/2011	2011	8	3	64	57	93	75	43	2563.5
8/4/2011	2011	8	4	65	58	91	74.5	42.5	2606
8/5/2011	2011	8	5	66	58	93	75.5	43.5	2649.5
8/6/2011	2011	8	6	67	52	92	72	40	2689.5
8/7/2011	2011	8	7	68	50	98	74	42	2731.5
8/8/2011	2011	8	8	69	50	96	73	41	2772.5
8/9/2011	2011	8	9	70	47	97	72	40	2812.5
8/10/2011	2011	8	10	71	59	99	79	47	2859.5
8/11/2011	2011	8	11	72	49	95	72	40	2899.5
8/12/2011	2011	8	12	73	55	93	74	42	2941.5

8/13/2011	2011	8	13	74	59	97	78	46	2987.5
8/14/2011	2011	8	14	75	57	91	74	42	3029.5
8/15/2011	2011	8	15	76	56	89	72.5	40.5	3070
8/16/2011	2011	8	16	77	59	95	77	45	3115
8/17/2011	2011	8	17	78	55	96	75.5	43.5	3158.5
8/18/2011	2011	8	18	79	56	97	76.5	44.5	3203
8/19/2011	2011	8	19	80	57	89	73	41	3244
8/20/2011	2011	8	20	81	60	90	75	43	3287
8/21/2011	2011	8	21	82	56	89	72.5	40.5	3327.5
8/22/2011	2011	8	22	83	54	82	68	36	3363.5
8/23/2011	2011	8	23	84	55	93	74	42	3405.5
8/24/2011	2011	8	24	85	55	100	77.5	45.5	3451
8/25/2011	2011	8	25	86	57	96	76.5	44.5	3495.5
8/26/2011	2011	8	26	87	57	88	72.5	40.5	3536
8/27/2011	2011	8	27	88	56	92	74	42	3578
8/28/2011	2011	8	28	89	59	97	78	46	3624
8/29/2011	2011	8	29	90	57	95	76	44	3668
8/30/2011	2011	8	30	91	55	97	76	44	3712
8/31/2011	2011	8	31	92	53	98	75.5	43.5	3755.5
9/1/2011	2011	9	1	93	58	92	75	43	3798.5
9/2/2011	2011	9	2	94	52	87	69.5	37.5	3836
9/3/2011	2011	9	3	95	55	89	72	40	3876
9/4/2011	2011	9	4	96	57	90	73.5	41.5	3917.5
9/5/2011	2011	9	5	97	57	86	71.5	39.5	3957
9/6/2011	2011	9	6	98	55	82	68.5	36.5	3993.5
9/7/2011	2011	9	7	99	55	82	68.5	36.5	4030
9/8/2011	2011	9	8	100	53	77	65	33	4063
9/9/2011	2011	9	9	101	52	75	63.5	31.5	4094.5
9/10/2011	2011	9	10	102	50	72	61	29	4123.5
9/11/2011	2011	9	11	103	52	73	62.5	30.5	4154
9/12/2011	2011	9	12	104	50	81	65.5	33.5	4187.5
9/13/2011	2011	9	13	105	50	76	63	31	4218.5
9/14/2011	2011	9	14	106	53	84	68.5	36.5	4255
9/15/2011	2011	9	15	107	50	80	65	33	4288
9/16/2011	2011	9	16	108	45	81	63	31	4319
9/17/2011	2011	9	17	109	48	80	64	32	4351
9/18/2011	2011	9	18	110	43	81	62	30	4381
9/19/2011	2011	9	19	111	43	81	62	30	4411
9/20/2011	2011	9	20	112	43	84	63.5	31.5	4442.5
9/21/2011	2011	9	21	113	42	88	65	33	4475.5
9/22/2011	2011	9	22	114	38	83	60.5	28.5	4504
9/23/2011	2011	9	23	115	38	83	60.5	28.5	4532.5
9/24/2011	2011	9	24	116	35	90	62.5	30.5	4563
9/25/2011	2011	9	25	117	37	91	64	32	4595
9/26/2011	2011	9	26	118	43	88	65.5	33.5	4628.5
9/27/2011	2011	9	27	119	42	88	65	33	4661.5
9/28/2011	2011	9	28	120	40	90	65	33	4694.5
9/29/2011	2011	9	29	121	41	89	65	33	4727.5
9/30/2011	2011	9	30	122	47	87	67	35	4762.5
10/1/2011	2011	10	1	123	38	78	58	26	4788.5
10/2/2011	2011	10	2	124	46	83	64.5	32.5	4821
10/3/2011	2011	10	3	125	40	78	59	27	4848
10/4/2011	2011	10	4	126	42	76	59	27	4875
10/5/2011	2011	10	5	127	40	60	50	18	4893
10/6/2011	2011	10	6	128	43	67	55	23	4916
10/7/2011	2011	10	7	129	37	62	49.5	17.5	4933.5
10/8/2011	2011	10	8	130	30	56	43	11	4944.5
10/9/2011	2011	10	9	131	30	63	46.5	14.5	4959
10/10/2011	2011	10	10	132	30	63	46.5	14.5	4973.5
10/11/2011	2011	10	11	133	35	75	55	23	4996.5
10/12/2011	2011	10	12	134	37	78	57.5	25.5	5022
10/13/2011	2011	10	13	135	32	77	54.5	22.5	5044.5
10/14/2011	2011	10	14	136	33	78	55.5	23.5	5068
10/15/2011	2011	10	15	137	34	80	57	25	5093
10/16/2011	2011	10	16	138	32	81	56.5	24.5	5117.5
10/17/2011	2011	10	17	139	37	84	60.5	28.5	5146
10/18/2011	2011	10	18	140	35	71	53	21	5167
10/19/2011	2011	10	19	141	30	74	52	20	5187
10/20/2011	2011	10	20	142	36	77	56.5	24.5	5211.5
10/21/2011	2011	10	21	143	29	80	54.5	22.5	5234
10/22/2011	2011	10	22	144	27	81	54	22	5256
10/23/2011	2011	10	23	145	28	80	54	22	5278
10/24/2011	2011	10	24	146	30	79	54.5	22.5	5300.5
10/25/2011	2011	10	25	147	30	77	53.5	21.5	5322
10/26/2011	2011	10	26	148	31	77	54	22	5344
10/27/2011	2011	10	27	149	42	68	55	23	5367
10/28/2011	2011	10	28	150	25	80	52.5	20.5	5387.5
10/29/2011	2011	10	29	151	23	70	46.5	14.5	5402
10/30/2011	2011	10	30	152	27	69	48	16	5418
10/31/2011	2011	10	31	153	30	72	51	19	5437
11/1/2011	2011	11	1	154	27	77	52	20	5457
11/2/2011	2011	11	2	155	24	73	48.5	16.5	5473.5
11/3/2011	2011	11	3	156	14	57	35.5	3.5	5477
11/4/2011	2011	11	4	157	32	59	45.5	13.5	5490.5
11/5/2011	2011	11	5	158	34	56	45	13	5503.5
11/6/2011	2011	11	6	159	19	55	37	5	5508.5
11/7/2011	2011	11	7	160	24	50	37	5	5513.5
11/8/2011	2011	11	8	161	29	48	38.5	6.5	5520
11/9/2011	2011	11	9	162	29	37	33	1	5521
11/10/2011	2011	11	10	163	13	55	34	2	5523
11/11/2011	2011	11	11	164	25	61	43	11	5534
11/12/2011	2011	11	12	165	32	62	47	15	5549
11/13/2011	2011	11	13	166	39	54	46.5	14.5	5563.5

11/14/2011	2011	11	14	167	34	54	44	12	5575.5
11/15/2011	2011	11	15	168	24	57	40.5	8.5	5584
11/16/2011	2011	11	16	169	28	53	40.5	8.5	5592.5
11/17/2011	2011	11	17	170	16	61	38.5	6.5	5599
11/18/2011	2011	11	18	171	19	60	39.5	7.5	5606.5
11/19/2011	2011	11	19	172	35	60	47.5	15.5	5622
11/20/2011	2011	11	20	173	32	63	47.5	15.5	5637.5
11/21/2011	2011	11	21	174	26	56	41	9	5646.5
11/22/2011	2011	11	22	175	22	56	39	7	5653.5
11/23/2011	2011	11	23	176	19	62	40.5	8.5	5662
11/24/2011	2011	11	24	177	18	63	40.5	8.5	5670.5
11/25/2011	2011	11	25	178	39	53	46	14	5684.5
11/26/2011	2011	11	26	179	32	47	39.5	7.5	5692
11/27/2011	2011	11	27	180	16	56	36	4	5696
11/28/2011	2011	11	28	181	23	64	43.5	11.5	5707.5
11/29/2011	2011	11	29	182	27	60	43.5	11.5	5719
11/30/2011	2011	11	30	183	17	65	41	9	5728
12/1/2011	2011	12	1	184	28	53	40.5	8.5	5736.5
12/2/2011	2011	12	2	185	26	53	39.5	7.5	5744
12/3/2011	2011	12	3	186	26	40	33	1	5745
12/4/2011	2011	12	4	187	26	37	31.5	-0.5	5744.5
12/5/2011	2011	12	5	188	-2	32	15	-17	5727.5
12/6/2011	2011	12	6	189	-6	31	12.5	-19.5	5708
12/7/2011	2011	12	7	190	4	40	22	-10	5698
12/8/2011	2011	12	8	191	10	47	28.5	-3.5	5694.5
12/9/2011	2011	12	9	192	12	45	28.5	-3.5	5691
12/10/2011	2011	12	10	193	12	44	28	-4	5687
12/11/2011	2011	12	11	194	1	47	24	-8	5679
12/12/2011	2011	12	12	195	24	55	39.5	7.5	5686.5
12/13/2011	2011	12	13	196	33	40	36.5	4.5	5691
12/14/2011	2011	12	14	197	37	40	38.5	6.5	5697.5
12/15/2011	2011	12	15	198	13	35	24	-8	5689.5
12/16/2011	2011	12	16	199	12	39	25.5	-6.5	5683
12/17/2011	2011	12	17	200	12	39	25.5	-6.5	5676.5
12/18/2011	2011	12	18	201	12	47	29.5	-2.5	5674
12/19/2011	2011	12	19	202	31	40	35.5	3.5	5677.5
12/20/2011	2011	12	20	203	31	55	43	11	5688.5
12/21/2011	2011	12	21	204	15	37	26	-6	5682.5
12/22/2011	2011	12	22	205	13	37	25	-7	5675.5
12/23/2011	2011	12	23	206	14	25	19.5	-12.5	5663
12/24/2011	2011	12	24	207	-13	17	2	-30	5633
12/25/2011	2011	12	25	208	-12	15	1.5	-30.5	5602.5
12/26/2011	2011	12	26	209	-12	35	11.5	-20.5	5582
12/27/2011	2011	12	27	210	-8	23	7.5	-24.5	5557.5
12/28/2011	2011	12	28	211	0	29	14.5	-17.5	5540
12/29/2011	2011	12	29	212	4	34	19	-13	5527
12/30/2011	2011	12	30	213	8	34	21	-11	5516
12/31/2011	2011	12	31	214	10	48	29	-3	5513
1/1/2012	2012	1	1	215	3	39	21	-11	5502
1/2/2012	2012	1	2	216	0	32	16	-16	5486
1/3/2012	2012	1	3	217	0	33	16.5	-15.5	5470.5
1/4/2012	2012	1	4	218	9	35	22	-10	5460.5
1/5/2012	2012	1	5	219	1	31	16	-16	5444.5
1/6/2012	2012	1	6	220	2	36	19	-13	5431.5
1/7/2012	2012	1	7	221	4	51	27.5	-4.5	5427
1/8/2012	2012	1	8	222	19	48	33.5	1.5	5428.5
1/9/2012	2012	1	9	223	14	34	24	-8	5420.5
1/10/2012	2012	1	10	224	4	36	20	-12	5408.5
1/11/2012	2012	1	11	225	13	42	27.5	-4.5	5404
1/12/2012	2012	1	12	226	3	35	19	-13	5391
1/13/2012	2012	1	13	227	-4	36	16	-16	5375
1/14/2012	2012	1	14	228	-1	34	16.5	-15.5	5359.5
1/15/2012	2012	1	15	229	6	48	27	-5	5354.5
1/16/2012	2012	1	16	230	36	45	40.5	8.5	5363
1/17/2012	2012	1	17	231	35	42	38.5	6.5	5369.5
1/18/2012	2012	1	18	232	17	50	33.5	1.5	5371
1/19/2012	2012	1	19	233	25	51	38	6	5377
1/20/2012	2012	1	20	234	22	51	36.5	4.5	5381.5
1/21/2012	2012	1	21	235	18	54	36	4	5385.5
1/22/2012	2012	1	22	236	30	52	41	9	5394.5
1/23/2012	2012	1	23	237	15	47	31	-1	5393.5
1/24/2012	2012	1	24	238	28	46	37	5	5398.5
1/25/2012	2012	1	25	239	24	42	33	1	5399.5
1/26/2012	2012	1	26	240	24	50	37	5	5404.5
1/27/2012	2012	1	27	241	30	49	39.5	7.5	5412
1/28/2012	2012	1	28	242	17	43	30	-2	5410
1/29/2012	2012	1	29	243	18	47	32.5	0.5	5410.5
1/30/2012	2012	1	30	244	19	53	36	4	5414.5
1/31/2012	2012	1	31	245	27	52	39.5	7.5	5422
2/1/2012	2012	2	1	246	22	50	36	4	5426
2/2/2012	2012	2	2	247	28	48	38	6	5432
2/3/2012	2012	2	3	248	24	42	33	1	5433
2/4/2012	2012	2	4	249	24	42	33	1	5434
2/5/2012	2012	2	5	250	27	40	33.5	1.5	5435.5
2/6/2012	2012	2	6	251	26	48	37	5	5440.5
2/7/2012	2012	2	7	252	20	46	33	1	5441.5
2/8/2012	2012	2	8	253	29	53	41	9	5450.5
2/9/2012	2012	2	9	254	29	53	41	9	5459.5
2/10/2012	2012	2	10	255	23	55	39	7	5466.5
2/11/2012	2012	2	11	256	21	54	37.5	5.5	5472
2/12/2012	2012	2	12	257	27	52	39.5	7.5	5479.5
2/13/2012	2012	2	13	258	30	45	37.5	5.5	5485
2/14/2012	2012	2	14	259	29	45	37	5	5490

2/15/2012	2012	2	15	260	17	41	29	-3	5487
2/16/2012	2012	2	16	261	26	49	37.5	5.5	5492.5
2/17/2012	2012	2	17	262	23	49	36	4	5496.5
2/18/2012	2012	2	18	263	20	52	36	4	5500.5
2/19/2012	2012	2	19	264	20	57	38.5	6.5	5507
2/20/2012	2012	2	20	265	18	42	30	-2	5505
2/21/2012	2012	2	21	266	16	54	35	3	5508
2/22/2012	2012	2	22	267	26	61	43.5	11.5	5519.5
2/23/2012	2012	2	23	268	32	61	46.5	14.5	5534
2/24/2012	2012	2	24	269	16	53	34.5	2.5	5536.5
2/25/2012	2012	2	25	270	15	64	39.5	7.5	5544
2/26/2012	2012	2	26	271	22	61	41.5	9.5	5553.5
2/27/2012	2012	2	27	272	23	56	39.5	7.5	5561
2/28/2012	2012	2	28	273	33	57	45	13	5574
2/29/2012	2012	2	29	274	16	57	36.5	4.5	5578.5
3/1/2012	2012	3	1	275	38	56	47	15	5593.5
3/2/2012	2012	3	2	276	22	50	36	4	5597.5
3/3/2012	2012	3	3	277	13	50	31.5	-0.5	5597
3/4/2012	2012	3	4	278	16	60	38	6	5603
3/5/2012	2012	3	5	279	17	69	43	11	5614
3/6/2012	2012	3	6	280	23	67	45	13	5627
3/7/2012	2012	3	7	281	29	64	46.5	14.5	5641.5
3/8/2012	2012	3	8	282	16	47	31.5	-0.5	5641
3/9/2012	2012	3	9	283	21	43	32	0	5641
3/10/2012	2012	3	10	284	29	43	36	4	5645
3/11/2012	2012	3	11	285	27	59	43	11	5656
3/12/2012	2012	3	12	286	23	66	44.5	12.5	5668.5
3/13/2012	2012	3	13	287	19	70	44.5	12.5	5681
3/14/2012	2012	3	14	288	22	70	46	14	5695
3/15/2012	2012	3	15	289	20	72	46	14	5709
3/16/2012	2012	3	16	290	22	73	47.5	15.5	5724.5
3/17/2012	2012	3	17	291	30	70	50	18	5742.5
3/18/2012	2012	3	18	292	34	65	49.5	17.5	5760
3/19/2012	2012	3	19	293	19	38	28.5	-3.5	5756.5
3/20/2012	2012	3	20	294	20	48	34	2	5758.5
3/21/2012	2012	3	21	295	17	63	40	8	5766.5
3/22/2012	2012	3	22	296	23	71	47	15	5781.5
3/23/2012	2012	3	23	297	23	74	48.5	16.5	5798
3/24/2012	2012	3	24	298	29	78	53.5	21.5	5819.5
3/25/2012	2012	3	25	299	26	77	51.5	19.5	5839
3/26/2012	2012	3	26	300	44	74	59	27	5866
3/27/2012	2012	3	27	301	26	75	50.5	18.5	5884.5
3/28/2012	2012	3	28	302	24	74	49	17	5901.5
3/29/2012	2012	3	29	303	28	72	50	18	5919.5
3/30/2012	2012	3	30	304	29	76	52.5	20.5	5940
3/31/2012	2012	3	31	305	34	79	56.5	24.5	5964.5
4/1/2012	2012	4	1	306	34	79	56.5	24.5	5989
4/2/2012	2012	4	2	307	31	48	39.5	7.5	5996.5
4/3/2012	2012	4	3	308	34	44	39	7	6003.5
4/4/2012	2012	4	4	309	31	71	51	19	6022.5
4/5/2012	2012	4	5	310	32	72	52	20	6042.5
4/6/2012	2012	4	6	311	34	71	52.5	20.5	6063
4/7/2012	2012	4	7	312	28	68	48	16	6079
4/8/2012	2012	4	8	313	42	73	57.5	25.5	6104.5
4/9/2012	2012	4	9	314	36	77	56.5	24.5	6129
4/10/2012	2012	4	10	315	33	77	55	23	6152
4/11/2012	2012	4	11	316	40	79	59.5	27.5	6179.5
4/12/2012	2012	4	12	317	35	75	55	23	6202.5
4/13/2012	2012	4	13	318	29	69	49	17	6219.5
4/14/2012	2012	4	14	319	30	65	47.5	15.5	6235
4/15/2012	2012	4	15	320	33	56	44.5	12.5	6247.5
4/16/2012	2012	4	16	321	23	63	43	11	6258.5
4/17/2012	2012	4	17	322	25	76	50.5	18.5	6277
4/18/2012	2012	4	18	323	29	78	53.5	21.5	6298.5
4/19/2012	2012	4	19	324	53	74	63.5	31.5	6330
4/20/2012	2012	4	20	325	37	76	56.5	24.5	6354.5
4/21/2012	2012	4	21	326	33	81	57	25	6379.5
4/22/2012	2012	4	22	327	36	82	59	27	6406.5
4/23/2012	2012	4	23	328	47	84	65.5	33.5	6440
4/24/2012	2012	4	24	329	45	85	65	33	6473
4/25/2012	2012	4	25	330	36	82	59	27	6500
4/26/2012	2012	4	26	331	44	83	63.5	31.5	6531.5
4/27/2012	2012	4	27	332	44	73	58.5	26.5	6558
4/28/2012	2012	4	28	333	36	71	53.5	21.5	6579.5
4/29/2012	2012	4	29	334	33	76	54.5	22.5	6602
4/30/2012	2012	4	30	335	32	79	55.5	23.5	6625.5
5/1/2012	2012	5	1	336	39	79	59	27	6652.5
5/2/2012	2012	5	2	337	43	81	62	30	6682.5
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5/4/2012	2012	5	4	339	38	83	60.5	28.5	6738
5/5/2012	2012	5	5	340	49	81	65	33	6771
5/6/2012	2012	5	6	341	41	81	61	29	6800
5/7/2012	2012	5	7	342	32	75	53.5	21.5	6821.5
5/8/2012	2012	5	8	343	44	69	56.5	24.5	6846
5/9/2012	2012	5	9	344	38	72	55	23	6869
5/10/2012	2012	5	10	345	36	79	57.5	25.5	6894.5
5/11/2012	2012	5	11	346	34	81	57.5	25.5	6920
5/12/2012	2012	5	12	347	49	80	64.5	32.5	6952.5
5/13/2012	2012	5	13	348	53	72	62.5	30.5	6983
5/14/2012	2012	5	14	349	33	75	54	22	7005
5/15/2012	2012	5	15	350	37	80	58.5	26.5	7031.5
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5/17/2012	2012	5	17	352	48	86	67	35	7096.5

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5/22/2012	2012	5	22	357	47	90	68.5	36.5	7262
5/23/2012	2012	5	23	358	51	88	69.5	37.5	7299.5
5/24/2012	2012	5	24	359	61	85	73	41	7340.5
5/25/2012	2012	5	25	360	50	87	68.5	36.5	7377
5/26/2012	2012	5	26	361	53	84	68.5	36.5	7413.5
5/27/2012	2012	5	27	362	30	78	54	22	7435.5
5/28/2012	2012	5	28	363	28	82	55	23	7458.5
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5/30/2012	2012	5	30	365	46	86	66	34	7521
5/31/2012	2012	5	31	366	41	88	64.5	32.5	7553.5
6/1/2012	2012	6	1	1	43	93	68	36	36
6/2/2012	2012	6	2	2	55	91	73	41	77
6/3/2012	2012	6	3	3	42	92	67	35	112
6/4/2012	2012	6	4	4	50	91	70.5	38.5	150.5
6/5/2012	2012	6	5	5	42	91	66.5	34.5	185
6/6/2012	2012	6	6	6	39	91	65	33	218
6/7/2012	2012	6	7	7	44	91	67.5	35.5	253.5
6/8/2012	2012	6	8	8	40	91	65.5	33.5	287
6/9/2012	2012	6	9	9	50	90	70	38	325
6/10/2012	2012	6	10	10	49	87	68	36	361
6/11/2012	2012	6	11	11	45	90	67.5	35.5	396.5
6/12/2012	2012	6	12	12	45	92	68.5	36.5	433
6/13/2012	2012	6	13	13	41	92	66.5	34.5	467.5
6/14/2012	2012	6	14	14	46	91	68.5	36.5	504
6/15/2012	2012	6	15	15	50	92	71	39	543
6/16/2012	2012	6	16	16	45	90	67.5	35.5	578.5
6/17/2012	2012	6	17	17	53	94	73.5	41.5	620
6/18/2012	2012	6	18	18	49	93	71	39	659
6/19/2012	2012	6	19	19	53	93	73	41	700
6/20/2012	2012	6	20	20	54	96	75	43	743
6/21/2012	2012	6	21	21	48	95	71.5	39.5	782.5
6/22/2012	2012	6	22	22	56	97	76.5	44.5	827
6/23/2012	2012	6	23	23	52	95	73.5	41.5	868.5
6/24/2012	2012	6	24	24	48	96	72	40	908.5
6/25/2012	2012	6	25	25	53	96	74.5	42.5	951
6/26/2012	2012	6	26	26	55	97	76	44	995
6/27/2012	2012	6	27	27	54	93	73.5	41.5	1036.5
6/28/2012	2012	6	28	28	53	95	74	42	1078.5
6/29/2012	2012	6	29	29	58	97	77.5	45.5	1124
6/30/2012	2012	6	30	30	51	98	74.5	42.5	1166.5
7/1/2012	2012	7	1	31	58	97	77.5	45.5	1212
7/2/2012	2012	7	2	32	68	98	83	51	1263
7/3/2012	2012	7	3	33	60	95	77.5	45.5	1308.5
7/4/2012	2012	7	4	34	57	90	73.5	41.5	1350
7/5/2012	2012	7	5	35	55	87	71	39	1389
7/6/2012	2012	7	6	36	63	84	73.5	41.5	1430.5
7/7/2012	2012	7	7	37	63	79	71	39	1469.5
7/8/2012	2012	7	8	38	63	85	74	42	1511.5
7/9/2012	2012	7	9	39	56	82	69	37	1548.5
7/10/2012	2012	7	10	40	58	82	70	38	1586.5
7/11/2012	2012	7	11	41	57	82	69.5	37.5	1624
7/12/2012	2012	7	12	42	56	87	71.5	39.5	1663.5
7/13/2012	2012	7	13	43	59	90	74.5	42.5	1706
7/14/2012	2012	7	14	44	61	90	75.5	43.5	1749.5
7/15/2012	2012	7	15	45	56	88	72	40	1789.5
7/16/2012	2012	7	16	46	61	82	71.5	39.5	1829
7/17/2012	2012	7	17	47	55	86	70.5	38.5	1867.5
7/18/2012	2012	7	18	48	54	90	72	40	1907.5
7/19/2012	2012	7	19	49	56	88	72	40	1947.5
7/20/2012	2012	7	20	50	60	86	73	41	1988.5
7/21/2012	2012	7	21	51	67	91	79	47	2035.5
7/22/2012	2012	7	22	52	62	90	76	44	2079.5
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7/24/2012	2012	7	24	54	53	82	67.5	35.5	2155
7/25/2012	2012	7	25	55	54	72	63	31	2186
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7/27/2012	2012	7	27	57	60	89	74.5	42.5	2268
7/28/2012	2012	7	28	58	55	88	71.5	39.5	2307.5
7/29/2012	2012	7	29	59	60	88	74	42	2349.5
7/30/2012	2012	7	30	60	55	92	73.5	41.5	2391
7/31/2012	2012	7	31	61	59	92	75.5	43.5	2434.5
8/1/2012	2012	8	1	62	55	90	72.5	40.5	2475
8/2/2012	2012	8	2	63	54	85	69.5	37.5	2512.5
8/3/2012	2012	8	3	64	55	86	70.5	38.5	2551
8/4/2012	2012	8	4	65	53	87	70	38	2589
8/5/2012	2012	8	5	66	62	86	74	42	2631
8/6/2012	2012	8	6	67	57	87	72	40	2671
8/7/2012	2012	8	7	68	55	86	70.5	38.5	2709.5
8/8/2012	2012	8	8	69	58	90	74	42	2751.5
8/9/2012	2012	8	9	70	52	92	72	40	2791.5
8/10/2012	2012	8	10	71	51	94	72.5	40.5	2832
8/11/2012	2012	8	11	72	61	94	77.5	45.5	2877.5
8/12/2012	2012	8	12	73	53	91	72	40	2917.5
8/13/2012	2012	8	13	74	62	82	72	40	2957.5
8/14/2012	2012	8	14	75	53	88	70.5	38.5	2996
8/15/2012	2012	8	15	76	50	90	70	38	3034
8/16/2012	2012	8	16	77	51	88	69.5	37.5	3071.5
8/17/2012	2012	8	17	78	59	86	72.5	40.5	3112
8/18/2012	2012	8	18	79	52	91	71.5	39.5	3151.5

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8/20/2012	2012	8	20	81	62	86	74	42	3234
8/21/2012	2012	8	21	82	54	90	72	40	3274
8/22/2012	2012	8	22	83	61	82	71.5	39.5	3313.5
8/23/2012	2012	8	23	84	56	81	68.5	36.5	3350
8/24/2012	2012	8	24	85	49	80	64.5	32.5	3382.5
8/25/2012	2012	8	25	86	50	88	69	37	3419.5
8/26/2012	2012	8	26	87	52	90	71	39	3458.5
8/27/2012	2012	8	27	88	56	89	72.5	40.5	3499
8/28/2012	2012	8	28	89	48	89	68.5	36.5	3535.5
8/29/2012	2012	8	29	90	46	90	68	36	3571.5
8/30/2012	2012	8	30	91	51	92	71.5	39.5	3611
8/31/2012	2012	8	31	92	46	89	67.5	35.5	3646.5
9/1/2012	2012	9	1	93	49	90	69.5	37.5	3684
9/2/2012	2012	9	2	94	49	89	69	37	3721
9/3/2012	2012	9	3	95	59	87	73	41	3762
9/4/2012	2012	9	4	96	61	90	75.5	43.5	3805.5
9/5/2012	2012	9	5	97	63	91	77	45	3850.5
9/6/2012	2012	9	6	98	55	92	73.5	41.5	3892
9/7/2012	2012	9	7	99	63	87	75	43	3935
9/8/2012	2012	9	8	100	56	73	64.5	32.5	3967.5
9/9/2012	2012	9	9	101	41	78	59.5	27.5	3995
9/10/2012	2012	9	10	102	52	85	68.5	36.5	4031.5
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9/12/2012	2012	9	12	104	57	67	62	30	4092.5
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9/14/2012	2012	9	14	106	43	69	56	24	4143
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9/16/2012	2012	9	16	108	38	85	61.5	29.5	4199
9/17/2012	2012	9	17	109	41	82	61.5	29.5	4228.5
9/18/2012	2012	9	18	110	39	80	59.5	27.5	4256
9/19/2012	2012	9	19	111	37	84	60.5	28.5	4284.5
9/20/2012	2012	9	20	112	36	84	60	28	4312.5
9/21/2012	2012	9	21	113	40	84	62	30	4342.5
9/22/2012	2012	9	22	114	37	88	62.5	30.5	4373
9/23/2012	2012	9	23	115	42	84	63	31	4404
9/24/2012	2012	9	24	116	44	81	62.5	30.5	4434.5
9/25/2012	2012	9	25	117	41	77	59	27	4461.5
9/26/2012	2012	9	26	118	40	80	60	28	4489.5
9/27/2012	2012	9	27	119	41	78	59.5	27.5	4517
9/28/2012	2012	9	28	120	43	78	60.5	28.5	4545.5
9/29/2012	2012	9	29	121	40	79	59.5	27.5	4573
9/30/2012	2012	9	30	122	34	79	56.5	24.5	4597.5
1/1/2013	2013	1	1	123	2	34	18	-14	4583.5
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1/3/2013	2013	1	3	125	-3	33	15	-17	4550
1/4/2013	2013	1	4	126	-4	37	16.5	-15.5	4534.5
1/5/2013	2013	1	5	127	-2	32	15	-17	4517.5
1/6/2013	2013	1	6	128	-2	42	20	-12	4505.5
1/7/2013	2013	1	7	129	28	47	37.5	5.5	4511
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1/11/2013	2013	1	11	133	24	43	33.5	1.5	4505.5
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1/13/2013	2013	1	13	135	-11	30	9.5	-22.5	4460.5
1/14/2013	2013	1	14	136	0	28	14	-18	4442.5
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1/16/2013	2013	1	16	138	-1	44	21.5	-10.5	4408
1/17/2013	2013	1	17	139	4	48	26	-6	4402
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1/22/2013	2013	1	22	144	11	61	36	4	4398.5
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1/24/2013	2013	1	24	146	17	64	40.5	8.5	4410.5
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1/27/2013	2013	1	27	149	38	56	47	15	4451
1/28/2013	2013	1	28	150	33	53	43	11	4462
1/29/2013	2013	1	29	151	15	41	28	-4	4458
1/30/2013	2013	1	30	152	7	42	24.5	-7.5	4450.5
1/31/2013	2013	1	31	153	16	50	33	1	4451.5
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3/4/2013	2013	3	4	155	33	59	46	14	4474.5
3/5/2013	2013	3	5	156	15	62	38.5	6.5	4481
3/6/2013	2013	3	6	157	30	68	49	17	4498
3/7/2013	2013	3	7	158	20	66	43	11	4509
3/8/2013	2013	3	8	159	23	65	44	12	4521
3/9/2013	2013	3	9	160	27	42	34.5	2.5	4523.5
3/10/2013	2013	3	10	161	24	51	37.5	5.5	4529
3/11/2013	2013	3	11	162	11	62	36.5	4.5	4533.5
3/12/2013	2013	3	12	163	18	64	41	9	4542.5
3/13/2013	2013	3	13	164	21	70	45.5	13.5	4556
3/14/2013	2013	3	14	165	25	75	50	18	4574
3/15/2013	2013	3	15	166	22	79	50.5	18.5	4592.5
3/16/2013	2013	3	16	167	34	75	54.5	22.5	4615
3/17/2013	2013	3	17	168	26	68	47	15	4630
3/18/2013	2013	3	18	169	23	66	44.5	12.5	4642.5
3/19/2013	2013	3	19	170	32	63	47.5	15.5	4658
3/20/2013	2013	3	20	171	19	63	41	9	4667
3/21/2013	2013	3	21	172	48	68	58	26	4693

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3/23/2013	2013	3	23	174	26	58	42	10	4713
3/24/2013	2013	3	24	175	11	54	32.5	0.5	4713.5
3/25/2013	2013	3	25	176	11	58	34.5	2.5	4716
3/26/2013	2013	3	26	177	15	66	40.5	8.5	4724.5
3/27/2013	2013	3	27	178	24	69	46.5	14.5	4739
3/28/2013	2013	3	28	179	32	71	51.5	19.5	4758.5
3/29/2013	2013	3	29	180	35	71	53	21	4779.5
3/30/2013	2013	3	30	181	25	70	47.5	15.5	4795
3/31/2013	2013	3	31	182	26	71	48.5	16.5	4811.5
4/1/2013	2013	4	1	183	28	72	50	18	4829.5
4/2/2013	2013	4	2	184	23	68	45.5	13.5	4843
4/3/2013	2013	4	3	185	25	63	44	12	4855
4/4/2013	2013	4	4	186	20	68	44	12	4867
4/5/2013	2013	4	5	187	29	77	53	21	4888
4/6/2013	2013	4	6	188	29	78	53.5	21.5	4909.5
4/8/2013	2013	4	8	189	36	78	57	25	4934.5
4/9/2013	2013	4	9	190	32	72	52	20	4954.5
4/10/2013	2013	4	10	191	29	51	40	8	4962.5
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4/12/2013	2013	4	12	193	33	68	50.5	18.5	4983.5
4/15/2013	2013	4	15	194	33	75	54	22	5005.5
4/16/2013	2013	4	16	195	44	75	59.5	27.5	5033
4/17/2013	2013	4	17	196	42	72	57	25	5058
4/18/2013	2013	4	18	197	17	54	35.5	3.5	5061.5
4/19/2013	2013	4	19	198	13	50	31.5	-0.5	5061
4/20/2013	2013	4	20	199	24	68	46	14	5075
4/21/2013	2013	4	21	200	25	74	49.5	17.5	5092.5
4/23/2013	2013	4	23	201	45	81	63	31	5123.5
4/24/2013	2013	4	24	202	17	71	44	12	5135.5
4/27/2013	2013	4	27	203	30	72	51	19	5154.5
4/28/2013	2013	4	28	204	27	78	52.5	20.5	5175
4/29/2013	2013	4	29	205	32	85	58.5	26.5	5201.5
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5/3/2013	2013	5	3	208	29	69	49	17	5280
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5/5/2013	2013	5	5	210	41	74	57.5	25.5	5323.5
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5/11/2013	2013	5	11	216	36	75	55.5	23.5	5449.5
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5/17/2013	2013	5	17	222	39	89	64	32	5637.5
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5/19/2013	2013	5	19	224	50	74	62	30	5701.5
5/20/2013	2013	5	20	225	38	75	56.5	24.5	5726
5/21/2013	2013	5	21	226	28	78	53	21	5747
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5/30/2013	2013	5	30	235	48	83	65.5	33.5	6031
5/31/2013	2013	5	31	236	55	81	68	36	6067
6/1/2013	2013	6	1	1	39	83	61	29	29
6/2/2013	2013	6	2	2	44	89	66.5	34.5	63.5
6/3/2013	2013	6	3	3	45	85	65	33	96.5
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6/11/2013	2013	6	11	11	44	98	71	39	411
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7/13/2013	2013	7	13	37	55	91	73	41	1534
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7/17/2013	2013	7	17	41	58	81	69.5	37.5	1691.5
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7/26/2013	2013	7	26	49	59	90	74.5	42.5	2023.5
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2/15/2014	2014	2	15	250	22	74	48	16	5357.5
2/16/2014	2014	2	16	251	25	73	49	17	5374.5
2/17/2014	2014	2	17	252	20	73	46.5	14.5	5389
2/18/2014	2014	2	18	253	24	68	46	14	5403
2/19/2014	2014	2	19	254	26	74	50	18	5421
2/20/2014	2014	2	20	255	21	71	46	14	5435
2/21/2014	2014	2	21	256	10	53	31.5	-0.5	5434.5
2/22/2014	2014	2	22	257	15	65	40	8	5442.5
2/23/2014	2014	2	23	258	17	66	41.5	9.5	5452
2/24/2014	2014	2	24	259	18	71	44.5	12.5	5464.5
2/25/2014	2014	2	25	260	17	73	45	13	5477.5
2/26/2014	2014	2	26	261	21	65	43	11	5488.5
2/27/2014	2014	2	27	262	33	70	51.5	19.5	5508
2/28/2014	2014	2	28	263	23	61	42	10	5518
3/1/2014	2014	3	1	264	38	67	52.5	20.5	5538.5
3/2/2014	2014	3	2	265	33	50	41.5	9.5	5548
3/3/2014	2014	3	3	266	24	57	40.5	8.5	5556.5
3/4/2014	2014	3	4	267	20	61	40.5	8.5	5565
3/5/2014	2014	3	5	268	27	60	43.5	11.5	5576.5
3/6/2014	2014	3	6	269	20	65	42.5	10.5	5587
3/7/2014	2014	3	7	270	32	70	51	19	5606
3/8/2014	2014	3	8	271	21	64	42.5	10.5	5616.5
3/9/2014	2014	3	9	272	15	65	40	8	5624.5
3/10/2014	2014	3	10	273	16	70	43	11	5635.5
3/11/2014	2014	3	11	274	32	79	55.5	23.5	5659
3/12/2014	2014	3	12	275	17	66	41.5	9.5	5668.5
3/13/2014	2014	3	13	276	20	54	37	5	5673.5
3/15/2014	2014	3	15	277	21	64	42.5	10.5	5684
3/16/2014	2014	3	16	278	12	56	34	2	5686
3/17/2014	2014	3	17	279	19	67	43	11	5697
3/18/2014	2014	3	18	280	22	71	46.5	14.5	5711.5
3/19/2014	2014	3	19	281	11	59	35	3	5714.5
3/20/2014	2014	3	20	282	12	64	38	6	5720.5
3/21/2014	2014	3	21	283	24	74	49	17	5737.5
3/22/2014	2014	3	22	284	28	70	49	17	5754.5
3/23/2014	2014	3	23	285	24	67	45.5	13.5	5768
3/24/2014	2014	3	24	286	21	71	46	14	5782
3/25/2014	2014	3	25	287	19	72	45.5	13.5	5795.5
3/26/2014	2014	3	26	288	23	67	45	13	5808.5
3/27/2014	2014	3	27	289	34	66	50	18	5826.5
3/28/2014	2014	3	28	290	34	63	48.5	16.5	5843
3/29/2014	2014	3	29	291	20	68	44	12	5855
3/30/2014	2014	3	30	292	25	73	49	17	5872
3/31/2014	2014	3	31	293	21	70	45.5	13.5	5885.5
4/1/2014	2014	4	1	294	30	68	49	17	5902.5
4/2/2014	2014	4	2	295	32	69	50.5	18.5	5921
4/3/2014	2014	4	3	296	28	64	46	14	5935
4/4/2014	2014	4	4	297	15	57	36	4	5939
4/5/2014	2014	4	5	298	28	61	44.5	12.5	5951.5
4/7/2014	2014	4	7	299	29	63	46	14	5965.5
4/9/2014	2014	4	9	300	25	79	52	20	5985.5
4/10/2014	2014	4	10	301	35	84	59.5	27.5	6013
4/11/2014	2014	4	11	302	33	83	58	26	6039
4/12/2014	2014	4	12	303	36	82	59	27	6066
4/13/2014	2014	4	13	304	36	73	54.5	22.5	6088.5
4/14/2014	2014	4	14	305	21	72	46.5	14.5	6103
4/15/2014	2014	4	15	306	17	60	38.5	6.5	6109.5
4/16/2014	2014	4	16	307	25	75	50	18	6127.5
4/17/2014	2014	4	17	308	27	76	51.5	19.5	6147

4/18/2014	2014	4	18	309	37	75	56	24	6171
4/19/2014	2014	4	19	310	33	76	54.5	22.5	6193.5
4/20/2014	2014	4	20	311	33	64	48.5	16.5	6210
4/21/2014	2014	4	21	312	33	77	55	23	6233
4/22/2014	2014	4	22	313	47	82	64.5	32.5	6265.5
4/23/2014	2014	4	23	314	44	80	62	30	6295.5
4/24/2014	2014	4	24	315	31	73	52	20	6315.5
4/25/2014	2014	4	25	316	29	78	53.5	21.5	6337
4/26/2014	2014	4	26	317	38	78	58	26	6363
4/28/2014	2014	4	28	318	31	68	49.5	17.5	6380.5
4/29/2014	2014	4	29	319	29	64	46.5	14.5	6395
4/30/2014	2014	4	30	320	23	61	42	10	6405
5/1/2014	2014	5	1	321	30	64	47	15	6420
5/2/2014	2014	5	2	322	28	70	49	17	6437
5/4/2014	2014	5	4	323	30	82	56	24	6461
5/5/2014	2014	5	5	324	37	84	60.5	28.5	6489.5
5/6/2014	2014	5	6	325	41	81	61	29	6518.5
5/7/2014	2014	5	7	326	30	73	51.5	19.5	6538
5/8/2014	2014	5	8	327	27	70	48.5	16.5	6554.5
5/9/2014	2014	5	9	328	28	62	45	13	6567.5
5/10/2014	2014	5	10	329	39	75	57	25	6592.5
5/11/2014	2014	5	11	330	43	79	61	29	6621.5
5/12/2014	2014	5	12	331	32	69	50.5	18.5	6640
5/13/2014	2014	5	13	332	26	62	44	12	6652
5/14/2014	2014	5	14	333	28	65	46.5	14.5	6666.5
5/15/2014	2014	5	15	334	25	70	47.5	15.5	6682
5/16/2014	2014	5	16	335	32	80	56	24	6706
5/17/2014	2014	5	17	336	38	87	62.5	30.5	6736.5
5/18/2014	2014	5	18	337	49	89	69	37	6773.5
5/19/2014	2014	5	19	338	37	84	60.5	28.5	6802
5/20/2014	2014	5	20	339	34	84	59	27	6829
5/22/2014	2014	5	22	340	29	83	56	24	6853
5/23/2014	2014	5	23	341	43	80	61.5	29.5	6882.5
5/24/2014	2014	5	24	342	43	80	61.5	29.5	6912
5/25/2014	2014	5	25	343	33	60	46.5	14.5	6926.5
5/26/2014	2014	5	26	344	33	63	48	16	6942.5
5/27/2014	2014	5	27	345	39	79	59	27	6969.5
5/28/2014	2014	5	28	346	39	90	64.5	32.5	7002
5/29/2014	2014	5	29	347	60	91	75.5	43.5	7045.5
5/30/2014	2014	5	30	348	53	86	69.5	37.5	7083
5/31/2014	2014	5	31	349	47	90	68.5	36.5	7119.5
6/2/2014	2014	6	2	1	47	91	69	37	37
6/3/2014	2014	6	3	2	51	97	74	42	79
6/4/2014	2014	6	4	3	49	97	73	41	120
6/5/2014	2014	6	5	4	40	94	67	35	155
6/6/2014	2014	6	6	5	40	94	67	35	190
6/7/2014	2014	6	7	6	40	97	68.5	36.5	226.5
6/8/2014	2014	6	8	7	51	91	71	39	265.5
6/9/2014	2014	6	9	8	47	92	69.5	37.5	303
6/10/2014	2014	6	10	9	39	89	64	32	335
6/11/2014	2014	6	11	10	51	93	72	40	375
6/12/2014	2014	6	12	11	38	90	64	32	407
6/13/2014	2014	6	13	12	55	92	73.5	41.5	448.5
6/14/2014	2014	6	14	13	50	90	70	38	486.5
6/15/2014	2014	6	15	14	40	88	64	32	518.5
6/16/2014	2014	6	16	15	47	87	67	35	553.5
6/17/2014	2014	6	17	16	50	88	69	37	590.5
6/18/2014	2014	6	18	17	50	87	68.5	36.5	627
6/19/2014	2014	6	19	18	45	84	64.5	32.5	659.5
6/20/2014	2014	6	20	19	45	92	68.5	36.5	696
6/21/2014	2014	6	21	20	46	98	72	40	736
6/22/2014	2014	6	22	21	59	95	77	45	781
6/23/2014	2014	6	23	22	51	96	73.5	41.5	822.5
6/24/2014	2014	6	24	23	47	96	71.5	39.5	862
6/25/2014	2014	6	25	24	46	95	70.5	38.5	900.5
6/26/2014	2014	6	26	25	47	94	70.5	38.5	939
6/27/2014	2014	6	27	26	61	94	77.5	45.5	984.5
6/28/2014	2014	6	28	27	58	92	75	43	1027.5
6/29/2014	2014	6	29	28	53	96	74.5	42.5	1070
6/30/2014	2014	6	30	29	55	99	77	45	1115
7/1/2014	2014	7	1	30	57	101	79	47	1162
7/2/2014	2014	7	2	31	60	99	79.5	47.5	1209.5
7/3/2014	2014	7	3	32	58	89	73.5	41.5	1251
7/4/2014	2014	7	4	33	55	95	75	43	1294
7/5/2014	2014	7	5	34	56	92	74	42	1336
7/6/2014	2014	7	6	35	53	90	71.5	39.5	1375.5
7/7/2014	2014	7	7	36	53	92	72.5	40.5	1416
7/8/2014	2014	7	8	37	53	94	73.5	41.5	1457.5
7/9/2014	2014	7	9	38	56	91	73.5	41.5	1499
7/10/2014	2014	7	10	39	55	85	70	38	1537
7/11/2014	2014	7	11	40	60	92	76	44	1581
7/12/2014	2014	7	12	41	55	94	74.5	42.5	1623.5
7/13/2014	2014	7	13	42	59	92	75.5	43.5	1667
7/14/2014	2014	7	14	43	59	92	75.5	43.5	1710.5
7/15/2014	2014	7	15	44	57	95	76	44	1754.5
7/16/2014	2014	7	16	45	56	88	72	40	1794.5
7/17/2014	2014	7	17	46	55	88	71.5	39.5	1834
7/18/2014	2014	7	18	47	56	92	74	42	1876
7/19/2014	2014	7	19	48	60	97	78.5	46.5	1922.5
7/20/2014	2014	7	20	49	66	92	79	47	1969.5
7/21/2014	2014	7	21	50	57	95	76	44	2013.5
7/22/2014	2014	7	22	51	62	93	77.5	45.5	2059
7/23/2014	2014	7	23	52	62	93	77.5	45.5	2104.5

7/24/2014	2014	7	24	53	56	98	77	45	2149.5
7/25/2014	2014	7	25	54	57	92	74.5	42.5	2192
7/26/2014	2014	7	26	55	60	96	78	46	2238
7/27/2014	2014	7	27	56	58	101	79.5	47.5	2285.5
7/28/2014	2014	7	28	57	59	95	77	45	2330.5
7/29/2014	2014	7	29	58	57	77	67	35	2365.5
7/30/2014	2014	7	30	59	57	89	73	41	2406.5
7/31/2014	2014	7	31	60	57	89	73	41	2447.5
8/1/2014	2014	8	1	61	55	82	68.5	36.5	2484
8/2/2014	2014	8	2	62	55	78	66.5	34.5	2518.5
8/3/2014	2014	8	3	63	53	78	65.5	33.5	2552
8/4/2014	2014	8	4	64	54	78	66	34	2586
8/5/2014	2014	8	5	65	51	84	67.5	35.5	2621.5
8/6/2014	2014	8	6	66	51	84	67.5	35.5	2657
8/7/2014	2014	8	7	67	53	93	73	41	2698
8/8/2014	2014	8	8	68	47	81	64	32	2730
8/9/2014	2014	8	9	69	47	81	64	32	2762
8/10/2014	2014	8	10	70	47	81	64	32	2794
8/11/2014	2014	8	11	71	50	94	72	40	2834
8/12/2014	2014	8	12	72	50	94	72	40	2874
8/13/2014	2014	8	13	73	57	87	72	40	2914
8/14/2014	2014	8	14	74	55	75	65	33	2947
8/15/2014	2014	8	15	75	57	80	68.5	36.5	2983.5
8/16/2014	2014	8	16	76	57	86	71.5	39.5	3023
8/17/2014	2014	8	17	77	52	94	73	41	3064
8/18/2014	2014	8	18	78	57	93	75	43	3107
8/19/2014	2014	8	19	79	52	87	69.5	37.5	3144.5
8/20/2014	2014	8	20	80	51	81	66	34	3178.5
8/21/2014	2014	8	21	81	50	82	66	34	3212.5
8/22/2014	2014	8	22	82	56	82	69	37	3249.5
8/23/2014	2014	8	23	83	48	73	60.5	28.5	3278
8/24/2014	2014	8	24	84	48	83	65.5	33.5	3311.5
8/25/2014	2014	8	25	85	50	85	67.5	35.5	3347
8/26/2014	2014	8	26	86	55	87	71	39	3386
8/27/2014	2014	8	27	87	48	76	62	30	3416
8/28/2014	2014	8	28	88	44	81	62.5	30.5	3446.5
8/29/2014	2014	8	29	89	45	82	63.5	31.5	3478
8/31/2014	2014	8	31	90	51	91	71	39	3517
9/1/2014	2014	9	1	91	53	89	71	39	3556
9/2/2014	2014	9	2	92	45	93	69	37	3593
9/4/2014	2014	9	4	93	47	92	69.5	37.5	3630.5
9/5/2014	2014	9	5	94	51	90	70.5	38.5	3669
9/6/2014	2014	9	6	95	56	88	72	40	3709
9/7/2014	2014	9	7	96	50	84	67	35	3744
9/8/2014	2014	9	8	97	49	84	66.5	34.5	3778.5
9/9/2014	2014	9	9	98	49	83	66	34	3812.5
9/10/2014	2014	9	10	99	51	81	66	34	3846.5
9/11/2014	2014	9	11	100	43	85	64	32	3878.5
9/12/2014	2014	9	12	101	43	86	64.5	32.5	3911
9/13/2014	2014	9	13	102	47	83	65	33	3944
9/14/2014	2014	9	14	103	47	83	65	33	3977
9/15/2014	2014	9	15	104	47	83	65	33	4010
9/16/2014	2014	9	16	105	53	86	69.5	37.5	4047.5
9/17/2014	2014	9	17	106	56	77	66.5	34.5	4082
9/18/2014	2014	9	18	107	45	69	57	25	4107
9/19/2014	2014	9	19	108	45	69	57	25	4132
9/20/2014	2014	9	20	109	46	91	68.5	36.5	4168.5
9/21/2014	2014	9	21	110	54	88	71	39	4207.5
9/22/2014	2014	9	22	111	53	80	66.5	34.5	4242
9/23/2014	2014	9	23	112	51	82	66.5	34.5	4276.5
9/24/2014	2014	9	24	113	43	85	64	32	4308.5
9/25/2014	2014	9	25	114	47	88	67.5	35.5	4344
9/26/2014	2014	9	26	115	51	88	69.5	37.5	4381.5
9/27/2014	2014	9	27	116	50	84	67	35	4416.5
9/28/2014	2014	9	28	117	53	78	65.5	33.5	4450
9/29/2014	2014	9	29	118	42	78	60	28	4478
9/30/2014	2014	9	30	119	33	73	53	21	4499
10/1/2014	2014	10	1	120	33	78	55.5	23.5	4522.5
10/2/2014	2014	10	2	121	35	79	57	25	4547.5
10/3/2014	2014	10	3	122	29	73	51	19	4566.5
10/4/2014	2014	10	4	123	30	81	55.5	23.5	4590
10/5/2014	2014	10	5	124	32	81	56.5	24.5	4614.5
10/6/2014	2014	10	6	125	34	80	57	25	4639.5
10/7/2014	2014	10	7	126	34	84	59	27	4666.5
10/8/2014	2014	10	8	127	36	84	60	28	4694.5
10/9/2014	2014	10	9	128	50	76	63	31	4725.5
10/10/2014	2014	10	10	129	45	68	56.5	24.5	4750
10/11/2014	2014	10	11	130	44	73	58.5	26.5	4776.5
10/12/2014	2014	10	12	131	39	70	54.5	22.5	4799
10/13/2014	2014	10	13	132	33	73	53	21	4820
10/14/2014	2014	10	14	133	27	98	62.5	30.5	4850.5
10/15/2014	2014	10	15	134	28	77	52.5	20.5	4871
10/16/2014	2014	10	16	135	30	78	54	22	4893
10/17/2014	2014	10	17	136	37	83	60	28	4921
10/18/2014	2014	10	18	137	38	78	58	26	4947
10/19/2014	2014	10	19	138	47	72	59.5	27.5	4974.5
10/20/2014	2014	10	20	139	34	69	51.5	19.5	4994
10/21/2014	2014	10	21	140	35	71	53	21	5015
10/22/2014	2014	10	22	141	35	69	52	20	5035
10/23/2014	2014	10	23	142	32	75	53.5	21.5	5056.5
10/24/2014	2014	10	24	143	30	70	50	18	5074.5
10/25/2014	2014	10	25	144	31	71	51	19	5093.5
10/26/2014	2014	10	26	145	32	75	53.5	21.5	5115

10/27/2014	2014	10	27	146	33	77	55	23	5138
10/28/2014	2014	10	28	147	30	75	52.5	20.5	5158.5
10/29/2014	2014	10	29	148	28	77	52.5	20.5	5179
10/30/2014	2014	10	30	149	25	78	51.5	19.5	5198.5
10/31/2014	2014	10	31	150	25	74	49.5	17.5	5216
11/1/2014	2014	11	1	151	25	66	45.5	13.5	5229.5
11/2/2014	2014	11	2	152	39	64	51.5	19.5	5249
11/3/2014	2014	11	3	153	23	60	41.5	9.5	5258.5
11/4/2014	2014	11	4	154	23	62	42.5	10.5	5269
11/5/2014	2014	11	5	155	23	62	42.5	10.5	5279.5
11/6/2014	2014	11	6	156	19	66	42.5	10.5	5290
11/7/2014	2014	11	7	157	18	67	42.5	10.5	5300.5
11/8/2014	2014	11	8	158	18	74	46	14	5314.5
11/9/2014	2014	11	9	159	20	66	43	11	5325.5
11/10/2014	2014	11	10	160	30	75	52.5	20.5	5346
11/11/2014	2014	11	11	161	30	75	52.5	20.5	5366.5
11/12/2014	2014	11	12	162	37	64	50.5	18.5	5385
11/13/2014	2014	11	13	163	20	65	42.5	10.5	5395.5
11/14/2014	2014	11	14	164	21	48	34.5	2.5	5398
11/15/2014	2014	11	15	165	21	48	34.5	2.5	5400.5
11/16/2014	2014	11	16	166	27	64	45.5	13.5	5414
11/17/2014	2014	11	17	167	4	40	22	-10	5404
11/18/2014	2014	11	18	168	5	48	26.5	-5.5	5398.5
11/19/2014	2014	11	19	169	7	53	30	-2	5396.5
11/20/2014	2014	11	20	170	14	62	38	6	5402.5
11/21/2014	2014	11	21	171	10	53	31.5	-0.5	5402
11/22/2014	2014	11	22	172	12	60	36	4	5406
11/23/2014	2014	11	23	173	12	48	30	-2	5404
11/24/2014	2014	11	24	174	8	48	28	-4	5400
11/25/2014	2014	11	25	175	5	48	26.5	-5.5	5394.5
11/26/2014	2014	11	26	176	5	56	30.5	-1.5	5393
11/27/2014	2014	11	27	177	5	56	30.5	-1.5	5391.5
11/28/2014	2014	11	28	178	13	71	42	10	5401.5
11/29/2014	2014	11	29	179	14	76	45	13	5414.5
11/30/2014	2014	11	30	180	20	69	44.5	12.5	5427
12/1/2014	2014	12	1	181	14	62	38	6	5433
12/2/2014	2014	12	2	182	17	60	38.5	6.5	5439.5
12/3/2014	2014	12	3	183	17	50	33.5	1.5	5441
12/4/2014	2014	12	4	184	17	62	39.5	7.5	5448.5
12/5/2014	2014	12	5	185	31	47	39	7	5455.5
12/6/2014	2014	12	6	186	30	58	44	12	5467.5
12/7/2014	2014	12	7	187	28	51	39.5	7.5	5475
12/8/2014	2014	12	8	188	23	59	41	9	5484
12/9/2014	2014	12	9	189	25	55	40	8	5492
12/11/2014	2014	12	11	190	24	65	44.5	12.5	5504.5
12/12/2014	2014	12	12	191	24	64	44	12	5516.5
12/13/2014	2014	12	13	192	24	64	44	12	5528.5
12/15/2014	2014	12	15	193	15	45	30	-2	5526.5
12/16/2014	2014	12	16	194	15	46	30.5	-1.5	5525
12/17/2014	2014	12	17	195	28	46	37	5	5530
12/18/2014	2014	12	18	196	22	43	32.5	0.5	5530.5
12/19/2014	2014	12	19	197	20	41	30.5	-1.5	5529
12/20/2014	2014	12	20	198	6	43	24.5	-7.5	5521.5
12/21/2014	2014	12	21	199	6	52	29	-3	5518.5
12/22/2014	2014	12	22	200	28	57	42.5	10.5	5529
12/23/2014	2014	12	23	201	25	60	42.5	10.5	5539.5
12/24/2014	2014	12	24	202	8	41	24.5	-7.5	5532
12/25/2014	2014	12	25	203	8	50	29	-3	5529
12/26/2014	2014	12	26	204	5	47	26	-6	5523
12/27/2014	2014	12	27	205	6	35	20.5	-11.5	5511.5
12/28/2014	2014	12	28	206	3	37	20	-12	5499.5
12/29/2014	2014	12	29	207	3	43	23	-9	5490.5
12/30/2014	2014	12	30	208	4	47	25.5	-6.5	5484
12/31/2014	2014	12	31	209	10	33	21.5	-10.5	5473.5
1/1/2015	2015	1	1	210	10	34	22	-10	5463.5
1/2/2015	2015	1	2	211	8	34	21	-11	5452.5
1/3/2015	2015	1	3	212	4	34	19	-13	5439.5
1/4/2015	2015	1	4	213	6	48	27	-5	5434.5
1/5/2015	2015	1	5	214	8	40	24	-8	5426.5
1/6/2015	2015	1	6	215	8	62	35	3	5429.5
1/7/2015	2015	1	7	216	20	61	40.5	8.5	5438
1/8/2015	2015	1	8	217	21	56	38.5	6.5	5444.5
1/9/2015	2015	1	9	218	22	59	40.5	8.5	5453
1/10/2015	2015	1	10	219	22	59	40.5	8.5	5461.5
1/11/2015	2015	1	11	220	22	58	40	8	5469.5
1/12/2015	2015	1	12	221	27	55	41	9	5478.5
1/13/2015	2015	1	13	222	29	39	34	2	5480.5
1/14/2015	2015	1	14	223	28	39	33.5	1.5	5482
1/15/2015	2015	1	15	224	17	39	28	-4	5478
1/16/2015	2015	1	16	225	12	50	31	-1	5477
1/17/2015	2015	1	17	226	0	53	26.5	-5.5	5471.5
1/18/2015	2015	1	18	227	17	51	34	2	5473.5
1/19/2015	2015	1	19	228	19	60	39.5	7.5	5481
1/20/2015	2015	1	20	229	19	63	41	9	5490
1/21/2015	2015	1	21	230	25	56	40.5	8.5	5498.5
1/22/2015	2015	1	22	231	19	56	37.5	5.5	5504
1/23/2015	2015	1	23	232	0	31	15.5	-16.5	5487.5
1/24/2015	2015	1	24	233	10	39	24.5	-7.5	5480
1/25/2015	2015	1	25	234	10	52	31	-1	5479
1/26/2015	2015	1	26	235	21	58	39.5	7.5	5486.5
1/27/2015	2015	1	27	236	21	59	40	8	5494.5
1/28/2015	2015	1	28	237	21	65	43	11	5505.5
1/29/2015	2015	1	29	238	21	63	42	10	5515.5

1/30/2015	2015	1	30	239	29	50	39.5	7.5	5523
1/31/2015	2015	1	31	240	29	33	31	-1	5522
2/1/2015	2015	2	1	241	25	49	37	5	5527
2/2/2015	2015	2	2	242	19	55	37	5	5532
2/3/2015	2015	2	3	243	21	61	41	9	5541
2/4/2015	2015	2	4	244	23	62	42.5	10.5	5551.5
2/5/2015	2015	2	5	245	22	66	44	12	5563.5
2/6/2015	2015	2	6	246	19	71	45	13	5576.5
2/7/2015	2015	2	7	247	19	73	46	14	5590.5
2/8/2015	2015	2	8	248	23	72	47.5	15.5	5606
2/9/2015	2015	2	9	249	23	71	47	15	5621
2/10/2015	2015	2	10	250	19	74	46.5	14.5	5635.5
2/11/2015	2015	2	11	251	22	72	47	15	5650.5
2/12/2015	2015	2	12	252	19	72	45.5	13.5	5664
2/13/2015	2015	2	13	253	35	64	49.5	17.5	5681.5
2/14/2015	2015	2	14	254	19	64	41.5	9.5	5691
2/15/2015	2015	2	15	255	19	73	46	14	5705
2/16/2015	2015	2	16	256	18	68	43	11	5716
2/17/2015	2015	2	17	257	15	57	36	4	5720
2/18/2015	2015	2	18	258	12	56	34	2	5722
2/19/2015	2015	2	19	259	10	68	39	7	5729
2/20/2015	2015	2	20	260	19	73	46	14	5743
2/21/2015	2015	2	21	261	25	65	45	13	5756
2/22/2015	2015	2	22	262	25	64	44.5	12.5	5768.5
2/23/2015	2015	2	23	263	17	51	34	2	5770.5
2/24/2015	2015	2	24	264	14	32	23	-9	5761.5
2/26/2015	2015	2	26	265	15	55	35	3	5764.5
2/27/2015	2015	2	27	266	21	49	35	3	5767.5
2/28/2015	2015	2	28	267	22	37	29.5	-2.5	5765
3/1/2015	2015	3	1	268	22	39	30.5	-1.5	5763.5
3/2/2015	2015	3	2	269	33	58	45.5	13.5	5777
3/3/2015	2015	3	3	270	23	62	42.5	10.5	5787.5
3/4/2015	2015	3	4	271	20	52	36	4	5791.5
3/5/2015	2015	3	5	272	13	52	32.5	0.5	5792
3/6/2015	2015	3	6	273	13	53	33	1	5793
3/7/2015	2015	3	7	274	13	63	38	6	5799
3/8/2015	2015	3	8	275	24	54	39	7	5806
3/9/2015	2015	3	9	276	23	70	46.5	14.5	5820.5
3/10/2015	2015	3	10	277	17	58	37.5	5.5	5826
3/11/2015	2015	3	11	278	18	68	43	11	5837
3/12/2015	2015	3	12	279	23	67	45	13	5850
3/13/2015	2015	3	13	280	35	64	49.5	17.5	5867.5
3/14/2015	2015	3	14	281	32	66	49	17	5884.5
3/15/2015	2015	3	15	282	23	63	43	11	5895.5
3/16/2015	2015	3	16	283	22	68	45	13	5908.5
3/17/2015	2015	3	17	284	25	73	49	17	5925.5
3/18/2015	2015	3	18	285	25	67	46	14	5939.5
3/19/2015	2015	3	19	286	33	61	47	15	5954.5
3/20/2015	2015	3	20	287	35	58	46.5	14.5	5969
3/21/2015	2015	3	21	288	29	52	40.5	8.5	5977.5
3/22/2015	2015	3	22	289	25	69	47	15	5992.5
3/23/2015	2015	3	23	290	28	73	50.5	18.5	6011
3/25/2015	2015	3	25	291	32	72	52	20	6031
3/26/2015	2015	3	26	292	24	70	47	15	6046
3/27/2015	2015	3	27	293	24	71	47.5	15.5	6061.5
3/28/2015	2015	3	28	294	24	78	51	19	6080.5
3/29/2015	2015	3	29	295	32	82	57	25	6105.5
3/30/2015	2015	3	30	296	32	82	57	25	6130.5
3/31/2015	2015	3	31	297	30	79	54.5	22.5	6153
4/1/2015	2015	4	1	298	30	79	54.5	22.5	6175.5
4/2/2015	2015	4	2	299	39	75	57	25	6200.5
4/3/2015	2015	4	3	300	26	71	48.5	16.5	6217
4/4/2015	2015	4	4	301	31	68	49.5	17.5	6234.5
4/5/2015	2015	4	5	302	35	66	50.5	18.5	6253
4/6/2015	2015	4	6	303	26	74	50	18	6271
4/7/2015	2015	4	7	304	30	72	51	19	6290
4/8/2015	2015	4	8	305	38	73	55.5	23.5	6313.5
4/9/2015	2015	4	9	306	19	70	44.5	12.5	6326
4/10/2015	2015	4	10	307	23	66	44.5	12.5	6338.5
4/11/2015	2015	4	11	308	28	72	50	18	6356.5
4/12/2015	2015	4	12	309	39	72	55.5	23.5	6380
4/13/2015	2015	4	13	310	38	75	56.5	24.5	6404.5
4/14/2015	2015	4	14	311	33	69	51	19	6423.5
4/15/2015	2015	4	15	312	40	75	57.5	25.5	6449
4/16/2015	2015	4	16	313	19	66	42.5	10.5	6459.5
4/17/2015	2015	4	17	314	18	55	36.5	4.5	6464
4/18/2015	2015	4	18	315	27	51	39	7	6471
4/19/2015	2015	4	19	316	30	67	48.5	16.5	6487.5
4/20/2015	2015	4	20	317	24	70	47	15	6502.5
4/21/2015	2015	4	21	318	27	74	50.5	18.5	6521
4/22/2015	2015	4	22	319	33	71	52	20	6541
4/23/2015	2015	4	23	320	27	74	50.5	18.5	6559.5
4/24/2015	2015	4	24	321	38	72	55	23	6582.5
4/25/2015	2015	4	25	322	39	64	51.5	19.5	6602
4/26/2015	2015	4	26	323	40	67	53.5	21.5	6623.5
4/27/2015	2015	4	27	324	39	52	45.5	13.5	6637
4/28/2015	2015	4	28	325	40	67	53.5	21.5	6658.5
4/29/2015	2015	4	29	326	28	63	45.5	13.5	6672
4/30/2015	2015	4	30	327	34	78	56	24	6696
5/1/2015	2015	5	1	328	38	83	60.5	28.5	6724.5
5/2/2015	2015	5	2	329	38	84	61	29	6753.5
5/3/2015	2015	5	3	330	37	93	65	33	6786.5
5/4/2015	2015	5	4	331	38	77	57.5	25.5	6812

5/5/2015	2015	5	5	332	39	68	53.5	21.5	6833.5
5/6/2015	2015	5	6	333	45	65	55	23	6856.5
5/7/2015	2015	5	7	334	32	70	51	19	6875.5
5/8/2015	2015	5	8	335	39	74	56.5	24.5	6900
5/9/2015	2015	5	9	336	36	68	52	20	6920
5/10/2015	2015	5	10	337	32	68	50	18	6938
5/11/2015	2015	5	11	338	29	67	48	16	6954
5/12/2015	2015	5	12	339	45	74	59.5	27.5	6981.5
5/13/2015	2015	5	13	340	45	68	56.5	24.5	7006
5/14/2015	2015	5	14	341	40	75	57.5	25.5	7031.5
5/15/2015	2015	5	15	342	42	74	58	26	7057.5
5/17/2015	2015	5	17	343	26	59	42.5	10.5	7068
5/18/2015	2015	5	18	344	34	74	54	22	7090
5/19/2015	2015	5	19	345	42	74	58	26	7116
5/20/2015	2015	5	20	346	32	74	53	21	7137
5/21/2015	2015	5	21	347	48	79	63.5	31.5	7168.5
5/22/2015	2015	5	22	348	43	67	55	23	7191.5
5/23/2015	2015	5	23	349	38	71	54.5	22.5	7214
5/24/2015	2015	5	24	350	37	68	52.5	20.5	7234.5
5/25/2015	2015	5	25	351	34	68	51	19	7253.5
5/26/2015	2015	5	26	352	34	71	52.5	20.5	7274
5/27/2015	2015	5	27	353	43	77	60	28	7302
5/28/2015	2015	5	28	354	37	79	58	26	7328
5/29/2015	2015	5	29	355	43	85	64	32	7360
5/30/2015	2015	5	30	356	42	81	61.5	29.5	7389.5
5/31/2015	2015	5	31	357	40	86	63	31	7420.5
6/1/2015	2015	6	1	1	53	91	72	40	40
6/2/2015	2015	6	2	2	40	88	64	32	72
6/3/2015	2015	6	3	3	42	91	66.5	34.5	106.5
6/4/2015	2015	6	4	4	38	90	64	32	138.5
6/5/2015	2015	6	5	5	55	89	72	40	178.5
6/6/2015	2015	6	6	6	51	80	65.5	33.5	212
6/7/2015	2015	6	7	7	46	85	65.5	33.5	245.5
6/8/2015	2015	6	8	8	45	88	66.5	34.5	280
6/9/2015	2015	6	9	9	60	89	74.5	42.5	322.5
6/10/2015	2015	6	10	10	57	84	70.5	38.5	361
6/11/2015	2015	6	11	11	48	89	68.5	36.5	397.5
6/12/2015	2015	6	12	12	43	85	64	32	429.5
6/13/2015	2015	6	13	13	49	84	66.5	34.5	464
6/14/2015	2015	6	14	14	43	90	66.5	34.5	498.5
6/15/2015	2015	6	15	15	48	86	67	35	533.5
6/16/2015	2015	6	16	16	58	90	74	42	575.5
6/17/2015	2015	6	17	17	54	85	69.5	37.5	613
6/18/2015	2015	6	18	18	47	98	72.5	40.5	653.5
6/19/2015	2015	6	19	19	63	98	80.5	48.5	702
6/20/2015	2015	6	20	20	47	99	73	41	743
6/21/2015	2015	6	21	21	48	100	74	42	785
6/22/2015	2015	6	22	22	52	103	77.5	45.5	830.5
6/23/2015	2015	6	23	23	61	102	81.5	49.5	880
6/24/2015	2015	6	24	24	61	96	78.5	46.5	926.5
6/25/2015	2015	6	25	25	58	92	75	43	969.5
6/26/2015	2015	6	26	26	57	96	76.5	44.5	1014
6/27/2015	2015	6	27	27	63	96	79.5	47.5	1061.5
6/28/2015	2015	6	28	28	50	89	69.5	37.5	1099
6/29/2015	2015	6	29	29	52	90	71	39	1138
6/30/2015	2015	6	30	30	62	96	79	47	1185
7/1/2015	2015	7	1	31	63	95	79	47	1232
7/2/2015	2015	7	2	32	63	98	80.5	48.5	1280.5
7/3/2015	2015	7	3	33	60	97	78.5	46.5	1327
7/4/2015	2015	7	4	34	58	87	72.5	40.5	1367.5
7/5/2015	2015	7	5	35	58	86	72	40	1407.5
7/6/2015	2015	7	6	36	57	88	72.5	40.5	1448
7/7/2015	2015	7	7	37	56	87	71.5	39.5	1487.5
7/8/2015	2015	7	8	38	52	87	69.5	37.5	1525
7/9/2015	2015	7	9	39	54	86	70	38	1563
7/10/2015	2015	7	10	40	50	66	58	26	1589
7/11/2015	2015	7	11	41	53	79	66	34	1623
7/12/2015	2015	7	12	42	53	80	66.5	34.5	1657.5
7/13/2015	2015	7	13	43	55	87	71	39	1696.5
7/14/2015	2015	7	14	44	55	84	69.5	37.5	1734
7/15/2015	2015	7	15	45	51	83	67	35	1769
7/16/2015	2015	7	16	46	50	82	66	34	1803
7/17/2015	2015	7	17	47	51	86	68.5	36.5	1839.5
7/18/2015	2015	7	18	48	55	80	67.5	35.5	1875
7/19/2015	2015	7	19	49	56	86	71	39	1914
7/20/2015	2015	7	20	50	53	82	67.5	35.5	1949.5
7/21/2015	2015	7	21	51	54	88	71	39	1988.5
7/22/2015	2015	7	22	52	52	88	70	38	2026.5
7/23/2015	2015	7	23	53	58	91	74.5	42.5	2069
7/24/2015	2015	7	24	54	61	89	75	43	2112
7/25/2015	2015	7	25	55	52	89	70.5	38.5	2150.5
7/26/2015	2015	7	26	56	57	92	74.5	42.5	2193
7/27/2015	2015	7	27	57	56	90	73	41	2234
7/28/2015	2015	7	28	58	58	90	74	42	2276
7/29/2015	2015	7	29	59	62	91	76.5	44.5	2320.5
7/30/2015	2015	7	30	60	58	82	70	38	2358.5
7/31/2015	2015	7	31	61	57	76	66.5	34.5	2393
8/1/2015	2015	8	1	62	58	82	70	38	2431
8/2/2015	2015	8	2	63	58	84	71	39	2470
8/3/2015	2015	8	3	64	53	83	68	36	2506
8/4/2015	2015	8	4	65	53	88	70.5	38.5	2544.5
8/5/2015	2015	8	5	66	50	93	71.5	39.5	2584
8/6/2015	2015	8	6	67	49	94	71.5	39.5	2623.5

8/7/2015	2015	8	7	68	61	94	77.5	45.5	2669
8/8/2015	2015	8	8	69	58	87	72.5	40.5	2709.5
8/9/2015	2015	8	9	70	49	80	64.5	32.5	2742
8/10/2015	2015	8	10	71	54	88	71	39	2781
8/11/2015	2015	8	11	72	59	87	73	41	2822
8/12/2015	2015	8	12	73	58	85	71.5	39.5	2861.5
8/13/2015	2015	8	13	74	53	89	71	39	2900.5
8/14/2015	2015	8	14	75	54	94	74	42	2942.5
8/15/2015	2015	8	15	76	56	96	76	44	2986.5
8/16/2015	2015	8	16	77	54	93	73.5	41.5	3028
8/17/2015	2015	8	17	78	54	96	75	43	3071
8/18/2015	2015	8	18	79	61	97	79	47	3118
8/19/2015	2015	8	19	80	47	95	71	39	3157
8/20/2015	2015	8	20	81	49	93	71	39	3196
8/21/2015	2015	8	21	82	55	92	73.5	41.5	3237.5
8/22/2015	2015	8	22	83	51	89	70	38	3275.5
8/23/2015	2015	8	23	84	55	91	73	41	3316.5
8/24/2015	2015	8	24	85	56	86	71	39	3355.5
8/25/2015	2015	8	25	86	55	88	71.5	39.5	3395
8/26/2015	2015	8	26	87	58	86	72	40	3435
8/27/2015	2015	8	27	88	55	80	67.5	35.5	3470.5
8/28/2015	2015	8	28	89	51	84	67.5	35.5	3506
8/29/2015	2015	8	29	90	55	88	71.5	39.5	3545.5
8/30/2015	2015	8	30	91	50	86	68	36	3581.5
8/31/2015	2015	8	31	92	54	92	73	41	3622.5
9/1/2015	2015	9	1	93	58	90	74	42	3664.5
9/2/2015	2015	9	2	94	52	85	68.5	36.5	3701
9/3/2015	2015	9	3	95	51	86	68.5	36.5	3737.5
9/4/2015	2015	9	4	96	55	85	70	38	3775.5
9/5/2015	2015	9	5	97	55	74	64.5	32.5	3808
9/6/2015	2015	9	6	98	46	74	60	28	3836
9/7/2015	2015	9	7	99	52	86	69	37	3873
9/8/2015	2015	9	8	100	51	88	69.5	37.5	3910.5
9/9/2015	2015	9	9	101	45	88	66.5	34.5	3945
9/10/2015	2015	9	10	102	46	87	66.5	34.5	3979.5
9/11/2015	2015	9	11	103	38	93	65.5	33.5	4013
9/12/2015	2015	9	12	104	47	88	67.5	35.5	4048.5
9/13/2015	2015	9	13	105	45	86	65.5	33.5	4082
9/14/2015	2015	9	14	106	51	90	70.5	38.5	4120.5
9/15/2015	2015	9	15	107	50	84	67	35	4155.5
9/16/2015	2015	9	16	108	47	83	65	33	4188.5
9/17/2015	2015	9	17	109	43	84	63.5	31.5	4220
9/18/2015	2015	9	18	110	46	86	66	34	4254
9/19/2015	2015	9	19	111	48	89	68.5	36.5	4290.5
9/20/2015	2015	9	20	112	42	81	61.5	29.5	4320
9/21/2015	2015	9	21	113	40	88	64	32	4352
9/22/2015	2015	9	22	114	44	84	64	32	4384
9/23/2015	2015	9	23	115	47	74	60.5	28.5	4412.5
9/24/2015	2015	9	24	116	45	83	64	32	4444.5
9/25/2015	2015	9	25	117	44	83	63.5	31.5	4476
9/26/2015	2015	9	26	118	40	81	60.5	28.5	4504.5
9/27/2015	2015	9	27	119	42	88	65	33	4537.5
9/28/2015	2015	9	28	120	43	90	66.5	34.5	4572
9/29/2015	2015	9	29	121	43	89	66	34	4606
9/30/2015	2015	9	30	122	49	91	70	38	4644
11/1/2015	2015	11	1	123	26	64	45	13	4657
11/2/2015	2015	11	2	124	24	73	48.5	16.5	4673.5
11/3/2015	2015	11	3	125	30	76	53	21	4694.5
11/4/2015	2015	11	4	126	37	71	54	22	4716.5
11/5/2015	2015	11	5	127	28	54	41	9	4725.5
11/6/2015	2015	11	6	128	18	49	33.5	1.5	4727
11/7/2015	2015	11	7	129	19	57	38	6	4733
11/8/2015	2015	11	8	130	21	53	37	5	4738
11/9/2015	2015	11	9	131	21	62	41.5	9.5	4747.5
11/10/2015	2015	11	10	132	26	68	47	15	4762.5
11/11/2015	2015	11	11	133	28	64	46	14	4776.5
11/12/2015	2015	11	12	134	14	51	32.5	0.5	4777
11/13/2015	2015	11	13	135	12	58	35	3	4780
11/14/2015	2015	11	14	136	13	59	36	4	4784
11/15/2015	2015	11	15	137	20	63	41.5	9.5	4793.5
11/16/2015	2015	11	16	138	28	48	38	6	4799.5
11/17/2015	2015	11	17	139	27	37	32	0	4799.5
11/18/2015	2015	11	18	140	23	52	37.5	5.5	4805
11/19/2015	2015	11	19	141	14	58	36	4	4809
11/20/2015	2015	11	20	142	17	63	40	8	4817
11/21/2015	2015	11	21	143	18	64	41	9	4826
11/22/2015	2015	11	22	144	11	53	32	0	4826
11/23/2015	2015	11	23	145	13	61	37	5	4831
11/24/2015	2015	11	24	146	16	68	42	10	4841
11/25/2015	2015	11	25	147	23	66	44.5	12.5	4853.5
11/26/2015	2015	11	26	148	32	65	48.5	16.5	4870
11/27/2015	2015	11	27	149	27	61	44	12	4882
11/28/2015	2015	11	28	150	28	47	37.5	5.5	4887.5
11/29/2015	2015	11	29	151	18	43	30.5	-1.5	4886
11/30/2015	2015	11	30	152	14	54	34	2	4888
12/1/2015	2015	12	1	153	8	45	26.5	-5.5	4882.5
12/2/2015	2015	12	2	154	6	47	26.5	-5.5	4877
12/3/2015	2015	12	3	155	9	53	31	-1	4876
12/4/2015	2015	12	4	156	12	62	37	5	4881
12/5/2015	2015	12	5	157	14	59	36.5	4.5	4885.5
12/6/2015	2015	12	6	158	10	59	34.5	2.5	4888
12/7/2015	2015	12	7	159	14	63	38.5	6.5	4894.5
12/8/2015	2015	12	8	160	14	70	42	10	4904.5

12/9/2015	2015	12	9	161	19	65	42	10	4914.5
12/10/2015	2015	12	10	162	17	66	41.5	9.5	4924
12/11/2015	2015	12	11	163	23	70	46.5	14.5	4938.5
12/12/2015	2015	12	12	164	32	58	45	13	4951.5
12/13/2015	2015	12	13	165	18	41	29.5	-2.5	4949
12/14/2015	2015	12	14	166	15	49	32	0	4949
12/15/2015	2015	12	15	167	18	45	31.5	-0.5	4948.5
12/16/2015	2015	12	16	168	9	36	22.5	-9.5	4939
12/17/2015	2015	12	17	169	8	39	23.5	-8.5	4930.5
12/18/2015	2015	12	18	170	8	42	25	-7	4923.5
12/19/2015	2015	12	19	171	10	52	31	-1	4922.5
12/20/2015	2015	12	20	172	13	45	29	-3	4919.5
12/21/2015	2015	12	21	173	19	47	33	1	4920.5
12/22/2015	2015	12	22	174	23	53	38	6	4926.5
12/23/2015	2015	12	23	175	34	49	41.5	9.5	4936
12/24/2015	2015	12	24	176	24	48	36	4	4940
12/25/2015	2015	12	25	177	25	45	35	3	4943
12/26/2015	2015	12	26	178	17	46	31.5	-0.5	4942.5
12/27/2015	2015	12	27	179	15	24	19.5	-12.5	4930
12/28/2015	2015	12	28	180	6	31	18.5	-13.5	4916.5
12/29/2015	2015	12	29	181	8	44	26	-6	4910.5
12/30/2015	2015	12	30	182	10	44	27	-5	4905.5
12/31/2015	2015	12	31	183	5	44	24.5	-7.5	4898
1/1/2016	2016	1	1	184	7	45	26	-6	4892
1/2/2016	2016	1	2	185	19	29	24	-8	4884
1/3/2016	2016	1	3	186	10	41	25.5	-6.5	4877.5
1/4/2016	2016	1	4	187	11	48	29.5	-2.5	4875
1/5/2016	2016	1	5	188	23	38	30.5	-1.5	4873.5
1/6/2016	2016	1	6	189	25	45	35	3	4876.5
1/7/2016	2016	1	7	190	28	44	36	4	4880.5
1/8/2016	2016	1	8	191	18	43	30.5	-1.5	4879
1/9/2016	2016	1	9	192	9	36	22.5	-9.5	4869.5
1/10/2016	2016	1	10	193	6	40	23	-9	4860.5
1/11/2016	2016	1	11	194	8	36	22	-10	4850.5
1/12/2016	2016	1	12	195	5	38	21.5	-10.5	4840
1/13/2016	2016	1	13	196	7	51	29	-3	4837
1/14/2016	2016	1	14	197	9	53	31	-1	4836
1/15/2016	2016	1	15	198	10	55	32.5	0.5	4836.5
1/16/2016	2016	1	16	199	13	39	26	-6	4830.5
1/17/2016	2016	1	17	200	16	36	26	-6	4824.5
1/18/2016	2016	1	18	201	10	52	31	-1	4823.5
1/19/2016	2016	1	19	202	14	57	35.5	3.5	4827
1/20/2016	2016	1	20	203	23	54	38.5	6.5	4833.5
1/21/2016	2016	1	21	204	10	57	33.5	1.5	4835
1/22/2016	2016	1	22	205	14	46	30	-2	4833
1/23/2016	2016	1	23	206	14	56	35	3	4836
1/24/2016	2016	1	24	207	18	66	42	10	4846
1/25/2016	2016	1	25	208	15	51	33	1	4847
1/26/2016	2016	1	26	209	9	46	27.5	-4.5	4842.5
1/27/2016	2016	1	27	210	9	48	28.5	-3.5	4839
1/28/2016	2016	1	28	211	12	54	33	1	4840
1/29/2016	2016	1	29	212	12	60	36	4	4844
1/30/2016	2016	1	30	213	13	67	40	8	4852
1/31/2016	2016	1	31	214	32	63	47.5	15.5	4867.5
2/1/2016	2016	2	1	215	25	59	42	10	4877.5
2/2/2016	2016	2	2	216	15	36	25.5	-6.5	4871
2/3/2016	2016	2	3	217	4	34	19	-13	4858
2/4/2016	2016	2	4	218	0	36	18	-14	4844
2/5/2016	2016	2	5	219	4	44	24	-8	4836
2/6/2016	2016	2	6	220	5	43	24	-8	4828
2/7/2016	2016	2	7	221	10	54	32	0	4828
2/8/2016	2016	2	8	222	12	58	35	3	4831
2/9/2016	2016	2	9	223	13	61	37	5	4836
2/10/2016	2016	2	10	224	11	62	36.5	4.5	4840.5
2/11/2016	2016	2	11	225	11	71	41	9	4849.5
2/12/2016	2016	2	12	226	15	69	42	10	4859.5
2/13/2016	2016	2	13	227	15	74	44.5	12.5	4872
2/14/2016	2016	2	14	228	19	72	45.5	13.5	4885.5
2/15/2016	2016	2	15	229	22	64	43	11	4896.5
2/16/2016	2016	2	16	230	20	65	42.5	10.5	4907
2/17/2016	2016	2	17	231	14	69	41.5	9.5	4916.5
2/18/2016	2016	2	18	232	21	75	48	16	4932.5
2/19/2016	2016	2	19	233	27	71	49	17	4949.5
2/20/2016	2016	2	20	234	20	69	44.5	12.5	4962
2/21/2016	2016	2	21	235	19	73	46	14	4976
2/22/2016	2016	2	22	236	12	73	42.5	10.5	4986.5
2/23/2016	2016	2	23	237	17	73	45	13	4999.5
2/24/2016	2016	2	24	238	19	46	32.5	0.5	5000
2/25/2016	2016	2	25	239	12	59	35.5	3.5	5003.5
2/26/2016	2016	2	26	240	15	67	41	9	5012.5
2/27/2016	2016	2	27	241	11	70	40.5	8.5	5021
2/28/2016	2016	2	28	242	20	73	46.5	14.5	5035.5
2/29/2016	2016	2	29	243	20	73	46.5	14.5	5050
3/1/2016	2016	3	1	244	20	73	46.5	14.5	5064.5
3/2/2016	2016	3	2	245	22	72	47	15	5079.5
3/3/2016	2016	3	3	246	22	74	48	16	5095.5
3/4/2016	2016	3	4	247	24	76	50	18	5113.5
3/5/2016	2016	3	5	248	25	78	51.5	19.5	5133
3/6/2016	2016	3	6	249	37	68	52.5	20.5	5153.5
3/7/2016	2016	3	7	250	33	70	51.5	19.5	5173
3/8/2016	2016	3	8	251	24	70	47	15	5188
3/9/2016	2016	3	9	252	13	57	35	3	5191
3/10/2016	2016	3	10	253	18	65	41.5	9.5	5200.5

3/11/2016	2016	3	11	254	10	73	41.5	9.5	5210
3/12/2016	2016	3	12	255	20	76	48	16	5226
3/13/2016	2016	3	13	256	19	54	36.5	4.5	5230.5
3/14/2016	2016	3	14	257	37	69	53	21	5251.5
3/15/2016	2016	3	15	258	34	69	51.5	19.5	5271
3/16/2016	2016	3	16	259	21	63	42	10	5281
3/17/2016	2016	3	17	260	17	67	42	10	5291
3/18/2016	2016	3	18	261	20	72	46	14	5305
3/19/2016	2016	3	19	262	20	73	46.5	14.5	5319.5
3/20/2016	2016	3	20	263	27	71	49	17	5336.5
3/21/2016	2016	3	21	264	11	69	40	8	5344.5
3/22/2016	2016	3	22	265	22	78	50	18	5362.5
3/23/2016	2016	3	23	266	27	70	48.5	16.5	5379
3/24/2016	2016	3	24	267	16	55	35.5	3.5	5382.5
3/25/2016	2016	3	25	268	14	47	30.5	-1.5	5381
3/26/2016	2016	3	26	269	17	68	42.5	10.5	5391.5
3/27/2016	2016	3	27	270	10	60	35	3	5394.5
3/28/2016	2016	3	28	271	19	71	45	13	5407.5
3/29/2016	2016	3	29	272	25	65	45	13	5420.5
3/30/2016	2016	3	30	273	23	66	44.5	12.5	5433
3/31/2016	2016	3	31	274	13	55	34	2	5435
4/1/2016	2016	4	1	275	20	61	40.5	8.5	5443.5
4/2/2016	2016	4	2	276	15	61	38	6	5449.5
4/3/2016	2016	4	3	277	19	67	43	11	5460.5
4/4/2016	2016	4	4	278	24	74	49	17	5477.5
4/5/2016	2016	4	5	279	29	78	53.5	21.5	5499
4/6/2016	2016	4	6	280	25	76	50.5	18.5	5517.5
4/7/2016	2016	4	7	281	27	78	52.5	20.5	5538
4/8/2016	2016	4	8	282	35	68	51.5	19.5	5557.5
4/9/2016	2016	4	9	283	32	73	52.5	20.5	5578
4/10/2016	2016	4	10	284	34	69	51.5	19.5	5597.5
4/11/2016	2016	4	11	285	31	65	48	16	5613.5
4/12/2016	2016	4	12	286	35	67	51	19	5632.5
4/13/2016	2016	4	13	287	30	65	47.5	15.5	5648
4/14/2016	2016	4	14	288	35	73	54	22	5670
4/15/2016	2016	4	15	289	41	76	58.5	26.5	5696.5
4/16/2016	2016	4	16	290	33	67	50	18	5714.5
4/17/2016	2016	4	17	291	33	49	41	9	5723.5
4/18/2016	2016	4	18	292	36	52	44	12	5735.5
4/19/2016	2016	4	19	293	26	63	44.5	12.5	5748
4/20/2016	2016	4	20	294	28	68	48	16	5764
4/21/2016	2016	4	21	295	32	79	55.5	23.5	5787.5
4/22/2016	2016	4	22	296	44	80	62	30	5817.5
4/23/2016	2016	4	23	297	41	77	59	27	5844.5
4/24/2016	2016	4	24	298	31	79	55	23	5867.5
4/25/2016	2016	4	25	299	34	73	53.5	21.5	5889
4/26/2016	2016	4	26	300	35	73	54	22	5911
4/27/2016	2016	4	27	301	32	60	46	14	5925
4/28/2016	2016	4	28	302	40	70	55	23	5948
4/29/2016	2016	4	29	303	32	71	51.5	19.5	5967.5
4/30/2016	2016	4	30	304	35	61	48	16	5983.5
5/1/2016	2016	5	1	305	32	62	47	15	5998.5
5/2/2016	2016	5	2	306	33	43	38	6	6004.5
5/3/2016	2016	5	3	307	33	64	48.5	16.5	6021
5/4/2016	2016	5	4	308	34	72	53	21	6042
5/5/2016	2016	5	5	309	38	75	56.5	24.5	6066.5
5/6/2016	2016	5	6	310	52	81	66.5	34.5	6101
5/7/2016	2016	5	7	311	33	83	58	26	6127
5/8/2016	2016	5	8	312	35	67	51	19	6146
5/9/2016	2016	5	9	313	40	64	52	20	6166
5/10/2016	2016	5	10	314	41	72	56.5	24.5	6190.5
5/11/2016	2016	5	11	315	40	79	59.5	27.5	6218
5/12/2016	2016	5	12	316	35	79	57	25	6243
5/13/2016	2016	5	13	317	35	83	59	27	6270
5/14/2016	2016	5	14	318	35	83	59	27	6297
5/15/2016	2016	5	15	319	47	87	67	35	6332
5/16/2016	2016	5	16	320	40	82	61	29	6361
5/17/2016	2016	5	17	321	36	77	56.5	24.5	6385.5
5/18/2016	2016	5	18	322	33	65	49	17	6402.5
5/19/2016	2016	5	19	323	29	59	44	12	6414.5
5/20/2016	2016	5	20	324	34	76	55	23	6437.5
5/21/2016	2016	5	21	325	44	81	62.5	30.5	6468
5/22/2016	2016	5	22	326	39	82	60.5	28.5	6496.5
5/23/2016	2016	5	23	327	35	81	58	26	6522.5
5/24/2016	2016	5	24	328	35	81	58	26	6548.5
5/25/2016	2016	5	25	329	37	80	58.5	26.5	6575
5/26/2016	2016	5	26	330	34	79	56.5	24.5	6599.5
5/27/2016	2016	5	27	331	37	69	53	21	6620.5
5/28/2016	2016	5	28	332	33	77	55	23	6643.5
5/29/2016	2016	5	29	333	31	79	55	23	6666.5
5/30/2016	2016	5	30	334	32	84	58	26	6692.5
5/31/2016	2016	5	31	335	40	83	61.5	29.5	6722
6/2/2016	2016	6	2	1	45	79	62	30	30
6/3/2016	2016	6	3	2	46	82	64	32	62
6/4/2016	2016	6	4	3	41	94	67.5	35.5	97.5
6/5/2016	2016	6	5	4	41	94	67.5	35.5	133
6/6/2016	2016	6	6	5	43	91	67	35	168
6/8/2016	2016	6	8	6	45	96	70.5	38.5	206.5
6/9/2016	2016	6	9	7	58	96	77	45	251.5
6/10/2016	2016	6	10	8	49	97	73	41	292.5
6/11/2016	2016	6	11	9	52	100	76	44	336.5
6/12/2016	2016	6	12	10	51	85	68	36	372.5
6/13/2016	2016	6	13	11	49	94	71.5	39.5	412

6/14/2016	2016	6	14	12	42	90	66	34	446
6/15/2016	2016	6	15	13	41	89	65	33	479
6/16/2016	2016	6	16	14	42	92	67	35	514
6/17/2016	2016	6	17	15	40	91	65.5	33.5	547.5
6/18/2016	2016	6	18	16	40	96	68	36	583.5
6/19/2016	2016	6	19	17	49	97	73	41	624.5
6/20/2016	2016	6	20	18	49	103	76	44	668.5
6/21/2016	2016	6	21	19	49	96	72.5	40.5	709
6/22/2016	2016	6	22	20	59	100	79.5	47.5	756.5
6/23/2016	2016	6	23	21	57	100	78.5	46.5	803
6/24/2016	2016	6	24	22	53	98	75.5	43.5	846.5
6/25/2016	2016	6	25	23	56	92	74	42	888.5
6/26/2016	2016	6	26	24	61	92	76.5	44.5	933
6/27/2016	2016	6	27	25	49	91	70	38	971
6/28/2016	2016	6	28	26	60	91	75.5	43.5	1014.5
6/29/2016	2016	6	29	27	51	90	70.5	38.5	1053
6/30/2016	2016	6	30	28	59	92	75.5	43.5	1096.5
7/1/2016	2016	7	1	29	58	87	72.5	40.5	1137
7/2/2016	2016	7	2	30	51	87	69	37	1174
7/3/2016	2016	7	3	31	51	85	68	36	1210
7/4/2016	2016	7	4	32	50	94	72	40	1250
7/5/2016	2016	7	5	33	51	96	73.5	41.5	1291.5
7/6/2016	2016	7	6	34	60	96	78	46	1337.5
7/7/2016	2016	7	7	35	56	96	76	44	1381.5
7/8/2016	2016	7	8	36	55	95	75	43	1424.5
7/9/2016	2016	7	9	37	53	97	75	43	1467.5
7/10/2016	2016	7	10	38	60	98	79	47	1514.5
7/11/2016	2016	7	11	39	54	95	74.5	42.5	1557
7/12/2016	2016	7	12	40	52	95	73.5	41.5	1598.5
7/13/2016	2016	7	13	41	57	96	76.5	44.5	1643
7/14/2016	2016	7	14	42	57	96	76.5	44.5	1687.5
7/15/2016	2016	7	15	43	57	100	78.5	46.5	1734
7/16/2016	2016	7	16	44	57	101	79	47	1781
7/17/2016	2016	7	17	45	57	100	78.5	46.5	1827.5
7/18/2016	2016	7	18	46	56	100	78	46	1873.5
7/19/2016	2016	7	19	47	55	100	77.5	45.5	1919
7/20/2016	2016	7	20	48	60	90	75	43	1962
7/21/2016	2016	7	21	49	50	89	69.5	37.5	1999.5
7/22/2016	2016	7	22	50	50	95	72.5	40.5	2040
7/23/2016	2016	7	23	51	57	97	77	45	2085
7/24/2016	2016	7	24	52	56	100	78	46	2131
7/25/2016	2016	7	25	53	56	100	78	46	2177
7/26/2016	2016	7	26	54	60	93	76.5	44.5	2221.5
7/27/2016	2016	7	27	55	54	88	71	39	2260.5
7/28/2016	2016	7	28	56	67	92	79.5	47.5	2308
7/29/2016	2016	7	29	57	53	93	73	41	2349
7/30/2016	2016	7	30	58	55	98	76.5	44.5	2393.5
7/31/2016	2016	7	31	59	59	95	77	45	2438.5
8/1/2016	2016	8	1	60	60	94	77	45	2483.5
8/2/2016	2016	8	2	61	58	93	75.5	43.5	2527
8/3/2016	2016	8	3	62	59	90	74.5	42.5	2569.5
8/4/2016	2016	8	4	63	57	90	73.5	41.5	2611
8/5/2016	2016	8	5	64	60	90	75	43	2654
8/6/2016	2016	8	6	65	52	79	65.5	33.5	2687.5
8/7/2016	2016	8	7	66	51	84	67.5	35.5	2723
8/8/2016	2016	8	8	67	53	88	70.5	38.5	2761.5
8/9/2016	2016	8	9	68	50	88	69	37	2798.5
8/10/2016	2016	8	10	69	60	90	75	43	2841.5
8/11/2016	2016	8	11	70	56	92	74	42	2883.5
8/12/2016	2016	8	12	71	50	87	68.5	36.5	2920
8/13/2016	2016	8	13	72	60	91	75.5	43.5	2963.5
8/14/2016	2016	8	14	73	49	83	66	34	2997.5
8/15/2016	2016	8	15	74	50	86	68	36	3033.5
8/16/2016	2016	8	16	75	50	95	72.5	40.5	3074
8/17/2016	2016	8	17	76	52	88	70	38	3112
8/18/2016	2016	8	18	77	52	87	69.5	37.5	3149.5
8/19/2016	2016	8	19	78	51	85	68	36	3185.5
8/20/2016	2016	8	20	79	51	85	68	36	3221.5
8/21/2016	2016	8	21	80	50	85	67.5	35.5	3257
8/22/2016	2016	8	22	81	51	82	66.5	34.5	3291.5
8/23/2016	2016	8	23	82	47	81	64	32	3323.5
8/24/2016	2016	8	24	83	46	78	62	30	3353.5
8/25/2016	2016	8	25	84	45	81	63	31	3384.5
8/26/2016	2016	8	26	85	47	83	65	33	3417.5
8/27/2016	2016	8	27	86	50	79	64.5	32.5	3450
8/28/2016	2016	8	28	87	45	80	62.5	30.5	3480.5
8/29/2016	2016	8	29	88	42	77	59.5	27.5	3508
8/30/2016	2016	8	30	89	46	83	64.5	32.5	3540.5
8/31/2016	2016	8	31	90	52	82	67	35	3575.5
9/1/2016	2016	9	1	91	53	84	68.5	36.5	3612
9/2/2016	2016	9	2	92	54	86	70	38	3650
9/3/2016	2016	9	3	93	51	85	68	36	3686
9/4/2016	2016	9	4	94	48	85	66.5	34.5	3720.5
9/5/2016	2016	9	5	95	44	89	66.5	34.5	3755
9/6/2016	2016	9	6	96	47	92	69.5	37.5	3792.5
9/7/2016	2016	9	7	97	50	86	68	36	3828.5
9/8/2016	2016	9	8	98	46	76	61	29	3857.5
9/9/2016	2016	9	9	99	39	90	64.5	32.5	3890
9/10/2016	2016	9	10	100	48	92	70	38	3928
9/11/2016	2016	9	11	101	53	80	66.5	34.5	3962.5
9/12/2016	2016	9	12	102	43	91	67	35	3997.5
9/13/2016	2016	9	13	103	43	85	64	32	4029.5
9/14/2016	2016	9	14	104	46	81	63.5	31.5	4061

9/15/2016	2016	9	15	105	40	81	60.5	28.5	4089.5
9/16/2016	2016	9	16	106	37	85	61	29	4118.5
9/17/2016	2016	9	17	107	37	81	59	27	4145.5
9/18/2016	2016	9	18	108	33	87	60	28	4173.5
9/19/2016	2016	9	19	109	33	87	60	28	4201.5
9/20/2016	2016	9	20	110	41	92	66.5	34.5	4236
9/21/2016	2016	9	21	111	53	88	70.5	38.5	4274.5
9/22/2016	2016	9	22	112	48	82	65	33	4307.5
9/23/2016	2016	9	23	113	52	87	69.5	37.5	4345
9/24/2016	2016	9	24	114	27	87	57	25	4370
9/25/2016	2016	9	25	115	31	72	51.5	19.5	4389.5
9/26/2016	2016	9	26	116	38	73	55.5	23.5	4413
9/27/2016	2016	9	27	117	40	71	55.5	23.5	4436.5
9/28/2016	2016	9	28	118	39	78	58.5	26.5	4463
9/29/2016	2016	9	29	119	45	74	59.5	27.5	4490.5
9/30/2016	2016	9	30	120	45	77	61	29	4519.5
10/1/2016	2016	10	1	121	40	78	59	27	4546.5
10/2/2016	2016	10	2	122	41	79	60	28	4574.5
10/3/2016	2016	10	3	123	45	79	62	30	4604.5
10/4/2016	2016	10	4	124	36	74	55	23	4627.5
10/5/2016	2016	10	5	125	32	72	52	20	4647.5
10/6/2016	2016	10	6	126	37	72	54.5	22.5	4670
10/7/2016	2016	10	7	127	29	75	52	20	4690
10/8/2016	2016	10	8	128	32	68	50	18	4708
10/9/2016	2016	10	9	129	41	69	55	23	4731
10/10/2016	2016	10	10	130	35	75	55	23	4754
10/11/2016	2016	10	11	131	36	80	58	26	4780
10/12/2016	2016	10	12	132	35	81	58	26	4806
10/13/2016	2016	10	13	133	31	78	54.5	22.5	4828.5
10/14/2016	2016	10	14	134	31	81	56	24	4852.5
10/15/2016	2016	10	15	135	33	86	59.5	27.5	4880
10/16/2016	2016	10	16	136	39	85	62	30	4910
10/17/2016	2016	10	17	137	46	80	63	31	4941
10/18/2016	2016	10	18	138	40	84	62	30	4971
10/19/2016	2016	10	19	139	34	81	57.5	25.5	4996.5
10/20/2016	2016	10	20	140	22	72	47	15	5011.5
10/21/2016	2016	10	21	141	24	67	45.5	13.5	5025
10/22/2016	2016	10	22	142	27	82	54.5	22.5	5047.5
10/23/2016	2016	10	23	143	34	83	58.5	26.5	5074
10/24/2016	2016	10	24	144	32	83	57.5	25.5	5099.5
10/25/2016	2016	10	25	145	34	76	55	23	5122.5
10/26/2016	2016	10	26	146	34	76	55	23	5145.5
10/27/2016	2016	10	27	147	32	78	55	23	5168.5
10/28/2016	2016	10	28	148	33	79	56	24	5192.5
10/29/2016	2016	10	29	149	36	79	57.5	25.5	5218
10/30/2016	2016	10	30	150	34	80	57	25	5243
10/31/2016	2016	10	31	151	41	78	59.5	27.5	5270.5
11/1/2016	2016	11	1	152	40	75	57.5	25.5	5296
11/2/2016	2016	11	2	153	32	69	50.5	18.5	5314.5
11/3/2016	2016	11	3	154	34	69	51.5	19.5	5334
11/4/2016	2016	11	4	155	45	68	56.5	24.5	5358.5
11/5/2016	2016	11	5	156	42	58	50	18	5376.5
11/6/2016	2016	11	6	157	34	62	48	16	5392.5
11/7/2016	2016	11	7	158	32	63	47.5	15.5	5408
11/8/2016	2016	11	8	159	29	69	49	17	5425
11/9/2016	2016	11	9	160	27	63	45	13	5438
11/10/2016	2016	11	10	161	23	63	43	11	5449
11/11/2016	2016	11	11	162	25	60	42.5	10.5	5459.5
11/12/2016	2016	11	12	163	24	61	42.5	10.5	5470
11/13/2016	2016	11	13	164	23	67	45	13	5483
11/14/2016	2016	11	14	165	24	67	45.5	13.5	5496.5
11/15/2016	2016	11	15	166	24	67	45.5	13.5	5510
11/16/2016	2016	11	16	167	27	75	51	19	5529
11/17/2016	2016	11	17	168	33	72	52.5	20.5	5549.5
11/18/2016	2016	11	18	169	15	52	33.5	1.5	5551
11/19/2016	2016	11	19	170	19	58	38.5	6.5	5557.5
11/20/2016	2016	11	20	171	23	58	40.5	8.5	5566
11/21/2016	2016	11	21	172	26	66	46	14	5580
11/22/2016	2016	11	22	173	33	56	44.5	12.5	5592.5
11/23/2016	2016	11	23	174	19	54	36.5	4.5	5597
11/24/2016	2016	11	24	175	22	56	39	7	5604
11/25/2016	2016	11	25	176	14	52	33	1	5605
11/26/2016	2016	11	26	177	14	52	33	1	5606
11/27/2016	2016	11	27	178	14	53	33.5	1.5	5607.5
11/28/2016	2016	11	28	179	14	48	31	-1	5606.5
11/29/2016	2016	11	29	180	14	37	25.5	-6.5	5600
11/30/2016	2016	11	30	181	3	33	18	-14	5586
12/1/2016	2016	12	1	182	8	38	23	-9	5577
12/2/2016	2016	12	2	183	13	48	30.5	-1.5	5575.5
12/3/2016	2016	12	3	184	19	46	32.5	0.5	5576
12/4/2016	2016	12	4	185	11	46	28.5	-3.5	5572.5
12/5/2016	2016	12	5	186	13	49	31	-1	5571.5
12/6/2016	2016	12	6	187	18	54	36	4	5575.5
12/7/2016	2016	12	7	188	36	50	43	11	5586.5
12/8/2016	2016	12	8	189	18	47	32.5	0.5	5587
12/9/2016	2016	12	9	190	15	44	29.5	-2.5	5584.5
12/10/2016	2016	12	10	191	17	63	40	8	5592.5
12/11/2016	2016	12	11	192	25	66	45.5	13.5	5606
12/12/2016	2016	12	12	193	20	60	40	8	5614
12/13/2016	2016	12	13	194	26	61	43.5	11.5	5625.5
12/14/2016	2016	12	14	195	28	61	44.5	12.5	5638
12/15/2016	2016	12	15	196	28	61	44.5	12.5	5650.5
12/16/2016	2016	12	16	197	27	63	45	13	5663.5

12/17/2016	2016	12	17	198	28	53	40.5	8.5	5672
12/18/2016	2016	12	18	199	9	40	24.5	-7.5	5664.5
12/19/2016	2016	12	19	200	8	41	24.5	-7.5	5657
12/20/2016	2016	12	20	201	9	52	30.5	-1.5	5655.5
12/21/2016	2016	12	21	202	15	55	35	3	5658.5
12/22/2016	2016	12	22	203	28	67	47.5	15.5	5674
12/23/2016	2016	12	23	204	33	39	36	4	5678
12/24/2016	2016	12	24	205	27	53	40	8	5686
12/25/2016	2016	12	25	206	23	48	35.5	3.5	5689.5
12/26/2016	2016	12	26	207	18	35	26.5	-5.5	5684
12/27/2016	2016	12	27	208	17	43	30	-2	5682
12/28/2016	2016	12	28	209	18	59	38.5	6.5	5688.5
12/29/2016	2016	12	29	210	22	53	37.5	5.5	5694
12/30/2016	2016	12	30	211	15	47	31	-1	5693
12/31/2016	2016	12	31	212	17	55	36	4	5697
1/1/2017	2017	1	1	213	30	49	39.5	7.5	5704.5
1/2/2017	2017	1	2	214	29	49	39	7	5711.5
1/3/2017	2017	1	3	215	23	44	33.5	1.5	5713
1/4/2017	2017	1	4	216	22	50	36	4	5717
1/5/2017	2017	1	5	217	25	56	40.5	8.5	5725.5
1/6/2017	2017	1	6	218	20	53	36.5	4.5	5730
1/7/2017	2017	1	7	219	5	34	19.5	-12.5	5717.5
1/8/2017	2017	1	8	220	5	41	23	-9	5708.5
1/9/2017	2017	1	9	221	26	64	45	13	5721.5
1/10/2017	2017	1	10	222	32	61	46.5	14.5	5736
1/11/2017	2017	1	11	223	34	61	47.5	15.5	5751.5
1/12/2017	2017	1	12	224	22	55	38.5	6.5	5758
1/13/2017	2017	1	13	225	24	60	42	10	5768
1/14/2017	2017	1	14	226	23	53	38	6	5774
1/15/2017	2017	1	15	227	24	56	40	8	5782
1/16/2017	2017	1	16	228	30	44	37	5	5787
1/17/2017	2017	1	17	229	31	46	38.5	6.5	5793.5
1/18/2017	2017	1	18	230	27	44	35.5	3.5	5797
1/19/2017	2017	1	19	231	23	50	36.5	4.5	5801.5
1/20/2017	2017	1	20	232	25	47	36	4	5805.5
1/21/2017	2017	1	21	233	26	41	33.5	1.5	5807
1/22/2017	2017	1	22	234	17	40	28.5	-3.5	5803.5
1/23/2017	2017	1	23	235	21	41	31	-1	5802.5
1/24/2017	2017	1	24	236	25	54	39.5	7.5	5810
1/25/2017	2017	1	25	237	12	34	23	-9	5801
1/26/2017	2017	1	26	238	9	36	22.5	-9.5	5791.5
1/27/2017	2017	1	27	239	8	33	20.5	-11.5	5780
1/28/2017	2017	1	28	240	4	32	18	-14	5766
1/29/2017	2017	1	29	241	5	43	24	-8	5758
1/30/2017	2017	1	30	242	14	53	33.5	1.5	5759.5
1/31/2017	2017	1	31	243	15	56	35.5	3.5	5763
2/1/2017	2017	2	1	244	17	64	40.5	8.5	5771.5
2/2/2017	2017	2	2	245	18	67	42.5	10.5	5782
2/3/2017	2017	2	3	246	20	65	42.5	10.5	5792.5
2/4/2017	2017	2	4	247	14	59	36.5	4.5	5797
2/5/2017	2017	2	5	248	15	62	38.5	6.5	5803.5
2/6/2017	2017	2	6	249	27	68	47.5	15.5	5819
2/7/2017	2017	2	7	250	31	62	46.5	14.5	5833.5
2/8/2017	2017	2	8	251	27	55	41	9	5842.5
2/9/2017	2017	2	9	252	22	62	42	10	5852.5
2/10/2017	2017	2	10	253	24	70	47	15	5867.5
2/11/2017	2017	2	11	254	24	74	49	17	5884.5
2/12/2017	2017	2	12	255	24	69	46.5	14.5	5899
2/13/2017	2017	2	13	256	25	46	35.5	3.5	5902.5
2/14/2017	2017	2	14	257	29	44	36.5	4.5	5907
2/15/2017	2017	2	15	258	19	47	33	1	5908
2/16/2017	2017	2	16	259	19	57	38	6	5914
2/17/2017	2017	2	17	260	24	63	43.5	11.5	5925.5
2/18/2017	2017	2	18	261	23	63	43	11	5936.5
2/19/2017	2017	2	19	262	31	54	42.5	10.5	5947
2/20/2017	2017	2	20	263	29	52	40.5	8.5	5955.5
2/21/2017	2017	2	21	264	25	63	44	12	5967.5
2/22/2017	2017	2	22	265	29	72	50.5	18.5	5986
2/23/2017	2017	2	23	266	38	62	50	18	6004
2/24/2017	2017	2	24	267	16	51	33.5	1.5	6005.5
2/25/2017	2017	2	25	268	8	48	28	-4	6001.5
2/26/2017	2017	2	26	269	9	52	30.5	-1.5	6000
2/27/2017	2017	2	27	270	20	48	34	2	6002
2/28/2017	2017	2	28	271	28	56	42	10	6012
3/1/2017	2017	3	1	272	19	49	34	2	6014
3/2/2017	2017	3	2	273	12	48	30	-2	6012
3/3/2017	2017	3	3	274	11	58	34.5	2.5	6014.5
3/4/2017	2017	3	4	275	21	60	40.5	8.5	6023
3/5/2017	2017	3	5	276	34	64	49	17	6040
3/6/2017	2017	3	6	277	36	63	49.5	17.5	6057.5
3/7/2017	2017	3	7	278	13	54	33.5	1.5	6059
3/8/2017	2017	3	8	279	12	65	38.5	6.5	6065.5
3/9/2017	2017	3	9	280	22	73	47.5	15.5	6081
3/10/2017	2017	3	10	281	23	76	49.5	17.5	6098.5
3/11/2017	2017	3	11	282	22	79	50.5	18.5	6117
3/12/2017	2017	3	12	283	22	75	48.5	16.5	6133.5
3/13/2017	2017	3	13	284	24	74	49	17	6150.5
3/14/2017	2017	3	14	285	25	75	50	18	6168.5
3/15/2017	2017	3	15	286	23	77	50	18	6186.5
3/16/2017	2017	3	16	287	24	82	53	21	6207.5
3/17/2017	2017	3	17	288	29	79	54	22	6229.5
3/18/2017	2017	3	18	289	28	79	53.5	21.5	6251
3/19/2017	2017	3	19	290	28	81	54.5	22.5	6273.5

3/20/2017	2017	3	20	291	27	80	53.5	21.5	6295
3/21/2017	2017	3	21	292	30	82	56	24	6319
3/22/2017	2017	3	22	293	30	78	54	22	6341
3/23/2017	2017	3	23	294	34	78	56	24	6365
3/24/2017	2017	3	24	295	32	60	46	14	6379
3/25/2017	2017	3	25	296	22	68	45	13	6392
3/26/2017	2017	3	26	297	23	72	47.5	15.5	6407.5
3/27/2017	2017	3	27	298	24	68	46	14	6421.5
3/28/2017	2017	3	28	299	29	66	47.5	15.5	6437
3/29/2017	2017	3	29	300	35	59	47	15	6452
3/30/2017	2017	3	30	301	24	64	44	12	6464
3/31/2017	2017	3	31	302	30	71	50.5	18.5	6482.5
4/1/2017	2017	4	1	303	27	55	41	9	6491.5
4/2/2017	2017	4	2	304	26	43	34.5	2.5	6494
4/3/2017	2017	4	3	305	30	63	46.5	14.5	6508.5
4/4/2017	2017	4	4	306	34	67	50.5	18.5	6527
4/5/2017	2017	4	5	307	22	58	40	8	6535
4/6/2017	2017	4	6	308	22	66	44	12	6547
4/7/2017	2017	4	7	309	29	74	51.5	19.5	6566.5
4/8/2017	2017	4	8	310	29	78	53.5	21.5	6588
4/9/2017	2017	4	9	311	30	74	52	20	6608
4/10/2017	2017	4	10	312	20	67	43.5	11.5	6619.5
4/11/2017	2017	4	11	313	21	65	43	11	6630.5
4/12/2017	2017	4	12	314	33	71	52	20	6650.5
4/13/2017	2017	4	13	315	30	81	55.5	23.5	6674
4/14/2017	2017	4	14	316	32	78	55	23	6697
4/15/2017	2017	4	15	317	32	80	56	24	6721
4/16/2017	2017	4	16	318	29	79	54	22	6743
4/17/2017	2017	4	17	319	29	81	55	23	6766
4/18/2017	2017	4	18	320	36	80	58	26	6792
4/19/2017	2017	4	19	321	41	84	62.5	30.5	6822.5
4/20/2017	2017	4	20	322	32	81	56.5	24.5	6847
4/21/2017	2017	4	21	323	37	77	57	25	6872
4/22/2017	2017	4	22	324	30	80	55	23	6895
4/23/2017	2017	4	23	325	30	78	54	22	6917
4/24/2017	2017	4	24	326	40	83	61.5	29.5	6946.5
4/25/2017	2017	4	25	327	43	78	60.5	28.5	6975
4/26/2017	2017	4	26	328	26	63	44.5	12.5	6987.5
4/27/2017	2017	4	27	329	40	70	55	23	7010.5
4/28/2017	2017	4	28	330	38	73	55.5	23.5	7034
4/29/2017	2017	4	29	331	23	43	33	1	7035
4/30/2017	2017	4	30	332	23	52	37.5	5.5	7040.5
6/1/2017	2017	6	1	1	41	79	60	28	28
6/2/2017	2017	6	2	2	47	79	63	31	59
6/3/2017	2017	6	3	3	41	79	60	28	87
6/4/2017	2017	6	4	4	41	87	64	32	119
6/5/2017	2017	6	5	5	46	94	70	38	157
6/6/2017	2017	6	6	6	57	93	75	43	200
6/7/2017	2017	6	7	7	58	86	72	40	240
6/8/2017	2017	6	8	8	55	94	74.5	42.5	282.5
6/9/2017	2017	6	9	9	51	94	72.5	40.5	323
6/10/2017	2017	6	10	10	51	95	73	41	364
6/11/2017	2017	6	11	11	42	92	67	35	399
6/12/2017	2017	6	12	12	47	90	68.5	36.5	435.5
6/13/2017	2017	6	13	13	42	88	65	33	468.5
6/14/2017	2017	6	14	14	35	84	59.5	27.5	496
6/15/2017	2017	6	15	15	39	93	66	34	530
6/16/2017	2017	6	16	16	41	96	68.5	36.5	566.5
6/17/2017	2017	6	17	17	41	98	69.5	37.5	604
6/18/2017	2017	6	18	18	41	100	70.5	38.5	642.5
6/19/2017	2017	6	19	19	53	101	77	45	687.5
6/20/2017	2017	6	20	20	60	101	80.5	48.5	736
6/21/2017	2017	6	21	21	57	104	80.5	48.5	784.5
6/22/2017	2017	6	22	22	56	103	79.5	47.5	832
6/23/2017	2017	6	23	23	56	103	79.5	47.5	879.5
6/24/2017	2017	6	24	24	56	103	79.5	47.5	927
6/25/2017	2017	6	25	25	56	103	79.5	47.5	974.5
6/26/2017	2017	6	26	26	54	100	77	45	1019.5
6/27/2017	2017	6	27	27	53	82	67.5	35.5	1055
6/28/2017	2017	6	28	28	53	80	66.5	34.5	1089.5
6/29/2017	2017	6	29	29	52	80	66	34	1123.5
6/30/2017	2017	6	30	30	53	83	68	36	1159.5
7/1/2017	2017	7	1	31	50	83	66.5	34.5	1194
7/2/2017	2017	7	2	32	50	80	65	33	1227
7/3/2017	2017	7	3	33	51	81	66	34	1261
7/4/2017	2017	7	4	34	48	84	66	34	1295
7/5/2017	2017	7	5	35	54	85	69.5	37.5	1332.5
7/6/2017	2017	7	6	36	54	87	70.5	38.5	1371
7/7/2017	2017	7	7	37	54	83	68.5	36.5	1407.5
7/8/2017	2017	7	8	38	51	80	65.5	33.5	1441
7/9/2017	2017	7	9	39	53	80	66.5	34.5	1475.5
7/10/2017	2017	7	10	40	50	82	66	34	1509.5
7/11/2017	2017	7	11	41	50	80	65	33	1542.5
7/12/2017	2017	7	12	42	51	74	62.5	30.5	1573
7/13/2017	2017	7	13	43	50	77	63.5	31.5	1604.5
7/14/2017	2017	7	14	44	52	74	63	31	1635.5
7/15/2017	2017	7	15	45	56	77	66.5	34.5	1670
7/16/2017	2017	7	16	46	50	80	65	33	1703
7/17/2017	2017	7	17	47	49	76	62.5	30.5	1733.5
7/18/2017	2017	7	18	48	50	77	63.5	31.5	1765
7/19/2017	2017	7	19	49	50	79	64.5	32.5	1797.5
7/20/2017	2017	7	20	50	51	71	61	29	1826.5
7/21/2017	2017	7	21	51	51	75	63	31	1857.5

7/22/2017	2017	7	22	52	49	79	64	32	1889.5
7/23/2017	2017	7	23	53	52	76	64	32	1921.5
7/24/2017	2017	7	24	54	53	73	63	31	1952.5
7/25/2017	2017	7	25	55	53	72	62.5	30.5	1983
7/26/2017	2017	7	26	56	53	77	65	33	2016
7/27/2017	2017	7	27	57	55	76	65.5	33.5	2049.5
7/28/2017	2017	7	28	58	53	71	62	30	2079.5
7/29/2017	2017	7	29	59	48	68	58	26	2105.5
7/30/2017	2017	7	30	60	51	69	60	28	2133.5
7/31/2017	2017	7	31	61	51	67	59	27	2160.5
8/1/2017	2017	8	1	62	52	74	63	31	2191.5
8/2/2017	2017	8	2	63	53	75	64	32	2223.5
8/3/2017	2017	8	3	64	51	79	65	33	2256.5
8/4/2017	2017	8	4	65	51	74	62.5	30.5	2287
8/5/2017	2017	8	5	66	49	73	61	29	2316
8/6/2017	2017	8	6	67	48	73	60.5	28.5	2344.5
8/7/2017	2017	8	7	68	47	76	61.5	29.5	2374
8/8/2017	2017	8	8	69	48	76	62	30	2404
8/9/2017	2017	8	9	70	49	79	64	32	2436
8/10/2017	2017	8	10	71	51	77	64	32	2468
8/11/2017	2017	8	11	72	51	64	57.5	25.5	2493.5
8/12/2017	2017	8	12	73	48	76	62	30	2523.5
8/13/2017	2017	8	13	74	50	74	62	30	2553.5
8/14/2017	2017	8	14	75	51	76	63.5	31.5	2585
8/15/2017	2017	8	15	76	46	71	58.5	26.5	2611.5
8/16/2017	2017	8	16	77	41	73	57	25	2636.5
8/17/2017	2017	8	17	78	46	77	61.5	29.5	2666
8/18/2017	2017	8	18	79	47	79	63	31	2697
8/19/2017	2017	8	19	80	48	80	64	32	2729
8/20/2017	2017	8	20	81	49	70	59.5	27.5	2756.5
8/21/2017	2017	8	21	82	47	67	57	25	2781.5
8/22/2017	2017	8	22	83	48	78	63	31	2812.5
8/23/2017	2017	8	23	84	48	77	62.5	30.5	2843
8/24/2017	2017	8	24	85	45	65	55	23	2866
8/25/2017	2017	8	25	86	42	75	58.5	26.5	2892.5
8/26/2017	2017	8	26	87	48	81	64.5	32.5	2925
8/27/2017	2017	8	27	88	51	81	66	34	2959
8/28/2017	2017	8	28	89	52	81	66.5	34.5	2993.5
8/29/2017	2017	8	29	90	47	83	65	33	3026.5
8/30/2017	2017	8	30	91	47	79	63	31	3057.5
8/31/2017	2017	8	31	92	49	75	62	30	3087.5
9/1/2017	2017	9	1	93	47	79	63	31	3118.5
9/2/2017	2017	9	2	94	48	79	63.5	31.5	3150
9/3/2017	2017	9	3	95	46	81	63.5	31.5	3181.5
9/4/2017	2017	9	4	96	51	82	66.5	34.5	3216
9/5/2017	2017	9	5	97	54	78	66	34	3250
9/6/2017	2017	9	6	98	53	80	66.5	34.5	3284.5
9/7/2017	2017	9	7	99	54	75	64.5	32.5	3317
9/8/2017	2017	9	8	100	46	77	61.5	29.5	3346.5
9/9/2017	2017	9	9	101	50	74	62	30	3376.5
9/10/2017	2017	9	10	102	45	74	59.5	27.5	3404
9/11/2017	2017	9	11	103	46	77	61.5	29.5	3433.5
9/12/2017	2017	9	12	104	47	78	62.5	30.5	3464
9/13/2017	2017	9	13	105	49	76	62.5	30.5	3494.5
9/14/2017	2017	9	14	106	47	69	58	26	3520.5
9/15/2017	2017	9	15	107	46	67	56.5	24.5	3545
9/16/2017	2017	9	16	108	42	69	55.5	23.5	3568.5
9/17/2017	2017	9	17	109	41	70	55.5	23.5	3592
9/18/2017	2017	9	18	110	37	71	54	22	3614
9/19/2017	2017	9	19	111	48	70	59	27	3641
9/20/2017	2017	9	20	112	46	72	59	27	3668
9/21/2017	2017	9	21	113	42	73	57.5	25.5	3693.5
9/22/2017	2017	9	22	114	46	65	55.5	23.5	3717
9/23/2017	2017	9	23	115	33	61	47	15	3732
9/24/2017	2017	9	24	116	27	59	43	11	3743
9/25/2017	2017	9	25	117	26	63	44.5	12.5	3755.5
9/26/2017	2017	9	26	118	32	64	48	16	3771.5
9/27/2017	2017	9	27	119	37	48	42.5	10.5	3782
9/28/2017	2017	9	28	120	38	56	47	15	3797
9/29/2017	2017	9	29	121	45	59	52	20	3817
9/30/2017	2017	9	30	122	43	63	53	21	3838
10/1/2017	2017	10	1	123	38	64	51	19	3857
10/2/2017	2017	10	2	124	40	65	52.5	20.5	3877.5
10/3/2017	2017	10	3	125	35	70	52.5	20.5	3898
10/4/2017	2017	10	4	126	46	72	59	27	3925
10/5/2017	2017	10	5	127	46	69	57.5	25.5	3950.5
10/6/2017	2017	10	6	128	31	62	46.5	14.5	3965
10/7/2017	2017	10	7	129	27	68	47.5	15.5	3980.5
10/8/2017	2017	10	8	130	36	67	51.5	19.5	4000
10/9/2017	2017	10	9	131	24	47	35.5	3.5	4003.5
10/10/2017	2017	10	10	132	23	56	39.5	7.5	4011
10/11/2017	2017	10	11	133	31	66	48.5	16.5	4027.5
10/12/2017	2017	10	12	134	43	66	54.5	22.5	4050
10/13/2017	2017	10	13	135	36	66	51	19	4069
10/14/2017	2017	10	14	136	26	64	45	13	4082
10/15/2017	2017	10	15	137	23	65	44	12	4094
10/16/2017	2017	10	16	138	36	69	52.5	20.5	4114.5
10/17/2017	2017	10	17	139	36	67	51.5	19.5	4134
10/18/2017	2017	10	18	140	39	67	53	21	4155
10/19/2017	2017	10	19	141	40	64	52	20	4175
10/20/2017	2017	10	20	142	40	62	51	19	4194
10/21/2017	2017	10	21	143	31	53	42	10	4204
10/22/2017	2017	10	22	144	27	63	45	13	4217

10/23/2017	2017	10	23	145	36	65	50.5	18.5	4235.5
10/24/2017	2017	10	24	146	33	63	48	16	4251.5
10/25/2017	2017	10	25	147	34	65	49.5	17.5	4269
10/26/2017	2017	10	26	148	35	63	49	17	4286
10/27/2017	2017	10	27	149	31	56	43.5	11.5	4297.5
10/28/2017	2017	10	28	150	30	55	42.5	10.5	4308
10/29/2017	2017	10	29	151	29	61	45	13	4321
10/30/2017	2017	10	30	152	35	57	46	14	4335
10/31/2017	2017	10	31	153	34	53	43.5	11.5	4346.5
11/1/2017	2017	11	1	154	35	55	45	13	4359.5
11/2/2017	2017	11	2	155	36	55	45.5	13.5	4373
11/3/2017	2017	11	3	156	36	57	46.5	14.5	4387.5
11/4/2017	2017	11	4	157	43	58	50.5	18.5	4406
11/5/2017	2017	11	5	158	39	54	46.5	14.5	4420.5
11/6/2017	2017	11	6	159	36	53	44.5	12.5	4433
11/7/2017	2017	11	7	160	37	51	44	12	4445
11/8/2017	2017	11	8	161	26	53	39.5	7.5	4452.5
11/9/2017	2017	11	9	162	28	58	43	11	4463.5
11/10/2017	2017	11	10	163	33	60	46.5	14.5	4478
11/11/2017	2017	11	11	164	30	57	43.5	11.5	4489.5
11/12/2017	2017	11	12	165	29	62	45.5	13.5	4503
11/13/2017	2017	11	13	166	36	61	48.5	16.5	4519.5
11/14/2017	2017	11	14	167	29	61	45	13	4532.5
11/15/2017	2017	11	15	168	29	60	44.5	12.5	4545
11/16/2017	2017	11	16	169	33	59	46	14	4559
11/17/2017	2017	11	17	170	33	52	42.5	10.5	4569.5
11/18/2017	2017	11	18	171	15	47	31	-1	4568.5
11/19/2017	2017	11	19	172	17	54	35.5	3.5	4572
11/20/2017	2017	11	20	173	24	53	38.5	6.5	4578.5
11/21/2017	2017	11	21	174	28	55	41.5	9.5	4588
11/22/2017	2017	11	22	175	28	60	44	12	4600
11/23/2017	2017	11	23	176	30	63	46.5	14.5	4614.5
11/24/2017	2017	11	24	177	35	63	49	17	4631.5
11/25/2017	2017	11	25	178	31	63	47	15	4646.5
11/26/2017	2017	11	26	179	33	65	49	17	4663.5
11/27/2017	2017	11	27	180	39	62	50.5	18.5	4682
11/28/2017	2017	11	28	181	27	49	38	6	4688
11/29/2017	2017	11	29	182	29	55	42	10	4698
11/30/2017	2017	11	30	183	36	50	43	11	4709
12/1/2017	2017	12	1	184	30	48	39	7	4716
12/2/2017	2017	12	2	185	29	51	40	8	4724
12/3/2017	2017	12	3	186	31	50	40.5	8.5	4732.5
12/4/2017	2017	12	4	187	17	42	29.5	-2.5	4730
12/5/2017	2017	12	5	188	14	37	25.5	-6.5	4723.5
12/6/2017	2017	12	6	189	9	42	25.5	-6.5	4717
12/7/2017	2017	12	7	190	3	27	15	-17	4700
12/8/2017	2017	12	8	191	18	42	30	-2	4698
12/9/2017	2017	12	9	192	17	52	34.5	2.5	4700.5
12/10/2017	2017	12	10	193	19	53	36	4	4704.5
12/11/2017	2017	12	11	194	19	54	36.5	4.5	4709
12/12/2017	2017	12	12	195	23	55	39	7	4716
12/13/2017	2017	12	13	196	24	51	37.5	5.5	4721.5
12/14/2017	2017	12	14	197	17	37	27	-5	4716.5
12/15/2017	2017	12	15	198	13	46	29.5	-2.5	4714
12/16/2017	2017	12	16	199	23	46	34.5	2.5	4716.5
12/17/2017	2017	12	17	200	20	44	32	0	4716.5
12/18/2017	2017	12	18	201	17	43	30	-2	4714.5
12/19/2017	2017	12	19	202	20	45	32.5	0.5	4715
12/20/2017	2017	12	20	203	26	47	36.5	4.5	4719.5
12/21/2017	2017	12	21	204	5	32	18.5	-13.5	4706
12/22/2017	2017	12	22	205	5	31	18	-14	4692
12/23/2017	2017	12	23	206	21	41	31	-1	4691
12/24/2017	2017	12	24	207	27	47	37	5	4696
12/25/2017	2017	12	25	208	32	50	41	9	4705
12/26/2017	2017	12	26	209	26	49	37.5	5.5	4710.5
12/27/2017	2017	12	27	210	22	53	37.5	5.5	4716
12/28/2017	2017	12	28	211	27	54	40.5	8.5	4724.5
12/29/2017	2017	12	29	212	26	55	40.5	8.5	4733
12/30/2017	2017	12	30	213	30	55	42.5	10.5	4743.5
12/31/2017	2017	12	31	214	25	47	36	4	4747.5
1/1/2018	2018	1	1	215	25	49	37	5	4752.5
1/2/2018	2018	1	2	216	18	43	30.5	-1.5	4751
1/3/2018	2018	1	3	217	20	50	35	3	4754
1/4/2018	2018	1	4	218	25	49	37	5	4759
1/5/2018	2018	1	5	219	25	54	39.5	7.5	4766.5
1/6/2018	2018	1	6	220	32	51	41.5	9.5	4776
1/7/2018	2018	1	7	221	23	43	33	1	4777
1/8/2018	2018	1	8	222	23	54	38.5	6.5	4783.5
1/9/2018	2018	1	9	223	29	54	41.5	9.5	4793
1/10/2018	2018	1	10	224	26	39	32.5	0.5	4793.5
1/11/2018	2018	1	11	225	17	36	26.5	-5.5	4788
1/12/2018	2018	1	12	226	19	45	32	0	4788
1/13/2018	2018	1	13	227	15	49	32	0	4788
1/14/2018	2018	1	14	228	20	53	36.5	4.5	4792.5
1/15/2018	2018	1	15	229	23	50	36.5	4.5	4797
1/16/2018	2018	1	16	230	20	44	32	0	4797
1/17/2018	2018	1	17	231	18	43	30.5	-1.5	4795.5
1/18/2018	2018	1	18	232	15	52	33.5	1.5	4797
1/19/2018	2018	1	19	233	27	53	40	8	4805
1/20/2018	2018	1	20	234	20	47	33.5	1.5	4806.5
1/21/2018	2018	1	21	235	8	20	14	-18	4788.5
1/22/2018	2018	1	22	236	5	34	19.5	-12.5	4776
1/23/2018	2018	1	23	237	6	38	22	-10	4766

1/24/2018	2018	1	24	238	9	49	29	-3	4763
1/25/2018	2018	1	25	239	20	47	33.5	1.5	4764.5
1/26/2018	2018	1	26	240	8	37	22.5	-9.5	4755
1/27/2018	2018	1	27	241	6	46	26	-6	4749
1/28/2018	2018	1	28	242	16	45	30.5	-1.5	4747.5
1/29/2018	2018	1	29	243	18	55	36.5	4.5	4752
1/30/2018	2018	1	30	244	24	54	39	7	4759
1/31/2018	2018	1	31	245	32	54	43	11	4770
2/1/2018	2018	2	1	246	29	58	43.5	11.5	4781.5
2/2/2018	2018	2	2	247	29	55	42	10	4791.5
2/3/2018	2018	2	3	248	29	51	40	8	4799.5
2/4/2018	2018	2	4	249	27	55	41	9	4808.5
2/5/2018	2018	2	5	250	30	54	42	10	4818.5
2/6/2018	2018	2	6	251	18	43	30.5	-1.5	4817
2/7/2018	2018	2	7	252	14	48	31	-1	4816
2/8/2018	2018	2	8	253	23	54	38.5	6.5	4822.5
2/9/2018	2018	2	9	254	25	54	39.5	7.5	4830
2/10/2018	2018	2	10	255	22	50	36	4	4834
2/11/2018	2018	2	11	256	7	40	23.5	-8.5	4825.5
2/12/2018	2018	2	12	257	28	44	36	4	4829.5
2/13/2018	2018	2	13	258	23	48	35.5	3.5	4833
2/14/2018	2018	2	14	259	28	45	36.5	4.5	4837.5
2/15/2018	2018	2	15	260	22	34	28	-4	4833.5
2/16/2018	2018	2	16	261	16	39	27.5	-4.5	4829
2/17/2018	2018	2	17	262	19	48	33.5	1.5	4830.5
2/18/2018	2018	2	18	263	26	48	37	5	4835.5
2/19/2018	2018	2	19	264	13	44	28.5	-3.5	4832
2/20/2018	2018	2	20	265	5	22	13.5	-18.5	4813.5
2/21/2018	2018	2	21	266	8	38	23	-9	4804.5
2/22/2018	2018	2	22	267	13	29	21	-11	4793.5
2/23/2018	2018	2	23	268	5	38	21.5	-10.5	4783
2/24/2018	2018	2	24	269	11	28	19.5	-12.5	4770.5
2/25/2018	2018	2	25	270	8	33	20.5	-11.5	4759
2/26/2018	2018	2	26	271	11	48	29.5	-2.5	4756.5
2/27/2018	2018	2	27	272	20	47	33.5	1.5	4758
2/28/2018	2018	2	28	273	19	34	26.5	-5.5	4752.5
3/1/2018	2018	3	1	274	14	47	30.5	-1.5	4751
3/2/2018	2018	3	2	275	22	53	37.5	5.5	4756.5
3/3/2018	2018	3	3	276	26	53	39.5	7.5	4764
3/4/2018	2018	3	4	277	19	47	33	1	4765
3/5/2018	2018	3	5	278	8	36	22	-10	4755
3/6/2018	2018	3	6	279	9	47	28	-4	4751
3/7/2018	2018	3	7	280	18	52	35	3	4754
3/8/2018	2018	3	8	281	27	54	40.5	8.5	4762.5
3/9/2018	2018	3	9	282	26	55	40.5	8.5	4771
3/10/2018	2018	3	10	283	30	51	40.5	8.5	4779.5
3/11/2018	2018	3	11	284	28	37	32.5	0.5	4780
3/12/2018	2018	3	12	285	28	45	36.5	4.5	4784.5
3/13/2018	2018	3	13	286	25	50	37.5	5.5	4790
3/14/2018	2018	3	14	287	29	58	43.5	11.5	4801.5
3/15/2018	2018	3	15	288	26	42	34	2	4803.5
3/16/2018	2018	3	16	289	24	45	34.5	2.5	4806
3/17/2018	2018	3	17	290	23	48	35.5	3.5	4809.5
3/18/2018	2018	3	18	291	17	33	25	-7	4802.5
3/19/2018	2018	3	19	292	13	38	25.5	-6.5	4796
3/20/2018	2018	3	20	293	17	50	33.5	1.5	4797.5
3/21/2018	2018	3	21	294	29	57	43	11	4808.5
3/22/2018	2018	3	22	295	31	62	46.5	14.5	4823
3/23/2018	2018	3	23	296	30	53	41.5	9.5	4832.5
3/24/2018	2018	3	24	297	28	57	42.5	10.5	4843
3/25/2018	2018	3	25	298	26	55	40.5	8.5	4851.5
3/26/2018	2018	3	26	299	26	49	37.5	5.5	4857
3/27/2018	2018	3	27	300	25	36	30.5	-1.5	4855.5
3/28/2018	2018	3	28	301	19	46	32.5	0.5	4856
3/29/2018	2018	3	29	302	26	51	38.5	6.5	4862.5
3/30/2018	2018	3	30	303	25	58	41.5	9.5	4872
3/31/2018	2018	3	31	304	31	63	47	15	4887
4/1/2018	2018	4	1	305	36	57	46.5	14.5	4901.5
4/2/2018	2018	4	2	306	36	59	47.5	15.5	4917
4/3/2018	2018	4	3	307	29	58	43.5	11.5	4928.5
4/4/2018	2018	4	4	308	29	61	45	13	4941.5
4/5/2018	2018	4	5	309	29	59	44	12	4953.5
4/6/2018	2018	4	6	310	36	61	48.5	16.5	4970
4/7/2018	2018	4	7	311	42	67	54.5	22.5	4992.5
4/8/2018	2018	4	8	312	33	62	47.5	15.5	5008
4/9/2018	2018	4	9	313	27	57	42	10	5018
4/10/2018	2018	4	10	314	26	68	47	15	5033
4/11/2018	2018	4	11	315	37	68	52.5	20.5	5053.5
4/12/2018	2018	4	12	316	27	62	44.5	12.5	5066
4/13/2018	2018	4	13	317	19	36	27.5	-4.5	5061.5
4/14/2018	2018	4	14	318	22	50	36	4	5065.5
4/15/2018	2018	4	15	319	26	63	44.5	12.5	5078
4/16/2018	2018	4	16	320	39	65	52	20	5098
4/17/2018	2018	4	17	321	25	55	40	8	5106
4/18/2018	2018	4	18	322	16	59	37.5	5.5	5111.5
4/19/2018	2018	4	19	323	30	64	47	15	5126.5
4/20/2018	2018	4	20	324	27	46	36.5	4.5	5131
4/21/2018	2018	4	21	325	27	55	41	9	5140
4/22/2018	2018	4	22	326	28	64	46	14	5154
4/23/2018	2018	4	23	327	33	69	51	19	5173
4/24/2018	2018	4	24	328	37	70	53.5	21.5	5194.5
4/25/2018	2018	4	25	329	33	69	51	19	5213.5
4/26/2018	2018	4	26	330	37	69	53	21	5234.5

4/27/2018	2018	4	27	331	40	70	55	23	5257.5
4/28/2018	2018	4	28	332	39	66	52.5	20.5	5278
4/29/2018	2018	4	29	333	38	70	54	22	5300
4/30/2018	2018	4	30	334	41	61	51	19	5319
5/1/2018	2018	5	1	335	36	60	48	16	5335
5/2/2018	2018	5	2	336	27	44	35.5	3.5	5338.5
5/3/2018	2018	5	3	337	27	50	38.5	6.5	5345
5/4/2018	2018	5	4	338	27	62	44.5	12.5	5357.5
5/5/2018	2018	5	5	339	34	71	52.5	20.5	5378
5/6/2018	2018	5	6	340	41	74	57.5	25.5	5403.5
5/7/2018	2018	5	7	341	42	74	58	26	5429.5
5/8/2018	2018	5	8	342	44	77	60.5	28.5	5458
5/9/2018	2018	5	9	343	42	81	61.5	29.5	5487.5
5/10/2018	2018	5	10	344	45	78	61.5	29.5	5517
5/11/2018	2018	5	11	345	51	74	62.5	30.5	5547.5
5/12/2018	2018	5	12	346	41	73	57	25	5572.5
5/13/2018	2018	5	13	347	35	69	52	20	5592.5
5/14/2018	2018	5	14	348	39	69	54	22	5614.5
5/15/2018	2018	5	15	349	36	70	53	21	5635.5
5/16/2018	2018	5	16	350	35	75	55	23	5658.5
5/17/2018	2018	5	17	351	36	74	55	23	5681.5
5/18/2018	2018	5	18	352	37	68	52.5	20.5	5702
5/19/2018	2018	5	19	353	36	72	54	22	5724
5/20/2018	2018	5	20	354	42	72	57	25	5749
5/21/2018	2018	5	21	355	39	71	55	23	5772
5/22/2018	2018	5	22	356	40	73	56.5	24.5	5796.5
5/23/2018	2018	5	23	357	35	74	54.5	22.5	5819
5/24/2018	2018	5	24	358	39	76	57.5	25.5	5844.5
5/25/2018	2018	5	25	359	46	78	62	30	5874.5
5/26/2018	2018	5	26	360	43	72	57.5	25.5	5900
5/27/2018	2018	5	27	361	33	74	53.5	21.5	5921.5
5/28/2018	2018	5	28	362	34	71	52.5	20.5	5942
5/29/2018	2018	5	29	363	38	74	56	24	5966
5/30/2018	2018	5	30	364	45	75	60	28	5994
5/31/2018	2018	5	31	365	40	80	60	28	6022
6/1/2018	2018	6	1	1	44	77	60.5	28.5	28.5
6/2/2018	2018	6	2	2	42	82	62	30	58.5
6/3/2018	2018	6	3	3	49	81	65	33	91.5
6/4/2018	2018	6	4	4	43	84	63.5	31.5	123
6/5/2018	2018	6	5	5	51	82	66.5	34.5	157.5
6/6/2018	2018	6	6	6	48	81	64.5	32.5	190
6/7/2018	2018	6	7	7	47	82	64.5	32.5	222.5
6/8/2018	2018	6	8	8	45	82	63.5	31.5	254
6/9/2018	2018	6	9	9	54	81	67.5	35.5	289.5
6/10/2018	2018	6	10	10	51	81	66	34	323.5
6/11/2018	2018	6	11	11	47	83	65	33	356.5
6/12/2018	2018	6	12	12	46	88	67	35	391.5
6/13/2018	2018	6	13	13	58	86	72	40	431.5
6/14/2018	2018	6	14	14	53	83	68	36	467.5
6/15/2018	2018	6	15	15	51	77	64	32	499.5
6/16/2018	2018	6	16	16	49	62	55.5	23.5	523
6/17/2018	2018	6	17	17	47	70	58.5	26.5	549.5
6/18/2018	2018	6	18	18	44	76	60	28	577.5
6/19/2018	2018	6	19	19	48	78	63	31	608.5
6/20/2018	2018	6	20	20	44	83	63.5	31.5	640
6/21/2018	2018	6	21	21	46	87	66.5	34.5	674.5
6/22/2018	2018	6	22	22	51	85	68	36	710.5
6/23/2018	2018	6	23	23	46	85	65.5	33.5	744
6/24/2018	2018	6	24	24	50	82	66	34	778
6/25/2018	2018	6	25	25	47	85	66	34	812
6/26/2018	2018	6	26	26	49	88	68.5	36.5	848.5
6/27/2018	2018	6	27	27	55	90	72.5	40.5	889
6/28/2018	2018	6	28	28	58	86	72	40	929
6/29/2018	2018	6	29	29	54	81	67.5	35.5	964.5
6/30/2018	2018	6	30	30	55	77	66	34	998.5
7/1/2018	2018	7	1	31	50	83	66.5	34.5	1033
7/2/2018	2018	7	2	32	48	83	65.5	33.5	1066.5
7/3/2018	2018	7	3	33	54	82	68	36	1102.5
7/4/2018	2018	7	4	34	53	82	67.5	35.5	1138
7/5/2018	2018	7	5	35	57	81	69	37	1175
7/6/2018	2018	7	6	36	54	75	64.5	32.5	1207.5
7/7/2018	2018	7	7	37	50	84	67	35	1242.5
7/8/2018	2018	7	8	38	50	85	67.5	35.5	1278
7/9/2018	2018	7	9	39	51	78	64.5	32.5	1310.5
7/10/2018	2018	7	10	40	50	80	65	33	1343.5
7/11/2018	2018	7	11	41	49	74	61.5	29.5	1373
7/12/2018	2018	7	12	42	51	69	60	28	1401
7/13/2018	2018	7	13	43	52	74	63	31	1432
7/14/2018	2018	7	14	44	50	74	62	30	1462
7/15/2018	2018	7	15	45	51	77	64	32	1494
7/16/2018	2018	7	16	46	51	72	61.5	29.5	1523.5
7/17/2018	2018	7	17	47	49	70	59.5	27.5	1551
7/18/2018	2018	7	18	48	52	78	65	33	1584
7/19/2018	2018	7	19	49	53	83	68	36	1620
7/20/2018	2018	7	20	50	52	84	68	36	1656
7/21/2018	2018	7	21	51	49	86	67.5	35.5	1691.5
7/22/2018	2018	7	22	52	53	87	70	38	1729.5
7/23/2018	2018	7	23	53	56	86	71	39	1768.5
7/24/2018	2018	7	24	54	54	81	67.5	35.5	1804
7/25/2018	2018	7	25	55	52	83	67.5	35.5	1839.5
7/26/2018	2018	7	26	56	55	83	69	37	1876.5
7/27/2018	2018	7	27	57	51	76	63.5	31.5	1908
7/28/2018	2018	7	28	58	49	79	64	32	1940

7/29/2018	2018	7	29	59	51	83	67	35	1975
7/30/2018	2018	7	30	60	53	84	68.5	36.5	2011.5
7/31/2018	2018	7	31	61	51	83	67	35	2046.5
8/1/2018	2018	8	1	62	60	83	71.5	39.5	2086
8/2/2018	2018	8	2	63	58	82	70	38	2124
8/3/2018	2018	8	3	64	52	77	64.5	32.5	2156.5
8/4/2018	2018	8	4	65	52	83	67.5	35.5	2192
8/5/2018	2018	8	5	66	52	84	68	36	2228
8/6/2018	2018	8	6	67	51	86	68.5	36.5	2264.5
8/7/2018	2018	8	7	68	53	86	69.5	37.5	2302
8/8/2018	2018	8	8	69	56	83	69.5	37.5	2339.5
8/9/2018	2018	8	9	70	52	80	66	34	2373.5
8/10/2018	2018	8	10	71	48	79	63.5	31.5	2405
8/11/2018	2018	8	11	72	46	75	60.5	28.5	2433.5
8/12/2018	2018	8	12	73	49	79	64	32	2465.5
8/13/2018	2018	8	13	74	51	84	67.5	35.5	2501
8/14/2018	2018	8	14	75	52	81	66.5	34.5	2535.5
8/15/2018	2018	8	15	76	52	77	64.5	32.5	2568
8/16/2018	2018	8	16	77	53	75	64	32	2600
8/17/2018	2018	8	17	78	53	76	64.5	32.5	2632.5
8/18/2018	2018	8	18	79	53	78	65.5	33.5	2666
8/19/2018	2018	8	19	80	47	80	63.5	31.5	2697.5
8/20/2018	2018	8	20	81	46	82	64	32	2729.5
8/21/2018	2018	8	21	82	52	76	64	32	2761.5
8/22/2018	2018	8	22	83	51	70	60.5	28.5	2790
8/23/2018	2018	8	23	84	49	70	59.5	27.5	2817.5
8/24/2018	2018	8	24	85	49	73	61	29	2846.5
8/25/2018	2018	8	25	86	47	71	59	27	2873.5
8/26/2018	2018	8	26	87	47	74	60.5	28.5	2902
8/27/2018	2018	8	27	88	48	71	59.5	27.5	2929.5
8/28/2018	2018	8	28	89	43	76	59.5	27.5	2957
8/29/2018	2018	8	29	90	45	79	62	30	2987
8/30/2018	2018	8	30	91	50	79	64.5	32.5	3019.5
8/31/2018	2018	8	31	92	51	78	64.5	32.5	3052
9/1/2018	2018	9	1	93	44	60	52	20	3072
9/2/2018	2018	9	2	94	42	69	55.5	23.5	3095.5
9/3/2018	2018	9	3	95	42	66	54	22	3117.5
9/4/2018	2018	9	4	96	43	69	56	24	3141.5
9/5/2018	2018	9	5	97	42	71	56.5	24.5	3166
9/6/2018	2018	9	6	98	43	66	54.5	22.5	3188.5
9/7/2018	2018	9	7	99	44	71	57.5	25.5	3214
9/8/2018	2018	9	8	100	45	75	60	28	3242
9/9/2018	2018	9	9	101	48	78	63	31	3273
9/10/2018	2018	9	10	102	47	75	61	29	3302
9/11/2018	2018	9	11	103	48	76	62	30	3332
9/12/2018	2018	9	12	104	44	76	60	28	3360
9/13/2018	2018	9	13	105	43	75	59	27	3387
9/14/2018	2018	9	14	106	45	76	60.5	28.5	3415.5
9/15/2018	2018	9	15	107	47	79	63	31	3446.5
9/16/2018	2018	9	16	108	51	77	64	32	3478.5
9/17/2018	2018	9	17	109	50	79	64.5	32.5	3511
9/18/2018	2018	9	18	110	49	79	64	32	3543
9/19/2018	2018	9	19	111	48	75	61.5	29.5	3572.5
9/20/2018	2018	9	20	112	40	67	53.5	21.5	3594
9/21/2018	2018	9	21	113	37	70	53.5	21.5	3615.5
9/22/2018	2018	9	22	114	41	72	56.5	24.5	3640
9/23/2018	2018	9	23	115	45	72	58.5	26.5	3666.5
9/24/2018	2018	9	24	116	46	71	58.5	26.5	3693
9/25/2018	2018	9	25	117	45	72	58.5	26.5	3719.5
9/26/2018	2018	9	26	118	38	69	53.5	21.5	3741
9/27/2018	2018	9	27	119	37	73	55	23	3764
9/28/2018	2018	9	28	120	42	76	59	27	3791
9/29/2018	2018	9	29	121	44	72	58	26	3817
9/30/2018	2018	9	30	122	42	72	57	25	3842
10/1/2018	2018	10	1	123	50	63	56.5	24.5	3866.5
10/2/2018	2018	10	2	124	46	63	54.5	22.5	3889
10/3/2018	2018	10	3	125	46	64	55	23	3912
10/4/2018	2018	10	4	126	36	63	49.5	17.5	3929.5
10/5/2018	2018	10	5	127	34	60	47	15	3944.5
10/6/2018	2018	10	6	128	33	63	48	16	3960.5
10/7/2018	2018	10	7	129	33	52	42.5	10.5	3971
10/8/2018	2018	10	8	130	31	42	36.5	4.5	3975.5
10/9/2018	2018	10	9	131	32	42	37	5	3980.5
10/10/2018	2018	10	10	132	31	48	39.5	7.5	3988
10/11/2018	2018	10	11	133	31	54	42.5	10.5	3998.5
10/12/2018	2018	10	12	134	33	55	44	12	4010.5
10/13/2018	2018	10	13	135	38	57	47.5	15.5	4026
10/14/2018	2018	10	14	136	27	50	38.5	6.5	4032.5
10/15/2018	2018	10	15	137	25	36	30.5	-1.5	4031
10/16/2018	2018	10	16	138	27	36	31.5	-0.5	4030.5
10/17/2018	2018	10	17	139	28	37	32.5	0.5	4031
10/18/2018	2018	10	18	140	32	52	42	10	4041
10/19/2018	2018	10	19	141	30	54	42	10	4051
10/20/2018	2018	10	20	142	40	58	49	17	4068
10/21/2018	2018	10	21	143	38	60	49	17	4085
10/22/2018	2018	10	22	144	38	59	48.5	16.5	4101.5
10/23/2018	2018	10	23	145	39	50	44.5	12.5	4114
10/24/2018	2018	10	24	146	36	53	44.5	12.5	4126.5
10/25/2018	2018	10	25	147	30	53	41.5	9.5	4136
10/26/2018	2018	10	26	148	30	56	43	11	4147
10/27/2018	2018	10	27	149	29	63	46	14	4161
10/28/2018	2018	10	28	150	32	68	50	18	4179
10/29/2018	2018	10	29	151	42	62	52	20	4199

10/30/2018	2018	10	30	152	32	52	42	10	4209
10/31/2018	2018	10	31	153	26	42	34	2	4211
11/1/2018	2018	11	1	154	28	45	36.5	4.5	4215.5
11/2/2018	2018	11	2	155	27	53	40	8	4223.5
11/3/2018	2018	11	3	156	26	49	37.5	5.5	4229
11/4/2018	2018	11	4	157	26	51	38.5	6.5	4235.5
11/5/2018	2018	11	5	158	36	53	44.5	12.5	4248
11/6/2018	2018	11	6	159	30	54	42	10	4258
11/7/2018	2018	11	7	160	28	53	40.5	8.5	4266.5
11/8/2018	2018	11	8	161	15	48	31.5	-0.5	4266
11/9/2018	2018	11	9	162	10	45	27.5	-4.5	4261.5
11/10/2018	2018	11	10	163	25	49	37	5	4266.5
11/11/2018	2018	11	11	164	16	42	29	-3	4263.5
11/12/2018	2018	11	12	165	7	23	15	-17	4246.5
11/13/2018	2018	11	13	166	6	39	22.5	-9.5	4237
11/14/2018	2018	11	14	167	16	47	31.5	-0.5	4236.5
11/15/2018	2018	11	15	168	20	53	36.5	4.5	4241
11/16/2018	2018	11	16	169	23	53	38	6	4247
11/17/2018	2018	11	17	170	29	50	39.5	7.5	4254.5
11/18/2018	2018	11	18	171	20	46	33	1	4255.5
11/19/2018	2018	11	19	172	16	49	32.5	0.5	4256
11/20/2018	2018	11	20	173	19	50	34.5	2.5	4258.5
11/21/2018	2018	11	21	174	22	53	37.5	5.5	4264
11/22/2018	2018	11	22	175	28	42	35	3	4267
11/23/2018	2018	11	23	176	25	44	34.5	2.5	4269.5
11/24/2018	2018	11	24	177	21	46	33.5	1.5	4271
11/25/2018	2018	11	25	178	13	38	25.5	-6.5	4264.5
11/26/2018	2018	11	26	179	16	46	31	-1	4263.5
11/27/2018	2018	11	27	180	20	52	36	4	4267.5
11/28/2018	2018	11	28	181	32	50	41	9	4276.5
11/29/2018	2018	11	29	182	28	45	36.5	4.5	4281
11/30/2018	2018	11	30	183	26	35	30.5	-1.5	4279.5
12/1/2018	2018	12	1	184	19	33	26	-6	4273.5
12/2/2018	2018	12	2	185	8	28	18	-14	4259.5
12/3/2018	2018	12	3	186	1	30	15.5	-16.5	4243
12/4/2018	2018	12	4	187	4	35	19.5	-12.5	4230.5
12/5/2018	2018	12	5	188	17	47	32	0	4230.5
12/6/2018	2018	12	6	189	26	43	34.5	2.5	4233
12/7/2018	2018	12	7	190	29	39	34	2	4235
12/8/2018	2018	12	8	191	19	40	29.5	-2.5	4232.5
12/9/2018	2018	12	9	192	13	39	26	-6	4226.5
12/10/2018	2018	12	10	193	9	51	30	-2	4224.5
12/11/2018	2018	12	11	194	25	49	37	5	4229.5
12/12/2018	2018	12	12	195	18	42	30	-2	4227.5
12/13/2018	2018	12	13	196	14	36	25	-7	4220.5
12/14/2018	2018	12	14	197	13	48	30.5	-1.5	4219
12/15/2018	2018	12	15	198	24	50	37	5	4224
12/16/2018	2018	12	16	199	23	52	37.5	5.5	4229.5
12/17/2018	2018	12	17	200	30	40	35	3	4232.5
12/18/2018	2018	12	18	201	25	43	34	2	4234.5
12/19/2018	2018	12	19	202	25	45	35	3	4237.5
12/20/2018	2018	12	20	203	22	51	36.5	4.5	4242
12/21/2018	2018	12	21	204	31	50	40.5	8.5	4250.5
12/22/2018	2018	12	22	205	17	44	30.5	-1.5	4249
12/23/2018	2018	12	23	206	16	45	30.5	-1.5	4247.5
12/24/2018	2018	12	24	207	26	45	35.5	3.5	4251
12/25/2018	2018	12	25	208	25	45	35	3	4254
12/26/2018	2018	12	26	209	20	31	25.5	-6.5	4247.5
12/27/2018	2018	12	27	210	17	24	20.5	-11.5	4236
12/28/2018	2018	12	28	211	-4	20	8	-24	4212
12/29/2018	2018	12	29	212	-5	22	8.5	-23.5	4188.5
12/30/2018	2018	12	30	213	-4	30	13	-19	4169.5
12/31/2018	2018	12	31	214	15	21	18	-14	4155.5
1/1/2019	2019	1	1	215	6	21	13.5	-18.5	4137
1/2/2019	2019	1	2	216	0	27	13.5	-18.5	4118.5
1/3/2019	2019	1	3	217	2	38	20	-12	4106.5
1/4/2019	2019	1	4	218	15	52	33.5	1.5	4108
1/5/2019	2019	1	5	219	20	50	35	3	4111
1/6/2019	2019	1	6	220	23	36	29.5	-2.5	4108.5
1/7/2019	2019	1	7	221	19	35	27	-5	4103.5
1/8/2019	2019	1	8	222	17	49	33	1	4104.5
1/9/2019	2019	1	9	223	22	49	35.5	3.5	4108
1/10/2019	2019	1	10	224	27	46	36.5	4.5	4112.5
1/11/2019	2019	1	11	225	13	33	23	-9	4103.5
1/12/2019	2019	1	12	226	10	35	22.5	-9.5	4094
1/13/2019	2019	1	13	227	24	33	28.5	-3.5	4090.5
1/14/2019	2019	1	14	228	20	37	28.5	-3.5	4087
1/15/2019	2019	1	15	229	19	42	30.5	-1.5	4085.5
1/16/2019	2019	1	16	230	29	36	32.5	0.5	4086
1/17/2019	2019	1	17	231	20	47	33.5	1.5	4087.5
1/18/2019	2019	1	18	232	14	32	23	-9	4078.5
1/19/2019	2019	1	19	233	10	40	25	-7	4071.5
1/20/2019	2019	1	20	234	18	49	33.5	1.5	4073
1/21/2019	2019	1	21	235	17	44	30.5	-1.5	4071.5
1/22/2019	2019	1	22	236	4	26	15	-17	4054.5
1/23/2019	2019	1	23	237	2	35	18.5	-13.5	4041
1/24/2019	2019	1	24	238	13	35	24	-8	4033
1/25/2019	2019	1	25	239	9	39	24	-8	4025
1/26/2019	2019	1	26	240	8	40	24	-8	4017
1/27/2019	2019	1	27	241	15	47	31	-1	4016
1/28/2019	2019	1	28	242	15	45	30	-2	4014
1/29/2019	2019	1	29	243	17	41	29	-3	4011
1/30/2019	2019	1	30	244	10	46	28	-4	4007

1/31/2019	2019	1	31	245	20	46	33	1	4008
2/1/2019	2019	2	1	246	22	48	35	3	4011
2/2/2019	2019	2	2	247	21	44	32.5	0.5	4011.5
2/3/2019	2019	2	3	248	31	44	37.5	5.5	4017
2/4/2019	2019	2	4	249	32	46	39	7	4024
2/5/2019	2019	2	5	250	27	41	34	2	4026
2/6/2019	2019	2	6	251	10	28	19	-13	4013
2/7/2019	2019	2	7	252	-2	24	11	-21	3992
2/8/2019	2019	2	8	253	2	41	21.5	-10.5	3981.5
2/9/2019	2019	2	9	254	23	42	32.5	0.5	3982
2/10/2019	2019	2	10	255	22	41	31.5	-0.5	3981.5
2/11/2019	2019	2	11	256	4	24	14	-18	3963.5
2/12/2019	2019	2	12	257	3	44	23.5	-8.5	3955
2/13/2019	2019	2	13	258	22	47	34.5	2.5	3957.5
2/14/2019	2019	2	14	259	33	39	36	4	3961.5
2/15/2019	2019	2	15	260	31	44	37.5	5.5	3967
2/16/2019	2019	2	16	261	16	32	24	-8	3959
2/17/2019	2019	2	17	262	16	25	20.5	-11.5	3947.5
2/18/2019	2019	2	18	263	8	27	17.5	-14.5	3933
2/19/2019	2019	2	19	264	10	22	16	-16	3917
2/20/2019	2019	2	20	265	9	26	17.5	-14.5	3902.5
2/21/2019	2019	2	21	266	17	33	25	-7	3895.5
2/22/2019	2019	2	22	267	16	25	20.5	-11.5	3884
2/23/2019	2019	2	23	268	5	30	17.5	-14.5	3869.5
2/24/2019	2019	2	24	269	2	45	23.5	-8.5	3861
2/25/2019	2019	2	25	270	17	44	30.5	-1.5	3859.5
2/26/2019	2019	2	26	271	23	48	35.5	3.5	3863
2/27/2019	2019	2	27	272	24	49	36.5	4.5	3867.5
2/28/2019	2019	2	28	273	24	49	36.5	4.5	3872
3/1/2019	2019	3	1	274	31	49	40	8	3880
3/2/2019	2019	3	2	275	33	46	39.5	7.5	3887.5
3/3/2019	2019	3	3	276	32	46	39	7	3894.5
3/4/2019	2019	3	4	277	25	46	35.5	3.5	3898
3/5/2019	2019	3	5	278	24	54	39	7	3905
3/6/2019	2019	3	6	279	29	54	41.5	9.5	3914.5
3/7/2019	2019	3	7	280	36	52	44	12	3926.5
3/8/2019	2019	3	8	281	20	49	34.5	2.5	3929
3/9/2019	2019	3	9	282	17	40	28.5	-3.5	3925.5
3/10/2019	2019	3	10	283	17	49	33	1	3926.5
3/11/2019	2019	3	11	284	33	44	38.5	6.5	3933
3/12/2019	2019	3	12	285	25	41	33	1	3934
3/13/2019	2019	3	13	286	17	28	22.5	-9.5	3924.5
3/14/2019	2019	3	14	287	11	28	19.5	-12.5	3912
3/15/2019	2019	3	15	288	11	40	25.5	-6.5	3905.5
3/16/2019	2019	3	16	289	20	46	33	1	3906.5
3/17/2019	2019	3	17	290	22	50	36	4	3910.5
3/18/2019	2019	3	18	291	24	50	37	5	3915.5
3/19/2019	2019	3	19	292	29	50	39.5	7.5	3923
3/20/2019	2019	3	20	293	27	53	40	8	3931
3/21/2019	2019	3	21	294	27	49	38	6	3937
3/22/2019	2019	3	22	295	24	42	33	1	3938
3/23/2019	2019	3	23	296	25	48	36.5	4.5	3942.5
3/24/2019	2019	3	24	297	27	51	39	7	3949.5
3/25/2019	2019	3	25	298	24	58	41	9	3958.5
3/26/2019	2019	3	26	299	31	63	47	15	3973.5
3/27/2019	2019	3	27	300	35	60	47.5	15.5	3989
3/28/2019	2019	3	28	301	31	61	46	14	4003
3/29/2019	2019	3	29	302	26	51	38.5	6.5	4009.5
3/30/2019	2019	3	30	303	19	48	33.5	1.5	4011
3/31/2019	2019	3	31	304	18	39	28.5	-3.5	4007.5
4/1/2019	2019	4	1	305	16	50	33	1	4008.5
4/2/2019	2019	4	2	306	29	54	41.5	9.5	4018
4/3/2019	2019	4	3	307	29	48	38.5	6.5	4024.5
4/4/2019	2019	4	4	308	28	57	42.5	10.5	4035
4/5/2019	2019	4	5	309	29	54	41.5	9.5	4044.5
4/6/2019	2019	4	6	310	29	54	41.5	9.5	4054
4/7/2019	2019	4	7	311	29	61	45	13	4067
4/8/2019	2019	4	8	312	33	65	49	17	4084
4/9/2019	2019	4	9	313	38	66	52	20	4104
4/10/2019	2019	4	10	314	25	47	36	4	4108
4/11/2019	2019	4	11	315	24	41	32.5	0.5	4108.5
4/12/2019	2019	4	12	316	24	38	31	-1	4107.5
4/13/2019	2019	4	13	317	23	45	34	2	4109.5
4/14/2019	2019	4	14	318	26	58	42	10	4119.5
4/15/2019	2019	4	15	319	34	60	47	15	4134.5
4/16/2019	2019	4	16	320	33	53	43	11	4145.5
4/17/2019	2019	4	17	321	32	47	39.5	7.5	4153
4/18/2019	2019	4	18	322	32	61	46.5	14.5	4167.5
4/19/2019	2019	4	19	323	30	67	48.5	16.5	4184
4/20/2019	2019	4	20	324	36	67	51.5	19.5	4203.5
4/21/2019	2019	4	21	325	36	60	48	16	4219.5
4/22/2019	2019	4	22	326	29	54	41.5	9.5	4229
4/23/2019	2019	4	23	327	30	53	41.5	9.5	4238.5
4/24/2019	2019	4	24	328	30	61	45.5	13.5	4252
4/25/2019	2019	4	25	329	38	68	53	21	4273
4/26/2019	2019	4	26	330	37	69	53	21	4294
4/27/2019	2019	4	27	331	38	68	53	21	4315
4/28/2019	2019	4	28	332	36	66	51	19	4334
4/29/2019	2019	4	29	333	36	63	49.5	17.5	4351.5
4/30/2019	2019	4	30	334	33	51	42	10	4361.5
5/1/2019	2019	5	1	335	34	58	46	14	4375.5
5/2/2019	2019	5	2	336	30	61	45.5	13.5	4389
5/3/2019	2019	5	3	337	28	62	45	13	4402

5/4/2019	2019	5	4	338	31	66	48.5	16.5	4418.5
5/5/2019	2019	5	5	339	38	67	52.5	20.5	4439
5/6/2019	2019	5	6	340	37	62	49.5	17.5	4456.5
5/7/2019	2019	5	7	341	34	59	46.5	14.5	4471
5/8/2019	2019	5	8	342	32	50	41	9	4480
5/9/2019	2019	5	9	343	31	54	42.5	10.5	4490.5
5/10/2019	2019	5	10	344	34	42	38	6	4496.5
5/11/2019	2019	5	11	345	34	53	43.5	11.5	4508
5/12/2019	2019	5	12	346	31	58	44.5	12.5	4520.5
5/13/2019	2019	5	13	347	34	66	50	18	4538.5
5/14/2019	2019	5	14	348	39	67	53	21	4559.5
5/15/2019	2019	5	15	349	39	70	54.5	22.5	4582
5/16/2019	2019	5	16	350	42	71	56.5	24.5	4606.5
5/17/2019	2019	5	17	351	32	57	44.5	12.5	4619
5/18/2019	2019	5	18	352	29	54	41.5	9.5	4628.5
5/19/2019	2019	5	19	353	33	57	45	13	4641.5
5/20/2019	2019	5	20	354	27	44	35.5	3.5	4645
5/21/2019	2019	5	21	355	27	46	36.5	4.5	4649.5
5/22/2019	2019	5	22	356	31	58	44.5	12.5	4662
5/23/2019	2019	5	23	357	27	48	37.5	5.5	4667.5
5/24/2019	2019	5	24	358	26	63	44.5	12.5	4680
5/25/2019	2019	5	25	359	30	68	49	17	4697
5/26/2019	2019	5	26	360	39	68	53.5	21.5	4718.5
5/27/2019	2019	5	27	361	33	60	46.5	14.5	4733
5/28/2019	2019	5	28	362	28	57	42.5	10.5	4743.5
5/29/2019	2019	5	29	363	31	61	46	14	4757.5
5/30/2019	2019	5	30	364	32	62	47	15	4772.5
5/31/2019	2019	5	31	365	36	71	53.5	21.5	4794
6/1/2019	2019	6	1	1	39	75	57	25	25
6/2/2019	2019	6	2	2	42	74	58	26	51
6/3/2019	2019	6	3	3	38	74	56	24	75
6/4/2019	2019	6	4	4	41	74	57.5	25.5	100.5
6/5/2019	2019	6	5	5	41	66	53.5	21.5	122
6/6/2019	2019	6	6	6	40	74	57	25	147
6/7/2019	2019	6	7	7	47	75	61	29	176
6/8/2019	2019	6	8	8	42	73	57.5	25.5	201.5
6/9/2019	2019	6	9	9	42	76	59	27	228.5
6/10/2019	2019	6	10	10	46	71	58.5	26.5	255
6/11/2019	2019	6	11	11	46	78	62	30	285
6/12/2019	2019	6	12	12	43	80	61.5	29.5	314.5
6/13/2019	2019	6	13	13	49	81	65	33	347.5
6/14/2019	2019	6	14	14	50	76	63	31	378.5
6/15/2019	2019	6	15	15	47	75	61	29	407.5
6/16/2019	2019	6	16	16	46	75	60.5	28.5	436
6/17/2019	2019	6	17	17	40	72	56	24	460
6/18/2019	2019	6	18	18	38	74	56	24	484
6/19/2019	2019	6	19	19	44	77	60.5	28.5	512.5
6/20/2019	2019	6	20	20	52	77	64.5	32.5	545
6/21/2019	2019	6	21	21	46	74	60	28	573
6/22/2019	2019	6	22	22	40	71	55.5	23.5	596.5
6/23/2019	2019	6	23	23	33	68	50.5	18.5	615
6/24/2019	2019	6	24	24	34	74	54	22	637
6/25/2019	2019	6	25	25	44	78	61	29	666
6/26/2019	2019	6	26	26	43	80	61.5	29.5	695.5
6/27/2019	2019	6	27	27	47	82	64.5	32.5	728
6/28/2019	2019	6	28	28	47	82	64.5	32.5	760.5
6/29/2019	2019	6	29	29	47	83	65	33	793.5
6/30/2019	2019	6	30	30	49	82	65.5	33.5	827
7/1/2019	2019	7	1	31	47	80	63.5	31.5	858.5
7/2/2019	2019	7	2	32	52	80	66	34	892.5
7/3/2019	2019	7	3	33	54	79	66.5	34.5	927
7/4/2019	2019	7	4	34	51	79	65	33	960
7/5/2019	2019	7	5	35	52	79	65.5	33.5	993.5
7/6/2019	2019	7	6	36	55	67	61	29	1022.5
7/7/2019	2019	7	7	37	51	68	59.5	27.5	1050
7/8/2019	2019	7	8	38	48	75	61.5	29.5	1079.5
7/9/2019	2019	7	9	39	45	79	62	30	1109.5
7/10/2019	2019	7	10	40	46	84	65	33	1142.5
7/11/2019	2019	7	11	41	57	84	70.5	38.5	1181
7/12/2019	2019	7	12	42	54	83	68.5	36.5	1217.5
7/13/2019	2019	7	13	43	53	80	66.5	34.5	1252
7/14/2019	2019	7	14	44	51	80	65.5	33.5	1285.5
7/15/2019	2019	7	15	45	52	82	67	35	1320.5
7/16/2019	2019	7	16	46	55	83	69	37	1357.5
7/17/2019	2019	7	17	47	52	83	67.5	35.5	1393
7/18/2019	2019	7	18	48	55	84	69.5	37.5	1430.5
7/19/2019	2019	7	19	49	53	83	68	36	1466.5
7/20/2019	2019	7	20	50	58	85	71.5	39.5	1506
7/21/2019	2019	7	21	51	58	85	71.5	39.5	1545.5
7/22/2019	2019	7	22	52	54	82	68	36	1581.5
7/23/2019	2019	7	23	53	55	77	66	34	1615.5
7/24/2019	2019	7	24	54	53	75	64	32	1647.5
7/25/2019	2019	7	25	55	52	81	66.5	34.5	1682
7/26/2019	2019	7	26	56	50	82	66	34	1716
7/27/2019	2019	7	27	57	52	83	67.5	35.5	1751.5
7/28/2019	2019	7	28	58	53	82	67.5	35.5	1787
7/29/2019	2019	7	29	59	53	81	67	35	1822
7/30/2019	2019	7	30	60	54	82	68	36	1858
7/31/2019	2019	7	31	61	53	80	66.5	34.5	1892.5
8/1/2019	2019	8	1	62	52	79	65.5	33.5	1926
8/2/2019	2019	8	2	63	50	74	62	30	1956
8/3/2019	2019	8	3	64	52	77	64.5	32.5	1988.5
8/4/2019	2019	8	4	65	52	76	64	32	2020.5

8/5/2019	2019	8	5	66	50	81	65.5	33.5	2054
8/6/2019	2019	8	6	67	53	81	67	35	2089
8/7/2019	2019	8	7	68	52	74	63	31	2120
8/8/2019	2019	8	8	69	50	79	64.5	32.5	2152.5
8/9/2019	2019	8	9	70	48	69	58.5	26.5	2179
8/10/2019	2019	8	10	71	46	69	57.5	25.5	2204.5
8/11/2019	2019	8	11	72	50	65	57.5	25.5	2230
8/12/2019	2019	8	12	73	50	76	63	31	2261
8/13/2019	2019	8	13	74	49	80	64.5	32.5	2293.5
8/14/2019	2019	8	14	75	49	80	64.5	32.5	2326
8/15/2019	2019	8	15	76	52	82	67	35	2361
8/16/2019	2019	8	16	77	54	81	67.5	35.5	2396.5
8/17/2019	2019	8	17	78	51	78	64.5	32.5	2429
8/18/2019	2019	8	18	79	53	81	67	35	2464
8/19/2019	2019	8	19	80	50	83	66.5	34.5	2498.5
8/20/2019	2019	8	20	81	53	84	68.5	36.5	2535
8/21/2019	2019	8	21	82	54	78	66	34	2569
8/22/2019	2019	8	22	83	52	81	66.5	34.5	2603.5
8/23/2019	2019	8	23	84	51	77	64	32	2635.5
8/24/2019	2019	8	24	85	51	80	65.5	33.5	2669
8/25/2019	2019	8	25	86	51	83	67	35	2704
8/26/2019	2019	8	26	87	53	85	69	37	2741
8/27/2019	2019	8	27	88	50	86	68	36	2777
8/28/2019	2019	8	28	89	50	84	67	35	2812
8/29/2019	2019	8	29	90	53	80	66.5	34.5	2846.5
8/30/2019	2019	8	30	91	51	84	67.5	35.5	2882
8/31/2019	2019	8	31	92	53	86	69.5	37.5	2919.5
9/1/2019	2019	9	1	93	52	80	66	34	2953.5
9/2/2019	2019	9	2	94	50	82	66	34	2987.5
9/3/2019	2019	9	3	95	49	84	66.5	34.5	3022
9/4/2019	2019	9	4	96	54	81	67.5	35.5	3057.5
9/5/2019	2019	9	5	97	50	81	65.5	33.5	3091
9/6/2019	2019	9	6	98	56	84	70	38	3129
9/7/2019	2019	9	7	99	50	80	65	33	3162
9/8/2019	2019	9	8	100	47	71	59	27	3189
9/9/2019	2019	9	9	101	48	72	60	28	3217
9/10/2019	2019	9	10	102	45	71	58	26	3243
9/11/2019	2019	9	11	103	45	70	57.5	25.5	3268.5
9/12/2019	2019	9	12	104	36	72	54	22	3290.5
9/13/2019	2019	9	13	105	40	77	58.5	26.5	3317
9/14/2019	2019	9	14	106	48	76	62	30	3347
9/15/2019	2019	9	15	107	47	57	52	20	3367
9/16/2019	2019	9	16	108	46	67	56.5	24.5	3391.5
9/17/2019	2019	9	17	109	46	68	57	25	3416.5
9/18/2019	2019	9	18	110	43	68	55.5	23.5	3440
9/19/2019	2019	9	19	111	42	71	56.5	24.5	3464.5
9/20/2019	2019	9	20	112	43	68	55.5	23.5	3488
9/21/2019	2019	9	21	113	38	67	52.5	20.5	3508.5
9/22/2019	2019	9	22	114	32	68	50	18	3526.5
9/23/2019	2019	9	23	115	39	53	46	14	3540.5
9/24/2019	2019	9	24	116	36	66	51	19	3559.5
9/25/2019	2019	9	25	117	38	69	53.5	21.5	3581
9/26/2019	2019	9	26	118	45	67	56	24	3605
9/27/2019	2019	9	27	119	43	61	52	20	3625
9/28/2019	2019	9	28	120	42	69	55.5	23.5	3648.5
9/29/2019	2019	9	29	121	48	69	58.5	26.5	3675
9/30/2019	2019	9	30	122	44	73	58.5	26.5	3701.5
10/1/2019	2019	10	1	123	40	69	54.5	22.5	3724
10/2/2019	2019	10	2	124	36	64	50	18	3742
10/3/2019	2019	10	3	125	36	70	53	21	3763
10/4/2019	2019	10	4	126	47	64	55.5	23.5	3786.5
10/5/2019	2019	10	5	127	39	66	52.5	20.5	3807
10/6/2019	2019	10	6	128	35	66	50.5	18.5	3825.5
10/7/2019	2019	10	7	129	36	68	52	20	3845.5
10/8/2019	2019	10	8	130	38	67	52.5	20.5	3866
10/9/2019	2019	10	9	131	38	63	50.5	18.5	3884.5
10/10/2019	2019	10	10	132	19	55	37	5	3889.5
10/11/2019	2019	10	11	133	14	54	34	2	3891.5
10/12/2019	2019	10	12	134	31	62	46.5	14.5	3906
10/13/2019	2019	10	13	135	31	63	47	15	3921
10/14/2019	2019	10	14	136	31	62	46.5	14.5	3935.5
10/15/2019	2019	10	15	137	30	71	50.5	18.5	3954
10/16/2019	2019	10	16	138	29	69	49	17	3971
10/17/2019	2019	10	17	139	35	63	49	17	3988
10/18/2019	2019	10	18	140	29	55	42	10	3998
10/19/2019	2019	10	19	141	26	57	41.5	9.5	4007.5
10/20/2019	2019	10	20	142	25	50	37.5	5.5	4013
10/21/2019	2019	10	21	143	27	52	39.5	7.5	4020.5
10/22/2019	2019	10	22	144	25	60	42.5	10.5	4031
10/23/2019	2019	10	23	145	31	59	45	13	4044
10/24/2019	2019	10	24	146	19	41	30	-2	4042
10/25/2019	2019	10	25	147	18	56	37	5	4047
10/26/2019	2019	10	26	148	28	62	45	13	4060
10/27/2019	2019	10	27	149	41	60	50.5	18.5	4078.5
10/28/2019	2019	10	28	150	23	42	32.5	0.5	4079
10/29/2019	2019	10	29	151	25	48	36.5	4.5	4083.5
10/30/2019	2019	10	30	152	7	28	17.5	-14.5	4069
10/31/2019	2019	10	31	153	7	50	28.5	-3.5	4065.5
11/1/2019	2019	11	1	154	24	58	41	9	4074.5
11/2/2019	2019	11	2	155	24	59	41.5	9.5	4084
11/3/2019	2019	11	3	156	30	61	45.5	13.5	4097.5
11/4/2019	2019	11	4	157	32	58	45	13	4110.5
11/5/2019	2019	11	5	158	29	58	43.5	11.5	4122

11/6/2019	2019	11	6	159	33	46	39.5	7.5	4129.5
11/7/2019	2019	11	7	160	29	50	39.5	7.5	4137
11/8/2019	2019	11	8	161	25	53	39	7	4144
11/9/2019	2019	11	9	162	23	62	42.5	10.5	4154.5
11/10/2019	2019	11	10	163	33	57	45	13	4167.5
11/11/2019	2019	11	11	164	23	57	40	8	4175.5
11/12/2019	2019	11	12	165	20	52	36	4	4179.5
11/13/2019	2019	11	13	166	29	58	43.5	11.5	4191
11/14/2019	2019	11	14	167	26	58	42	10	4201
11/15/2019	2019	11	15	168	32	58	45	13	4214
11/16/2019	2019	11	16	169	28	58	43	11	4225
11/17/2019	2019	11	17	170	25	56	40.5	8.5	4233.5
11/18/2019	2019	11	18	171	33	60	46.5	14.5	4248
11/19/2019	2019	11	19	172	33	57	45	13	4261
11/20/2019	2019	11	20	173	34	42	38	6	4267
11/21/2019	2019	11	21	174	25	37	31	-1	4266
11/22/2019	2019	11	22	175	21	34	27.5	-4.5	4261.5
11/23/2019	2019	11	23	176	18	41	29.5	-2.5	4259
11/24/2019	2019	11	24	177	17	44	30.5	-1.5	4257.5
11/25/2019	2019	11	25	178	20	45	32.5	0.5	4258
11/26/2019	2019	11	26	179	6	20	13	-19	4239
11/27/2019	2019	11	27	180	14	37	25.5	-6.5	4232.5
11/28/2019	2019	11	28	181	25	38	31.5	-0.5	4232
11/29/2019	2019	11	29	182	17	35	26	-6	4226
11/30/2019	2019	11	30	183	6	23	14.5	-17.5	4208.5
12/1/2019	2019	12	1	184	6	42	24	-8	4200.5
12/2/2019	2019	12	2	185	21	50	35.5	3.5	4204
12/3/2019	2019	12	3	186	24	48	36	4	4208
12/4/2019	2019	12	4	187	33	43	38	6	4214
12/5/2019	2019	12	5	188	22	41	31.5	-0.5	4213.5
12/6/2019	2019	12	6	189	22	45	33.5	1.5	4215
12/7/2019	2019	12	7	190	28	49	38.5	6.5	4221.5
12/8/2019	2019	12	8	191	31	34	32.5	0.5	4222
12/9/2019	2019	12	9	192	16	35	25.5	-6.5	4215.5
12/10/2019	2019	12	10	193	13	41	27	-5	4210.5
12/11/2019	2019	12	11	194	15	47	31	-1	4209.5
12/12/2019	2019	12	12	195	24	44	34	2	4211.5
12/13/2019	2019	12	13	196	31	47	39	7	4218.5
12/14/2019	2019	12	14	197	32	44	38	6	4224.5
12/15/2019	2019	12	15	198	18	37	27.5	-4.5	4220
12/16/2019	2019	12	16	199	6	24	15	-17	4203
12/17/2019	2019	12	17	200	3	29	16	-16	4187
12/18/2019	2019	12	18	201	9	42	25.5	-6.5	4180.5
12/19/2019	2019	12	19	202	16	36	26	-6	4174.5
12/20/2019	2019	12	20	203	14	40	27	-5	4169.5
12/21/2019	2019	12	21	204	18	51	34.5	2.5	4172
12/22/2019	2019	12	22	205	25	53	39	7	4179
12/23/2019	2019	12	23	206	28	47	37.5	5.5	4184.5
12/24/2019	2019	12	24	207	27	40	33.5	1.5	4186
12/25/2019	2019	12	25	208	22	31	26.5	-5.5	4180.5
12/26/2019	2019	12	26	209	13	36	24.5	-7.5	4173
12/27/2019	2019	12	27	210	21	30	25.5	-6.5	4166.5
12/28/2019	2019	12	28	211	9	25	17	-15	4151.5
12/29/2019	2019	12	29	212	3	21	12	-20	4131.5
12/30/2019	2019	12	30	213	3	33	18	-14	4117.5
12/31/2019	2019	12	31	214	9	39	24	-8	4109.5
1/1/2020	2020	1	1	215	16	35	25.5	-6.5	4103
1/2/2020	2020	1	2	216	10	28	19	-13	4090
1/3/2020	2020	1	3	217	9	40	24.5	-7.5	4082.5
1/4/2020	2020	1	4	218	17	49	33	1	4083.5
1/5/2020	2020	1	5	219	22	50	36	4	4087.5
1/6/2020	2020	1	6	220	14	36	25	-7	4080.5
1/7/2020	2020	1	7	221	13	46	29.5	-2.5	4078
1/8/2020	2020	1	8	222	22	43	32.5	0.5	4078.5
1/9/2020	2020	1	9	223	20	31	25.5	-6.5	4072
1/10/2020	2020	1	10	224	2	26	14	-18	4054
1/11/2020	2020	1	11	225	3	38	20.5	-11.5	4042.5
1/12/2020	2020	1	12	226	11	36	23.5	-8.5	4034
1/13/2020	2020	1	13	227	25	39	32	0	4034
1/14/2020	2020	1	14	228	26	45	35.5	3.5	4037.5
1/15/2020	2020	1	15	229	24	48	36	4	4041.5
1/16/2020	2020	1	16	230	30	37	33.5	1.5	4043
1/17/2020	2020	1	17	231	10	38	24	-8	4035
1/18/2020	2020	1	18	232	8	48	28	-4	4031
1/19/2020	2020	1	19	233	15	44	29.5	-2.5	4028.5
1/20/2020	2020	1	20	234	24	47	35.5	3.5	4032
1/21/2020	2020	1	21	235	30	37	33.5	1.5	4033.5
1/22/2020	2020	1	22	236	24	36	30	-2	4031.5
1/23/2020	2020	1	23	237	17	40	28.5	-3.5	4028
1/24/2020	2020	1	24	238	17	45	31	-1	4027
1/25/2020	2020	1	25	239	20	45	32.5	0.5	4027.5
1/26/2020	2020	1	26	240	22	47	34.5	2.5	4030
1/27/2020	2020	1	27	241	20	33	26.5	-5.5	4024.5
1/28/2020	2020	1	28	242	14	41	27.5	-4.5	4020
1/29/2020	2020	1	29	243	14	33	23.5	-8.5	4011.5
1/30/2020	2020	1	30	244	11	39	25	-7	4004.5
1/31/2020	2020	1	31	245	9	40	24.5	-7.5	3997
2/1/2020	2020	2	1	246	21	52	36.5	4.5	4001.5
2/2/2020	2020	2	2	247	22	55	38.5	6.5	4008
2/3/2020	2020	2	3	248	19	44	31.5	-0.5	4007.5
2/4/2020	2020	2	4	249	-5	21	8	-24	3983.5
2/5/2020	2020	2	5	250	-7	22	7.5	-24.5	3959
2/6/2020	2020	2	6	251	11	36	23.5	-8.5	3950.5

2/7/2020	2020	2	7	252	28	48	38	6	3956.5
2/8/2020	2020	2	8	253	24	50	37	5	3961.5
2/9/2020	2020	2	9	254	25	44	34.5	2.5	3964
2/10/2020	2020	2	10	255	26	36	31	-1	3963
2/11/2020	2020	2	11	256	21	31	26	-6	3957
2/12/2020	2020	2	12	257	10	33	21.5	-10.5	3946.5
2/13/2020	2020	2	13	258	9	39	24	-8	3938.5
2/14/2020	2020	2	14	259	13	45	29	-3	3935.5
2/15/2020	2020	2	15	260	23	44	33.5	1.5	3937
2/16/2020	2020	2	16	261	30	49	39.5	7.5	3944.5
2/17/2020	2020	2	17	262	26	49	37.5	5.5	3950
2/18/2020	2020	2	18	263	20	47	33.5	1.5	3951.5
2/19/2020	2020	2	19	264	23	46	34.5	2.5	3954
2/20/2020	2020	2	20	265	17	48	32.5	0.5	3954.5
2/21/2020	2020	2	21	266	27	49	38	6	3960.5
2/22/2020	2020	2	22	267	31	38	34.5	2.5	3963
2/23/2020	2020	2	23	268	21	31	26	-6	3957
2/24/2020	2020	2	24	269	21	41	31	-1	3956
2/25/2020	2020	2	25	270	6	27	16.5	-15.5	3940.5
2/26/2020	2020	2	26	271	1	36	18.5	-13.5	3927
2/27/2020	2020	2	27	272	18	46	32	0	3927
2/28/2020	2020	2	28	273	16	51	33.5	1.5	3928.5
2/29/2020	2020	2	29	274	24	48	36	4	3932.5
3/1/2020	2020	3	1	275	27	45	36	4	3936.5
3/2/2020	2020	3	2	276	20	45	32.5	0.5	3937
3/3/2020	2020	3	3	277	20	48	34	2	3939
3/4/2020	2020	3	4	278	21	51	36	4	3943
3/5/2020	2020	3	5	279	23	56	39.5	7.5	3950.5
3/6/2020	2020	3	6	280	31	51	41	9	3959.5
3/7/2020	2020	3	7	281	29	55	42	10	3969.5
3/8/2020	2020	3	8	282	31	45	38	6	3975.5
3/9/2020	2020	3	9	283	29	49	39	7	3982.5
3/10/2020	2020	3	10	284	28	46	37	5	3987.5
3/11/2020	2020	3	11	285	35	47	41	9	3996.5
3/12/2020	2020	3	12	286	36	51	43.5	11.5	4008
3/13/2020	2020	3	13	287	29	43	36	4	4012
3/14/2020	2020	3	14	288	27	47	37	5	4017
3/15/2020	2020	3	15	289	27	53	40	8	4025
3/16/2020	2020	3	16	290	27	56	41.5	9.5	4034.5
3/17/2020	2020	3	17	291	31	53	42	10	4044.5
3/18/2020	2020	3	18	292	26	46	36	4	4048.5
3/19/2020	2020	3	19	293	18	35	26.5	-5.5	4043
3/20/2020	2020	3	20	294	14	44	29	-3	4040
3/21/2020	2020	3	21	295	26	50	38	6	4046
3/22/2020	2020	3	22	296	27	46	36.5	4.5	4050.5
3/23/2020	2020	3	23	297	30	49	39.5	7.5	4058
3/24/2020	2020	3	24	298	27	52	39.5	7.5	4065.5
3/25/2020	2020	3	25	299	33	54	43.5	11.5	4077
3/26/2020	2020	3	26	300	32	52	42	10	4087
3/27/2020	2020	3	27	301	20	37	28.5	-3.5	4083.5
3/28/2020	2020	3	28	302	15	38	26.5	-5.5	4078
3/29/2020	2020	3	29	303	22	50	36	4	4082
3/30/2020	2020	3	30	304	26	47	36.5	4.5	4086.5
3/31/2020	2020	3	31	305	25	57	41	9	4095.5
4/1/2020	2020	4	1	306	37	57	47	15	4110.5
4/2/2020	2020	4	2	307	35	56	45.5	13.5	4124
4/3/2020	2020	4	3	308	27	54	40.5	8.5	4132.5
4/4/2020	2020	4	4	309	28	56	42	10	4142.5
4/5/2020	2020	4	5	310	29	57	43	11	4153.5
4/6/2020	2020	4	6	311	29	57	43	11	4164.5
4/7/2020	2020	4	7	312	29	58	43.5	11.5	4176
4/8/2020	2020	4	8	313	29	61	45	13	4189
4/9/2020	2020	4	9	314	32	58	45	13	4202
4/10/2020	2020	4	10	315	26	55	40.5	8.5	4210.5
4/11/2020	2020	4	11	316	25	55	40	8	4218.5
4/12/2020	2020	4	12	317	29	50	39.5	7.5	4226
4/13/2020	2020	4	13	318	19	37	28	-4	4222
4/14/2020	2020	4	14	319	9	37	23	-9	4213
4/15/2020	2020	4	15	320	14	47	30.5	-1.5	4211.5
4/16/2020	2020	4	16	321	28	54	41	9	4220.5
4/17/2020	2020	4	17	322	29	55	42	10	4230.5
4/18/2020	2020	4	18	323	31	51	41	9	4239.5
4/19/2020	2020	4	19	324	29	54	41.5	9.5	4249
4/20/2020	2020	4	20	325	35	57	46	14	4263
4/21/2020	2020	4	21	326	30	56	43	11	4274
4/22/2020	2020	4	22	327	33	58	45.5	13.5	4287.5
4/23/2020	2020	4	23	328	31	61	46	14	4301.5
4/24/2020	2020	4	24	329	33	63	48	16	4317.5
4/25/2020	2020	4	25	330	29	64	46.5	14.5	4332
4/26/2020	2020	4	26	331	38	71	54.5	22.5	4354.5
4/27/2020	2020	4	27	332	41	71	56	24	4378.5
4/28/2020	2020	4	28	333	44	71	57.5	25.5	4404
4/29/2020	2020	4	29	334	38	74	56	24	4428
4/30/2020	2020	4	30	335	44	74	59	27	4455
5/1/2020	2020	5	1	336	42	73	57.5	25.5	4480.5
5/2/2020	2020	5	2	337	44	71	57.5	25.5	4506
5/3/2020	2020	5	3	338	41	71	56	24	4530
5/4/2020	2020	5	4	339	38	69	53.5	21.5	4551.5
5/5/2020	2020	5	5	340	34	72	53	21	4572.5
5/6/2020	2020	5	6	341	36	76	56	24	4596.5
5/7/2020	2020	5	7	342	39	74	56.5	24.5	4621
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5/11/2020	2020	5	11	346	44	66	55	23	4710.5
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5/13/2020	2020	5	13	348	38	65	51.5	19.5	4749
5/14/2020	2020	5	14	349	38	65	51.5	19.5	4768.5
5/15/2020	2020	5	15	350	37	67	52	20	4788.5
5/16/2020	2020	5	16	351	37	73	55	23	4811.5
5/17/2020	2020	5	17	352	42	75	58.5	26.5	4838
5/18/2020	2020	5	18	353	43	78	60.5	28.5	4866.5
5/19/2020	2020	5	19	354	42	74	58	26	4892.5
5/20/2020	2020	5	20	355	33	62	47.5	15.5	4908
5/21/2020	2020	5	21	356	29	64	46.5	14.5	4922.5
5/22/2020	2020	5	22	357	32	69	50.5	18.5	4941
5/23/2020	2020	5	23	358	35	67	51	19	4960
5/24/2020	2020	5	24	359	35	64	49.5	17.5	4977.5
5/25/2020	2020	5	25	360	32	64	48	16	4993.5
5/26/2020	2020	5	26	361	32	71	51.5	19.5	5013
5/27/2020	2020	5	27	362	44	77	60.5	28.5	5041.5
5/28/2020	2020	5	28	363	45	80	62.5	30.5	5072
5/29/2020	2020	5	29	364	51	79	65	33	5105
5/30/2020	2020	5	30	365	49	80	64.5	32.5	5137.5
5/31/2020	2020	5	31	366	51	77	64	32	5169.5
6/1/2020	2020	6	1	1	47	72	59.5	27.5	27.5
6/2/2020	2020	6	2	2	47	79	63	31	58.5
6/3/2020	2020	6	3	3	47	79	63	31	89.5
6/4/2020	2020	6	4	4	49	82	65.5	33.5	123
6/5/2020	2020	6	5	5	52	83	67.5	35.5	158.5
6/6/2020	2020	6	6	6	48	75	61.5	29.5	188
6/7/2020	2020	6	7	7	45	73	59	27	215
6/8/2020	2020	6	8	8	33	67	50	18	233
6/9/2020	2020	6	9	9	30	63	46.5	14.5	247.5
6/10/2020	2020	6	10	10	32	74	53	21	268.5
6/11/2020	2020	6	11	11	40	81	60.5	28.5	297
6/12/2020	2020	6	12	12	53	80	66.5	34.5	331.5
6/13/2020	2020	6	13	13	52	79	65.5	33.5	365
6/14/2020	2020	6	14	14	48	78	63	31	396
6/15/2020	2020	6	15	15	44	79	61.5	29.5	425.5
6/16/2020	2020	6	16	16	51	77	64	32	457.5
6/17/2020	2020	6	17	17	48	77	62.5	30.5	488
6/18/2020	2020	6	18	18	44	75	59.5	27.5	515.5
6/19/2020	2020	6	19	19	44	75	59.5	27.5	543
6/20/2020	2020	6	20	20	41	77	59	27	570
6/21/2020	2020	6	21	21	46	81	63.5	31.5	601.5
6/22/2020	2020	6	22	22	50	84	67	35	636.5
6/23/2020	2020	6	23	23	49	85	67	35	671.5
6/24/2020	2020	6	24	24	52	83	67.5	35.5	707
6/25/2020	2020	6	25	25	56	82	69	37	744
6/26/2020	2020	6	26	26	53	77	65	33	777
6/27/2020	2020	6	27	27	44	81	62.5	30.5	807.5
6/28/2020	2020	6	28	28	55	77	66	34	841.5
6/29/2020	2020	6	29	29	53	76	64.5	32.5	874
6/30/2020	2020	6	30	30	44	71	57.5	25.5	899.5
7/1/2020	2020	7	1	31	40	75	57.5	25.5	925
7/2/2020	2020	7	2	32	45	76	60.5	28.5	953.5
7/3/2020	2020	7	3	33	51	76	63.5	31.5	985
7/4/2020	2020	7	4	34	47	81	64	32	1017
7/5/2020	2020	7	5	35	49	84	66.5	34.5	1051.5
7/6/2020	2020	7	6	36	54	84	69	37	1088.5
7/7/2020	2020	7	7	37	53	82	67.5	35.5	1124
7/8/2020	2020	7	8	38	51	83	67	35	1159
7/9/2020	2020	7	9	39	50	84	67	35	1194
7/10/2020	2020	7	10	40	55	88	71.5	39.5	1233.5
7/11/2020	2020	7	11	41	53	90	71.5	39.5	1273
7/12/2020	2020	7	12	42	58	86	72	40	1313
7/13/2020	2020	7	13	43	49	86	67.5	35.5	1348.5
7/14/2020	2020	7	14	44	55	82	68.5	36.5	1385
7/15/2020	2020	7	15	45	52	80	66	34	1419
7/16/2020	2020	7	16	46	51	77	64	32	1451
7/17/2020	2020	7	17	47	50	75	62.5	30.5	1481.5
7/18/2020	2020	7	18	48	47	78	62.5	30.5	1512
7/19/2020	2020	7	19	49	50	83	66.5	34.5	1546.5
7/20/2020	2020	7	20	50	51	84	67.5	35.5	1582
7/21/2020	2020	7	21	51	53	81	67	35	1617
7/22/2020	2020	7	22	52	50	67	58.5	26.5	1643.5
7/23/2020	2020	7	23	53	48	67	57.5	25.5	1669
7/24/2020	2020	7	24	54	49	64	56.5	24.5	1693.5
7/25/2020	2020	7	25	55	51	65	58	26	1719.5
7/26/2020	2020	7	26	56	49	74	61.5	29.5	1749
7/27/2020	2020	7	27	57	50	74	62	30	1779
7/28/2020	2020	7	28	58	50	76	63	31	1810
7/29/2020	2020	7	29	59	48	82	65	33	1843
7/30/2020	2020	7	30	60	48	84	66	34	1877
7/31/2020	2020	7	31	61	52	83	67.5	35.5	1912.5
8/1/2020	2020	8	1	62	53	81	67	35	1947.5
8/2/2020	2020	8	2	63	53	81	67	35	1982.5
8/3/2020	2020	8	3	64	54	83	68.5	36.5	2019
8/4/2020	2020	8	4	65	56	82	69	37	2056
8/5/2020	2020	8	5	66	52	72	62	30	2086
8/6/2020	2020	8	6	67	47	79	63	31	2117
8/7/2020	2020	8	7	68	47	75	61	29	2146
8/8/2020	2020	8	8	69	52	79	65.5	33.5	2179.5
8/9/2020	2020	8	9	70	49	81	65	33	2212.5
8/10/2020	2020	8	10	71	53	83	68	36	2248.5

8/11/2020	2020	8	11	72	51	81	66	34	2282.5
8/12/2020	2020	8	12	73	52	83	67.5	35.5	2318
8/13/2020	2020	8	13	74	53	82	67.5	35.5	2353.5
8/14/2020	2020	8	14	75	53	85	69	37	2390.5
8/15/2020	2020	8	15	76	52	91	71.5	39.5	2430
8/16/2020	2020	8	16	77	56	85	70.5	38.5	2468.5
8/17/2020	2020	8	17	78	51	82	66.5	34.5	2503
8/18/2020	2020	8	18	79	56	83	69.5	37.5	2540.5
8/19/2020	2020	8	19	80	55	85	70	38	2578.5
8/20/2020	2020	8	20	81	57	86	71.5	39.5	2618
8/21/2020	2020	8	21	82	58	86	72	40	2658
8/22/2020	2020	8	22	83	53	85	69	37	2695
8/23/2020	2020	8	23	84	53	84	68.5	36.5	2731.5
8/24/2020	2020	8	24	85	54	83	68.5	36.5	2768
8/25/2020	2020	8	25	86	51	82	66.5	34.5	2802.5
8/26/2020	2020	8	26	87	52	78	65	33	2835.5
8/27/2020	2020	8	27	88	52	80	66	34	2869.5
8/28/2020	2020	8	28	89	47	84	65.5	33.5	2903
8/29/2020	2020	8	29	90	47	78	62.5	30.5	2933.5
8/30/2020	2020	8	30	91	53	74	63.5	31.5	2965
8/31/2020	2020	8	31	92	51	73	62	30	2995
9/1/2020	2020	9	1	93	42	70	56	24	3019
9/2/2020	2020	9	2	94	40	78	59	27	3046
9/3/2020	2020	9	3	95	44	82	63	31	3077
9/4/2020	2020	9	4	96	53	84	68.5	36.5	3113.5
9/5/2020	2020	9	5	97	54	83	68.5	36.5	3150
9/6/2020	2020	9	6	98	53	85	69	37	3187
9/7/2020	2020	9	7	99	50	85	67.5	35.5	3222.5
9/8/2020	2020	9	8	100	37	74	55.5	23.5	3246
9/9/2020	2020	9	9	101	34	50	42	10	3256
9/10/2020	2020	9	10	102	33	56	44.5	12.5	3268.5
9/11/2020	2020	9	11	103	32	64	48	16	3284.5
9/12/2020	2020	9	12	104	33	65	49	17	3301.5
9/13/2020	2020	9	13	105	44	69	56.5	24.5	3326
9/14/2020	2020	9	14	106	44	70	57	25	3351
9/15/2020	2020	9	15	107	42	73	57.5	25.5	3376.5
9/16/2020	2020	9	16	108	40	76	58	26	3402.5
9/17/2020	2020	9	17	109	47	74	60.5	28.5	3431
9/18/2020	2020	9	18	110	43	73	58	26	3457
9/19/2020	2020	9	19	111	46	74	60	28	3485
9/20/2020	2020	9	20	112	47	72	59.5	27.5	3512.5
9/21/2020	2020	9	21	113	46	74	60	28	3540.5
9/22/2020	2020	9	22	114	45	73	59	27	3567.5
9/23/2020	2020	9	23	115	44	71	57.5	25.5	3593
9/24/2020	2020	9	24	116	42	76	59	27	3620
9/25/2020	2020	9	25	117	46	77	61.5	29.5	3649.5
9/26/2020	2020	9	26	118	51	76	63.5	31.5	3681
9/27/2020	2020	9	27	119	42	74	58	26	3707
9/28/2020	2020	9	28	120	34	66	50	18	3725
9/29/2020	2020	9	29	121	31	73	52	20	3745
9/30/2020	2020	9	30	122	38	76	57	25	3770
10/1/2020	2020	10	1	123	37	75	56	24	3794
10/2/2020	2020	10	2	124	38	74	56	24	3818
10/3/2020	2020	10	3	125	38	73	55.5	23.5	3841.5
10/4/2020	2020	10	4	126	40	74	57	25	3866.5
10/5/2020	2020	10	5	127	39	75	57	25	3891.5
10/6/2020	2020	10	6	128	37	76	56.5	24.5	3916
10/7/2020	2020	10	7	129	40	76	58	26	3942
10/8/2020	2020	10	8	130	42	73	57.5	25.5	3967.5
10/9/2020	2020	10	9	131	41	71	56	24	3991.5
10/10/2020	2020	10	10	132	39	70	54.5	22.5	4014
10/11/2020	2020	10	11	133	35	64	49.5	17.5	4031.5
10/12/2020	2020	10	12	134	31	69	50	18	4049.5
10/13/2020	2020	10	13	135	37	72	54.5	22.5	4072
10/14/2020	2020	10	14	136	42	73	57.5	25.5	4097.5
10/15/2020	2020	10	15	137	35	77	56	24	4121.5
10/16/2020	2020	10	16	138	30	70	50	18	4139.5
10/17/2020	2020	10	17	139	38	69	53.5	21.5	4161
10/18/2020	2020	10	18	140	40	69	54.5	22.5	4183.5
10/19/2020	2020	10	19	141	40	69	54.5	22.5	4206
10/20/2020	2020	10	20	142	38	71	54.5	22.5	4228.5
10/21/2020	2020	10	21	143	37	68	52.5	20.5	4249
10/22/2020	2020	10	22	144	39	64	51.5	19.5	4268.5
10/23/2020	2020	10	23	145	36	63	49.5	17.5	4286
10/24/2020	2020	10	24	146	45	63	54	22	4308
10/25/2020	2020	10	25	147	33	59	46	14	4322
10/26/2020	2020	10	26	148	15	39	27	-5	4317
10/27/2020	2020	10	27	149	15	24	19.5	-12.5	4304.5
10/28/2020	2020	10	28	150	14	41	27.5	-4.5	4300
10/29/2020	2020	10	29	151	25	53	39	7	4307
10/30/2020	2020	10	30	152	29	60	44.5	12.5	4319.5
10/31/2020	2020	10	31	153	32	60	46	14	4333.5
11/1/2020	2020	11	1	154	34	63	48.5	16.5	4350
11/2/2020	2020	11	2	155	36	65	50.5	18.5	4368.5
11/3/2020	2020	11	3	156	38	67	52.5	20.5	4389
11/4/2020	2020	11	4	157	34	61	47.5	15.5	4404.5
11/5/2020	2020	11	5	158	32	63	47.5	15.5	4420
11/6/2020	2020	11	6	159	42	63	52.5	20.5	4440.5
11/7/2020	2020	11	7	160	31	55	43	11	4451.5
11/8/2020	2020	11	8	161	27	44	35.5	3.5	4455
11/9/2020	2020	11	9	162	18	31	24.5	-7.5	4447.5
11/10/2020	2020	11	10	163	14	33	23.5	-8.5	4439
11/11/2020	2020	11	11	164	13	44	28.5	-3.5	4435.5

11/12/2020	2020	11	12	165	21	46	33.5	1.5	4437
11/13/2020	2020	11	13	166	28	49	38.5	6.5	4443.5
11/14/2020	2020	11	14	167	20	44	32	0	4443.5
11/15/2020	2020	11	15	168	21	53	37	5	4448.5
11/16/2020	2020	11	16	169	29	61	45	13	4461.5
11/17/2020	2020	11	17	170	33	62	47.5	15.5	4477
11/18/2020	2020	11	18	171	37	62	49.5	17.5	4494.5
11/19/2020	2020	11	19	172	40	60	50	18	4512.5
11/20/2020	2020	11	20	173	39	57	48	16	4528.5
11/21/2020	2020	11	21	174	31	58	44.5	12.5	4541
11/22/2020	2020	11	22	175	29	54	41.5	9.5	4550.5
11/23/2020	2020	11	23	176	34	54	44	12	4562.5
11/24/2020	2020	11	24	177	21	38	29.5	-2.5	4560
11/25/2020	2020	11	25	178	19	44	31.5	-0.5	4559.5
11/26/2020	2020	11	26	179	22	42	32	0	4559.5
11/27/2020	2020	11	27	180	22	30	26	-6	4553.5
11/28/2020	2020	11	28	181	15	40	27.5	-4.5	4549
11/29/2020	2020	11	29	182	19	46	32.5	0.5	4549.5
11/30/2020	2020	11	30	183	16	45	30.5	-1.5	4548
12/1/2020	2020	12	1	184	17	38	27.5	-4.5	4543.5
12/2/2020	2020	12	2	185	8	33	20.5	-11.5	4532
12/3/2020	2020	12	3	186	6	34	20	-12	4520
12/4/2020	2020	12	4	187	11	44	27.5	-4.5	4515.5
12/5/2020	2020	12	5	188	19	46	32.5	0.5	4516
12/6/2020	2020	12	6	189	20	48	34	2	4518
12/7/2020	2020	12	7	190	18	52	35	3	4521
12/8/2020	2020	12	8	191	23	54	38.5	6.5	4527.5
12/9/2020	2020	12	9	192	22	54	38	6	4533.5
12/10/2020	2020	12	10	193	26	38	32	0	4533.5
12/11/2020	2020	12	11	194	16	34	25	-7	4526.5
12/12/2020	2020	12	12	195	9	30	19.5	-12.5	4514
12/13/2020	2020	12	13	196	3	33	18	-14	4500
12/14/2020	2020	12	14	197	17	41	29	-3	4497
12/15/2020	2020	12	15	198	6	28	17	-15	4482
12/16/2020	2020	12	16	199	10	38	24	-8	4474
12/17/2020	2020	12	17	200	13	44	28.5	-3.5	4470.5
12/18/2020	2020	12	18	201	12	35	23.5	-8.5	4462
12/19/2020	2020	12	19	202	10	40	25	-7	4455
12/20/2020	2020	12	20	203	16	45	30.5	-1.5	4453.5
12/21/2020	2020	12	21	204	22	49	35.5	3.5	4457
12/22/2020	2020	12	22	205	25	43	34	2	4459
12/23/2020	2020	12	23	206	6	26	16	-16	4443
12/24/2020	2020	12	24	207	4	35	19.5	-12.5	4430.5
12/25/2020	2020	12	25	208	13	45	29	-3	4427.5
12/26/2020	2020	12	26	209	21	46	33.5	1.5	4429
12/27/2020	2020	12	27	210	23	44	33.5	1.5	4430.5
12/28/2020	2020	12	28	211	27	47	37	5	4435.5
12/29/2020	2020	12	29	212	10	28	19	-13	4422.5
12/30/2020	2020	12	30	213	6	30	18	-14	4408.5
12/31/2020	2020	12	31	214	6	38	22	-10	4398.5
1/1/2021	2021	1	1	215	13	37	25	-7	4391.5
1/2/2021	2021	1	2	216	16	35	25.5	-6.5	4385
1/3/2021	2021	1	3	217	17	42	29.5	-2.5	4382.5
1/4/2021	2021	1	4	218	17	50	33.5	1.5	4384
1/5/2021	2021	1	5	219	17	43	30	-2	4382
1/6/2021	2021	1	6	220	13	44	28.5	-3.5	4378.5
1/7/2021	2021	1	7	221	18	47	32.5	0.5	4379
1/8/2021	2021	1	8	222	17	47	32	0	4379
1/9/2021	2021	1	9	223	16	36	26	-6	4373
1/10/2021	2021	1	10	224	10	31	20.5	-11.5	4361.5
1/11/2021	2021	1	11	225	6	33	19.5	-12.5	4349
1/12/2021	2021	1	12	226	5	43	24	-8	4341
1/13/2021	2021	1	13	227	17	49	33	1	4342
1/14/2021	2021	1	14	228	26	44	35	3	4345
1/15/2021	2021	1	15	229	21	47	34	2	4347
1/16/2021	2021	1	16	230	21	42	31.5	-0.5	4346.5
1/17/2021	2021	1	17	231	21	49	35	3	4349.5
1/18/2021	2021	1	18	232	26	47	36.5	4.5	4354
1/19/2021	2021	1	19	233	19	27	23	-9	4345
1/20/2021	2021	1	20	234	22	42	32	0	4345
1/21/2021	2021	1	21	235	21	43	32	0	4345
1/22/2021	2021	1	22	236	27	39	33	1	4346
1/23/2021	2021	1	23	237	22	39	30.5	-1.5	4344.5
1/24/2021	2021	1	24	238	19	37	28	-4	4340.5
1/25/2021	2021	1	25	239	6	25	15.5	-16.5	4324
1/26/2021	2021	1	26	240	7	18	12.5	-19.5	4304.5
1/27/2021	2021	1	27	241	-2	33	15.5	-16.5	4288
1/28/2021	2021	1	28	242	19	47	33	1	4289
1/29/2021	2021	1	29	243	20	47	33.5	1.5	4290.5
1/30/2021	2021	1	30	244	11	36	23.5	-8.5	4282
1/31/2021	2021	1	31	245	8	46	27	-5	4277
2/1/2021	2021	2	1	246	22	51	36.5	4.5	4281.5
2/2/2021	2021	2	2	247	31	51	41	9	4290.5
2/3/2021	2021	2	3	248	33	47	40	8	4298.5
2/4/2021	2021	2	4	249	20	38	29	-3	4295.5
2/5/2021	2021	2	5	250	20	39	29.5	-2.5	4293
2/6/2021	2021	2	6	251	15	42	28.5	-3.5	4289.5
2/7/2021	2021	2	7	252	27	49	38	6	4295.5
2/8/2021	2021	2	8	253	26	49	37.5	5.5	4301
2/9/2021	2021	2	9	254	28	48	38	6	4307
2/10/2021	2021	2	10	255	25	45	35	3	4310
2/11/2021	2021	2	11	256	23	46	34.5	2.5	4312.5
2/12/2021	2021	2	12	257	25	44	34.5	2.5	4315

2/13/2021	2021	2	13	258	24	42	33	1	4316
2/14/2021	2021	2	14	259	15	28	21.5	-10.5	4305.5
2/15/2021	2021	2	15	260	15	30	22.5	-9.5	4296
2/16/2021	2021	2	16	261	11	29	20	-12	4284
2/17/2021	2021	2	17	262	7	29	18	-14	4270
2/18/2021	2021	2	18	263	4	30	17	-15	4255
2/19/2021	2021	2	19	264	8	44	26	-6	4249
2/20/2021	2021	2	20	265	23	49	36	4	4253
2/21/2021	2021	2	21	266	16	35	25.5	-6.5	4246.5
2/22/2021	2021	2	22	267	15	46	30.5	-1.5	4245
2/23/2021	2021	2	23	268	21	49	35	3	4248
2/24/2021	2021	2	24	269	22	47	34.5	2.5	4250.5
2/25/2021	2021	2	25	270	18	44	31	-1	4249.5
2/26/2021	2021	2	26	271	23	44	33.5	1.5	4251
2/27/2021	2021	2	27	272	13	40	26.5	-5.5	4245.5
2/28/2021	2021	2	28	273	6	29	17.5	-14.5	4231
3/1/2021	2021	3	1	274	4	42	23	-9	4222
3/2/2021	2021	3	2	275	14	50	32	0	4222
3/3/2021	2021	3	3	276	21	54	37.5	5.5	4227.5
3/4/2021	2021	3	4	277	24	37	30.5	-1.5	4226
3/5/2021	2021	3	5	278	22	50	36	4	4230
3/6/2021	2021	3	6	279	29	51	40	8	4238
3/7/2021	2021	3	7	280	24	57	40.5	8.5	4246.5
3/8/2021	2021	3	8	281	33	64	48.5	16.5	4263
3/9/2021	2021	3	9	282	28	43	35.5	3.5	4266.5
3/10/2021	2021	3	10	283	21	41	31	-1	4265.5
3/11/2021	2021	3	11	284	18	49	33.5	1.5	4267
3/12/2021	2021	3	12	285	20	48	34	2	4269
3/13/2021	2021	3	13	286	18	30	24	-8	4261
3/14/2021	2021	3	14	287	17	28	22.5	-9.5	4251.5
3/15/2021	2021	3	15	288	22	42	32	0	4251.5
3/16/2021	2021	3	16	289	20	38	29	-3	4248.5
3/17/2021	2021	3	17	290	22	46	34	2	4250.5
3/18/2021	2021	3	18	291	19	54	36.5	4.5	4255
3/19/2021	2021	3	19	292	26	58	42	10	4265
3/20/2021	2021	3	20	293	30	58	44	12	4277
3/21/2021	2021	3	21	294	31	52	41.5	9.5	4286.5
3/22/2021	2021	3	22	295	20	44	32	0	4286.5
3/23/2021	2021	3	23	296	23	36	29.5	-2.5	4284
3/24/2021	2021	3	24	297	17	29	23	-9	4275
3/25/2021	2021	3	25	298	22	40	31	-1	4274
3/26/2021	2021	3	26	299	17	39	28	-4	4270
3/27/2021	2021	3	27	300	17	43	30	-2	4268
3/28/2021	2021	3	28	301	19	57	38	6	4274
3/29/2021	2021	3	29	302	31	61	46	14	4288
3/30/2021	2021	3	30	303	22	52	37	5	4293
3/31/2021	2021	3	31	304	15	51	33	1	4294
4/1/2021	2021	4	1	305	26	59	42.5	10.5	4304.5
4/2/2021	2021	4	2	306	32	63	47.5	15.5	4320
4/3/2021	2021	4	3	307	32	66	49	17	4337
4/4/2021	2021	4	4	308	38	68	53	21	4358
4/5/2021	2021	4	5	309	36	65	50.5	18.5	4376.5
4/6/2021	2021	4	6	310	31	58	44.5	12.5	4389
4/7/2021	2021	4	7	311	25	58	41.5	9.5	4398.5
4/8/2021	2021	4	8	312	36	63	49.5	17.5	4416
4/9/2021	2021	4	9	313	29	60	44.5	12.5	4428.5
4/10/2021	2021	4	10	314	26	62	44	12	4440.5
4/11/2021	2021	4	11	315	32	62	47	15	4455.5
4/12/2021	2021	4	12	316	37	63	50	18	4473.5
4/13/2021	2021	4	13	317	36	57	46.5	14.5	4488
4/14/2021	2021	4	14	318	37	62	49.5	17.5	4505.5
4/15/2021	2021	4	15	319	26	62	44	12	4517.5
4/16/2021	2021	4	16	320	22	50	36	4	4521.5
4/17/2021	2021	4	17	321	23	44	33.5	1.5	4523
4/18/2021	2021	4	18	322	26	39	32.5	0.5	4523.5
4/19/2021	2021	4	19	323	22	54	38	6	4529.5
4/20/2021	2021	4	20	324	28	59	43.5	11.5	4541
4/21/2021	2021	4	21	325	30	60	45	13	4554
4/22/2021	2021	4	22	326	29	54	41.5	9.5	4563.5
4/23/2021	2021	4	23	327	28	51	39.5	7.5	4571
4/24/2021	2021	4	24	328	34	61	47.5	15.5	4586.5
4/25/2021	2021	4	25	329	42	66	54	22	4608.5
4/26/2021	2021	4	26	330	31	58	44.5	12.5	4621
4/27/2021	2021	4	27	331	27	48	37.5	5.5	4626.5
4/28/2021	2021	4	28	332	27	46	36.5	4.5	4631
4/29/2021	2021	4	29	333	28	59	43.5	11.5	4642.5
4/30/2021	2021	4	30	334	33	66	49.5	17.5	4660
5/1/2021	2021	5	1	335	42	72	57	25	4685
5/2/2021	2021	5	2	336	40	67	53.5	21.5	4706.5
5/3/2021	2021	5	3	337	31	57	44	12	4718.5
5/4/2021	2021	5	4	338	30	63	46.5	14.5	4733
5/5/2021	2021	5	5	339	40	71	55.5	23.5	4756.5
5/6/2021	2021	5	6	340	38	74	56	24	4780.5
5/7/2021	2021	5	7	341	42	73	57.5	25.5	4806
5/8/2021	2021	5	8	342	38	65	51.5	19.5	4825.5
5/9/2021	2021	5	9	343	36	63	49.5	17.5	4843
5/10/2021	2021	5	10	344	37	65	51	19	4862
5/11/2021	2021	5	11	345	30	64	47	15	4877
5/12/2021	2021	5	12	346	33	68	50.5	18.5	4895.5
5/13/2021	2021	5	13	347	34	73	53.5	21.5	4917
5/14/2021	2021	5	14	348	43	73	58	26	4943
5/15/2021	2021	5	15	349	41	72	56.5	24.5	4967.5
5/16/2021	2021	5	16	350	37	71	54	22	4989.5

5/17/2021	2021	5	17	351	32	64	48	16	5005.5
5/18/2021	2021	5	18	352	38	56	47	15	5020.5
5/19/2021	2021	5	19	353	38	70	54	22	5042.5
5/20/2021	2021	5	20	354	41	73	57	25	5067.5
5/21/2021	2021	5	21	355	42	58	50	18	5085.5
5/22/2021	2021	5	22	356	37	71	54	22	5107.5
5/23/2021	2021	5	23	357	27	61	44	12	5119.5
5/24/2021	2021	5	24	358	30	68	49	17	5136.5
5/25/2021	2021	5	25	359	32	72	52	20	5156.5
5/26/2021	2021	5	26	360	40	73	56.5	24.5	5181
5/27/2021	2021	5	27	361	37	73	55	23	5204
5/28/2021	2021	5	28	362	40	77	58.5	26.5	5230.5
5/29/2021	2021	5	29	363	47	76	61.5	29.5	5260
5/30/2021	2021	5	30	364	40	76	58	26	5286
5/31/2021	2021	5	31	365	44	68	56	24	5310
6/1/2021	2021	6	1	1	40	72	56	24	24
6/2/2021	2021	6	2	2	45	74	59.5	27.5	51.5
6/3/2021	2021	6	3	3	45	77	61	29	80.5
6/4/2021	2021	6	4	4	42	81	61.5	29.5	110
6/5/2021	2021	6	5	5	50	83	66.5	34.5	144.5
6/6/2021	2021	6	6	6	53	82	67.5	35.5	180
6/7/2021	2021	6	7	7	49	80	64.5	32.5	212.5
6/8/2021	2021	6	8	8	49	79	64	32	244.5
6/9/2021	2021	6	9	9	45	81	63	31	275.5
6/10/2021	2021	6	10	10	46	82	64	32	307.5
6/11/2021	2021	6	11	11	43	83	63	31	338.5
6/12/2021	2021	6	12	12	44	88	66	34	372.5
6/13/2021	2021	6	13	13	49	90	69.5	37.5	410
6/14/2021	2021	6	14	14	52	93	72.5	40.5	450.5
6/15/2021	2021	6	15	15	58	89	73.5	41.5	492
6/16/2021	2021	6	16	16	58	91	74.5	42.5	534.5
6/17/2021	2021	6	17	17	55	91	73	41	575.5
6/18/2021	2021	6	18	18	53	88	70.5	38.5	614
6/19/2021	2021	6	19	19	55	88	71.5	39.5	653.5
6/20/2021	2021	6	20	20	57	86	71.5	39.5	693
6/21/2021	2021	6	21	21	59	88	73.5	41.5	734.5
6/22/2021	2021	6	22	22	56	85	70.5	38.5	773
6/23/2021	2021	6	23	23	48	78	63	31	804
6/24/2021	2021	6	24	24	47	77	62	30	834
6/25/2021	2021	6	25	25	49	77	63	31	865
6/26/2021	2021	6	26	26	45	74	59.5	27.5	892.5
6/27/2021	2021	6	27	27	49	67	58	26	918.5
6/28/2021	2021	6	28	28	47	63	55	23	941.5
6/29/2021	2021	6	29	29	47	62	54.5	22.5	964
6/30/2021	2021	6	30	30	49	67	58	26	990
7/1/2021	2021	7	1	31	49	74	61.5	29.5	1019.5
7/2/2021	2021	7	2	32	52	76	64	32	1051.5
7/3/2021	2021	7	3	33	49	76	62.5	30.5	1082
7/4/2021	2021	7	4	34	52	82	67	35	1117
7/5/2021	2021	7	5	35	52	83	67.5	35.5	1152.5
7/6/2021	2021	7	6	36	50	82	66	34	1186.5
7/7/2021	2021	7	7	37	56	80	68	36	1222.5
7/8/2021	2021	7	8	38	54	85	69.5	37.5	1260
7/9/2021	2021	7	9	39	59	88	73.5	41.5	1301.5
7/10/2021	2021	7	10	40	57	92	74.5	42.5	1344
7/11/2021	2021	7	11	41	60	88	74	42	1386
7/12/2021	2021	7	12	42	57	81	69	37	1423
7/13/2021	2021	7	13	43	52	83	67.5	35.5	1458.5
7/14/2021	2021	7	14	44	52	72	62	30	1488.5
7/15/2021	2021	7	15	45	51	75	63	31	1519.5
7/16/2021	2021	7	16	46	52	79	65.5	33.5	1553
7/17/2021	2021	7	17	47	51	76	63.5	31.5	1584.5
7/18/2021	2021	7	18	48	52	77	64.5	32.5	1617
7/19/2021	2021	7	19	49	52	78	65	33	1650
7/20/2021	2021	7	20	50	54	81	67.5	35.5	1685.5
7/21/2021	2021	7	21	51	51	82	66.5	34.5	1720
7/22/2021	2021	7	22	52	54	77	65.5	33.5	1753.5
7/23/2021	2021	7	23	53	50	75	62.5	30.5	1784
7/24/2021	2021	7	24	54	48	66	57	25	1809
7/25/2021	2021	7	25	55	49	69	59	27	1836
7/26/2021	2021	7	26	56	49	74	61.5	29.5	1865.5
7/27/2021	2021	7	27	57	51	71	61	29	1894.5
7/28/2021	2021	7	28	58	52	74	63	31	1925.5
7/29/2021	2021	7	29	59	51	77	64	32	1957.5
7/30/2021	2021	7	30	60	50	76	63	31	1988.5
7/31/2021	2021	7	31	61	49	77	63	31	2019.5
8/1/2021	2021	8	1	62	49	74	61.5	29.5	2049
8/2/2021	2021	8	2	63	49	70	59.5	27.5	2076.5
8/3/2021	2021	8	3	64	49	76	62.5	30.5	2107
8/4/2021	2021	8	4	65	47	79	63	31	2138
8/5/2021	2021	8	5	66	51	81	66	34	2172
8/6/2021	2021	8	6	67	56	81	68.5	36.5	2208.5
8/7/2021	2021	8	7	68	48	78	63	31	2239.5
8/8/2021	2021	8	8	69	47	81	64	32	2271.5
8/9/2021	2021	8	9	70	51	79	65	33	2304.5
8/10/2021	2021	8	10	71	52	76	64	32	2336.5
8/11/2021	2021	8	11	72	50	74	62	30	2366.5
8/12/2021	2021	8	12	73	51	77	64	32	2398.5
8/13/2021	2021	8	13	74	48	76	62	30	2428.5
8/14/2021	2021	8	14	75	49	69	59	27	2455.5
8/15/2021	2021	8	15	76	48	78	63	31	2486.5
8/16/2021	2021	8	16	77	48	74	61	29	2515.5
8/17/2021	2021	8	17	78	46	76	61	29	2544.5

8/18/2021	2021	8	18	79	52	71	61.5	29.5	2574
8/19/2021	2021	8	19	80	51	69	60	28	2602
8/20/2021	2021	8	20	81	45	70	57.5	25.5	2627.5
8/21/2021	2021	8	21	82	45	75	60	28	2655.5
8/22/2021	2021	8	22	83	46	78	62	30	2685.5
8/23/2021	2021	8	23	84	48	77	62.5	30.5	2716
8/24/2021	2021	8	24	85	46	78	62	30	2746
8/25/2021	2021	8	25	86	48	83	65.5	33.5	2779.5
8/26/2021	2021	8	26	87	52	82	67	35	2814.5
8/27/2021	2021	8	27	88	53	82	67.5	35.5	2850
8/28/2021	2021	8	28	89	51	78	64.5	32.5	2882.5
8/29/2021	2021	8	29	90	48	80	64	32	2914.5
8/30/2021	2021	8	30	91	49	78	63.5	31.5	2946
8/31/2021	2021	8	31	92	49	78	63.5	31.5	2977.5
9/1/2021	2021	9	1	93	52	62	57	25	3002.5
9/2/2021	2021	9	2	94	47	66	56.5	24.5	3027
9/3/2021	2021	9	3	95	46	76	61	29	3056
9/4/2021	2021	9	4	96	50	75	62.5	30.5	3086.5
9/5/2021	2021	9	5	97	45	77	61	29	3115.5
9/6/2021	2021	9	6	98	46	80	63	31	3146.5
9/7/2021	2021	9	7	99	46	82	64	32	3178.5
9/8/2021	2021	9	8	100	51	82	66.5	34.5	3213
9/9/2021	2021	9	9	101	56	82	69	37	3250
9/10/2021	2021	9	10	102	57	82	69.5	37.5	3287.5
9/11/2021	2021	9	11	103	51	80	65.5	33.5	3321
9/12/2021	2021	9	12	104	47	81	64	32	3353
9/13/2021	2021	9	13	105	49	80	64.5	32.5	3385.5
9/14/2021	2021	9	14	106	51	79	65	33	3418.5
9/15/2021	2021	9	15	107	47	79	63	31	3449.5
9/16/2021	2021	9	16	108	47	74	60.5	28.5	3478
9/17/2021	2021	9	17	109	46	77	61.5	29.5	3507.5
9/18/2021	2021	9	18	110	48	76	62	30	3537.5
9/19/2021	2021	9	19	111	47	72	59.5	27.5	3565
9/20/2021	2021	9	20	112	39	71	55	23	3588
9/21/2021	2021	9	21	113	33	72	52.5	20.5	3608.5
9/22/2021	2021	9	22	114	41	74	57.5	25.5	3634
9/23/2021	2021	9	23	115	43	72	57.5	25.5	3659.5
9/24/2021	2021	9	24	116	42	71	56.5	24.5	3684
9/25/2021	2021	9	25	117	43	68	55.5	23.5	3707.5
9/26/2021	2021	9	26	118	41	61	51	19	3726.5
9/27/2021	2021	9	27	119	41	53	47	15	3741.5
9/28/2021	2021	9	28	120	42	56	49	17	3758.5
9/29/2021	2021	9	29	121	37	59	48	16	3774.5
9/30/2021	2021	9	30	122	36	46	41	9	3783.5
10/1/2021	2021	10	1	123	34	44	39	7	3790.5
10/2/2021	2021	10	2	124	31	57	44	12	3802.5
10/3/2021	2021	10	3	125	38	62	50	18	3820.5
10/4/2021	2021	10	4	126	40	65	52.5	20.5	3841
10/5/2021	2021	10	5	127	43	65	54	22	3863
10/6/2021	2021	10	6	128	40	60	50	18	3881
10/7/2021	2021	10	7	129	38	64	51	19	3900
10/8/2021	2021	10	8	130	42	67	54.5	22.5	3922.5
10/9/2021	2021	10	9	131	34	59	46.5	14.5	3937
10/10/2021	2021	10	10	132	31	52	41.5	9.5	3946.5
10/11/2021	2021	10	11	133	28	59	43.5	11.5	3958
10/12/2021	2021	10	12	134	24	43	33.5	1.5	3959.5
10/13/2021	2021	10	13	135	20	45	32.5	0.5	3960
10/14/2021	2021	10	14	136	27	48	37.5	5.5	3965.5
10/15/2021	2021	10	15	137	20	49	34.5	2.5	3968
10/16/2021	2021	10	16	138	26	63	44.5	12.5	3980.5
10/17/2021	2021	10	17	139	35	62	48.5	16.5	3997
10/18/2021	2021	10	18	140	33	60	46.5	14.5	4011.5
10/19/2021	2021	10	19	141	26	51	38.5	6.5	4018
10/20/2021	2021	10	20	142	26	59	42.5	10.5	4028.5
10/21/2021	2021	10	21	143	29	62	45.5	13.5	4042
10/22/2021	2021	10	22	144	32	63	47.5	15.5	4057.5
10/23/2021	2021	10	23	145	38	56	47	15	4072.5
10/24/2021	2021	10	24	146	33	58	45.5	13.5	4086
10/25/2021	2021	10	25	147	39	67	53	21	4107
10/26/2021	2021	10	26	148	27	49	38	6	4113
10/27/2021	2021	10	27	149	25	47	36	4	4117
10/28/2021	2021	10	28	150	27	54	40.5	8.5	4125.5
10/29/2021	2021	10	29	151	28	64	46	14	4139.5
10/30/2021	2021	10	30	152	35	63	49	17	4156.5
10/31/2021	2021	10	31	153	34	59	46.5	14.5	4171
11/1/2021	2021	11	1	154	34	56	45	13	4184
11/2/2021	2021	11	2	155	31	55	43	11	4195
11/3/2021	2021	11	3	156	27	56	41.5	9.5	4204.5
11/4/2021	2021	11	4	157	28	59	43.5	11.5	4216
11/5/2021	2021	11	5	158	32	63	47.5	15.5	4231.5
11/6/2021	2021	11	6	159	34	63	48.5	16.5	4248
11/7/2021	2021	11	7	160	37	61	49	17	4265
11/8/2021	2021	11	8	161	34	60	47	15	4280
11/9/2021	2021	11	9	162	33	54	43.5	11.5	4291.5
11/10/2021	2021	11	10	163	31	49	40	8	4299.5
11/11/2021	2021	11	11	164	24	51	37.5	5.5	4305
11/12/2021	2021	11	12	165	26	55	40.5	8.5	4313.5
11/13/2021	2021	11	13	166	27	58	42.5	10.5	4324
11/14/2021	2021	11	14	167	27	59	43	11	4335
11/15/2021	2021	11	15	168	33	63	48	16	4351
11/16/2021	2021	11	16	169	34	53	43.5	11.5	4362.5
11/17/2021	2021	11	17	170	24	53	38.5	6.5	4369
11/18/2021	2021	11	18	171	22	53	37.5	5.5	4374.5

11/19/2021	2021	11	19	172	27	53	40	8	4382.5
11/20/2021	2021	11	20	173	28	52	40	8	4390.5
11/21/2021	2021	11	21	174	24	47	35.5	3.5	4394
11/22/2021	2021	11	22	175	19	58	38.5	6.5	4400.5
11/23/2021	2021	11	23	176	33	49	41	9	4409.5
11/24/2021	2021	11	24	177	19	39	29	-3	4406.5
11/25/2021	2021	11	25	178	16	40	28	-4	4402.5
11/26/2021	2021	11	26	179	17	50	33.5	1.5	4404
11/27/2021	2021	11	27	180	25	50	37.5	5.5	4409.5
11/28/2021	2021	11	28	181	25	53	39	7	4416.5
11/29/2021	2021	11	29	182	27	58	42.5	10.5	4427
11/30/2021	2021	11	30	183	25	54	39.5	7.5	4434.5
12/1/2021	2021	12	1	184	25	58	41.5	9.5	4444
12/2/2021	2021	12	2	185	29	54	41.5	9.5	4453.5
12/3/2021	2021	12	3	186	28	53	40.5	8.5	4462
12/4/2021	2021	12	4	187	26	53	39.5	7.5	4469.5
12/5/2021	2021	12	5	188	26	53	39.5	7.5	4477
12/6/2021	2021	12	6	189	25	49	37	5	4482
12/7/2021	2021	12	7	190	26	42	34	2	4484
12/8/2021	2021	12	8	191	25	41	33	1	4485
12/9/2021	2021	12	9	192	32	44	38	6	4491
12/10/2021	2021	12	10	193	6	32	19	-13	4478
12/11/2021	2021	12	11	194	2	37	19.5	-12.5	4465.5
12/12/2021	2021	12	12	195	18	49	33.5	1.5	4467
12/13/2021	2021	12	13	196	24	46	35	3	4470
12/14/2021	2021	12	14	197	33	45	39	7	4477
12/15/2021	2021	12	15	198	17	39	28	-4	4473
12/16/2021	2021	12	16	199	15	44	29.5	-2.5	4470.5
12/17/2021	2021	12	17	200	8	36	22	-10	4460.5
12/18/2021	2021	12	18	201	5	34	19.5	-12.5	4448
12/19/2021	2021	12	19	202	9	42	25.5	-6.5	4441.5
12/20/2021	2021	12	20	203	19	48	33.5	1.5	4443
12/21/2021	2021	12	21	204	27	45	36	4	4447
12/22/2021	2021	12	22	205	26	50	38	6	4453
12/23/2021	2021	12	23	206	35	47	41	9	4462
12/24/2021	2021	12	24	207	30	39	34.5	2.5	4464.5
12/25/2021	2021	12	25	208	31	35	33	1	4465.5
12/26/2021	2021	12	26	209	23	35	29	-3	4462.5
12/27/2021	2021	12	27	210	23	33	28	-4	4458.5
12/28/2021	2021	12	28	211	21	27	24	-8	4450.5
12/29/2021	2021	12	29	212	21	25	23	-9	4441.5
12/30/2021	2021	12	30	213	22	30	26	-6	4435.5
12/31/2021	2021	12	31	214	25	34	29.5	-2.5	4433
1/1/2022	2022	1	1	215	-2	29	13.5	-18.5	4414.5
1/2/2022	2022	1	2	216	-5	35	15	-17	4397.5
1/3/2022	2022	1	3	217	10	44	27	-5	4392.5
1/4/2022	2022	1	4	218	22	42	32	0	4392.5
1/5/2022	2022	1	5	219	23	43	33	1	4393.5
1/6/2022	2022	1	6	220	28	48	38	6	4399.5
1/7/2022	2022	1	7	221	26	48	37	5	4404.5
1/8/2022	2022	1	8	222	20	39	29.5	-2.5	4402
1/9/2022	2022	1	9	223	11	38	24.5	-7.5	4394.5
1/10/2022	2022	1	10	224	10	41	25.5	-6.5	4388
1/11/2022	2022	1	11	225	11	46	28.5	-3.5	4384.5
1/12/2022	2022	1	12	226	14	49	31.5	-0.5	4384
1/13/2022	2022	1	13	227	22	54	38	6	4390
1/14/2022	2022	1	14	228	22	44	33	1	4391
1/15/2022	2022	1	15	229	14	44	29	-3	4388
1/16/2022	2022	1	16	230	17	49	33	1	4389
1/17/2022	2022	1	17	231	16	47	31.5	-0.5	4388.5
1/18/2022	2022	1	18	232	27	40	33.5	1.5	4390
1/19/2022	2022	1	19	233	17	37	27	-5	4385
1/20/2022	2022	1	20	234	13	37	25	-7	4378
1/21/2022	2022	1	21	235	15	41	28	-4	4374
1/22/2022	2022	1	22	236	19	37	28	-4	4370
1/23/2022	2022	1	23	237	16	42	29	-3	4367
1/24/2022	2022	1	24	238	18	44	31	-1	4366
1/25/2022	2022	1	25	239	20	41	30.5	-1.5	4364.5
1/26/2022	2022	1	26	240	8	33	20.5	-11.5	4353
1/27/2022	2022	1	27	241	6	37	21.5	-10.5	4342.5
1/28/2022	2022	1	28	242	6	38	22	-10	4332.5
1/29/2022	2022	1	29	243	10	47	28.5	-3.5	4329
1/30/2022	2022	1	30	244	21	38	29.5	-2.5	4326.5
1/31/2022	2022	1	31	245	17	46	31.5	-0.5	4326
2/1/2022	2022	2	1	246	24	42	33	1	4327
2/2/2022	2022	2	2	247	0	28	14	-18	4309
2/3/2022	2022	2	3	248	-8	20	6	-26	4283
2/4/2022	2022	2	4	249	-4	36	16	-16	4267
2/5/2022	2022	2	5	250	5	44	24.5	-7.5	4259.5
2/6/2022	2022	2	6	251	8	33	20.5	-11.5	4248
2/7/2022	2022	2	7	252	8	39	23.5	-8.5	4239.5
2/8/2022	2022	2	8	253	12	44	28	-4	4235.5
2/9/2022	2022	2	9	254	15	47	31	-1	4234.5
2/10/2022	2022	2	10	255	15	49	32	0	4234.5
2/11/2022	2022	2	11	256	22	50	36	4	4238.5
2/12/2022	2022	2	12	257	19	44	31.5	-0.5	4238
2/13/2022	2022	2	13	258	17	50	33.5	1.5	4239.5
2/14/2022	2022	2	14	259	20	51	35.5	3.5	4243
2/15/2022	2022	2	15	260	26	50	38	6	4249
2/16/2022	2022	2	16	261	21	41	31	-1	4248
2/17/2022	2022	2	17	262	10	27	18.5	-13.5	4234.5
2/18/2022	2022	2	18	263	9	41	25	-7	4227.5
2/19/2022	2022	2	19	264	10	48	29	-3	4224.5

2/20/2022	2022	2	20	265	22	50	36	4	4228.5
2/21/2022	2022	2	21	266	26	41	33.5	1.5	4230
2/22/2022	2022	2	22	267	24	40	32	0	4230
2/23/2022	2022	2	23	268	13	39	26	-6	4224
2/24/2022	2022	2	24	269	6	26	16	-16	4208
2/25/2022	2022	2	25	270	3	40	21.5	-10.5	4197.5
2/26/2022	2022	2	26	271	5	38	21.5	-10.5	4187
2/27/2022	2022	2	27	272	5	45	25	-7	4180
2/28/2022	2022	2	28	273	21	53	37	5	4185
3/1/2022	2022	3	1	274	19	57	38	6	4191
3/2/2022	2022	3	2	275	23	59	41	9	4200
3/3/2022	2022	3	3	276	28	59	43.5	11.5	4211.5
3/4/2022	2022	3	4	277	26	53	39.5	7.5	4219
3/5/2022	2022	3	5	278	25	41	33	1	4220
3/6/2022	2022	3	6	279	16	29	22.5	-9.5	4210.5
3/7/2022	2022	3	7	280	14	34	24	-8	4202.5
3/8/2022	2022	3	8	281	3	33	18	-14	4188.5
3/9/2022	2022	3	9	282	11	40	25.5	-6.5	4182
3/10/2022	2022	3	10	283	16	43	29.5	-2.5	4179.5
3/11/2022	2022	3	11	284	3	31	17	-15	4164.5
3/12/2022	2022	3	12	285	9	47	28	-4	4160.5
3/13/2022	2022	3	13	286	20	50	35	3	4163.5
3/14/2022	2022	3	14	287	21	46	33.5	1.5	4165
3/15/2022	2022	3	15	288	20	57	38.5	6.5	4171.5
3/16/2022	2022	3	16	289	28	54	41	9	4180.5
3/17/2022	2022	3	17	290	20	41	30.5	-1.5	4179
3/18/2022	2022	3	18	291	16	49	32.5	0.5	4179.5
3/19/2022	2022	3	19	292	20	53	36.5	4.5	4184
3/20/2022	2022	3	20	293	26	55	40.5	8.5	4192.5
3/21/2022	2022	3	21	294	26	40	33	1	4193.5
3/22/2022	2022	3	22	295	22	43	32.5	0.5	4194
3/23/2022	2022	3	23	296	16	44	30	-2	4192
3/24/2022	2022	3	24	297	27	57	42	10	4202
3/25/2022	2022	3	25	298	29	61	45	13	4215
3/26/2022	2022	3	26	299	31	65	48	16	4231
3/27/2022	2022	3	27	300	35	65	50	18	4249
3/28/2022	2022	3	28	301	37	55	46	14	4263
3/29/2022	2022	3	29	302	28	37	32.5	0.5	4263.5
3/30/2022	2022	3	30	303	29	44	36.5	4.5	4268
3/31/2022	2022	3	31	304	29	50	39.5	7.5	4275.5
4/1/2022	2022	4	1	305	29	52	40.5	8.5	4284
4/2/2022	2022	4	2	306	30	59	44.5	12.5	4296.5
4/3/2022	2022	4	3	307	31	57	44	12	4308.5
4/4/2022	2022	4	4	308	30	57	43.5	11.5	4320
4/5/2022	2022	4	5	309	35	63	49	17	4337
4/6/2022	2022	4	6	310	26	52	39	7	4344
4/7/2022	2022	4	7	311	22	54	38	6	4350
4/8/2022	2022	4	8	312	24	63	43.5	11.5	4361.5
4/9/2022	2022	4	9	313	31	65	48	16	4377.5
4/10/2022	2022	4	10	314	31	58	44.5	12.5	4390
4/11/2022	2022	4	11	315	32	58	45	13	4403
4/12/2022	2022	4	12	316	22	42	32	0	4403
4/13/2022	2022	4	13	317	14	42	28	-4	4399
4/14/2022	2022	4	14	318	22	54	38	6	4405
4/15/2022	2022	4	15	319	36	60	48	16	4421
4/16/2022	2022	4	16	320	36	63	49.5	17.5	4438.5
4/17/2022	2022	4	17	321	33	64	48.5	16.5	4455
4/18/2022	2022	4	18	322	32	69	50.5	18.5	4473.5
4/19/2022	2022	4	19	323	38	65	51.5	19.5	4493
4/20/2022	2022	4	20	324	43	71	57	25	4518
4/21/2022	2022	4	21	325	38	69	53.5	21.5	4539.5
4/22/2022	2022	4	22	326	30	65	47.5	15.5	4555
4/23/2022	2022	4	23	327	25	50	37.5	5.5	4560.5
4/24/2022	2022	4	24	328	22	52	37	5	4565.5
4/25/2022	2022	4	25	329	22	59	40.5	8.5	4574
4/26/2022	2022	4	26	330	33	66	49.5	17.5	4591.5
4/27/2022	2022	4	27	331	39	68	53.5	21.5	4613
4/28/2022	2022	4	28	332	35	65	50	18	4631
4/29/2022	2022	4	29	333	33	63	48	16	4647
4/30/2022	2022	4	30	334	27	65	46	14	4661
5/1/2022	2022	5	1	335	35	67	51	19	4680
5/2/2022	2022	5	2	336	38	63	50.5	18.5	4698.5
5/3/2022	2022	5	3	337	34	66	50	18	4716.5
5/4/2022	2022	5	4	338	26	54	40	8	4724.5
5/5/2022	2022	5	5	339	27	64	45.5	13.5	4738
5/6/2022	2022	5	6	340	39	71	55	23	4761
5/7/2022	2022	5	7	341	49	72	60.5	28.5	4789.5
5/8/2022	2022	5	8	342	46	67	56.5	24.5	4814
5/9/2022	2022	5	9	343	42		42	10	4824
5/10/2022	2022	5	10	344	42	72	57	25	4849
5/11/2022	2022	5	11	345	40	71	55.5	23.5	4872.5
5/12/2022	2022	5	12	346	31	63	47	15	4887.5
5/13/2022	2022	5	13	347	30	69	49.5	17.5	4905
5/14/2022	2022	5	14	348	34	76	55	23	4928
5/15/2022	2022	5	15	349	40	80	60	28	4956
5/16/2022	2022	5	16	350	48	78	63	31	4987
5/17/2022	2022	5	17	351	42	75	58.5	26.5	5013.5
5/18/2022	2022	5	18	352	48	76	62	30	5043.5
5/19/2022	2022	5	19	353	47	76	61.5	29.5	5073
5/20/2022	2022	5	20	354	45	69	57	25	5098
5/21/2022	2022	5	21	355	45	69	57	25	5123
5/22/2022	2022	5	22	356	39	71	55	23	5146
5/23/2022	2022	5	23	357	35	64	49.5	17.5	5163.5

5/24/2022	2022	5	24	358	34	61	47.5	15.5	5179
5/25/2022	2022	5	25	359	36	70	53	21	5200
5/26/2022	2022	5	26	360	41	78	59.5	27.5	5227.5
5/27/2022	2022	5	27	361	45	79	62	30	5257.5
5/28/2022	2022	5	28	362	46	75	60.5	28.5	5286
5/29/2022	2022	5	29	363	46	69	57.5	25.5	5311.5
5/30/2022	2022	5	30	364	42	65	53.5	21.5	5333
5/31/2022	2022	5	31	365	32	70	51	19	5352
6/1/2022	2022	6	1	1	36	74	55	23	23
6/2/2022	2022	6	2	2	39	76	57.5	25.5	48.5
6/3/2022	2022	6	3	3	41	76	58.5	26.5	75
6/4/2022	2022	6	4	4	43	74	58.5	26.5	101.5
6/5/2022	2022	6	5	5	50	76	63	31	132.5
6/6/2022	2022	6	6	6	50	80	65	33	165.5
6/7/2022	2022	6	7	7	53	81	67	35	200.5
6/8/2022	2022	6	8	8	50	84	67	35	235.5
6/9/2022	2022	6	9	9	56	83	69.5	37.5	273
6/10/2022	2022	6	10	10	51	87	69	37	310
6/11/2022	2022	6	11	11	54	86	70	38	348
6/12/2022	2022	6	12	12	54	82	68	36	384
6/13/2022	2022	6	13	13	53	80	66.5	34.5	418.5
6/14/2022	2022	6	14	14	54	77	65.5	33.5	452
6/15/2022	2022	6	15	15	47	82	64.5	32.5	484.5
6/16/2022	2022	6	16	16	47	86	66.5	34.5	519
6/17/2022	2022	6	17	17	53	82	67.5	35.5	554.5
6/18/2022	2022	6	18	18	48	74	61	29	583.5
6/19/2022	2022	6	19	19	47	68	57.5	25.5	609
6/20/2022	2022	6	20	20	46	72	59	27	636
6/21/2022	2022	6	21	21	49	74	61.5	29.5	665.5
6/22/2022	2022	6	22	22	50	66	58	26	691.5
6/23/2022	2022	6	23	23	47	75	61	29	720.5
6/24/2022	2022	6	24	24	52	74	63	31	751.5
6/25/2022	2022	6	25	25	51	69	60	28	779.5
6/26/2022	2022	6	26	26	49	65	57	25	804.5
6/27/2022	2022	6	27	27	45	63	54	22	826.5
6/28/2022	2022	6	28	28	44	74	59	27	853.5
6/29/2022	2022	6	29	29	50	77	63.5	31.5	885
6/30/2022	2022	6	30	30	51	74	62.5	30.5	915.5
7/1/2022	2022	7	1	31	51	73	62	30	945.5
7/2/2022	2022	7	2	32	48	73	60.5	28.5	974
7/3/2022	2022	7	3	33	51	73	62	30	1004
7/4/2022	2022	7	4	34	50	74	62	30	1034
7/5/2022	2022	7	5	35	49	73	61	29	1063
7/6/2022	2022	7	6	36	48	76	62	30	1093
7/7/2022	2022	7	7	37	47	78	62.5	30.5	1123.5
7/8/2022	2022	7	8	38	48	83	65.5	33.5	1157
7/9/2022	2022	7	9	39	51	80	65.5	33.5	1190.5
7/10/2022	2022	7	10	40	50	81	65.5	33.5	1224
7/11/2022	2022	7	11	41	51	80	65.5	33.5	1257.5
7/12/2022	2022	7	12	42	56	77	66.5	34.5	1292
7/13/2022	2022	7	13	43	54	78	66	34	1326
7/14/2022	2022	7	14	44	51	80	65.5	33.5	1359.5
7/15/2022	2022	7	15	45	52	81	66.5	34.5	1394
7/16/2022	2022	7	16	46	52	83	67.5	35.5	1429.5
7/17/2022	2022	7	17	47	53	84	68.5	36.5	1466
7/18/2022	2022	7	18	48	52	83	67.5	35.5	1501.5
7/19/2022	2022	7	19	49	51	84	67.5	35.5	1537
7/20/2022	2022	7	20	50	57	84	70.5	38.5	1575.5
7/21/2022	2022	7	21	51	54	87	70.5	38.5	1614
7/22/2022	2022	7	22	52	55	85	70	38	1652
7/23/2022	2022	7	23	53	53	84	68.5	36.5	1688.5
7/24/2022	2022	7	24	54	53	81	67	35	1723.5
7/25/2022	2022	7	25	55	51	77	64	32	1755.5
7/26/2022	2022	7	26	56	51	74	62.5	30.5	1786
7/27/2022	2022	7	27	57	49	77	63	31	1817
7/28/2022	2022	7	28	58	48	72	60	28	1845
7/29/2022	2022	7	29	59	50	72	61	29	1874
7/30/2022	2022	7	30	60	50	71	60.5	28.5	1902.5
7/31/2022	2022	7	31	61	48	73	60.5	28.5	1931
8/1/2022	2022	8	1	62	55	78	66.5	34.5	1965.5
8/2/2022	2022	8	2	63	53	80	66.5	34.5	2000
8/3/2022	2022	8	3	64	52	81	66.5	34.5	2034.5
8/4/2022	2022	8	4	65	54	77	65.5	33.5	2068
8/5/2022	2022	8	5	66	53	79	66	34	2102
8/6/2022	2022	8	6	67	53	79	66	34	2136
8/7/2022	2022	8	7	68	54	72	63	31	2167
8/8/2022	2022	8	8	69	54	72	63	31	2198
8/9/2022	2022	8	9	70	50	78	64	32	2230
8/10/2022	2022	8	10	71	50	77	63.5	31.5	2261.5
8/11/2022	2022	8	11	72	50	71	60.5	28.5	2290
8/12/2022	2022	8	12	73	48	76	62	30	2320
8/13/2022	2022	8	13	74	49	76	62.5	30.5	2350.5
8/14/2022	2022	8	14	75	48	74	61	29	2379.5
8/15/2022	2022	8	15	76	49	75	62	30	2409.5
8/16/2022	2022	8	16	77	47	74	60.5	28.5	2438
8/17/2022	2022	8	17	78	49	73	61	29	2467
8/18/2022	2022	8	18	79	50	69	59.5	27.5	2494.5
8/19/2022	2022	8	19	80	51	62	56.5	24.5	2519
8/20/2022	2022	8	20	81	48	56	52	20	2539
8/21/2022	2022	8	21	82	44	69	56.5	24.5	2563.5
8/22/2022	2022	8	22	83	48	73	60.5	28.5	2592
8/23/2022	2022	8	23	84	47	70	58.5	26.5	2618.5
8/24/2022	2022	8	24	85	49	70	59.5	27.5	2646

8/25/2022	2022	8	25	86	51	69	60	28	2674
8/26/2022	2022	8	26	87	50	70	60	28	2702
8/27/2022	2022	8	27	88	50	70	60	28	2730
8/28/2022	2022	8	28	89	47	73	60	28	2758
8/29/2022	2022	8	29	90	46	76	61	29	2787
8/30/2022	2022	8	30	91	54	75	64.5	32.5	2819.5
8/31/2022	2022	8	31	92	51	75	63	31	2850.5
9/1/2022	2022	9	1	93	51	76	63.5	31.5	2882
9/2/2022	2022	9	2	94	51	81	66	34	2916
9/3/2022	2022	9	3	95	48	75	61.5	29.5	2945.5
9/4/2022	2022	9	4	96	49	74	61.5	29.5	2975
9/5/2022	2022	9	5	97	48	82	65	33	3008
9/6/2022	2022	9	6	98	50	80	65	33	3041
9/7/2022	2022	9	7	99	49	80	64.5	32.5	3073.5
9/8/2022	2022	9	8	100	54	79	66.5	34.5	3108
9/9/2022	2022	9	9	101	50	76	63	31	3139
9/10/2022	2022	9	10	102	48	73	60.5	28.5	3167.5
9/11/2022	2022	9	11	103	44	71	57.5	25.5	3193
9/12/2022	2022	9	12	104	44	70	57	25	3218
9/13/2022	2022	9	13	105	46	65	55.5	23.5	3241.5
9/14/2022	2022	9	14	106	44	64	54	22	3263.5
9/15/2022	2022	9	15	107	42	66	54	22	3285.5
9/16/2022	2022	9	16	108	43	70	56.5	24.5	3310
9/17/2022	2022	9	17	109	42	72	57	25	3335
9/18/2022	2022	9	18	110	43	72	57.5	25.5	3360.5
9/19/2022	2022	9	19	111	47	72	59.5	27.5	3388
9/20/2022	2022	9	20	112	51	73	62	30	3418
9/21/2022	2022	9	21	113	49	67	58	26	3444
9/22/2022	2022	9	22	114	48	71	59.5	27.5	3471.5
9/23/2022	2022	9	23	115	45	67	56	24	3495.5
9/24/2022	2022	9	24	116	38	68	53	21	3516.5
9/25/2022	2022	9	25	117	37	69	53	21	3537.5
9/26/2022	2022	9	26	118	44	69	56.5	24.5	3562
9/27/2022	2022	9	27	119	42	71	56.5	24.5	3586.5
9/28/2022	2022	9	28	120	43	68	55.5	23.5	3610
9/29/2022	2022	9	29	121	41	68	54.5	22.5	3632.5
9/30/2022	2022	9	30	122	41	69	55	23	3655.5
10/1/2022	2022	10	1	123	40	71	55.5	23.5	3679
10/2/2022	2022	10	2	124	44	63	53.5	21.5	3700.5
10/3/2022	2022	10	3	125	41	57	49	17	3717.5
10/4/2022	2022	10	4	126	40	52	46	14	3731.5
10/5/2022	2022	10	5	127	40	57	48.5	16.5	3748
10/6/2022	2022	10	6	128	42	51	46.5	14.5	3762.5
10/7/2022	2022	10	7	129	40	53	46.5	14.5	3777
10/8/2022	2022	10	8	130	40	48	44	12	3789
10/9/2022	2022	10	9	131	36	55	45.5	13.5	3802.5
10/10/2022	2022	10	10	132	35	58	46.5	14.5	3817
10/11/2022	2022	10	11	133	36	60	48	16	3833
10/12/2022	2022	10	12	134	35	64	49.5	17.5	3850.5
10/13/2022	2022	10	13	135	32	66	49	17	3867.5
10/14/2022	2022	10	14	136	33	65	49	17	3884.5
10/15/2022	2022	10	15	137	36	65	50.5	18.5	3903
10/16/2022	2022	10	16	138	36	44	40	8	3911
10/17/2022	2022	10	17	139	31	41	36	4	3915
10/18/2022	2022	10	18	140	31	55	43	11	3926
10/19/2022	2022	10	19	141	31	61	46	14	3940
10/20/2022	2022	10	20	142	29	63	46	14	3954
10/21/2022	2022	10	21	143	35	59	47	15	3969
10/22/2022	2022	10	22	144	43	58	50.5	18.5	3987.5
10/23/2022	2022	10	23	145	23	46	34.5	2.5	3990
10/24/2022	2022	10	24	146	21	33	27	-5	3985
10/25/2022	2022	10	25	147	20	51	35.5	3.5	3988.5
10/26/2022	2022	10	26	148	28	50	39	7	3995.5
10/27/2022	2022	10	27	149	22	35	28.5	-3.5	3992
10/28/2022	2022	10	28	150	20	51	35.5	3.5	3995.5
10/29/2022	2022	10	29	151	26	54	40	8	4003.5
10/30/2022	2022	10	30	152	26	51	38.5	6.5	4010
10/31/2022	2022	10	31	153	24	54	39	7	4017
11/1/2022	2022	11	1	154	28	54	41	9	4026
11/2/2022	2022	11	2	155	32	53	42.5	10.5	4036.5
11/3/2022	2022	11	3	156	19	39	29	-3	4033.5
11/4/2022	2022	11	4	157	20	29	24.5	-7.5	4026
11/5/2022	2022	11	5	158	18	45	31.5	-0.5	4025.5
11/6/2022	2022	11	6	159	30	53	41.5	9.5	4035
11/7/2022	2022	11	7	160	30	57	43.5	11.5	4046.5
11/8/2022	2022	11	8	161	37	58	47.5	15.5	4062
11/9/2022	2022	11	9	162	26	54	40	8	4070
11/10/2022	2022	11	10	163	16	37	26.5	-5.5	4064.5
11/11/2022	2022	11	11	164	14	36	25	-7	4057.5
11/12/2022	2022	11	12	165	17	47	32	0	4057.5
11/13/2022	2022	11	13	166	23	49	36	4	4061.5
11/14/2022	2022	11	14	167	18	36	27	-5	4056.5
11/15/2022	2022	11	15	168	11	37	24	-8	4048.5
11/16/2022	2022	11	16	169	7	33	20	-12	4036.5
11/17/2022	2022	11	17	170	15	44	29.5	-2.5	4034
11/18/2022	2022	11	18	171	20	40	30	-2	4032
11/19/2022	2022	11	19	172	16	40	28	-4	4028
11/20/2022	2022	11	20	173	15	43	29	-3	4025
11/21/2022	2022	11	21	174	14	50	32	0	4025
11/22/2022	2022	11	22	175	20	48	34	2	4027
11/23/2022	2022	11	23	176	21	44	32.5	0.5	4027.5
11/24/2022	2022	11	24	177	17	35	26	-6	4021.5
11/25/2022	2022	11	25	178	15	42	28.5	-3.5	4018

11/26/2022	2022	11	26	179	21	46	33.5	1.5	4019.5
11/27/2022	2022	11	27	180	22	41	31.5	-0.5	4019
11/28/2022	2022	11	28	181	25	39	32	0	4019
11/29/2022	2022	11	29	182	25	37	31	-1	4018
11/30/2022	2022	11	30	183	18	48	33	1	4019
12/1/2022	2022	12	1	184	27	50	38.5	6.5	4025.5
12/2/2022	2022	12	2	185	29	41	35	3	4028.5
12/3/2022	2022	12	3	186	31	47	39	7	4035.5
12/4/2022	2022	12	4	187	36	43	39.5	7.5	4043
12/5/2022	2022	12	5	188	34	42	38	6	4049
12/6/2022	2022	12	6	189	29	38	33.5	1.5	4050.5
12/7/2022	2022	12	7	190	28	40	34	2	4052.5
12/8/2022	2022	12	8	191	19	39	29	-3	4049.5
12/9/2022	2022	12	9	192	23	43	33	1	4050.5
12/10/2022	2022	12	10	193	19	47	33	1	4051.5
12/11/2022	2022	12	11	194	26	49	37.5	5.5	4057
12/12/2022	2022	12	12	195	15	34	24.5	-7.5	4049.5
12/13/2022	2022	12	13	196	13	20	16.5	-15.5	4034
12/14/2022	2022	12	14	197	8	27	17.5	-14.5	4019.5
12/15/2022	2022	12	15	198	9	29	19	-13	4006.5
12/16/2022	2022	12	16	199	-1	22	10.5	-21.5	3985
12/17/2022	2022	12	17	200	1	37	19	-13	3972
12/18/2022	2022	12	18	201	14	36	25	-7	3965
12/19/2022	2022	12	19	202	13	36	24.5	-7.5	3957.5
12/20/2022	2022	12	20	203	13	42	27.5	-4.5	3953
12/21/2022	2022	12	21	204	18	41	29.5	-2.5	3950.5
12/22/2022	2022	12	22	205	24	44	34	2	3952.5
12/23/2022	2022	12	23	206	23	43	33	1	3953.5
12/24/2022	2022	12	24	207	21	40	30.5	-1.5	3952
12/25/2022	2022	12	25	208	20	47	33.5	1.5	3953.5
12/26/2022	2022	12	26	209	25	50	37.5	5.5	3959
12/27/2022	2022	12	27	210	33	48	40.5	8.5	3967.5
12/28/2022	2022	12	28	211	22	37	29.5	-2.5	3965
12/29/2022	2022	12	29	212	21	29	25	-7	3958
12/30/2022	2022	12	30	213	26	31	28.5	-3.5	3954.5
12/31/2022	2022	12	31	214	30	34	32	0	3954.5
1/1/2023	2023	1	1	215	23	40	31.5	-0.5	3954
1/2/2023	2023	1	2	216	20	26	23	-9	3945
1/3/2023	2023	1	3	217	19	25	22	-10	3935
1/4/2023	2023	1	4	218	15	29	22	-10	3925
1/5/2023	2023	1	5	219	18	39	28.5	-3.5	3921.5
1/6/2023	2023	1	6	220	12	33	22.5	-9.5	3912
1/7/2023	2023	1	7	221	8	43	25.5	-6.5	3905.5
1/8/2023	2023	1	8	222	20	44	32	0	3905.5
1/9/2023	2023	1	9	223	20	47	33.5	1.5	3907
1/10/2023	2023	1	10	224	31	44	37.5	5.5	3912.5
1/11/2023	2023	1	11	225	12	34	23	-9	3903.5
1/12/2023	2023	1	12	226	9	44	26.5	-5.5	3898
1/13/2023	2023	1	13	227	17	53	35	3	3901
1/14/2023	2023	1	14	228	27	47	37	5	3906
1/15/2023	2023	1	15	229	23	31	27	-5	3901
1/16/2023	2023	1	16	230	22	32	27	-5	3896
1/17/2023	2023	1	17	231	18	29	23.5	-8.5	3887.5
1/18/2023	2023	1	18	232	9	24	16.5	-15.5	3872
1/19/2023	2023	1	19	233	6	35	20.5	-11.5	3860.5
1/20/2023	2023	1	20	234	15	23	19	-13	3847.5
1/21/2023	2023	1	21	235	9	27	18	-14	3833.5
1/22/2023	2023	1	22	236	7	37	22	-10	3823.5
1/23/2023	2023	1	23	237	11	30	20.5	-11.5	3812
1/24/2023	2023	1	24	238	4	29	16.5	-15.5	3796.5
1/25/2023	2023	1	25	239	0	27	13.5	-18.5	3778
1/26/2023	2023	1	26	240	-3	29	13	-19	3759
1/27/2023	2023	1	27	241	6	40	23	-9	3750
1/28/2023	2023	1	28	242	15	36	25.5	-6.5	3743.5
1/29/2023	2023	1	29	243	23	40	31.5	-0.5	3743
1/30/2023	2023	1	30	244	13	38	25.5	-6.5	3736.5
1/31/2023	2023	1	31	245	9	37	23	-9	3727.5
2/1/2023	2023	2	1	246	5	38	21.5	-10.5	3717
2/2/2023	2023	2	2	247	7	38	22.5	-9.5	3707.5
2/3/2023	2023	2	3	248	11	46	28.5	-3.5	3704
2/4/2023	2023	2	4	249	21	49	35	3	3707
2/5/2023	2023	2	5	250	23	51	37	5	3712
2/6/2023	2023	2	6	251	11	33	22	-10	3702
2/7/2023	2023	2	7	252	9	31	20	-12	3690
2/8/2023	2023	2	8	253	8	38	23	-9	3681
2/9/2023	2023	2	9	254	2	27	14.5	-17.5	3663.5
2/10/2023	2023	2	10	255	-1	45	22	-10	3653.5
2/11/2023	2023	2	11	256	16	48	32	0	3653.5
2/12/2023	2023	2	12	257	20	50	35	3	3656.5
2/13/2023	2023	2	13	258	20	45	32.5	0.5	3657
2/14/2023	2023	2	14	259	17	24	20.5	-11.5	3645.5
2/15/2023	2023	2	15	260	4	17	10.5	-21.5	3624
2/16/2023	2023	2	16	261	-4	22	9	-23	3601
2/17/2023	2023	2	17	262	-5	40	17.5	-14.5	3586.5
2/18/2023	2023	2	18	263	22	43	32.5	0.5	3587
2/19/2023	2023	2	19	264	27	41	34	2	3589
2/20/2023	2023	2	20	265	25	45	35	3	3592
2/21/2023	2023	2	21	266	25	45	35	3	3595
2/22/2023	2023	2	22	267	14	30	22	-10	3585
2/23/2023	2023	2	23	268	12	28	20	-12	3573
2/24/2023	2023	2	24	269	18	40	29	-3	3570
2/25/2023	2023	2	25	270	27	50	38.5	6.5	3576.5
2/26/2023	2023	2	26	271	17	36	26.5	-5.5	3571

2/27/2023	2023	2	27	272	13	36	24.5	-7.5	3563.5
2/28/2023	2023	2	28	273	20	38	29	-3	3560.5
3/1/2023	2023	3	1	274	16	33	24.5	-7.5	3553
3/2/2023	2023	3	2	275	18	30	24	-8	3545
3/3/2023	2023	3	3	276	16	40	28	-4	3541
3/4/2023	2023	3	4	277	11	48	29.5	-2.5	3538.5
3/5/2023	2023	3	5	278	28	46	37	5	3543.5
3/6/2023	2023	3	6	279	31	51	41	9	3552.5
3/7/2023	2023	3	7	280	33	49	41	9	3561.5
3/8/2023	2023	3	8	281	32	53	42.5	10.5	3572
3/9/2023	2023	3	9	282	20	47	33.5	1.5	3573.5
3/10/2023	2023	3	10	283	30	51	40.5	8.5	3582
3/11/2023	2023	3	11	284	33	46	39.5	7.5	3589.5
3/12/2023	2023	3	12	285	29	46	37.5	5.5	3595
3/13/2023	2023	3	13	286	23	46	34.5	2.5	3597.5
3/14/2023	2023	3	14	287	22	50	36	4	3601.5
3/15/2023	2023	3	15	288	32	40	36	4	3605.5
3/16/2023	2023	3	16	289	26	37	31.5	-0.5	3605
3/17/2023	2023	3	17	290	15	36	25.5	-6.5	3598.5
3/18/2023	2023	3	18	291	13	37	25	-7	3591.5
3/19/2023	2023	3	19	292	15	40	27.5	-4.5	3587
3/20/2023	2023	3	20	293	27	32	29.5	-2.5	3584.5
3/21/2023	2023	3	21	294	28	36	32	0	3584.5
3/22/2023	2023	3	22	295	27	41	34	2	3586.5
3/23/2023	2023	3	23	296	20	39	29.5	-2.5	3584
3/24/2023	2023	3	24	297	19	34	26.5	-5.5	3578.5
3/25/2023	2023	3	25	298	11	35	23	-9	3569.5
3/26/2023	2023	3	26	299	17	35	26	-6	3563.5
3/27/2023	2023	3	27	300	7	37	22	-10	3553.5
3/28/2023	2023	3	28	301	8	51	29.5	-2.5	3551
3/29/2023	2023	3	29	302	27	57	42	10	3561
3/30/2023	2023	3	30	303	21	49	35	3	3564
3/31/2023	2023	3	31	304	19	39	29	-3	3561
4/1/2023	2023	4	1	305	17	55	36	4	3565
4/2/2023	2023	4	2	306	26	54	40	8	3573
4/3/2023	2023	4	3	307	33	54	43.5	11.5	3584.5
4/4/2023	2023	4	4	308	12	33	22.5	-9.5	3575
4/5/2023	2023	4	5	309	4	35	19.5	-12.5	3562.5
4/6/2023	2023	4	6	310	9	51	30	-2	3560.5
4/7/2023	2023	4	7	311	27	55	41	9	3569.5
4/8/2023	2023	4	8	312	29	56	42.5	10.5	3580
4/9/2023	2023	4	9	313	27	59	43	11	3591
4/10/2023	2023	4	10	314	28	64	46	14	3605
4/11/2023	2023	4	11	315	38	68	53	21	3626
4/12/2023	2023	4	12	316	36	66	51	19	3645
4/13/2023	2023	4	13	317	35	56	45.5	13.5	3658.5
4/14/2023	2023	4	14	318	32	48	40	8	3666.5
4/15/2023	2023	4	15	319	26	51	38.5	6.5	3673
4/16/2023	2023	4	16	320	25	60	42.5	10.5	3683.5
4/17/2023	2023	4	17	321	33	62	47.5	15.5	3699
4/18/2023	2023	4	18	322	33	57	45	13	3712
4/19/2023	2023	4	19	323	27	55	41	9	3721
4/20/2023	2023	4	20	324	20	48	34	2	3723
4/21/2023	2023	4	21	325	21	55	38	6	3729
4/22/2023	2023	4	22	326	30	55	42.5	10.5	3739.5
4/23/2023	2023	4	23	327	27	57	42	10	3749.5
4/24/2023	2023	4	24	328	32	58	45	13	3762.5
4/25/2023	2023	4	25	329	26	55	40.5	8.5	3771
4/26/2023	2023	4	26	330	27	54	40.5	8.5	3779.5
4/27/2023	2023	4	27	331	29	63	46	14	3793.5
4/28/2023	2023	4	28	332	32	55	43.5	11.5	3805
4/29/2023	2023	4	29	333	30	66	48	16	3821
4/30/2023	2023	4	30	334	37	72	54.5	22.5	3843.5
5/1/2023	2023	5	1	335	37	72	54.5	22.5	3866
5/2/2023	2023	5	2	336	37	63	50	18	3884
5/3/2023	2023	5	3	337	36	66	51	19	3903
5/4/2023	2023	5	4	338	34	61	47.5	15.5	3918.5
5/5/2023	2023	5	5	339	28	57	42.5	10.5	3929
5/6/2023	2023	5	6	340	33	61	47	15	3944
5/7/2023	2023	5	7	341	38	62	50	18	3962
5/8/2023	2023	5	8	342	36	68	52	20	3982
5/9/2023	2023	5	9	343	32	68	50	18	4000
5/10/2023	2023	5	10	344	33	61	47	15	4015
5/11/2023	2023	5	11	345	32	61	46.5	14.5	4029.5
5/12/2023	2023	5	12	346	33	66	49.5	17.5	4047
5/13/2023	2023	5	13	347	41	65	53	21	4068
5/14/2023	2023	5	14	348	38	63	50.5	18.5	4086.5
5/15/2023	2023	5	15	349	41	61	51	19	4105.5
5/16/2023	2023	5	16	350	38	66	52	20	4125.5
5/17/2023	2023	5	17	351	42	64	53	21	4146.5
5/18/2023	2023	5	18	352	41	60	50.5	18.5	4165
5/19/2023	2023	5	19	353	40	58	49	17	4182
5/20/2023	2023	5	20	354	37	63	50	18	4200
5/21/2023	2023	5	21	355	38	63	50.5	18.5	4218.5
5/22/2023	2023	5	22	356	38	66	52	20	4238.5
5/23/2023	2023	5	23	357	39	70	54.5	22.5	4261
5/24/2023	2023	5	24	358	40	71	55.5	23.5	4284.5
5/25/2023	2023	5	25	359	39	72	55.5	23.5	4308
5/26/2023	2023	5	26	360	38	72	55	23	4331
5/27/2023	2023	5	27	361	36	68	52	20	4351
5/28/2023	2023	5	28	362	35	69	52	20	4371
5/29/2023	2023	5	29	363	39	71	55	23	4394
5/30/2023	2023	5	30	364	40	73	56.5	24.5	4418.5

5/31/2023	2023	5	31	365	39	71	55	23	4441.5
6/1/2023	2023	6	1	1	36	64	50	18	18
6/2/2023	2023	6	2	2	41	63	52	20	38
6/3/2023	2023	6	3	3	38	67	52.5	20.5	58.5
6/4/2023	2023	6	4	4	38	70	54	22	80.5
6/5/2023	2023	6	5	5	40	70	55	23	103.5
6/6/2023	2023	6	6	6	43	70	56.5	24.5	128
6/7/2023	2023	6	7	7	46	68	57	25	153
6/8/2023	2023	6	8	8	39	69	54	22	175
6/9/2023	2023	6	9	9	41	68	54.5	22.5	197.5
6/10/2023	2023	6	10	10	40	72	56	24	221.5
6/11/2023	2023	6	11	11	39	72	55.5	23.5	245
6/12/2023	2023	6	12	12	35	64	49.5	17.5	262.5
6/13/2023	2023	6	13	13	34	64	49	17	279.5
6/14/2023	2023	6	14	14	38	72	55	23	302.5
6/15/2023	2023	6	15	15	39	71	55	23	325.5
6/16/2023	2023	6	16	16	36	72	54	22	347.5
6/17/2023	2023	6	17	17	37	70	53.5	21.5	369
6/18/2023	2023	6	18	18	42	76	59	27	396
6/19/2023	2023	6	19	19	53	76	64.5	32.5	428.5
6/20/2023	2023	6	20	20	42	75	58.5	26.5	455
6/21/2023	2023	6	21	21	39	78	58.5	26.5	481.5
6/22/2023	2023	6	22	22	42	78	60	28	509.5
6/23/2023	2023	6	23	23	41	76	58.5	26.5	536
6/24/2023	2023	6	24	24	35	76	55.5	23.5	559.5
6/25/2023	2023	6	25	25	47	81	64	32	591.5
6/26/2023	2023	6	26	26	51	83	67	35	626.5
6/27/2023	2023	6	27	27	55	81	68	36	662.5
6/28/2023	2023	6	28	28	53	82	67.5	35.5	698
6/29/2023	2023	6	29	29	49	78	63.5	31.5	729.5
6/30/2023	2023	6	30	30	42	77	59.5	27.5	757
7/1/2023	2023	7	1	31	43	79	61	29	786
7/2/2023	2023	7	2	32	46	82	64	32	818
7/3/2023	2023	7	3	33	47	83	65	33	851
7/4/2023	2023	7	4	34	51	83	67	35	886
7/5/2023	2023	7	5	35	50	82	66	34	920
7/6/2023	2023	7	6	36	48	84	66	34	954
7/7/2023	2023	7	7	37	49	83	66	34	988
7/8/2023	2023	7	8	38	50	82	66	34	1022
7/9/2023	2023	7	9	39	53	83	68	36	1058
7/10/2023	2023	7	10	40	55	83	69	37	1095
7/11/2023	2023	7	11	41	59	85	72	40	1135
7/12/2023	2023	7	12	42	59	83	71	39	1174
7/13/2023	2023	7	13	43	59	85	72	40	1214
7/14/2023	2023	7	14	44	55	88	71.5	39.5	1253.5
7/15/2023	2023	7	15	45	50	88	69	37	1290.5
7/16/2023	2023	7	16	46	49	88	68.5	36.5	1327
7/17/2023	2023	7	17	47	53	92	72.5	40.5	1367.5
7/18/2023	2023	7	18	48	59	87	73	41	1408.5
7/19/2023	2023	7	19	49	60	87	73.5	41.5	1450
7/20/2023	2023	7	20	50	57	90	73.5	41.5	1491.5
7/21/2023	2023	7	21	51	54	87	70.5	38.5	1530
7/22/2023	2023	7	22	52	53	86	69.5	37.5	1567.5
7/23/2023	2023	7	23	53	57	85	71	39	1606.5
7/24/2023	2023	7	24	54	56	87	71.5	39.5	1646
7/25/2023	2023	7	25	55	55	87	71	39	1685
7/26/2023	2023	7	26	56	53	86	69.5	37.5	1722.5
7/27/2023	2023	7	27	57	54	85	69.5	37.5	1760
7/28/2023	2023	7	28	58	51	84	67.5	35.5	1795.5
7/29/2023	2023	7	29	59	54	85	69.5	37.5	1833
7/30/2023	2023	7	30	60	53	80	66.5	34.5	1867.5
7/31/2023	2023	7	31	61	49	78	63.5	31.5	1899
8/1/2023	2023	8	1	62	51	76	63.5	31.5	1930.5
8/2/2023	2023	8	2	63	50	80	65	33	1963.5
8/3/2023	2023	8	3	64	50	79	64.5	32.5	1996
8/4/2023	2023	8	4	65	51	82	66.5	34.5	2030.5
8/5/2023	2023	8	5	66	50	83	66.5	34.5	2065
8/6/2023	2023	8	6	67	49	84	66.5	34.5	2099.5
8/7/2023	2023	8	7	68	53	79	66	34	2133.5
8/8/2023	2023	8	8	69	51	74	62.5	30.5	2164
8/9/2023	2023	8	9	70	50	74	62	30	2194
8/10/2023	2023	8	10	71	53	74	63.5	31.5	2225.5
8/11/2023	2023	8	11	72	48	74	61	29	2254.5
8/12/2023	2023	8	12	73	49	68	58.5	26.5	2281
8/13/2023	2023	8	13	74	47	72	59.5	27.5	2308.5
8/14/2023	2023	8	14	75	52	73	62.5	30.5	2339
8/15/2023	2023	8	15	76	48	75	61.5	29.5	2368.5
8/16/2023	2023	8	16	77	49	77	63	31	2399.5
8/17/2023	2023	8	17	78	49	78	63.5	31.5	2431
8/18/2023	2023	8	18	79	49	80	64.5	32.5	2463.5
8/19/2023	2023	8	19	80	49	79	64	32	2495.5
8/20/2023	2023	8	20	81	58	79	68.5	36.5	2532
8/21/2023	2023	8	21	82	55	78	66.5	34.5	2566.5
8/22/2023	2023	8	22	83	52	76	64	32	2598.5
8/23/2023	2023	8	23	84	50	68	59	27	2625.5
8/24/2023	2023	8	24	85	50	67	58.5	26.5	2652
8/25/2023	2023	8	25	86	48	76	62	30	2682
8/26/2023	2023	8	26	87	51	74	62.5	30.5	2712.5
8/27/2023	2023	8	27	88	50	74	62	30	2742.5
8/28/2023	2023	8	28	89	48	80	64	32	2774.5
8/29/2023	2023	8	29	90	49	81	65	33	2807.5
8/30/2023	2023	8	30	91	51	81	66	34	2841.5
8/31/2023	2023	8	31	92	47	84	65.5	33.5	2875

9/1/2023	2023	9	1	93	48	78	63	31	2906
9/2/2023	2023	9	2	94	49	76	62.5	30.5	2936.5
9/3/2023	2023	9	3	95	48	76	62	30	2966.5
9/4/2023	2023	9	4	96	48	72	60	28	2994.5
9/5/2023	2023	9	5	97	42	76	59	27	3021.5
9/6/2023	2023	9	6	98	43	81	62	30	3051.5
9/7/2023	2023	9	7	99	46	80	63	31	3082.5
9/8/2023	2023	9	8	100	48	81	64.5	32.5	3115
9/9/2023	2023	9	9	101	47	79	63	31	3146
9/10/2023	2023	9	10	102	50	80	65	33	3179
9/11/2023	2023	9	11	103	47	72	59.5	27.5	3206.5
9/12/2023	2023	9	12	104	49	66	57.5	25.5	3232
9/13/2023	2023	9	13	105	42	63	52.5	20.5	3252.5
9/14/2023	2023	9	14	106	42	64	53	21	3273.5
9/15/2023	2023	9	15	107	38	66	52	20	3293.5
9/16/2023	2023	9	16	108	38	69	53.5	21.5	3315
9/17/2023	2023	9	17	109	44	67	55.5	23.5	3338.5
9/18/2023	2023	9	18	110	40	68	54	22	3360.5
9/19/2023	2023	9	19	111	36	68	52	20	3380.5
9/20/2023	2023	9	20	112	36	64	50	18	3398.5
9/21/2023	2023	9	21	113	44	69	56.5	24.5	3423
9/22/2023	2023	9	22	114	44	69	56.5	24.5	3447.5
9/23/2023	2023	9	23	115	41	63	52	20	3467.5
9/24/2023	2023	9	24	116	37	65	51	19	3486.5
9/25/2023	2023	9	25	117	36	72	54	22	3508.5
9/26/2023	2023	9	26	118	38	73	55.5	23.5	3532
9/27/2023	2023	9	27	119	40	73	56.5	24.5	3556.5
9/28/2023	2023	9	28	120	41	72	56.5	24.5	3581
9/29/2023	2023	9	29	121	41	72	56.5	24.5	3605.5
9/30/2023	2023	9	30	122	47	73	60	28	3633.5
10/1/2023	2023	10	1	123	51	68	59.5	27.5	3661
10/2/2023	2023	10	2	124	40	64	52	20	3681
10/3/2023	2023	10	3	125	30	59	44.5	12.5	3693.5
10/4/2023	2023	10	4	126	30	61	45.5	13.5	3707
10/5/2023	2023	10	5	127	30	68	49	17	3724
10/6/2023	2023	10	6	128	35	71	53	21	3745
10/7/2023	2023	10	7	129	40	69	54.5	22.5	3767.5
10/8/2023	2023	10	8	130	40	66	53	21	3788.5
10/9/2023	2023	10	9	131	40	67	53.5	21.5	3810
10/10/2023	2023	10	10	132	38	65	51.5	19.5	3829.5
10/11/2023	2023	10	11	133	41	65	53	21	3850.5
10/12/2023	2023	10	12	134	26	53	39.5	7.5	3858
10/13/2023	2023	10	13	135	22	57	39.5	7.5	3865.5
10/14/2023	2023	10	14	136	33	63	48	16	3881.5
10/15/2023	2023	10	15	137	32	70	51	19	3900.5
10/16/2023	2023	10	16	138	36	71	53.5	21.5	3922
10/17/2023	2023	10	17	139	39	70	54.5	22.5	3944.5
10/18/2023	2023	10	18	140	38	71	54.5	22.5	3967
10/19/2023	2023	10	19	141	38	72	55	23	3990
10/20/2023	2023	10	20	142	37	72	54.5	22.5	4012.5
10/21/2023	2023	10	21	143	39	71	55	23	4035.5
10/22/2023	2023	10	22	144	38	68	53	21	4056.5
10/23/2023	2023	10	23	145	37	66	51.5	19.5	4076
10/24/2023	2023	10	24	146	37	57	47	15	4091
10/25/2023	2023	10	25	147	35	58	46.5	14.5	4105.5
10/26/2023	2023	10	26	148	35	55	45	13	4118.5
10/27/2023	2023	10	27	149	32	60	46	14	4132.5
10/28/2023	2023	10	28	150	38	56	47	15	4147.5
10/29/2023	2023	10	29	151	20	50	35	3	4150.5
10/30/2023	2023	10	30	152	12	45	28.5	-3.5	4147
10/31/2023	2023	10	31	153	16	52	34	2	4149
11/1/2023	2023	11	1	154	22	57	39.5	7.5	4156.5
11/2/2023	2023	11	2	155	27	61	44	12	4168.5
11/3/2023	2023	11	3	156	32	64	48	16	4184.5
11/4/2023	2023	11	4	157	31	65	48	16	4200.5
11/5/2023	2023	11	5	158	34	62	48	16	4216.5
11/6/2023	2023	11	6	159	41	63	52	20	4236.5
11/7/2023	2023	11	7	160	39	61	50	18	4254.5
11/8/2023	2023	11	8	161	24	50	37	5	4259.5
11/9/2023	2023	11	9	162	22	47	34.5	2.5	4262
11/10/2023	2023	11	10	163	24	40	32	0	4262
11/11/2023	2023	11	11	164	21	45	33	1	4263
11/12/2023	2023	11	12	165	20	56	38	6	4269
11/13/2023	2023	11	13	166	31	54	42.5	10.5	4279.5
11/14/2023	2023	11	14	167	26	56	41	9	4288.5
11/15/2023	2023	11	15	168	28	60	44	12	4300.5
11/16/2023	2023	11	16	169	38	55	46.5	14.5	4315
11/17/2023	2023	11	17	170	33	53	43	11	4326
11/18/2023	2023	11	18	171	30	40	35	3	4329
11/19/2023	2023	11	19	172	28	36	32	0	4329
11/20/2023	2023	11	20	173	23	36	29.5	-2.5	4326.5
11/21/2023	2023	11	21	174	20	42	31	-1	4325.5
11/22/2023	2023	11	22	175	19	51	35	3	4328.5
11/23/2023	2023	11	23	176	24	46	35	3	4331.5
11/24/2023	2023	11	24	177	23	40	31.5	-0.5	4331
11/25/2023	2023	11	25	178	15	31	23	-9	4322
11/26/2023	2023	11	26	179	8	37	22.5	-9.5	4312.5
11/27/2023	2023	11	27	180	10	38	24	-8	4304.5
11/28/2023	2023	11	28	181	12	44	28	-4	4300.5
11/29/2023	2023	11	29	182	26	45	35.5	3.5	4304
11/30/2023	2023	11	30	183	25	31	28	-4	4300
12/1/2023	2023	12	1	184	21	28	24.5	-7.5	4292.5
12/2/2023	2023	12	2	185	17	29	23	-9	4283.5

12/3/2023	2023	12	3	186	21	37	29	-3	4280.5
12/4/2023	2023	12	4	187	21	44	32.5	0.5	4281
12/5/2023	2023	12	5	188	20	51	35.5	3.5	4284.5
12/6/2023	2023	12	6	189	23	52	37.5	5.5	4290
12/7/2023	2023	12	7	190	30	46	38	6	4296
12/8/2023	2023	12	8	191	13	37	25	-7	4289
12/9/2023	2023	12	9	192	7	28	17.5	-14.5	4274.5
12/10/2023	2023	12	10	193	6	46	26	-6	4268.5
12/11/2023	2023	12	11	194	22	51	36.5	4.5	4273
12/12/2023	2023	12	12	195	28	48	38	6	4279
12/13/2023	2023	12	13	196	29	39	34	2	4281
12/14/2023	2023	12	14	197	18	35	26.5	-5.5	4275.5
12/15/2023	2023	12	15	198	16	40	28	-4	4271.5
12/16/2023	2023	12	16	199	15	52	33.5	1.5	4273
12/17/2023	2023	12	17	200	24	53	38.5	6.5	4279.5
12/18/2023	2023	12	18	201	25	51	38	6	4285.5
12/19/2023	2023	12	19	202	29	50	39.5	7.5	4293
12/20/2023	2023	12	20	203	28	41	34.5	2.5	4295.5
12/21/2023	2023	12	21	204	24	44	34	2	4297.5
12/22/2023	2023	12	22	205	27	43	35	3	4300.5
12/23/2023	2023	12	23	206	26	33	29.5	-2.5	4298
12/24/2023	2023	12	24	207	11	32	21.5	-10.5	4287.5
12/25/2023	2023	12	25	208	2	28	15	-17	4270.5
12/26/2023	2023	12	26	209	6	31	18.5	-13.5	4257
12/27/2023	2023	12	27	210	11	38	24.5	-7.5	4249.5
12/28/2023	2023	12	28	211	13	38	25.5	-6.5	4243
12/29/2023	2023	12	29	212	14	46	30	-2	4241
12/30/2023	2023	12	30	213	19	47	33	1	4242
12/31/2023	2023	12	31	214	18	38	28	-4	4238
1/1/2024	2024	1	1	215	16	41	28.5	-3.5	4234.5
1/2/2024	2024	1	2	216	15	40	27.5	-4.5	4230
1/3/2024	2024	1	3	217	17	41	29	-3	4227
1/4/2024	2024	1	4	218	21	28	24.5	-7.5	4219.5
1/5/2024	2024	1	5	219	11	27	19	-13	4206.5
1/6/2024	2024	1	6	220	8	26	17	-15	4191.5
1/7/2024	2024	1	7	221	14	21	17.5	-14.5	4177
1/8/2024	2024	1	8	222	4	18	11	-21	4156
1/9/2024	2024	1	9	223	4	29	16.5	-15.5	4140.5
1/10/2024	2024	1	10	224	14	31	22.5	-9.5	4131
1/11/2024	2024	1	11	225	5	21	13	-19	4112
1/12/2024	2024	1	12	226	5	24	14.5	-17.5	4094.5
1/13/2024	2024	1	13	227	17	34	25.5	-6.5	4088
1/14/2024	2024	1	14	228	24	38	31	-1	4087
1/15/2024	2024	1	15	229	22	36	29	-3	4084
1/16/2024	2024	1	16	230	18	41	29.5	-2.5	4081.5
1/17/2024	2024	1	17	231	21	39	30	-2	4079.5
1/18/2024	2024	1	18	232	22	44	33	1	4080.5
1/19/2024	2024	1	19	233	20	48	34	2	4082.5
1/20/2024	2024	1	20	234	27	47	37	5	4087.5
1/21/2024	2024	1	21	235	29	35	32	0	4087.5
1/22/2024	2024	1	22	236	20	35	27.5	-4.5	4083
1/23/2024	2024	1	23	237	20	36	28	-4	4079
1/24/2024	2024	1	24	238	26	38	32	0	4079
1/25/2024	2024	1	25	239	25	32	28.5	-3.5	4075.5
1/26/2024	2024	1	26	240	14	32	23	-9	4066.5
1/27/2024	2024	1	27	241	12	40	26	-6	4060.5
1/28/2024	2024	1	28	242	12	49	30.5	-1.5	4059
1/29/2024	2024	1	29	243	20	52	36	4	4063
1/30/2024	2024	1	30	244	22	51	36.5	4.5	4067.5
1/31/2024	2024	1	31	245	24	50	37	5	4072.5
2/1/2024	2024	2	1	246	29	48	38.5	6.5	4079
2/2/2024	2024	2	2	247	22	36	29	-3	4076
2/3/2024	2024	2	3	248	17	29	23	-9	4067
2/4/2024	2024	2	4	249	13	38	25.5	-6.5	4060.5
2/5/2024	2024	2	5	250	16	51	33.5	1.5	4062
2/6/2024	2024	2	6	251	31	48	39.5	7.5	4069.5
2/7/2024	2024	2	7	252	22	31	26.5	-5.5	4064
2/8/2024	2024	2	8	253	16	36	26	-6	4058
2/9/2024	2024	2	9	254	15	32	23.5	-8.5	4049.5
2/10/2024	2024	2	10	255	13	29	21	-11	4038.5
2/11/2024	2024	2	11	256	8	35	21.5	-10.5	4028
2/12/2024	2024	2	12	257	9	42	25.5	-6.5	4021.5
2/13/2024	2024	2	13	258	13	47	30	-2	4019.5
2/14/2024	2024	2	14	259	19	41	30	-2	4017.5
2/15/2024	2024	2	15	260	20	46	33	1	4018.5
2/16/2024	2024	2	16	261	19	43	31	-1	4017.5
2/17/2024	2024	2	17	262	20	44	32	0	4017.5
2/18/2024	2024	2	18	263	22	47	34.5	2.5	4020
2/19/2024	2024	2	19	264	24	51	37.5	5.5	4025.5
2/20/2024	2024	2	20	265	30	54	42	10	4035.5
2/21/2024	2024	2	21	266	30	48	39	7	4042.5
2/22/2024	2024	2	22	267	19	44	31.5	-0.5	4042
2/23/2024	2024	2	23	268	14	44	29	-3	4039
2/24/2024	2024	2	24	269	20	51	35.5	3.5	4042.5
2/25/2024	2024	2	25	270	28	53	40.5	8.5	4051
2/26/2024	2024	2	26	271	32	47	39.5	7.5	4058.5
2/27/2024	2024	2	27	272	23	43	33	1	4059.5
2/28/2024	2024	2	28	273	12	48	30	-2	4057.5
2/29/2024	2024	2	29	274	22	47	34.5	2.5	4060
3/1/2024	2024	3	1	275	27	49	38	6	4066
3/2/2024	2024	3	2	276	30	49	39.5	7.5	4073.5
3/3/2024	2024	3	3	277	29	47	38	6	4079.5
3/4/2024	2024	3	4	278	28	44	36	4	4083.5

3/5/2024	2024	3	5	279	25	49	37	5	4088.5
3/6/2024	2024	3	6	280	26	44	35	3	4091.5
3/7/2024	2024	3	7	281	24	38	31	-1	4090.5
3/8/2024	2024	3	8	282	18	37	27.5	-4.5	4086
3/9/2024	2024	3	9	283	14	42	28	-4	4082
3/10/2024	2024	3	10	284	15	50	32.5	0.5	4082.5
3/11/2024	2024	3	11	285	23	50	36.5	4.5	4087
3/12/2024	2024	3	12	286	31	50	40.5	8.5	4095.5
3/13/2024	2024	3	13	287	25	33	29	-3	4092.5
3/14/2024	2024	3	14	288	22	39	30.5	-1.5	4091
3/15/2024	2024	3	15	289	26	33	29.5	-2.5	4088.5
3/16/2024	2024	3	16	290	19	41	30	-2	4086.5
3/17/2024	2024	3	17	291	14	38	26	-6	4080.5
3/18/2024	2024	3	18	292	27	41	34	2	4082.5
3/19/2024	2024	3	19	293	23	45	34	2	4084.5
3/20/2024	2024	3	20	294	20	49	34.5	2.5	4087
3/21/2024	2024	3	21	295	26	53	39.5	7.5	4094.5
3/22/2024	2024	3	22	296	27	54	40.5	8.5	4103
3/23/2024	2024	3	23	297	28	50	39	7	4110
3/24/2024	2024	3	24	298	21	36	28.5	-3.5	4106.5
3/25/2024	2024	3	25	299	20	32	26	-6	4100.5
3/26/2024	2024	3	26	300	20	36	28	-4	4096.5
3/27/2024	2024	3	27	301	16	40	28	-4	4092.5
3/28/2024	2024	3	28	302	20	53	36.5	4.5	4097
3/29/2024	2024	3	29	303	32	52	42	10	4107
3/30/2024	2024	3	30	304	32	57	44.5	12.5	4119.5
3/31/2024	2024	3	31	305	25	48	36.5	4.5	4124
4/1/2024	2024	4	1	306	23	38	30.5	-1.5	4122.5
4/2/2024	2024	4	2	307	20	46	33	1	4123.5
4/3/2024	2024	4	3	308	26	57	41.5	9.5	4133
4/4/2024	2024	4	4	309	28	61	44.5	12.5	4145.5
4/5/2024	2024	4	5	310	21	55	38	6	4151.5
4/6/2024	2024	4	6	311	18	31	24.5	-7.5	4144
4/7/2024	2024	4	7	312	19	44	31.5	-0.5	4143.5
4/8/2024	2024	4	8	313	25	46	35.5	3.5	4147
4/9/2024	2024	4	9	314	26	49	37.5	5.5	4152.5
4/10/2024	2024	4	10	315	27	54	40.5	8.5	4161
4/11/2024	2024	4	11	316	26	61	43.5	11.5	4172.5
4/12/2024	2024	4	12	317	31	65	48	16	4188.5
4/13/2024	2024	4	13	318	29	60	44.5	12.5	4201
4/14/2024	2024	4	14	319	32	62	47	15	4216
4/15/2024	2024	4	15	320	30	46	38	6	4222
4/16/2024	2024	4	16	321	29	57	43	11	4233
4/17/2024	2024	4	17	322	30	63	46.5	14.5	4247.5
4/18/2024	2024	4	18	323	35	63	49	17	4264.5
4/19/2024	2024	4	19	324	33	66	49.5	17.5	4282
4/20/2024	2024	4	20	325	35	63	49	17	4299
4/21/2024	2024	4	21	326	33	65	49	17	4316
4/22/2024	2024	4	22	327	35	66	50.5	18.5	4334.5
4/23/2024	2024	4	23	328	36	68	52	20	4354.5
4/24/2024	2024	4	24	329	34	64	49	17	4371.5
4/25/2024	2024	4	25	330	33	54	43.5	11.5	4383
4/26/2024	2024	4	26	331	28	54	41	9	4392
4/27/2024	2024	4	27	332	27	37	32	0	4392
4/28/2024	2024	4	28	333	28	48	38	6	4398
4/29/2024	2024	4	29	334	28	58	43	11	4409
4/30/2024	2024	4	30	335	32	62	47	15	4424
5/1/2024	2024	5	1	336	34	63	48.5	16.5	4440.5
5/2/2024	2024	5	2	337	30	61	45.5	13.5	4454
5/3/2024	2024	5	3	338	34	62	48	16	4470
5/4/2024	2024	5	4	339	36	63	49.5	17.5	4487.5
5/5/2024	2024	5	5	340	36	62	49	17	4504.5
5/6/2024	2024	5	6	341	36	62	49	17	4521.5
5/7/2024	2024	5	7	342	36	62	49	17	4538.5
5/8/2024	2024	5	8	343	36	41	38.5	6.5	4545
5/9/2024	2024	5	9	344	28	55	41.5	9.5	4554.5
5/10/2024	2024	5	10	345	30	57	43.5	11.5	4566
5/11/2024	2024	5	11	346	29	62	45.5	13.5	4579.5
5/12/2024	2024	5	12	347	34	58	46	14	4593.5
5/13/2024	2024	5	13	348	31	60	45.5	13.5	4607
5/14/2024	2024	5	14	349	36	66	51	19	4626
5/15/2024	2024	5	15	350	39	65	52	20	4646
5/16/2024	2024	5	16	351	38	62	50	18	4664
5/17/2024	2024	5	17	352	38	56	47	15	4679
5/18/2024	2024	5	18	353	38	68	53	21	4700
5/19/2024	2024	5	19	354	38	69	53.5	21.5	4721.5
5/20/2024	2024	5	20	355	41	67	54	22	4743.5
5/21/2024	2024	5	21	356	41	65	53	21	4764.5
5/22/2024	2024	5	22	357	33	63	48	16	4780.5
5/23/2024	2024	5	23	358	30	65	47.5	15.5	4796
5/24/2024	2024	5	24	359	39	67	53	21	4817
5/25/2024	2024	5	25	360	36	67	51.5	19.5	4836.5
5/26/2024	2024	5	26	361	36	63	49.5	17.5	4854
5/27/2024	2024	5	27	362	37	67	52	20	4874
5/28/2024	2024	5	28	363	37	72	54.5	22.5	4896.5
5/29/2024	2024	5	29	364	42	74	58	26	4922.5
5/30/2024	2024	5	30	365	42	74	58	26	4948.5
5/31/2024	2024	5	31	366	42	74	58	26	4974.5
6/1/2024	2024	6	1	1	51	74	62.5	30.5	30.5
6/2/2024	2024	6	2	2	47	76	61.5	29.5	60
6/3/2024	2024	6	3	3	45	72	58.5	26.5	86.5
6/4/2024	2024	6	4	4	47	73	60	28	114.5
6/5/2024	2024	6	5	5	48	75	61.5	29.5	144

6/6/2024	2024	6	6	6	45	80	62.5	30.5	174.5
6/7/2024	2024	6	7	7	47	86	66.5	34.5	209
6/8/2024	2024	6	8	8	51	84	67.5	35.5	244.5
6/9/2024	2024	6	9	9	53	80	66.5	34.5	279
6/10/2024	2024	6	10	10	53	76	64.5	32.5	311.5
6/11/2024	2024	6	11	11	47	67	57	25	336.5
6/12/2024	2024	6	12	12	44	77	60.5	28.5	365
6/13/2024	2024	6	13	13	48	83	65.5	33.5	398.5
6/14/2024	2024	6	14	14	48	84	66	34	432.5
6/15/2024	2024	6	15	15	44	74	59	27	459.5
6/16/2024	2024	6	16	16	43	78	60.5	28.5	488
6/17/2024	2024	6	17	17	53	79	66	34	522
6/18/2024	2024	6	18	18	47	79	63	31	553
6/19/2024	2024	6	19	19	45	74	59.5	27.5	580.5
6/20/2024	2024	6	20	20	44	80	62	30	610.5
6/21/2024	2024	6	21	21	53	75	64	32	642.5
6/22/2024	2024	6	22	22	53	73	63	31	673.5
6/23/2024	2024	6	23	23	51	66	58.5	26.5	700
6/24/2024	2024	6	24	24	53	69	61	29	729
6/25/2024	2024	6	25	25	49	76	62.5	30.5	759.5
6/26/2024	2024	6	26	26	55	81	68	36	795.5
6/27/2024	2024	6	27	27	54	80	67	35	830.5
6/28/2024	2024	6	28	28	53	74	63.5	31.5	862
6/29/2024	2024	6	29	29	49	74	61.5	29.5	891.5
6/30/2024	2024	6	30	30	52	75	63.5	31.5	923
7/1/2024	2024	7	1	31	54	74	64	32	955
7/2/2024	2024	7	2	32	54	71	62.5	30.5	985.5
7/3/2024	2024	7	3	33	49	72	60.5	28.5	1014
7/4/2024	2024	7	4	34	49	76	62.5	30.5	1044.5
7/5/2024	2024	7	5	35	47	79	63	31	1075.5
7/6/2024	2024	7	6	36	45	77	61	29	1104.5
7/7/2024	2024	7	7	37	43	78	60.5	28.5	1133
7/8/2024	2024	7	8	38	47	81	64	32	1165
7/9/2024	2024	7	9	39	45	76	60.5	28.5	1193.5
7/10/2024	2024	7	10	40	50	78	64	32	1225.5
7/11/2024	2024	7	11	41	49	79	64	32	1257.5
7/12/2024	2024	7	12	42	53	82	67.5	35.5	1293
7/13/2024	2024	7	13	43	51	81	66	34	1327
7/14/2024	2024	7	14	44	50	82	66	34	1361
7/15/2024	2024	7	15	45	52	83	67.5	35.5	1396.5
7/16/2024	2024	7	16	46	53	81	67	35	1431.5
7/17/2024	2024	7	17	47	52	82	67	35	1466.5
7/18/2024	2024	7	18	48	52	78	65	33	1499.5
7/19/2024	2024	7	19	49	49	79	64	32	1531.5
7/20/2024	2024	7	20	50	48	78	63	31	1562.5
7/21/2024	2024	7	21	51	52	78	65	33	1595.5
7/22/2024	2024	7	22	52	48	70	59	27	1622.5
7/23/2024	2024	7	23	53	45	73	59	27	1649.5
7/24/2024	2024	7	24	54	48	78	63	31	1680.5
7/25/2024	2024	7	25	55	54	79	66.5	34.5	1715
7/26/2024	2024	7	26	56	53	80	66.5	34.5	1749.5
7/27/2024	2024	7	27	57	52	78	65	33	1782.5
7/28/2024	2024	7	28	58	51	79	65	33	1815.5
7/29/2024	2024	7	29	59	51	78	64.5	32.5	1848
7/30/2024	2024	7	30	60	55	78	66.5	34.5	1882.5
7/31/2024	2024	7	31	61	54	82	68	36	1918.5
8/1/2024	2024	8	1	62	56	82	69	37	1955.5
8/2/2024	2024	8	2	63	55	83	69	37	1992.5
8/3/2024	2024	8	3	64	48	77	62.5	30.5	2023
8/4/2024	2024	8	4	65	54	79	66.5	34.5	2057.5
8/5/2024	2024	8	5	66	50	77	63.5	31.5	2089
8/6/2024	2024	8	6	67	50	81	65.5	33.5	2122.5
8/7/2024	2024	8	7	68	53	80	66.5	34.5	2157
8/8/2024	2024	8	8	69	49	79	64	32	2189
8/9/2024	2024	8	9	70	49	76	62.5	30.5	2219.5
8/10/2024	2024	8	10	71	53	73	63	31	2250.5
8/11/2024	2024	8	11	72	53	75	64	32	2282.5
8/12/2024	2024	8	12	73	52	77	64.5	32.5	2315
8/13/2024	2024	8	13	74	51	77	64	32	2347
8/14/2024	2024	8	14	75	51	67	59	27	2374
8/15/2024	2024	8	15	76	47	74	60.5	28.5	2402.5
8/16/2024	2024	8	16	77	47	78	62.5	30.5	2433
8/17/2024	2024	8	17	78	52	80	66	34	2467
8/18/2024	2024	8	18	79	52	81	66.5	34.5	2501.5
8/19/2024	2024	8	19	80	51	79	65	33	2534.5
8/20/2024	2024	8	20	81	50	79	64.5	32.5	2567
8/21/2024	2024	8	21	82	50	82	66	34	2601
8/22/2024	2024	8	22	83	49	80	64.5	32.5	2633.5
8/23/2024	2024	8	23	84	46	72	59	27	2660.5
8/24/2024	2024	8	24	85	48	74	61	29	2689.5
8/25/2024	2024	8	25	86	49	68	58.5	26.5	2716
8/26/2024	2024	8	26	87	48	73	60.5	28.5	2744.5
8/27/2024	2024	8	27	88	49	71	60	28	2772.5
8/28/2024	2024	8	28	89	45	72	58.5	26.5	2799
8/29/2024	2024	8	29	90	49	63	56	24	2823
8/30/2024	2024	8	30	91	48	72	60	28	2851
8/31/2024	2024	8	31	92	46	73	59.5	27.5	2878.5
9/1/2024	2024	9	1	93	46	73	59.5	27.5	2906
9/2/2024	2024	9	2	94	45	71	58	26	2932
9/3/2024	2024	9	3	95	47	69	58	26	2958
9/4/2024	2024	9	4	96	43	74	58.5	26.5	2984.5
9/5/2024	2024	9	5	97	47	78	62.5	30.5	3015
9/6/2024	2024	9	6	98	46	78	62	30	3045

9/7/2024	2024	9	7	99	48	71	59.5	27.5	3072.5
9/8/2024	2024	9	8	100	45	72	58.5	26.5	3099
9/9/2024	2024	9	9	101	47	74	60.5	28.5	3127.5
9/10/2024	2024	9	10	102	48	75	61.5	29.5	3157
9/11/2024	2024	9	11	103	46	73	59.5	27.5	3184.5
9/12/2024	2024	9	12	104	47	74	60.5	28.5	3213
9/13/2024	2024	9	13	105	47	75	61	29	3242
9/14/2024	2024	9	14	106	46	71	58.5	26.5	3268.5
9/15/2024	2024	9	15	107	44	75	59.5	27.5	3296
9/16/2024	2024	9	16	108	46	66	56	24	3320
9/17/2024	2024	9	17	109	48	64	56	24	3344
9/18/2024	2024	9	18	110	48	61	54.5	22.5	3366.5
9/19/2024	2024	9	19	111	40	65	52.5	20.5	3387
9/20/2024	2024	9	20	112	38	69	53.5	21.5	3408.5
9/21/2024	2024	9	21	113	38	71	54.5	22.5	3431
9/22/2024	2024	9	22	114	34	62	48	16	3447
9/23/2024	2024	9	23	115	33	61	47	15	3462
9/24/2024	2024	9	24	116	36	65	50.5	18.5	3480.5
9/25/2024	2024	9	25	117	38	70	54	22	3502.5
9/26/2024	2024	9	26	118	45	74	59.5	27.5	3530
9/27/2024	2024	9	27	119	46	75	60.5	28.5	3558.5
9/28/2024	2024	9	28	120	45	77	61	29	3587.5
9/29/2024	2024	9	29	121	45	78	61.5	29.5	3617
9/30/2024	2024	9	30	122	48	75	61.5	29.5	3646.5
10/1/2024	2024	10	1	123	47	76	61.5	29.5	3676
10/2/2024	2024	10	2	124	45	74	59.5	27.5	3703.5
10/3/2024	2024	10	3	125	44	74	59	27	3730.5
10/4/2024	2024	10	4	126	43	74	58.5	26.5	3757
10/5/2024	2024	10	5	127	43	76	59.5	27.5	3784.5
10/6/2024	2024	10	6	128	42	74	58	26	3810.5
10/7/2024	2024	10	7	129	41	73	57	25	3835.5
10/8/2024	2024	10	8	130	42	72	57	25	3860.5
10/9/2024	2024	10	9	131	40	71	55.5	23.5	3884
10/10/2024	2024	10	10	132	42	71	56.5	24.5	3908.5
10/11/2024	2024	10	11	133	41	70	55.5	23.5	3932
10/12/2024	2024	10	12	134	41	72	56.5	24.5	3956.5
10/13/2024	2024	10	13	135	43	71	57	25	3981.5
10/14/2024	2024	10	14	136	42	72	57	25	4006.5
10/15/2024	2024	10	15	137	43	70	56.5	24.5	4031
10/16/2024	2024	10	16	138	40	65	52.5	20.5	4051.5
10/17/2024	2024	10	17	139	39	60	49.5	17.5	4069
10/18/2024	2024	10	18	140	39	60	49.5	17.5	4086.5
10/19/2024	2024	10	19	141	29	57	43	11	4097.5
10/20/2024	2024	10	20	142	28	38	33	1	4098.5
10/21/2024	2024	10	21	143	29	49	39	7	4105.5
10/22/2024	2024	10	22	144	27	56	41.5	9.5	4115
10/23/2024	2024	10	23	145	28	63	45.5	13.5	4128.5
10/24/2024	2024	10	24	146	33	65	49	17	4145.5
10/25/2024	2024	10	25	147	36	64	50	18	4163.5
10/26/2024	2024	10	26	148	35	67	51	19	4182.5
10/27/2024	2024	10	27	149	37	67	52	20	4202.5
10/28/2024	2024	10	28	150	40	66	53	21	4223.5
10/29/2024	2024	10	29	151	40	63	51.5	19.5	4243
10/30/2024	2024	10	30	152	40	47	43.5	11.5	4254.5
10/31/2024	2024	10	31	153	21	39	30	-2	4252.5
11/1/2024	2024	11	1	154	20	51	35.5	3.5	4256
11/2/2024	2024	11	2	155	26	54	40	8	4264
11/3/2024	2024	11	3	156	28	53	40.5	8.5	4272.5
11/4/2024	2024	11	4	157	28	37	32.5	0.5	4273
11/5/2024	2024	11	5	158	20	31	25.5	-6.5	4266.5
11/6/2024	2024	11	6	159	20	41	30.5	-1.5	4265
11/7/2024	2024	11	7	160	9	28	18.5	-13.5	4251.5
11/8/2024	2024	11	8	161	18	29	23.5	-8.5	4243
11/9/2024	2024	11	9	162	18	29	23.5	-8.5	4234.5
11/10/2024	2024	11	10	163	19	39	29	-3	4231.5
11/11/2024	2024	11	11	164	22	54	38	6	4237.5
11/12/2024	2024	11	12	165	22	51	36.5	4.5	4242
11/13/2024	2024	11	13	166	23	44	33.5	1.5	4243.5
11/14/2024	2024	11	14	167	18	50	34	2	4245.5
11/15/2024	2024	11	15	168	29	56	42.5	10.5	4256
11/16/2024	2024	11	16	169	29	56	42.5	10.5	4266.5
11/17/2024	2024	11	17	170	20	39	29.5	-2.5	4264
11/18/2024	2024	11	18	171	18	42	30	-2	4262
11/19/2024	2024	11	19	172	18	39	28.5	-3.5	4258.5
11/20/2024	2024	11	20	173	15	35	25	-7	4251.5
11/21/2024	2024	11	21	174	16	47	31.5	-0.5	4251
11/22/2024	2024	11	22	175	21	56	38.5	6.5	4257.5
11/23/2024	2024	11	23	176	25	58	41.5	9.5	4267
11/24/2024	2024	11	24	177	29	55	42	10	4277
11/25/2024	2024	11	25	178	34	50	42	10	4287
11/26/2024	2024	11	26	179	26	47	36.5	4.5	4291.5
11/27/2024	2024	11	27	180	26	47	36.5	4.5	4296
11/28/2024	2024	11	28	181	26	40	33	1	4297
11/29/2024	2024	11	29	182	11	35	23	-9	4288
11/30/2024	2024	11	30	183	9	40	24.5	-7.5	4280.5
12/1/2024	2024	12	1	184	15	48	31.5	-0.5	4280
12/2/2024	2024	12	2	185	20	52	36	4	4284
12/3/2024	2024	12	3	186	24	51	37.5	5.5	4289.5
12/4/2024	2024	12	4	187	27	50	38.5	6.5	4296
12/5/2024	2024	12	5	188	25	47	36	4	4300
12/6/2024	2024	12	6	189	25	46	35.5	3.5	4303.5
12/7/2024	2024	12	7	190	24	44	34	2	4305.5
12/8/2024	2024	12	8	191	23	45	34	2	4307.5

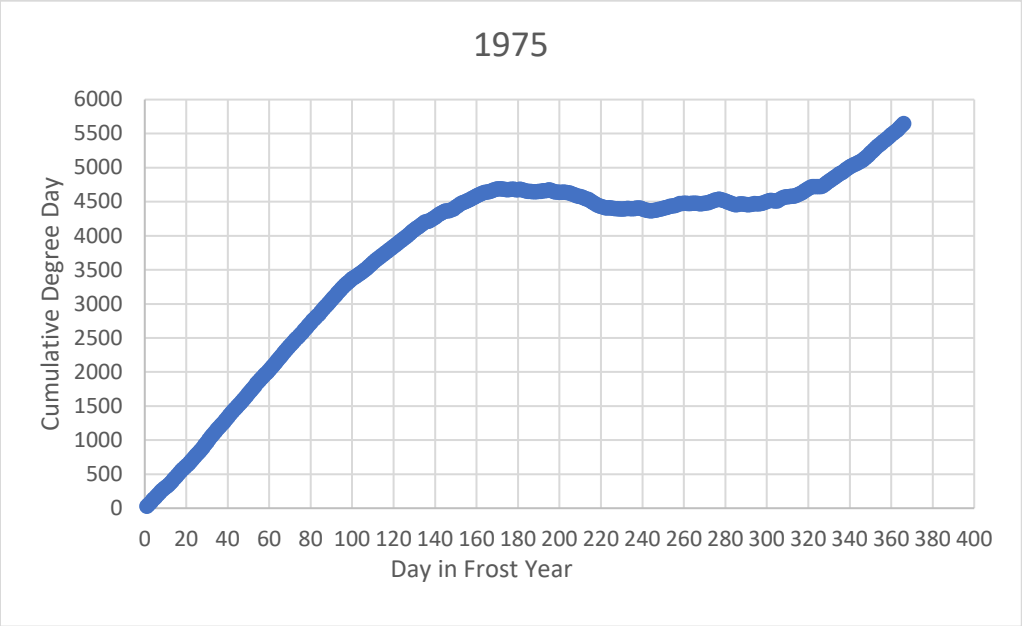
12/9/2024	2024	12	9	192	23	44	33.5	1.5	4309
12/10/2024	2024	12	10	193	14	38	26	-6	4303
12/11/2024	2024	12	11	194	11	30	20.5	-11.5	4291.5
12/12/2024	2024	12	12	195	15	41	28	-4	4287.5
12/13/2024	2024	12	13	196	26	50	38	6	4293.5
12/14/2024	2024	12	14	197	24	37	30.5	-1.5	4292
12/15/2024	2024	12	15	198	20	49	34.5	2.5	4294.5
12/16/2024	2024	12	16	199	21	44	32.5	0.5	4295
12/17/2024	2024	12	17	200	22	52	37	5	4300
12/18/2024	2024	12	18	201	24	48	36	4	4304
12/19/2024	2024	12	19	202	22	53	37.5	5.5	4309.5
12/20/2024	2024	12	20	203	25	54	39.5	7.5	4317
12/21/2024	2024	12	21	204	28	55	41.5	9.5	4326.5
12/22/2024	2024	12	22	205	26	56	41	9	4335.5
12/23/2024	2024	12	23	206	27	51	39	7	4342.5
12/24/2024	2024	12	24	207	28	48	38	6	4348.5
12/25/2024	2024	12	25	208	28	49	38.5	6.5	4355
12/26/2024	2024	12	26	209	20	38	29	-3	4352
12/27/2024	2024	12	27	210	17	38	27.5	-4.5	4347.5
12/28/2024	2024	12	28	211	27	38	32.5	0.5	4348
12/29/2024	2024	12	29	212	24	46	35	3	4351
12/30/2024	2024	12	30	213	24	52	38	6	4357
12/31/2024	2024	12	31	214	23	45	34	2	4359
1/1/2025	2025	1	1	215	23	41	32	0	4359
1/2/2025	2025	1	2	216	18	43	30.5	-1.5	4357.5
1/3/2025	2025	1	3	217	26	50	38	6	4363.5
1/4/2025	2025	1	4	218	26	52	39	7	4370.5
1/5/2025	2025	1	5	219	26	44	35	3	4373.5
1/6/2025	2025	1	6	220	14	36	25	-7	4366.5
1/7/2025	2025	1	7	221	14	39	26.5	-5.5	4361
1/8/2025	2025	1	8	222	14	34	24	-8	4353
1/9/2025	2025	1	9	223	13	30	21.5	-10.5	4342.5
1/10/2025	2025	1	10	224	11	24	17.5	-14.5	4328
1/11/2025	2025	1	11	225	5	31	18	-14	4314
1/12/2025	2025	1	12	226	12	38	25	-7	4307
1/13/2025	2025	1	13	227	4	29	16.5	-15.5	4291.5
1/14/2025	2025	1	14	228	7	28	17.5	-14.5	4277
1/15/2025	2025	1	15	229	4	28	16	-16	4261
1/16/2025	2025	1	16	230	6	38	22	-10	4251
1/17/2025	2025	1	17	231	16	48	32	0	4251
1/18/2025	2025	1	18	232	16	34	25	-7	4244
1/19/2025	2025	1	19	233	4	30	17	-15	4229
1/20/2025	2025	1	20	234	0	29	14.5	-17.5	4211.5
1/21/2025	2025	1	21	235	1	29	15	-17	4194.5
1/22/2025	2025	1	22	236	-4	33	14.5	-17.5	4177
1/23/2025	2025	1	23	237	4	34	19	-13	4164
1/24/2025	2025	1	24	238	4	34	19	-13	4151
1/25/2025	2025	1	25	239	8	44	26	-6	4145
1/26/2025	2025	1	26	240	8	42	25	-7	4138
1/27/2025	2025	1	27	241	8	42	25	-7	4131
1/28/2025	2025	1	28	242	15	43	29	-3	4128
1/29/2025	2025	1	29	243	14	41	27.5	-4.5	4123.5
1/30/2025	2025	1	30	244	15	26	20.5	-11.5	4112
1/31/2025	2025	1	31	245	17	37	27	-5	4107
2/1/2025	2025	2	1	246	14	49	31.5	-0.5	4106.5
2/2/2025	2025	2	2	247	26	49	37.5	5.5	4112
2/3/2025	2025	2	3	248	33	57	45	13	4125
2/4/2025	2025	2	4	249	33	62	47.5	15.5	4140.5
2/5/2025	2025	2	5	250	33	58	45.5	13.5	4154
2/6/2025	2025	2	6	251	29	53	41	9	4163
2/7/2025	2025	2	7	252	25	56	40.5	8.5	4171.5
2/8/2025	2025	2	8	253	37	55	46	14	4185.5
2/9/2025	2025	2	9	254	33	52	42.5	10.5	4196
2/10/2025	2025	2	10	255	27	50	38.5	6.5	4202.5
2/11/2025	2025	2	11	256	27	50	38.5	6.5	4209
2/12/2025	2025	2	12	257	27	42	34.5	2.5	4211.5
2/13/2025	2025	2	13	258	18	33	25.5	-6.5	4205
2/14/2025	2025	2	14	259	13	42	27.5	-4.5	4200.5
2/15/2025	2025	2	15	260	13	34	23.5	-8.5	4192
2/16/2025	2025	2	16	261	21	31	26	-6	4186
2/17/2025	2025	2	17	262	13	45	29	-3	4183
2/18/2025	2025	2	18	263	13	47	30	-2	4181
2/19/2025	2025	2	19	264	19	40	29.5	-2.5	4178.5
2/20/2025	2025	2	20	265	16	45	30.5	-1.5	4177
2/21/2025	2025	2	21	266	22	47	34.5	2.5	4179.5
2/22/2025	2025	2	22	267	18	42	30	-2	4177.5
2/23/2025	2025	2	23	268	16	46	31	-1	4176.5
2/24/2025	2025	2	24	269	23	53	38	6	4182.5
2/25/2025	2025	2	25	270	29	57	43	11	4193.5
2/26/2025	2025	2	26	271	29	57	43	11	4204.5
2/27/2025	2025	2	27	272	23	52	37.5	5.5	4210
2/28/2025	2025	2	28	273	18	43	30.5	-1.5	4208.5
3/1/2025	2025	3	1	274	23	52	37.5	5.5	4214
3/2/2025	2025	3	2	275	26	58	42	10	4224
3/3/2025	2025	3	3	276	26	48	37	5	4229
3/4/2025	2025	3	4	277	21	35	28	-4	4225
3/5/2025	2025	3	5	278	20	37	28.5	-3.5	4221.5
3/6/2025	2025	3	6	279	20	48	34	2	4223.5
3/7/2025	2025	3	7	280	20	42	31	-1	4222.5
3/8/2025	2025	3	8	281	20	36	28	-4	4218.5
3/9/2025	2025	3	9	282	16	32	24	-8	4210.5
3/10/2025	2025	3	10	283	13	48	30.5	-1.5	4209
3/11/2025	2025	3	11	284	22	55	38.5	6.5	4215.5

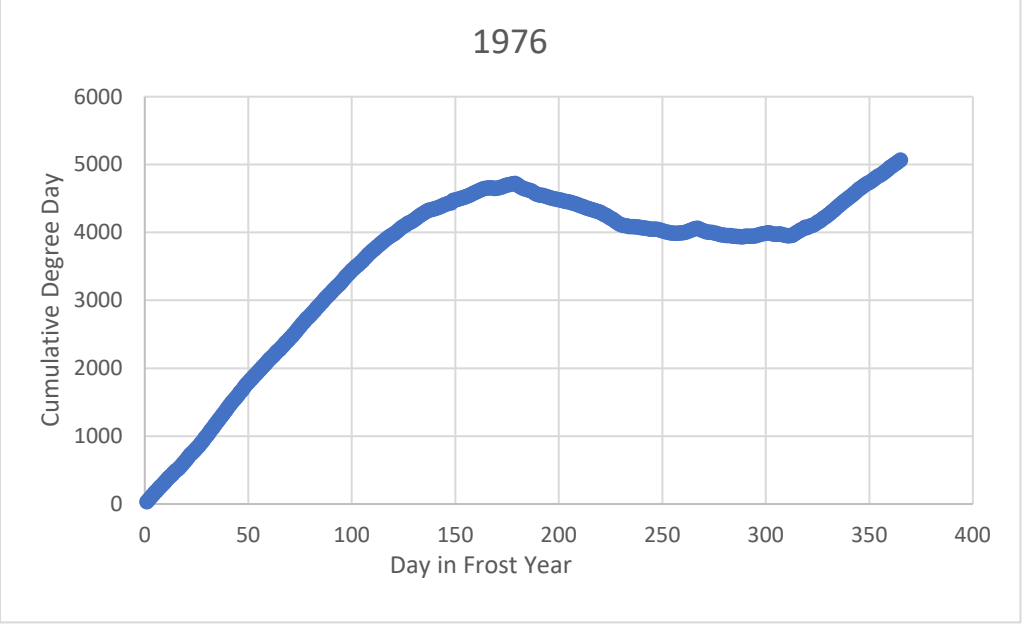
3/12/2025	2025	3	12	285	24	49	36.5	4.5	4220
3/13/2025	2025	3	13	286	24	41	32.5	0.5	4220.5
3/14/2025	2025	3	14	287	19	49	34	2	4222.5
3/15/2025	2025	3	15	288	16	26	21	-11	4211.5
3/16/2025	2025	3	16	289	19	31	25	-7	4204.5
3/17/2025	2025	3	17	290	16	47	31.5	-0.5	4204
3/18/2025	2025	3	18	291	16	58	37	5	4209
3/19/2025	2025	3	19	292	16	40	28	-4	4205
3/20/2025	2025	3	20	293	12	35	23.5	-8.5	4196.5
3/21/2025	2025	3	21	294	12	49	30.5	-1.5	4195
3/22/2025	2025	3	22	295	25	50	37.5	5.5	4200.5
3/23/2025	2025	3	23	296	29	52	40.5	8.5	4209
3/24/2025	2025	3	24	297	29	52	40.5	8.5	4217.5
3/25/2025	2025	3	25	298	28	61	44.5	12.5	4230
3/26/2025	2025	3	26	299	30	65	47.5	15.5	4245.5
3/27/2025	2025	3	27	300	34	64	49	17	4262.5
3/28/2025	2025	3	28	301	34	64	49	17	4279.5
3/29/2025	2025	3	29	302	34	58	46	14	4293.5
3/30/2025	2025	3	30	303	29	50	39.5	7.5	4301
3/31/2025	2025	3	31	304	26	50	38	6	4307
4/1/2025	2025	4	1	305	26	56	41	9	4316
4/2/2025	2025	4	2	306	18	46	32	0	4316
4/3/2025	2025	4	3	307	16	36	26	-6	4310
4/4/2025	2025	4	4	308	20	35	27.5	-4.5	4305.5
4/5/2025	2025	4	5	309	20	37	28.5	-3.5	4302
4/6/2025	2025	4	6	310	17	32	24.5	-7.5	4294.5
4/7/2025	2025	4	7	311	16	45	30.5	-1.5	4293
4/8/2025	2025	4	8	312	22	55	38.5	6.5	4299.5
4/9/2025	2025	4	9	313	28	61	44.5	12.5	4312
4/10/2025	2025	4	10	314	34	66	50	18	4330
4/11/2025	2025	4	11	315	33	69	51	19	4349
4/12/2025	2025	4	12	316	36	72	54	22	4371
4/13/2025	2025	4	13	317	37	69	53	21	4392
4/14/2025	2025	4	14	318	46	61	53.5	21.5	4413.5
4/15/2025	2025	4	15	319	38	64	51	19	4432.5
4/16/2025	2025	4	16	320	36	66	51	19	4451.5
4/17/2025	2025	4	17	321	36	67	51.5	19.5	4471
4/18/2025	2025	4	18	322	36	58	47	15	4486
4/19/2025	2025	4	19	323	26	48	37	5	4491
4/20/2025	2025	4	20	324	21	32	26.5	-5.5	4485.5
4/21/2025	2025	4	21	325	21	50	35.5	3.5	4489
4/22/2025	2025	4	22	326	26	58	42	10	4499
4/23/2025	2025	4	23	327	30	63	46.5	14.5	4513.5
4/24/2025	2025	4	24	328	34	64	49	17	4530.5
4/25/2025	2025	4	25	329	34	62	48	16	4546.5
4/26/2025	2025	4	26	330	31	66	48.5	16.5	4563
4/27/2025	2025	4	27	331	30	66	48	16	4579
4/28/2025	2025	4	28	332	30	60	45	13	4592
4/29/2025	2025	4	29	333	26	54	40	8	4600
4/30/2025	2025	4	30	334	28	55	41.5	9.5	4609.5
5/1/2025	2025	5	1	335	28	58	43	11	4620.5
5/2/2025	2025	5	2	336	33	57	45	13	4633.5
5/3/2025	2025	5	3	337	31	58	44.5	12.5	4646
5/4/2025	2025	5	4	338	31	61	46	14	4660
5/5/2025	2025	5	5	339	31	52	41.5	9.5	4669.5
5/6/2025	2025	5	6	340	26	46	36	4	4673.5
5/7/2025	2025	5	7	341	27	44	35.5	3.5	4677
5/8/2025	2025	5	8	342	33	49	41	9	4686
5/9/2025	2025	5	9	343	30	57	43.5	11.5	4697.5
5/10/2025	2025	5	10	344	32	64	48	16	4713.5
5/11/2025	2025	5	11	345	37	65	51	19	4732.5
5/12/2025	2025	5	12	346	37	65	51	19	4751.5
5/13/2025	2025	5	13	347	42	67	54.5	22.5	4774
5/14/2025	2025	5	14	348	32	55	43.5	11.5	4785.5
5/15/2025	2025	5	15	349	26	58	42	10	4795.5
5/16/2025	2025	5	16	350	31	65	48	16	4811.5
5/17/2025	2025	5	17	351	34	66	50	18	4829.5
5/18/2025	2025	5	18	352	38	53	45.5	13.5	4843
5/19/2025	2025	5	19	353	28	50	39	7	4850
5/20/2025	2025	5	20	354	24	63	43.5	11.5	4861.5
5/21/2025	2025	5	21	355	34	72	53	21	4882.5
5/22/2025	2025	5	22	356	39	76	57.5	25.5	4908
5/23/2025	2025	5	23	357	39	74	56.5	24.5	4932.5
5/24/2025	2025	5	24	358	38	72	55	23	4955.5
5/25/2025	2025	5	25	359	42	70	56	24	4979.5
5/26/2025	2025	5	26	360	41	69	55	23	5002.5
5/27/2025	2025	5	27	361	40	72	56	24	5026.5
5/28/2025	2025	5	28	362	40	72	56	24	5050.5
5/29/2025	2025	5	29	363	40	72	56	24	5074.5
5/30/2025	2025	5	30	364	43	76	59.5	27.5	5102
5/31/2025	2025	5	31	365	52	76	64	32	5134
6/1/2025	2025	6	1	1	50	80	65	33	33
6/2/2025	2025	6	2	2	47	63	55	23	56
6/3/2025	2025	6	3	3	44	69	56.5	24.5	80.5
6/4/2025	2025	6	4	4	42	62	52	20	100.5
6/5/2025	2025	6	5	5	39	67	53	21	121.5
6/6/2025	2025	6	6	6	40	74	57	25	146.5
6/7/2025	2025	6	7	7	42	78	60	28	174.5
6/8/2025	2025	6	8	8	44	78	61	29	203.5
6/9/2025	2025	6	9	9	45	74	59.5	27.5	231
6/10/2025	2025	6	10	10	46	74	60	28	259
6/11/2025	2025	6	11	11	47	77	62	30	289
6/12/2025	2025	6	12	12	51	80	65.5	33.5	322.5

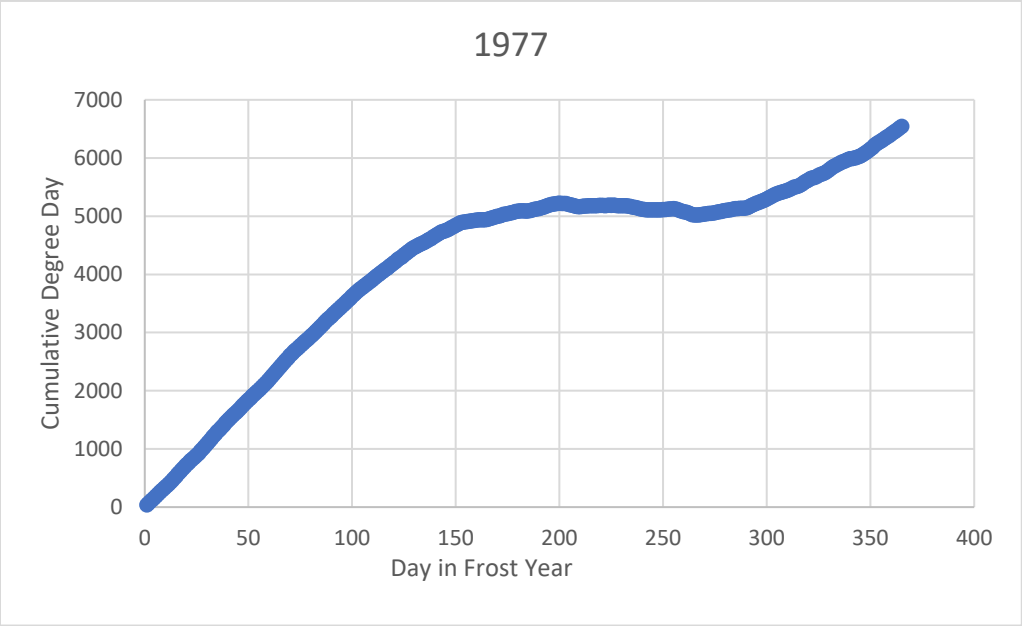
6/13/2025	2025	6	13	13	51	80	65.5	33.5	356
6/14/2025	2025	6	14	14	45	83	64	32	388
6/15/2025	2025	6	15	15	47	85	66	34	422
6/16/2025	2025	6	16	16	51	85	68	36	458
6/17/2025	2025	6	17	17	48	81	64.5	32.5	490.5
6/18/2025	2025	6	18	18	47	84	65.5	33.5	524
6/19/2025	2025	6	19	19	52	86	69	37	561
6/20/2025	2025	6	20	20	53	85	69	37	598
6/21/2025	2025	6	21	21	56	80	68	36	634
6/22/2025	2025	6	22	22	49	75	62	30	664
6/23/2025	2025	6	23	23	42	78	60	28	692
6/24/2025	2025	6	24	24	46	77	61.5	29.5	721.5
6/25/2025	2025	6	25	25	48	73	60.5	28.5	750
6/26/2025	2025	6	26	26	45	77	61	29	779
6/27/2025	2025	6	27	27	49	79	64	32	811
6/28/2025	2025	6	28	28	48	81	64.5	32.5	843.5
6/29/2025	2025	6	29	29	47	84	65.5	33.5	877
6/30/2025	2025	6	30	30	50	83	66.5	34.5	911.5
7/1/2025	2025	7	1	31	54	74	64	32	943.5
7/2/2025	2025	7	2	32	46	76	61	29	972.5
7/3/2025	2025	7	3	33	45	72	58.5	26.5	999
7/4/2025	2025	7	4	34	45	74	59.5	27.5	1026.5
7/5/2025	2025	7	5	35	48	82	65	33	1059.5
7/6/2025	2025	7	6	36	51	80	65.5	33.5	1093
7/7/2025	2025	7	7	37	54	84	69	37	1130
7/8/2025	2025	7	8	38	56	87	71.5	39.5	1169.5
7/9/2025	2025	7	9	39	51	86	68.5	36.5	1206
7/10/2025	2025	7	10	40	59	88	73.5	41.5	1247.5
7/11/2025	2025	7	11	41	54	85	69.5	37.5	1285
7/12/2025	2025	7	12	42	53	83	68	36	1321
7/13/2025	2025	7	13	43	51	86	68.5	36.5	1357.5
7/14/2025	2025	7	14	44	53	82	67.5	35.5	1393
7/15/2025	2025	7	15	45	51	81	66	34	1427
7/16/2025	2025	7	16	46	53	79	66	34	1461
7/17/2025	2025	7	17	47	49	79	64	32	1493
7/18/2025	2025	7	18	48	50	78	64	32	1525
7/19/2025	2025	7	19	49	52	74	63	31	1556

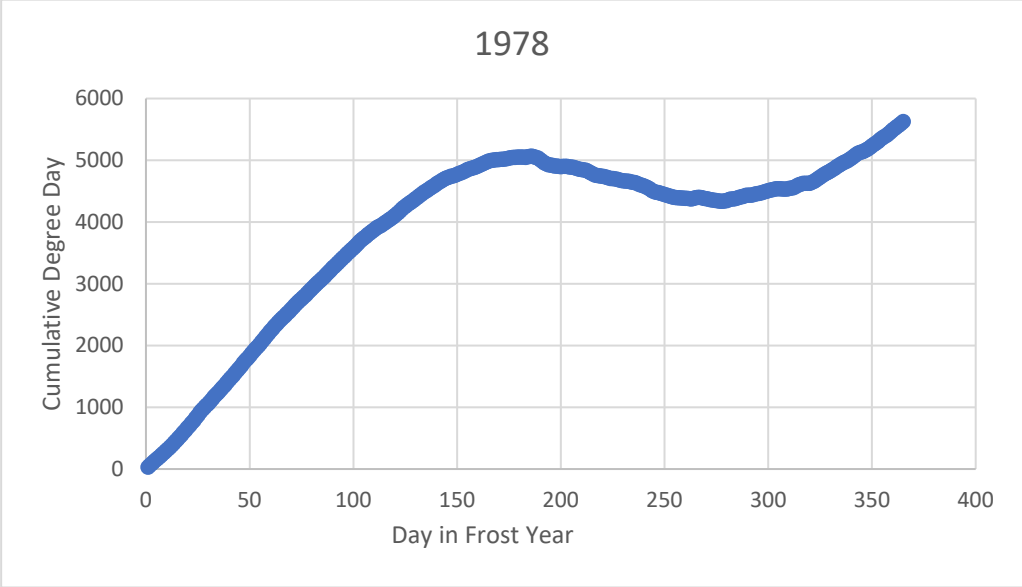
ATTACHMENT D2
FROST INDEX CALCULATIONS

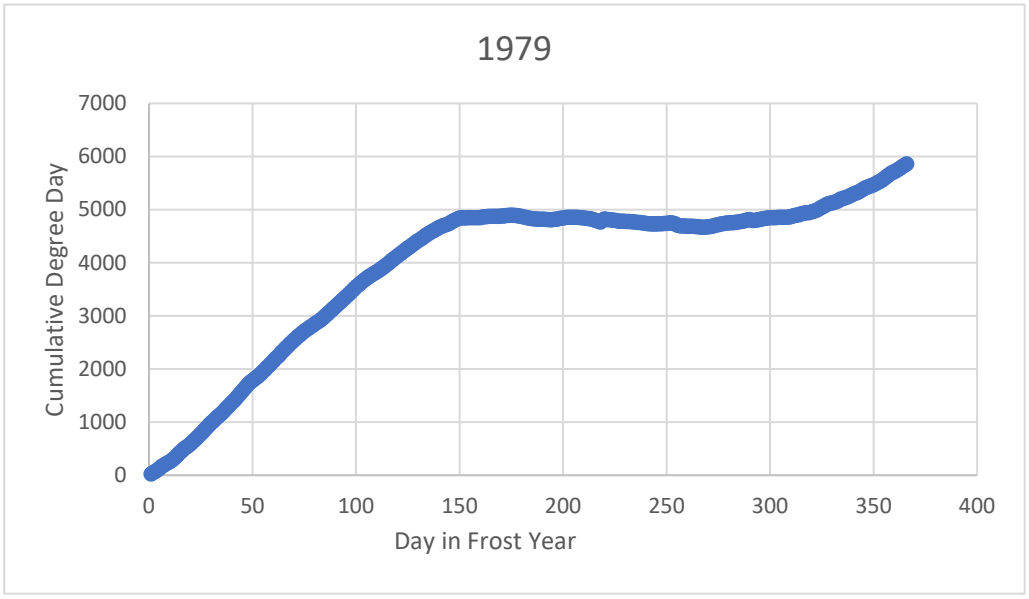
ATTACHMENT D2.1
CUMULATIVE DEGREE DAY PLOTS

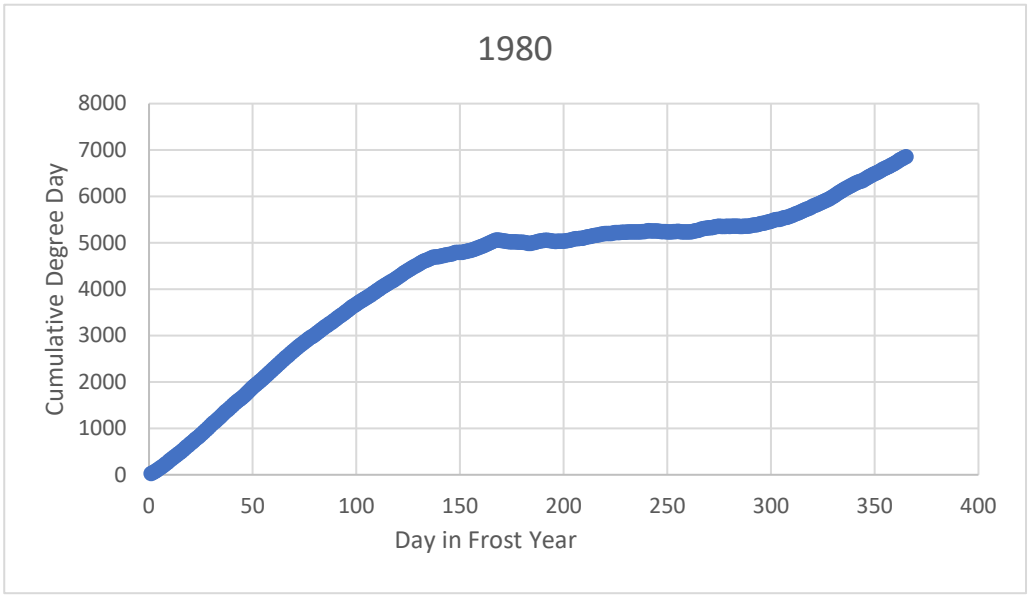

1975
Cumulative Degree Day
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400
Day in Frost Year

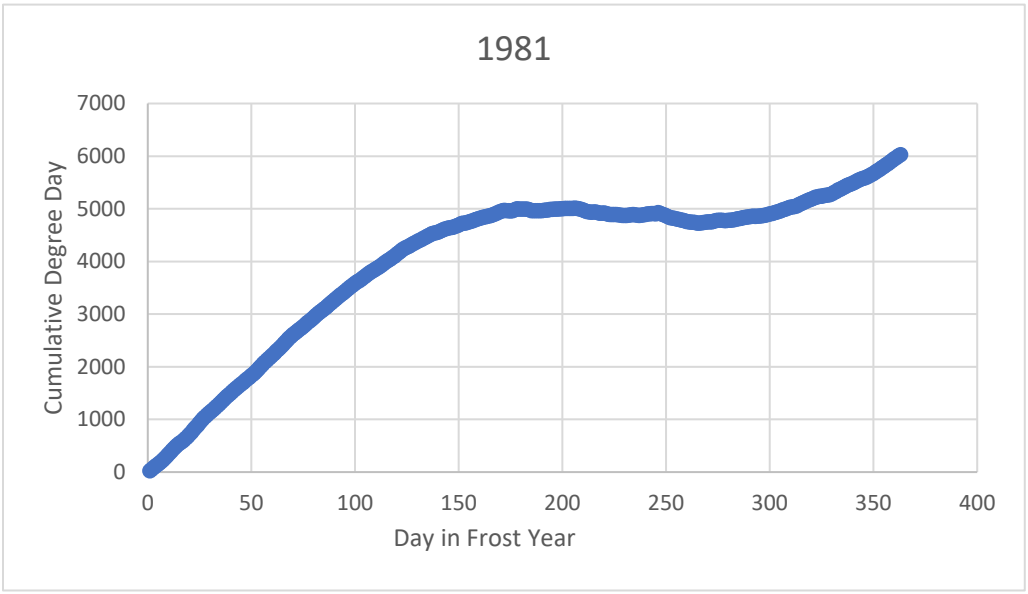

1976
Cumulative Degree Day
6000
5000
4000
3000
2000
1000
0
0 50 100 150 200 250 300 350 400
Day in Frost Year

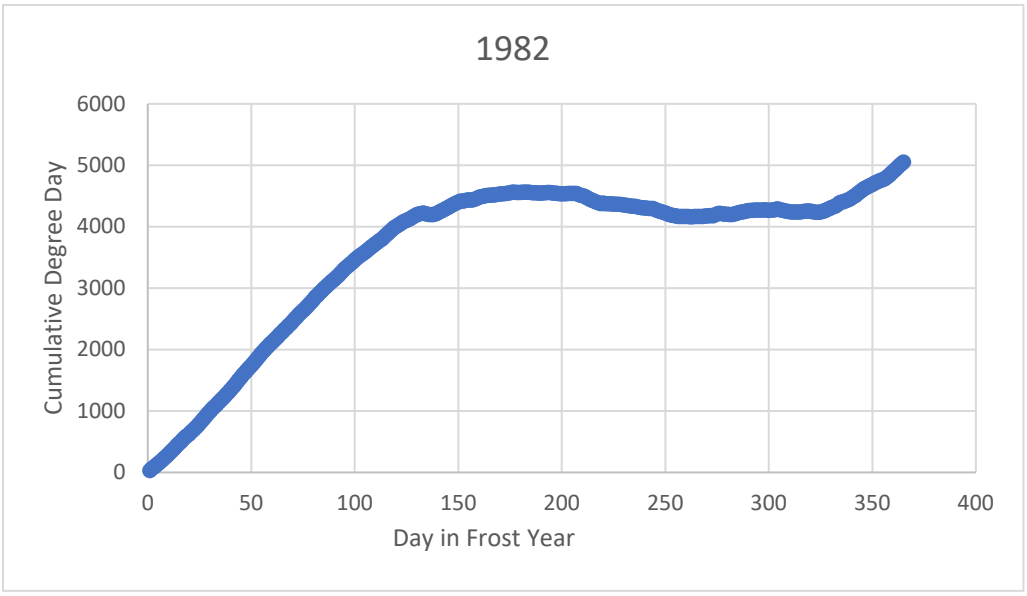

1977
Cumulative Degree Day
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


1978
Cumulative Degree Day
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


1979
Cumulative Degree Day
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


1980
Cumulative Degree Day
8000
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


1981
Cumulative Degree Day
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


1982
Cumulative Degree Day
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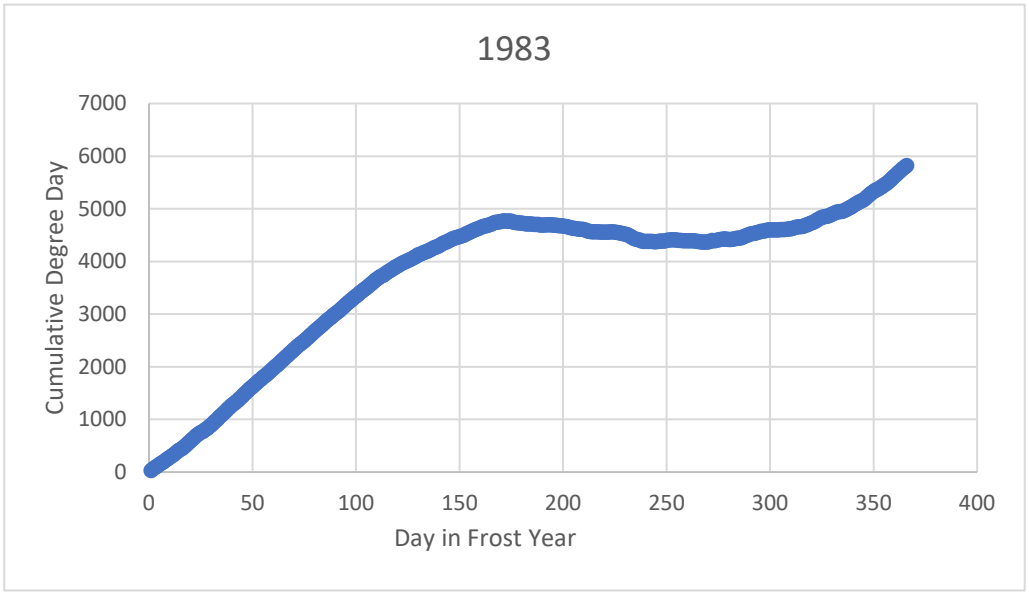
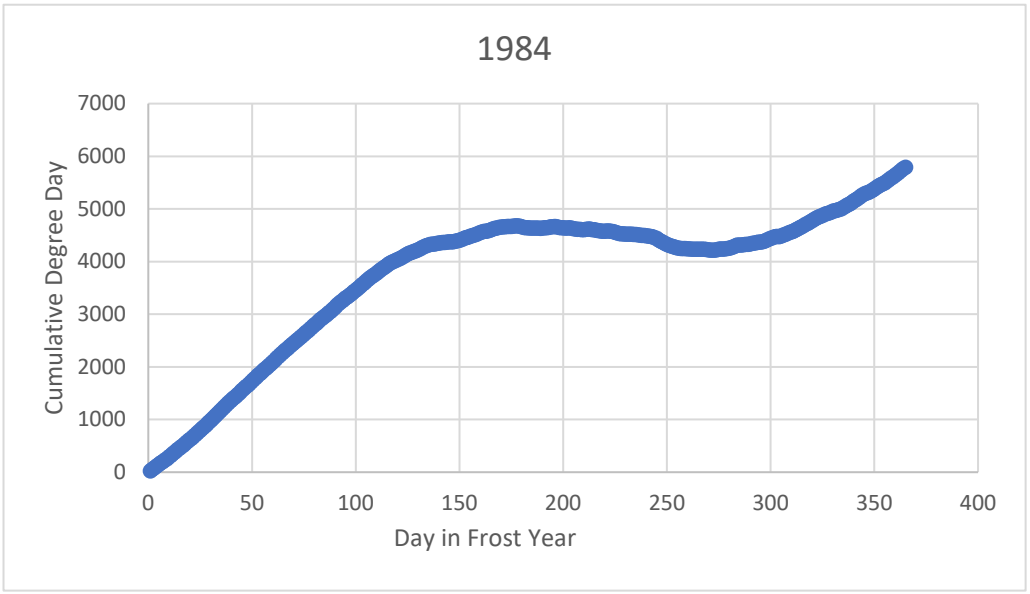
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


1983
Cumulative Degree Day
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


1984
Cumulative Degree Day
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6000
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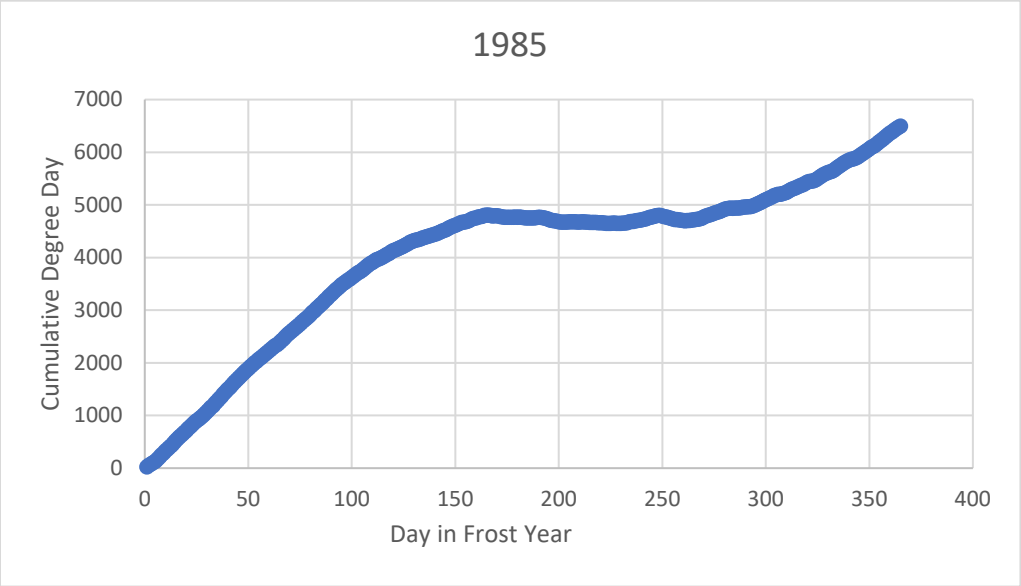
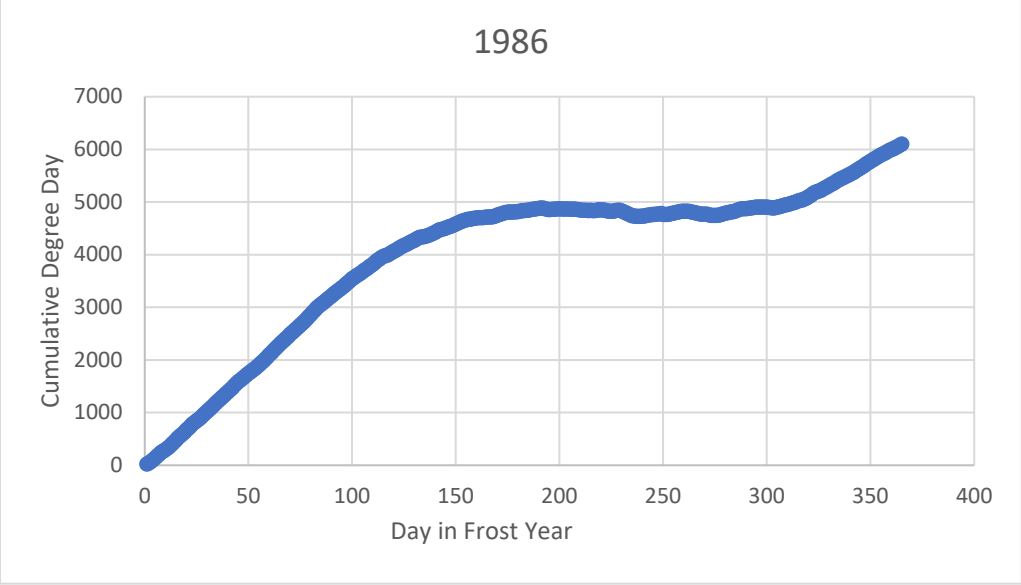
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


1985
Cumulative Degree Day
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


1986
Cumulative Degree Day
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6000
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4000
3000
2000
1000
0
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50
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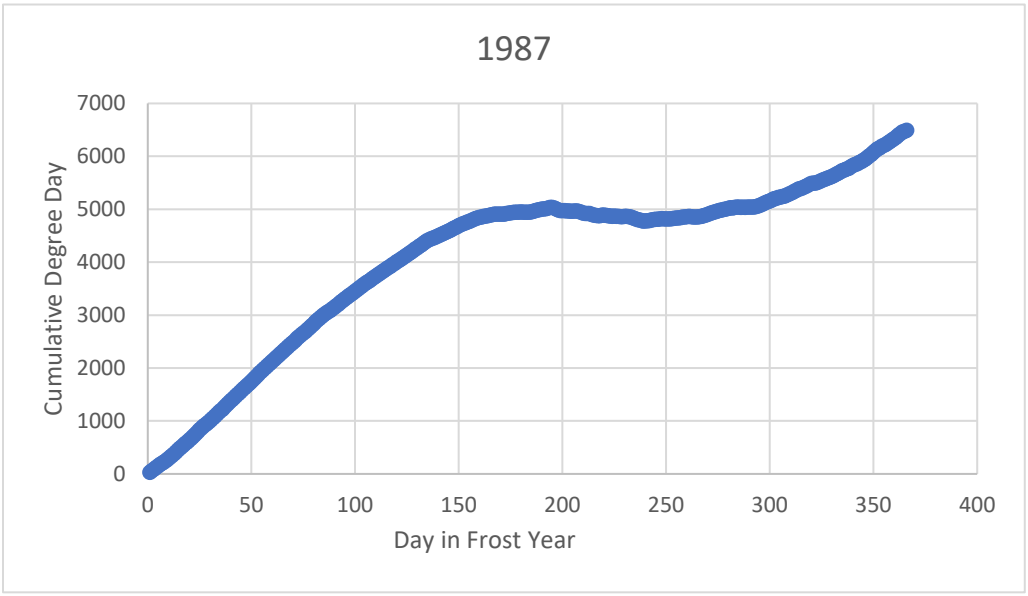
150
200
250
300
350
400
Day in Frost Year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Cumulative Degree Day
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4000
3000
2000
1000
0
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50
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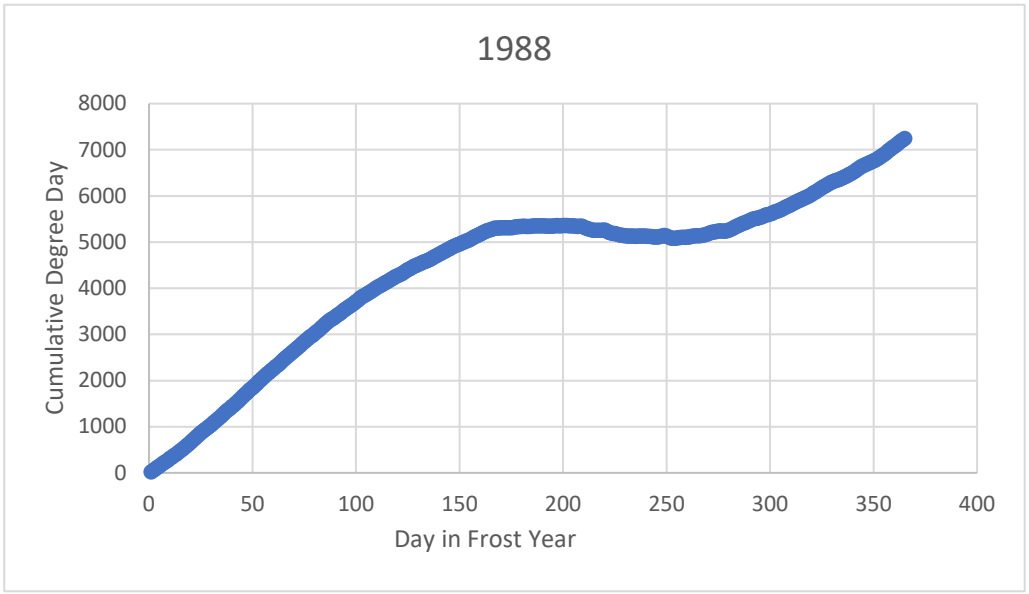
150
200
250
300
350
400
Day in Frost Year


1988
Cumulative Degree Day
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4000
3000
2000
1000
0
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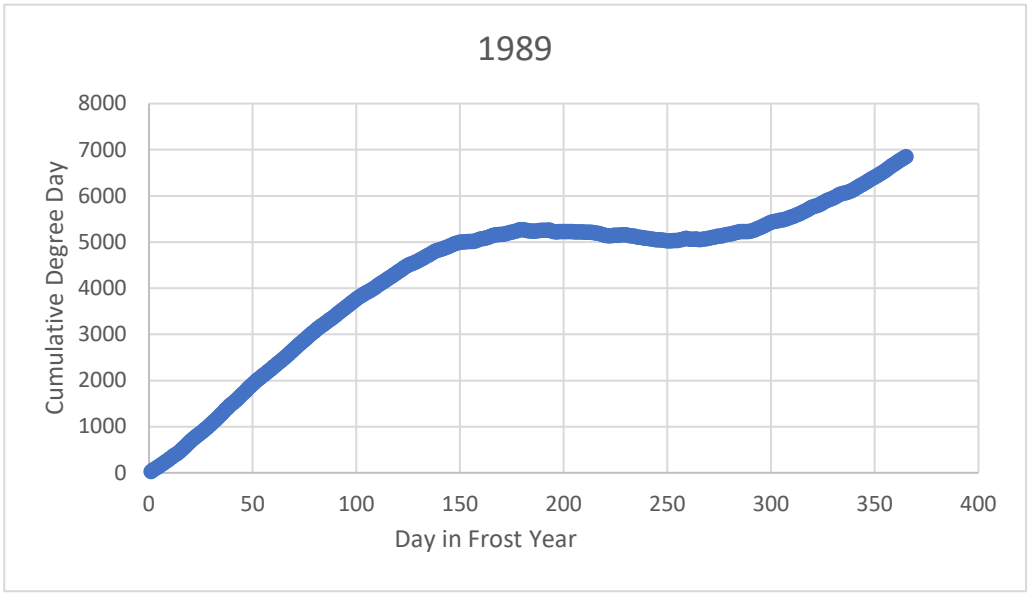
50
100
150
200
250
300
350
400
Day in Frost Year


1989
Cumulative Degree Day
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7000
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4000
3000
2000
1000
0
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200
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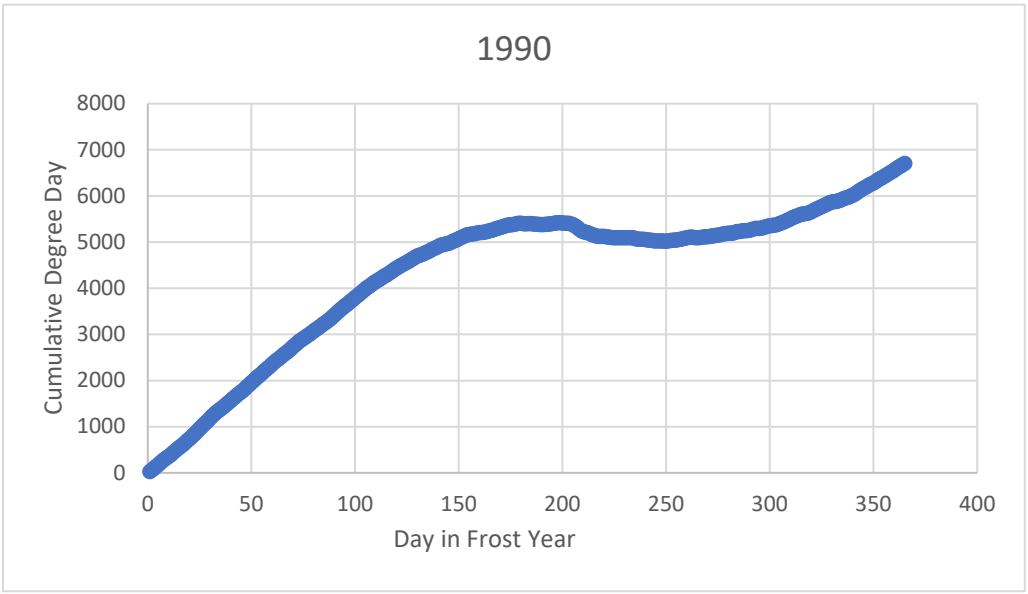
350
400
Day in Frost Year


1990
Cumulative Degree Day
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7000
6000
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4000
3000
2000
1000
0
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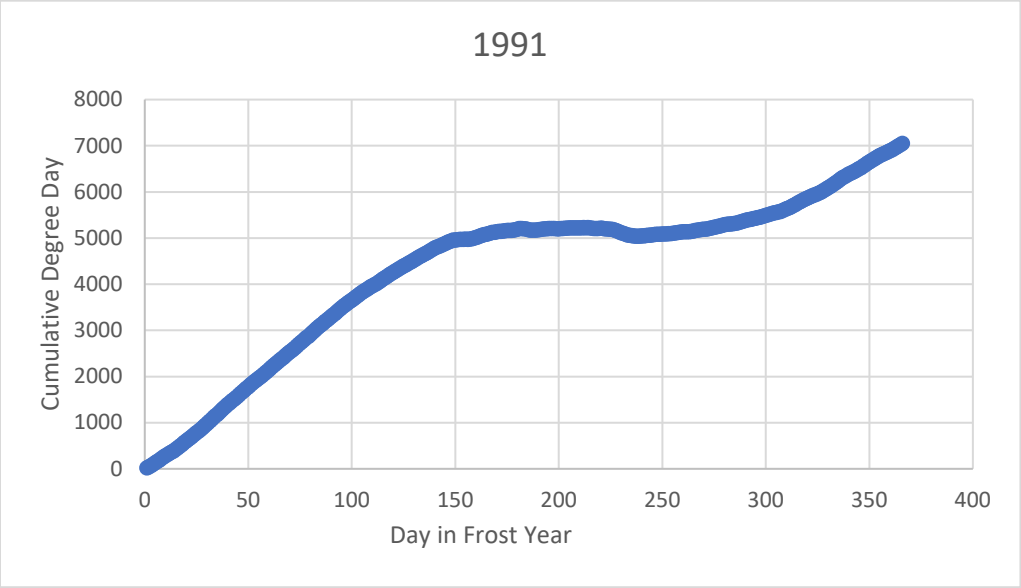
50
100
150
200
250
300
350
400
Day in Frost Year


1991
Cumulative Degree Day
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6000
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4000
3000
2000
1000
0
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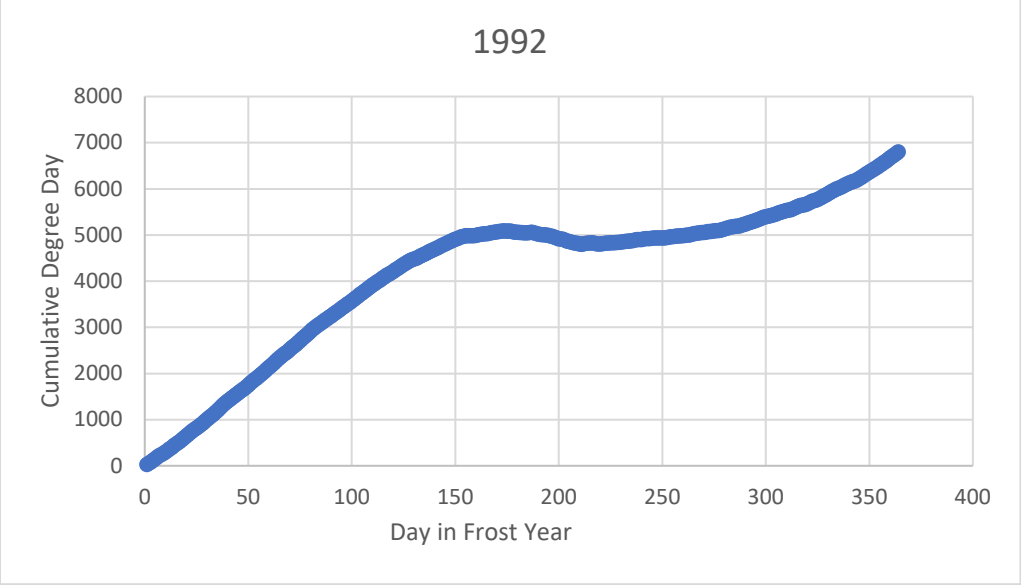
250
300
350
400
Day in Frost Year


1992
Cumulative Degree Day
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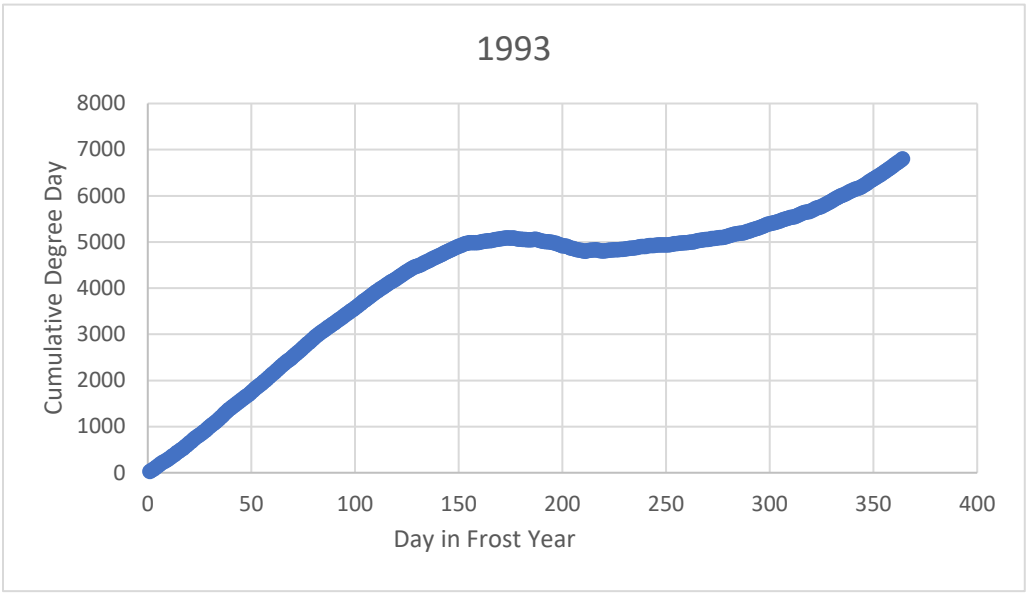
Day in Frost Year


1993
Cumulative Degree Day
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4000
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200
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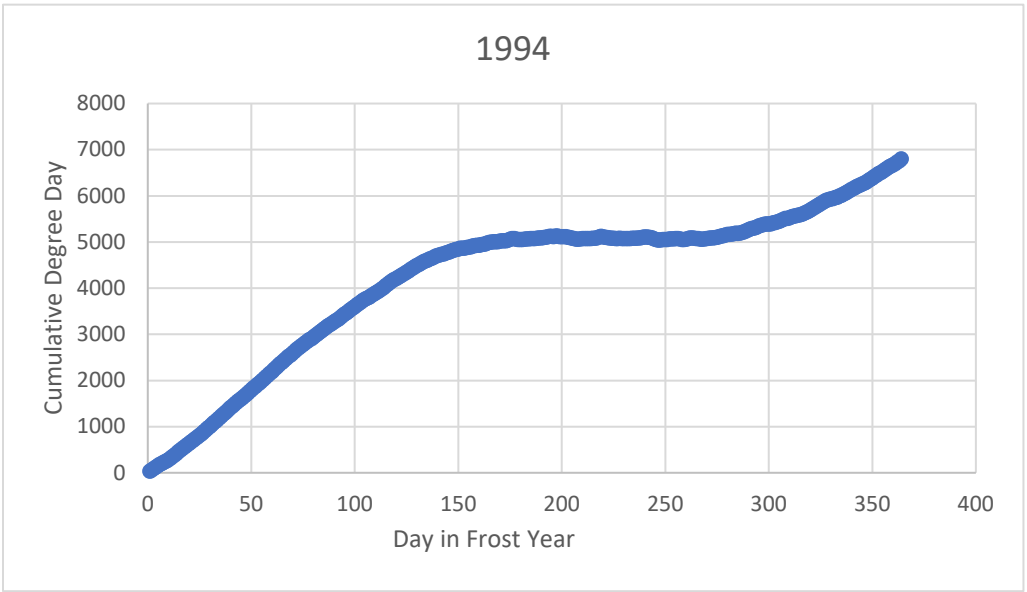
350
400
Day in Frost Year


1994
Cumulative Degree Day
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4000
3000
2000
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0
50
100
150
200
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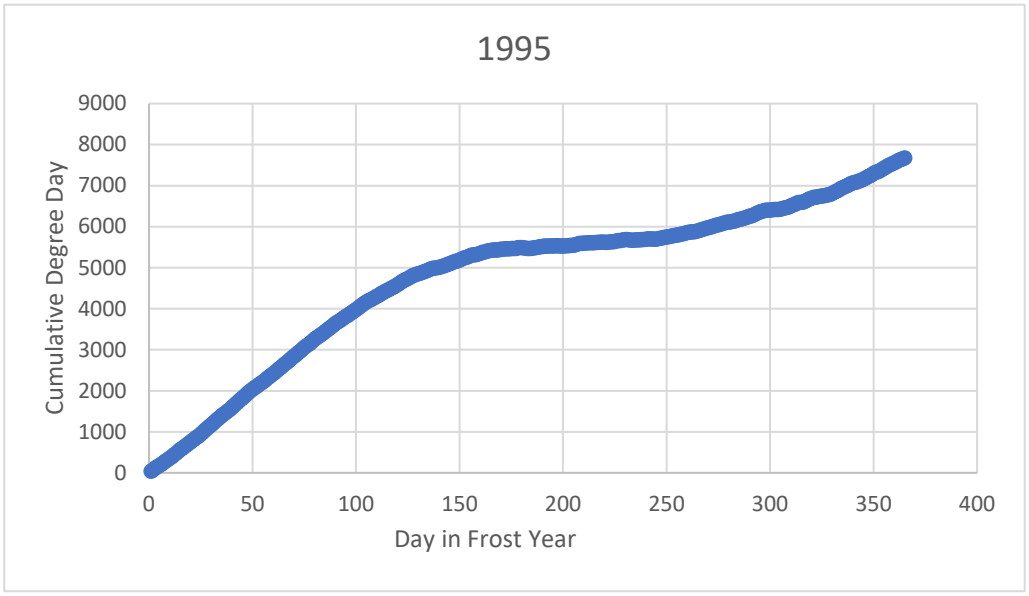
300
350
400
Day in Frost Year


1995
Cumulative Degree Day
9000
8000
7000
6000
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4000
3000
2000
1000
0
0
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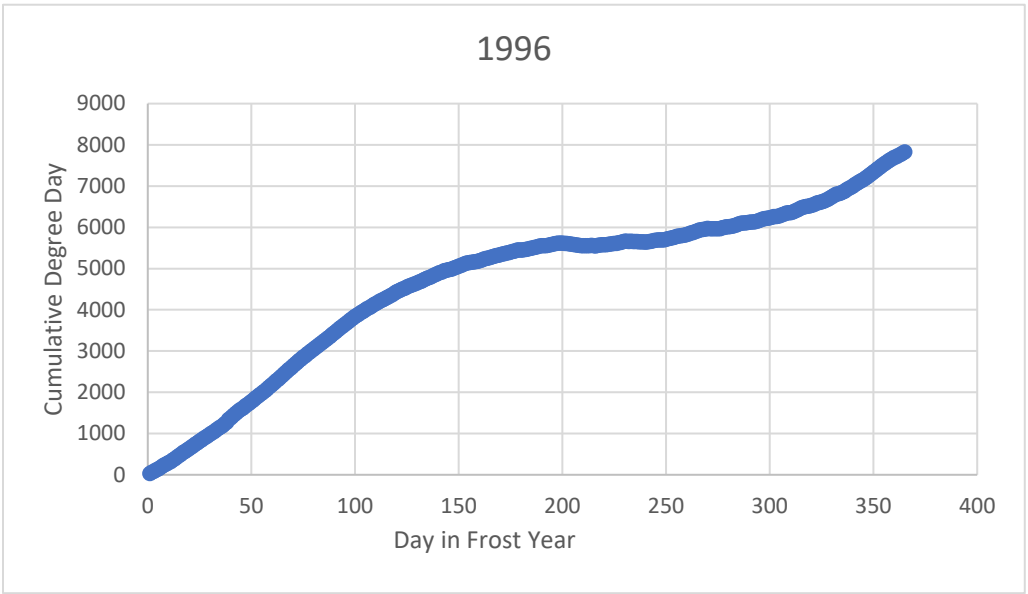
150
200
250
300
350
400
Day in Frost Year


1996
Cumulative Degree Day
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7000
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4000
3000
2000
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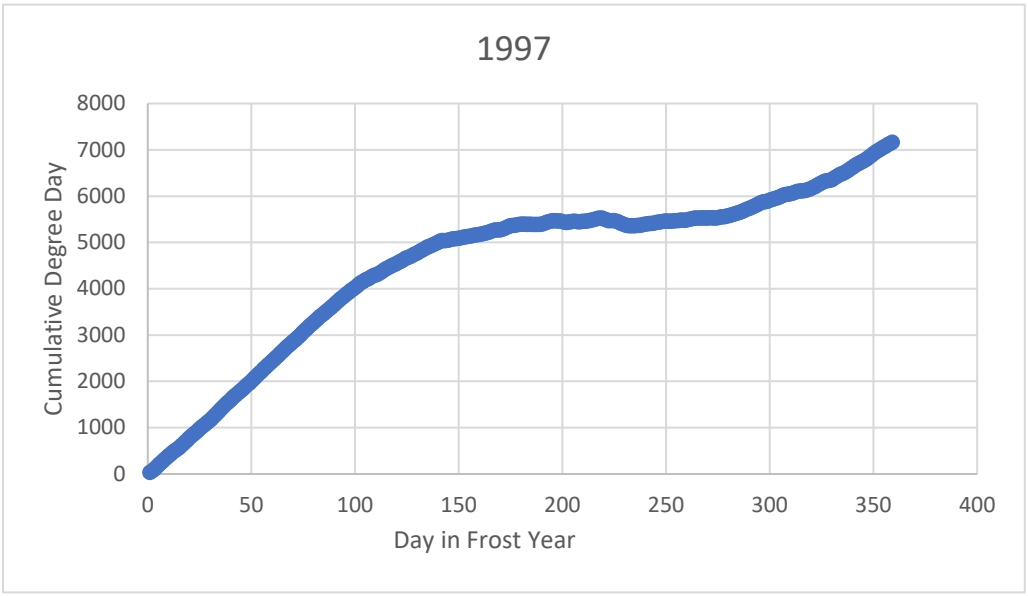
150
200
250
300
350
400
Day in Frost Year


1997
Cumulative Degree Day
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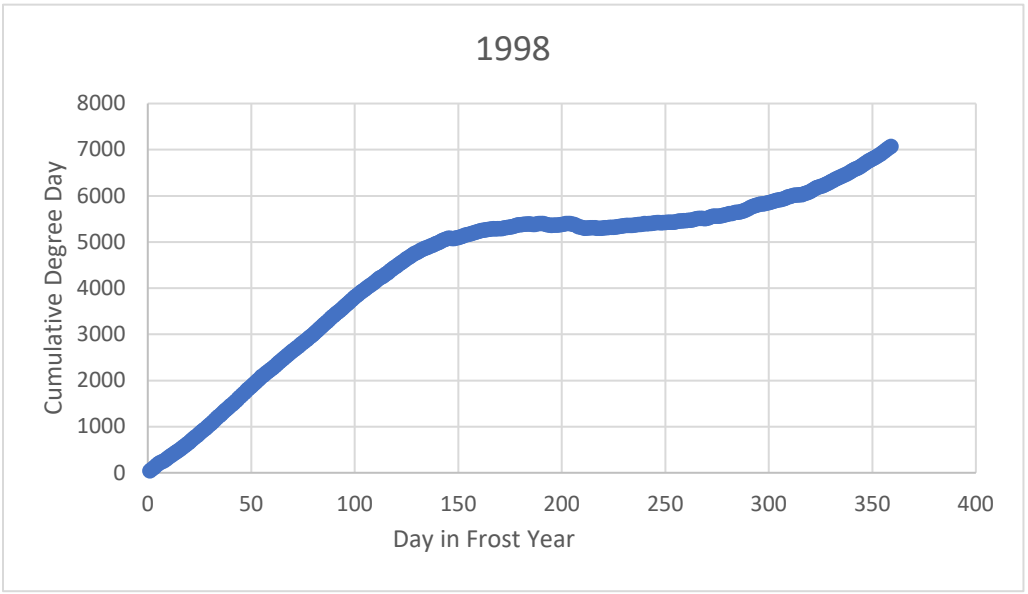
Day in Frost Year


1998
Cumulative Degree Day
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7000
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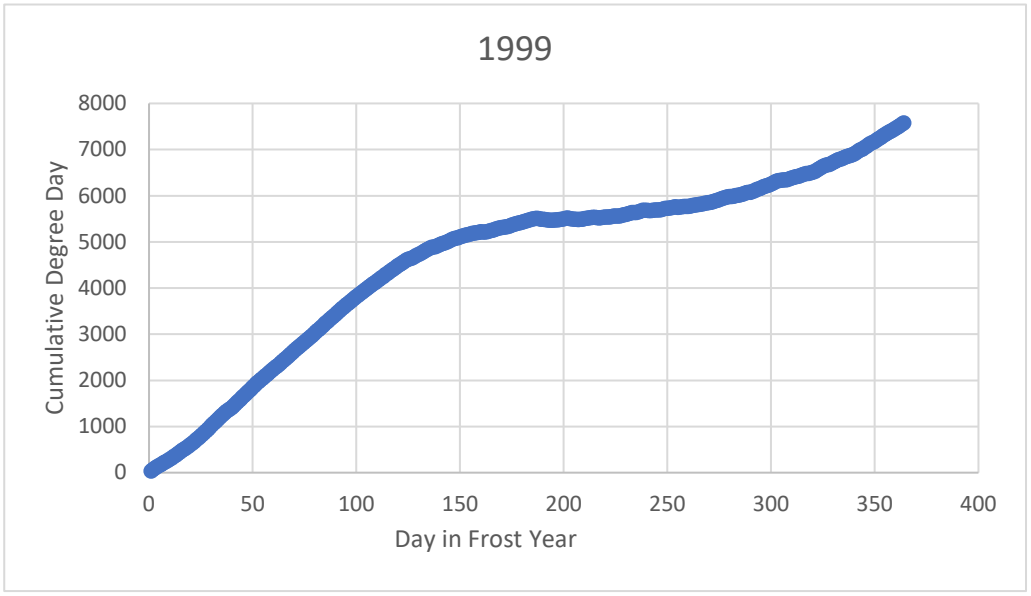
Day in Frost Year


1999
Cumulative Degree Day
8000
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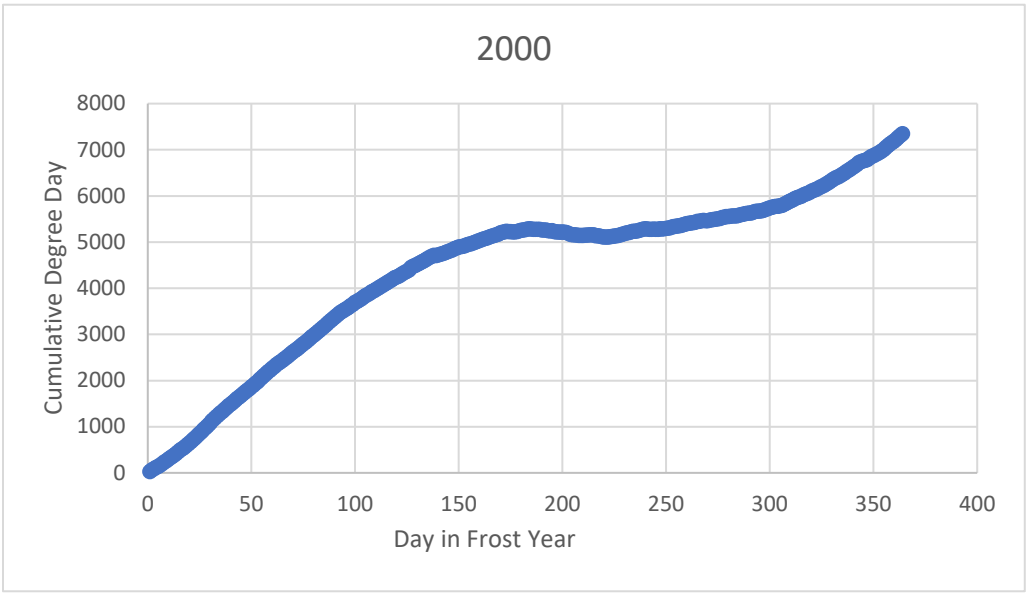
Day in Frost Year


2000
Cumulative Degree Day
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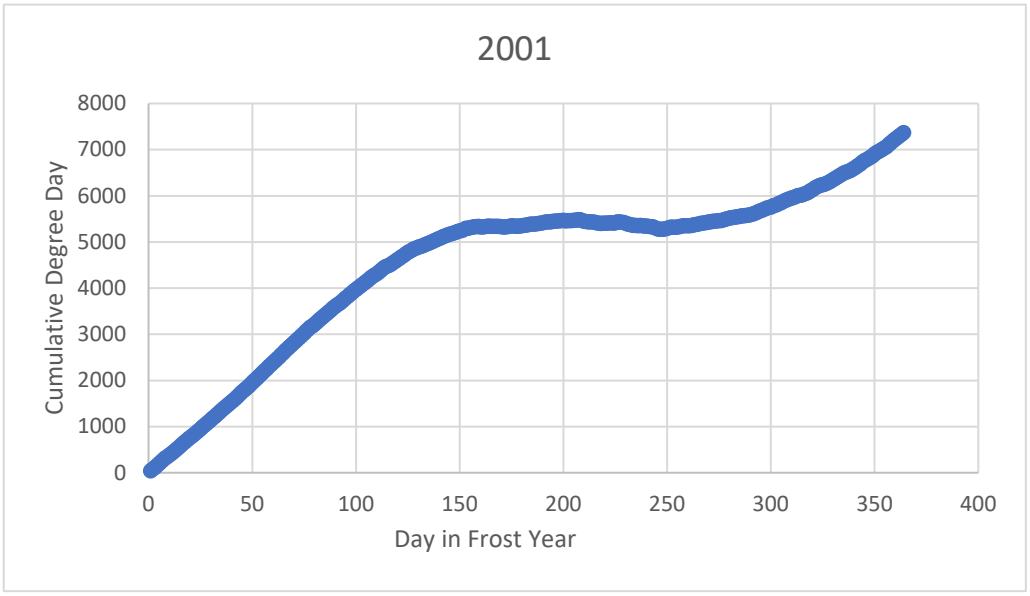
Day in Frost Year


2001
Cumulative Degree Day
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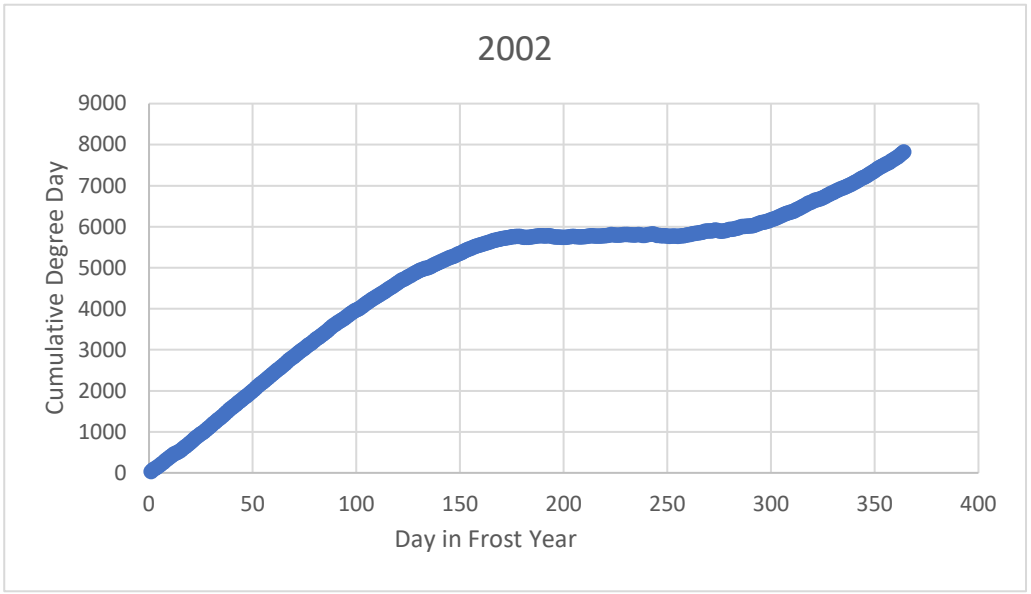
Day in Frost Year


2002
Cumulative Degree Day
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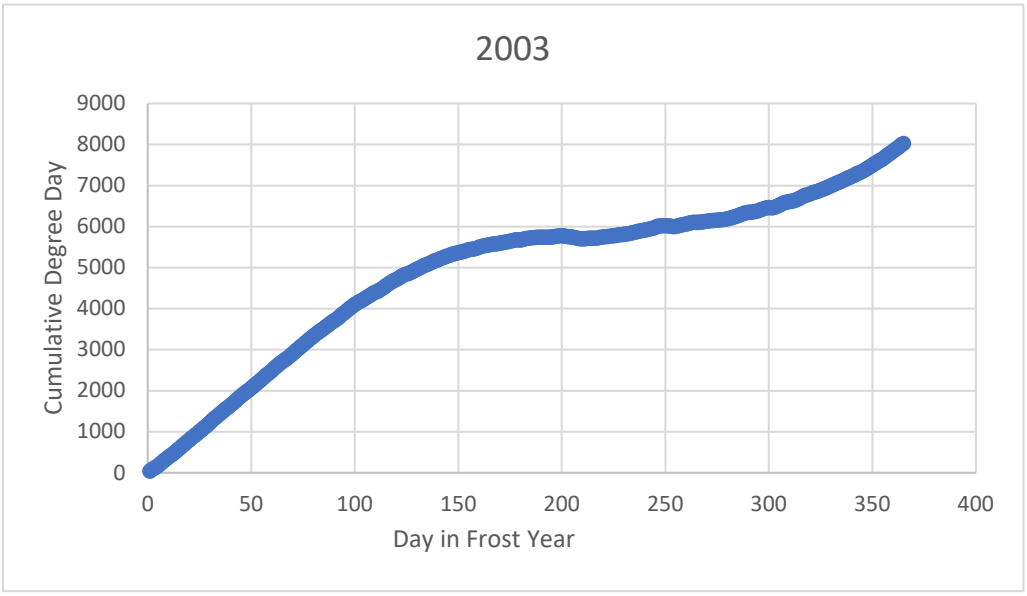
400
Day in Frost Year


2003
Cumulative Degree Day
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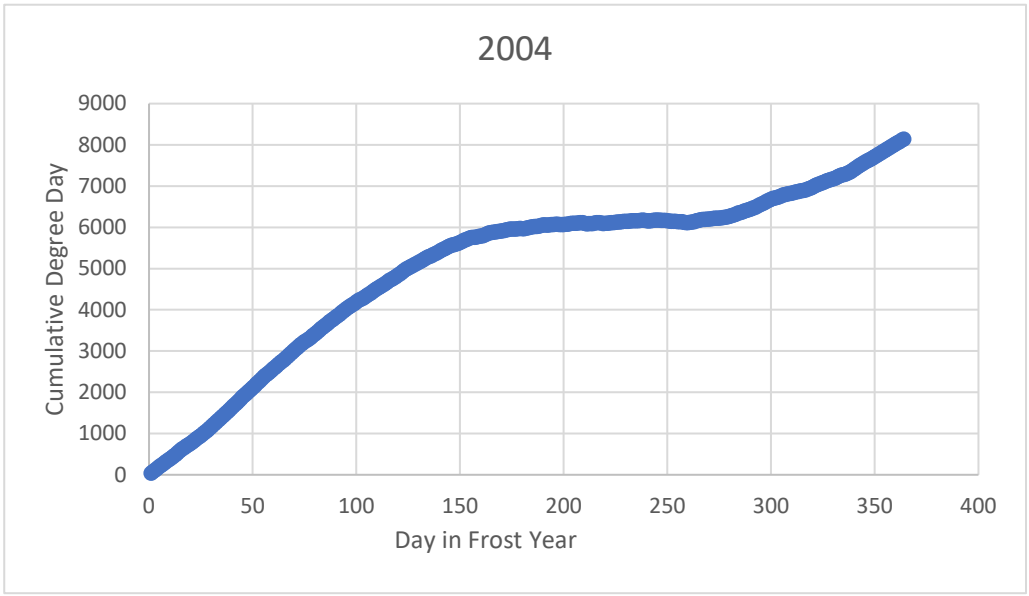
400
Day in Frost Year


2004
Cumulative Degree Day
9000
8000
7000
6000
5000
4000
3000
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0
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100
150
200
250
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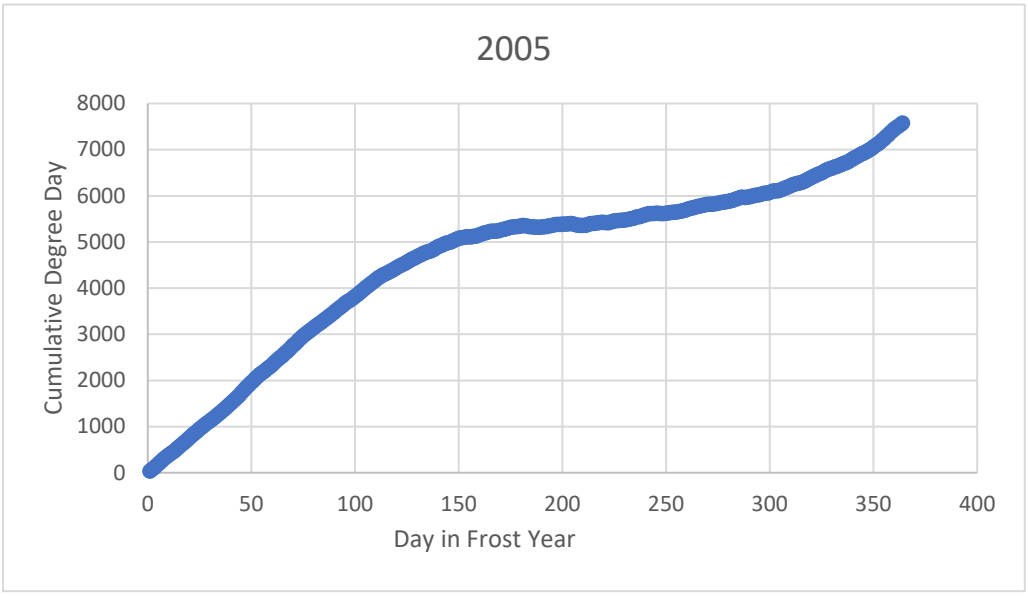
350
400
Day in Frost Year


2005
Cumulative Degree Day
8000
7000
6000
5000
4000
3000
2000
1000
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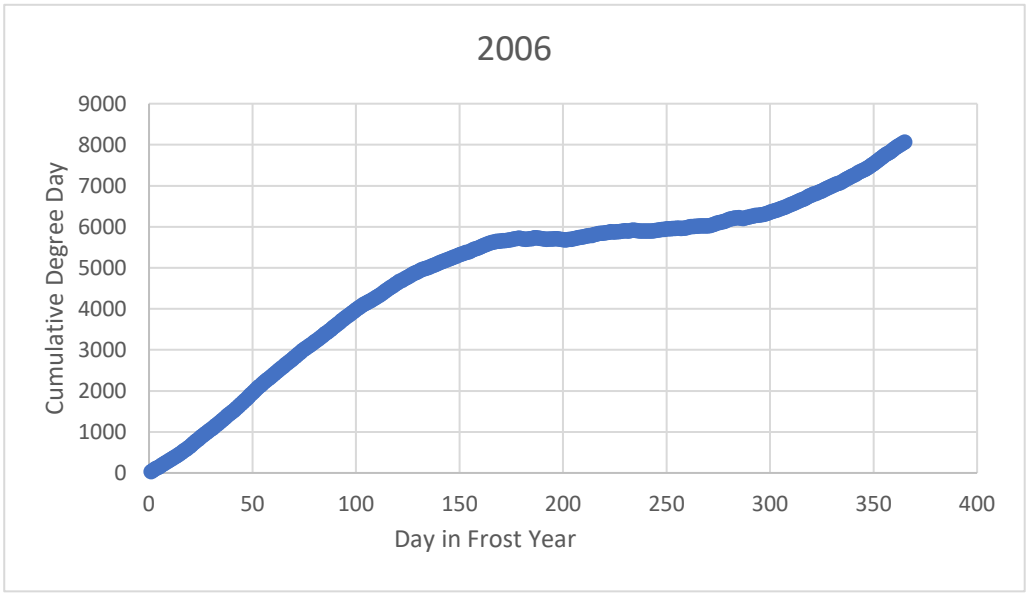
100
150
200
250
300
350
400
Day in Frost Year


2006
Cumulative Degree Day
9000
8000
7000
6000
5000
4000
3000
2000
1000
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100
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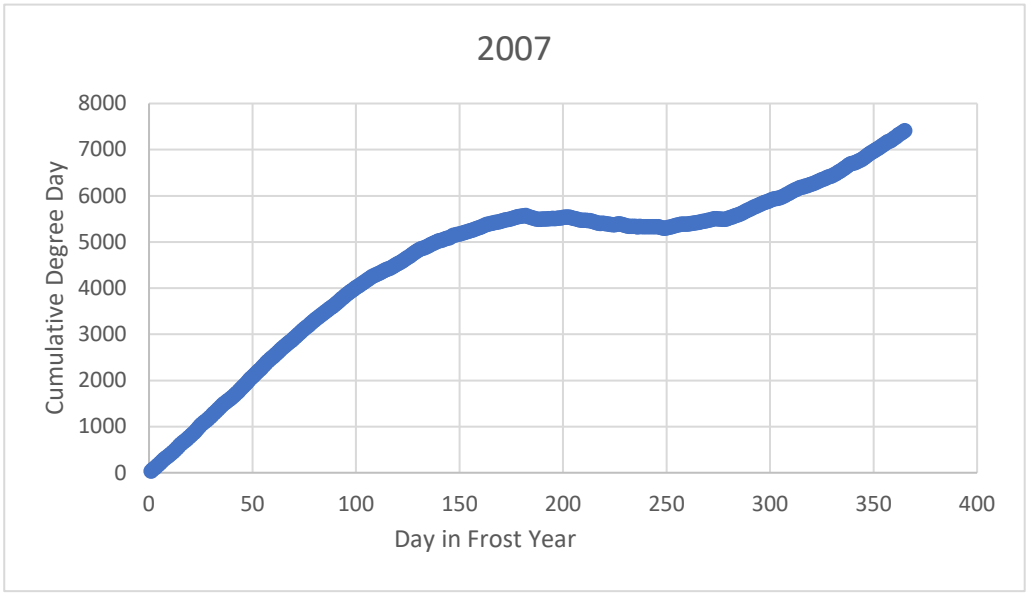
200
250
300
350
400
Day in Frost Year


2007
Cumulative Degree Day
8000
7000
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4000
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1000
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0
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100
150
200
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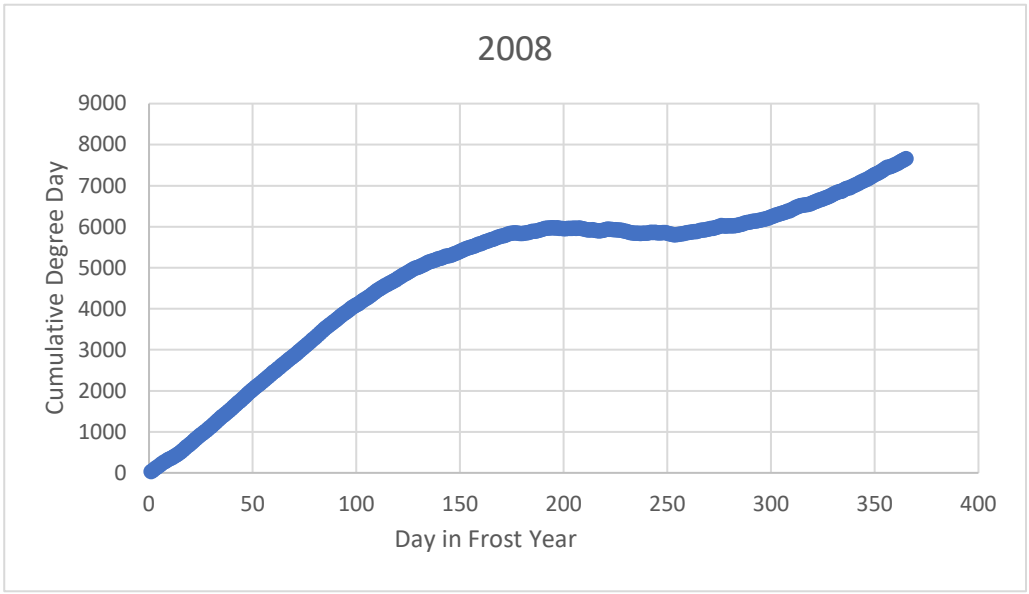
400
Day in Frost Year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Cumulative Degree Day
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4000
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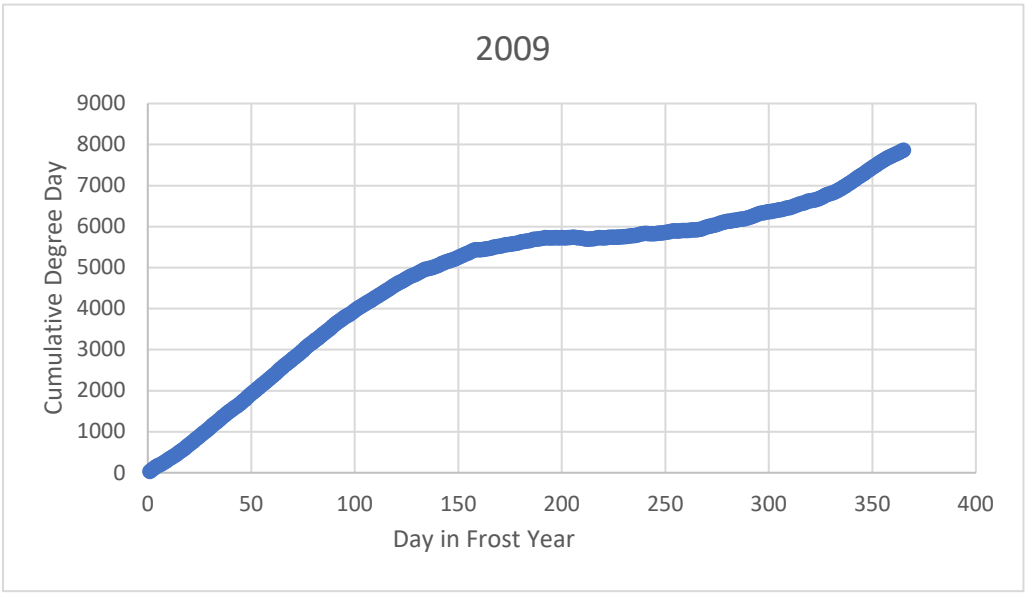
400
Day in Frost Year


2009
Cumulative Degree Day
9000
8000
7000
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4000
3000
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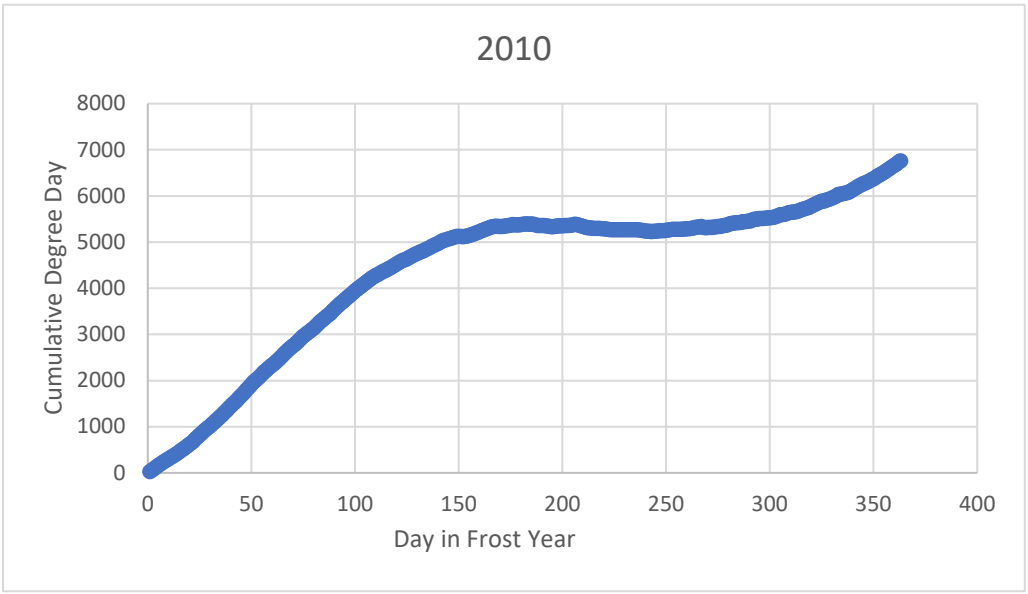
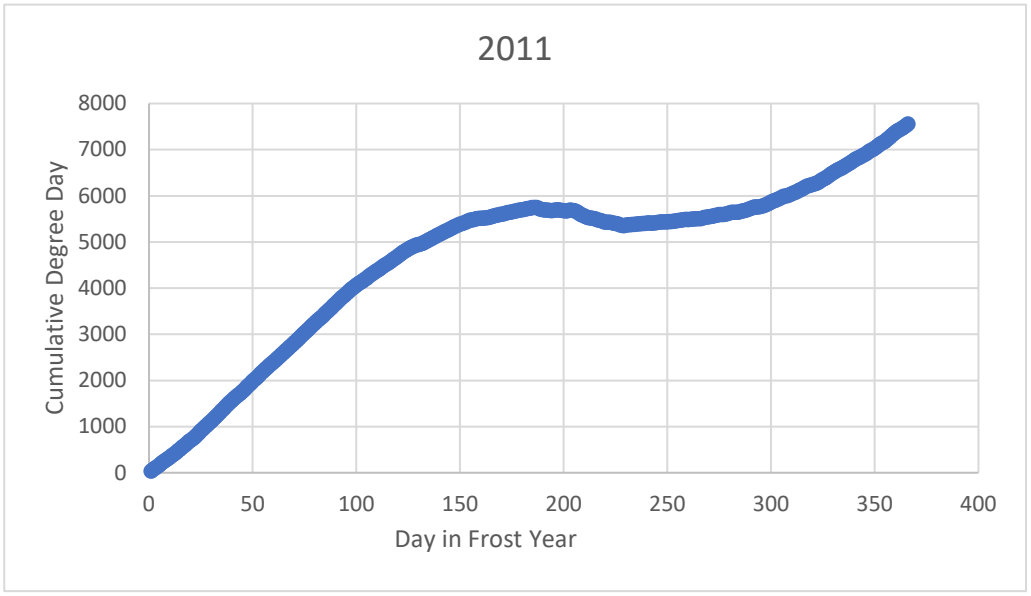
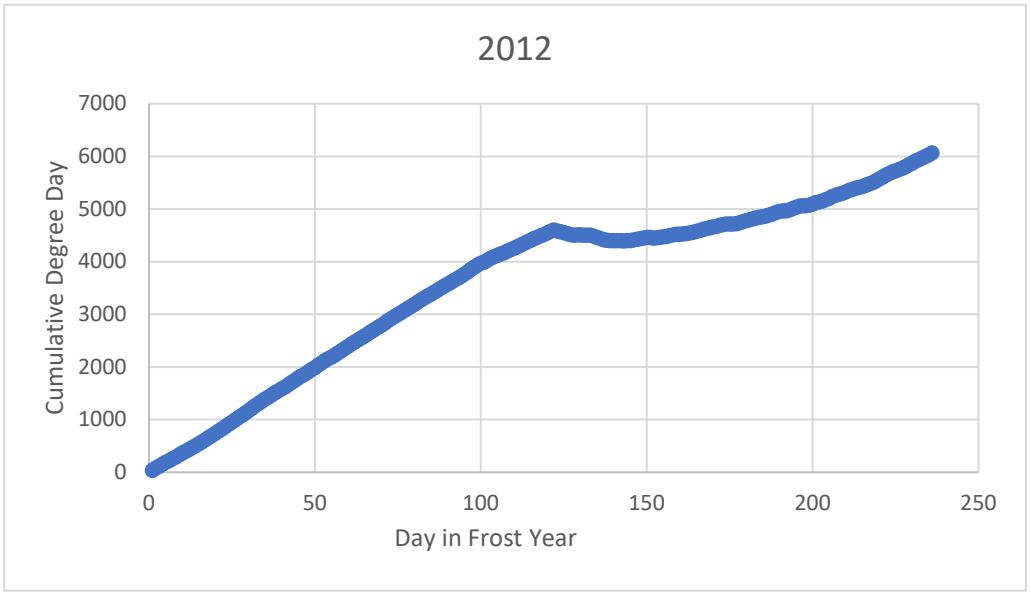
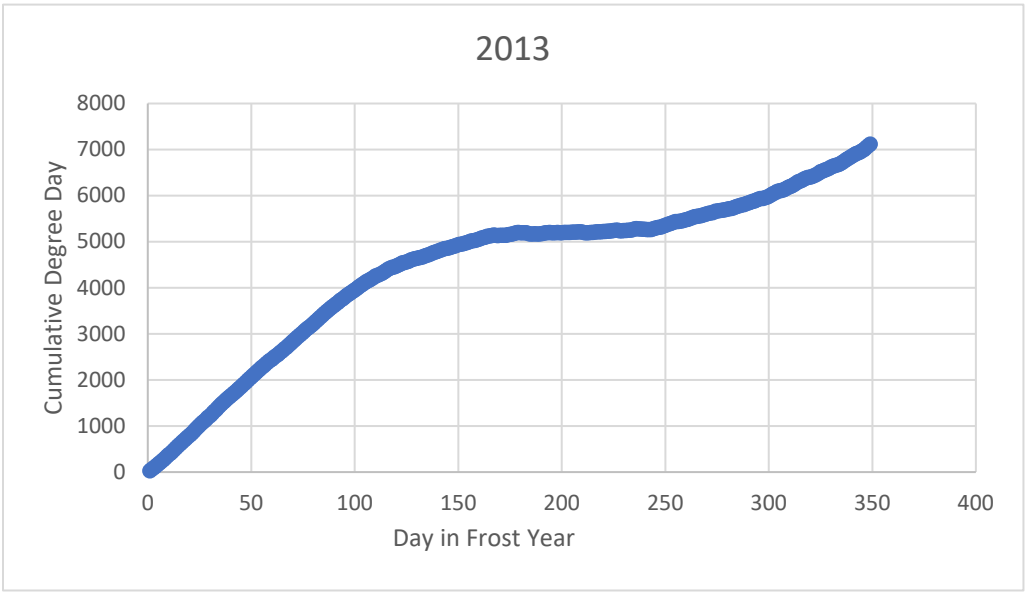
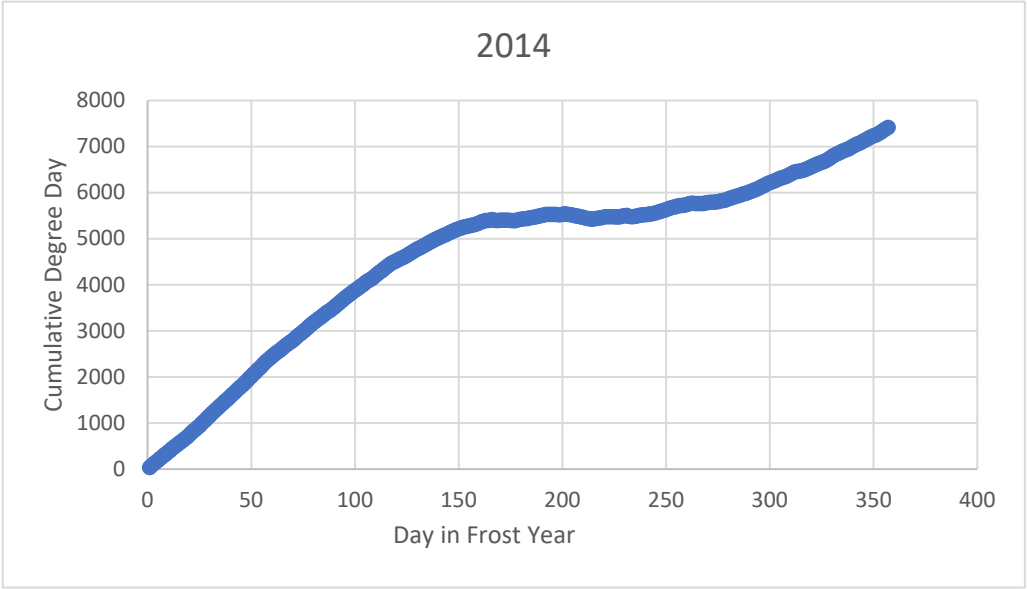
350
400
Day in Frost Year


2010
Cumulative Degree Day
8000
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


2011
Cumulative Degree Day
8000
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


2012
Cumulative Degree Day
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
Day in Frost Year


2013
Cumulative Degree Day
8000
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


2014
Cumulative Degree Day
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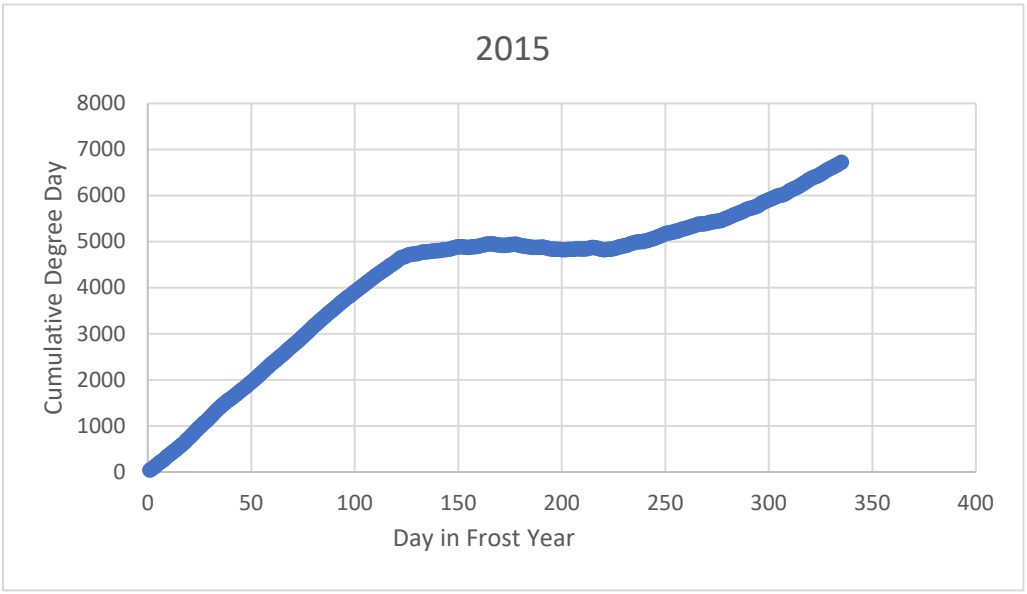
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


2015
Cumulative Degree Day
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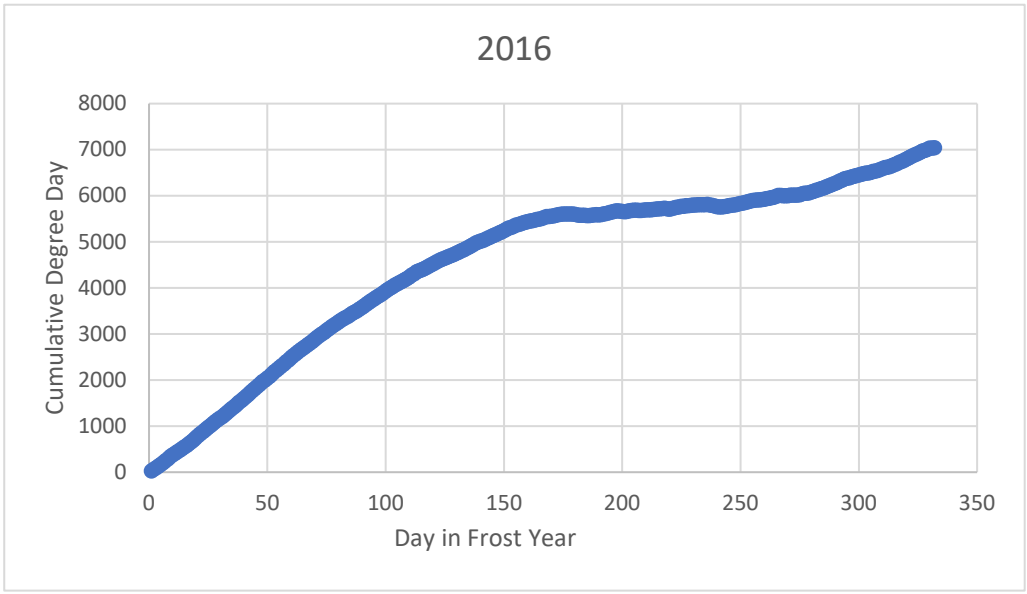
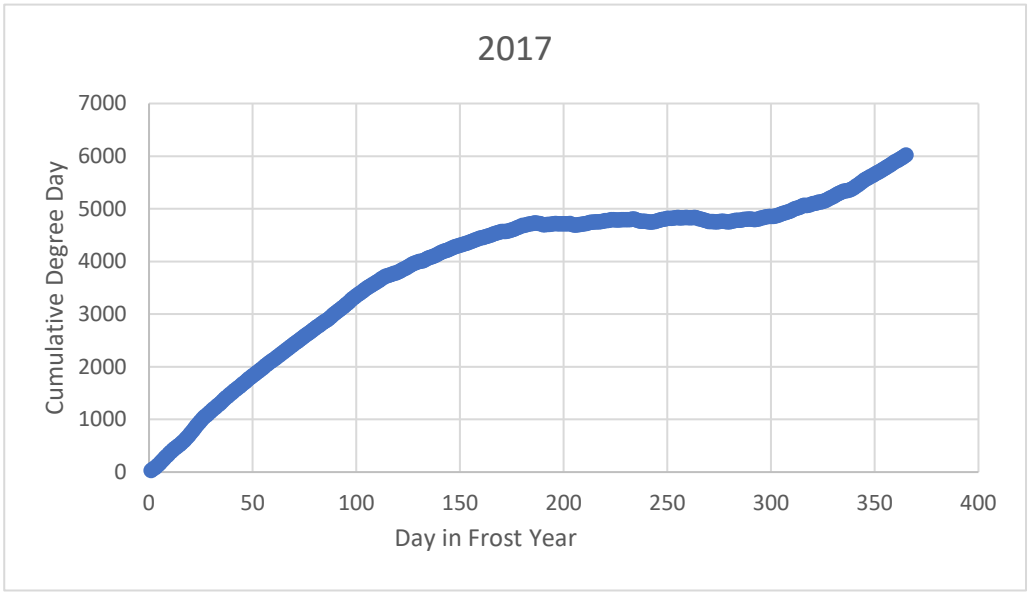
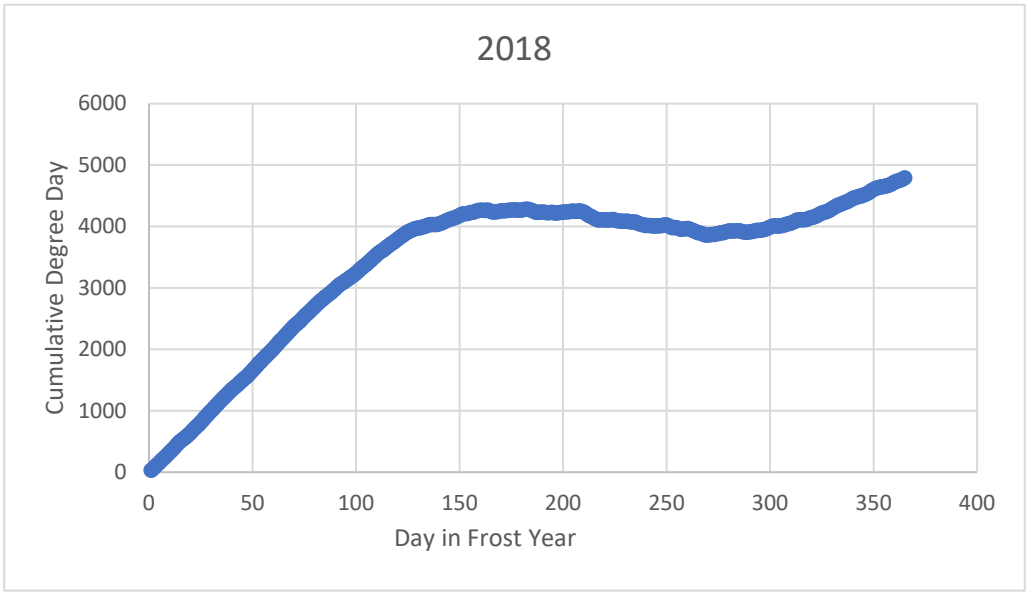
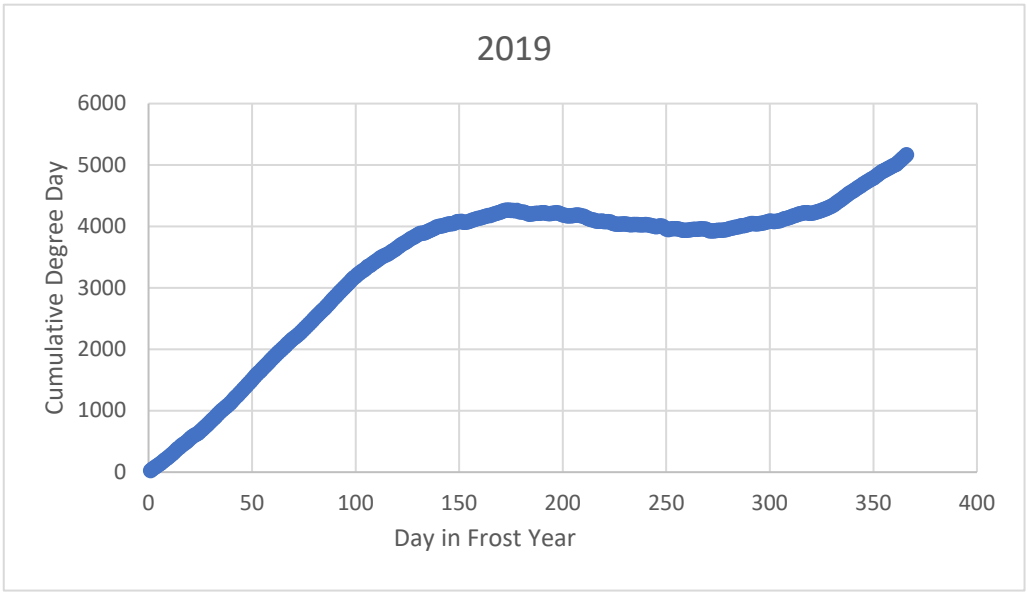
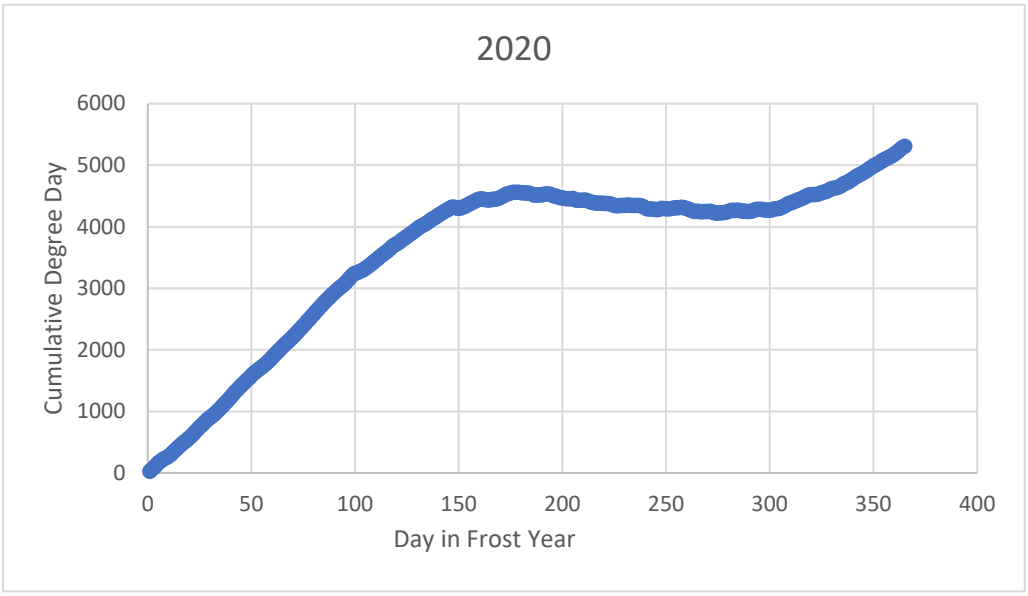
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year

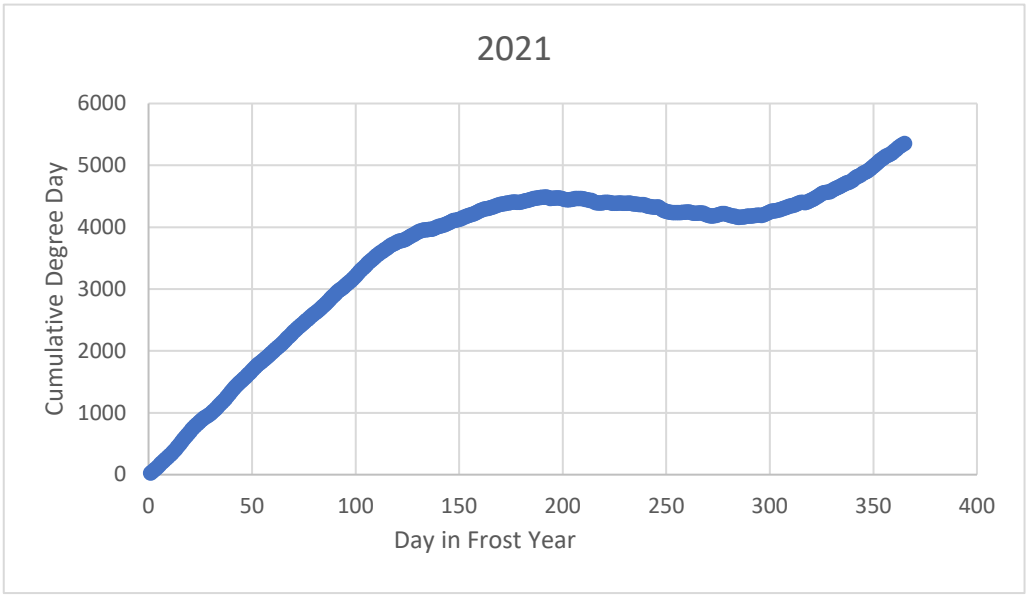

2016
Cumulative Degree Day
8000
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
Day in Frost Year

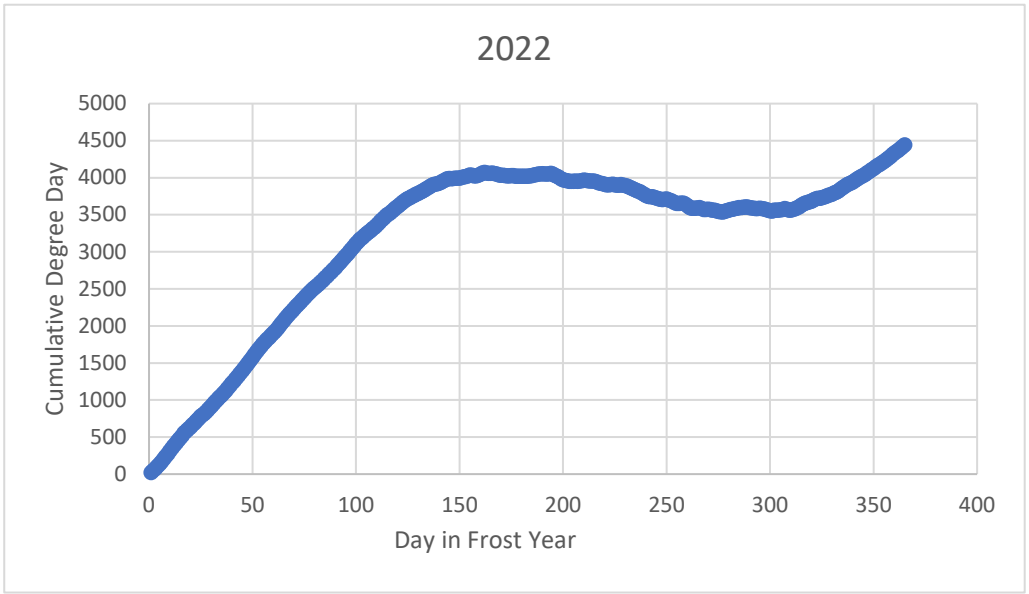

2017
Cumulative Degree Day
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year

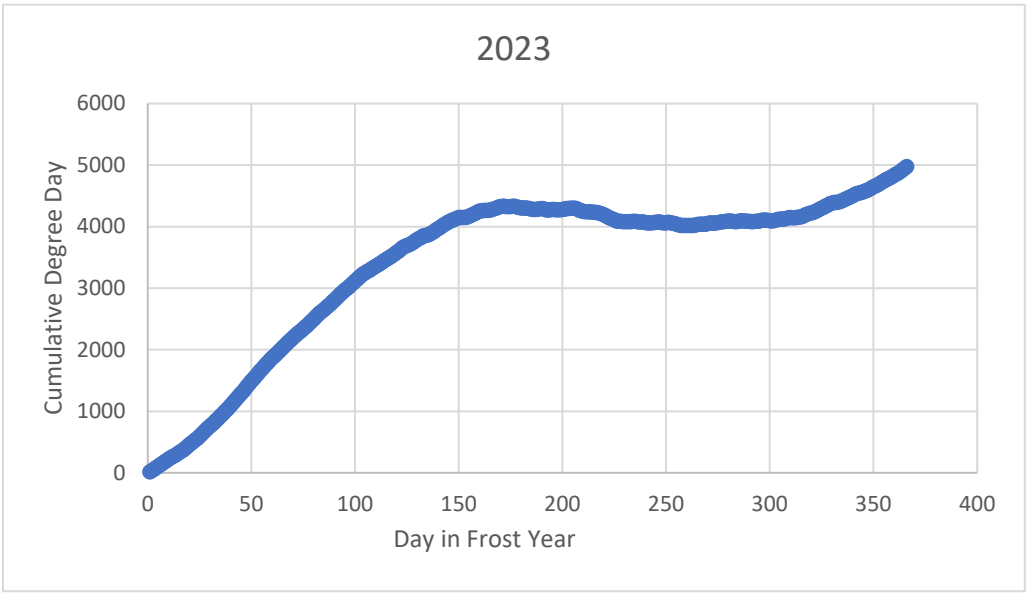

2018
Cumulative Degree Day
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year

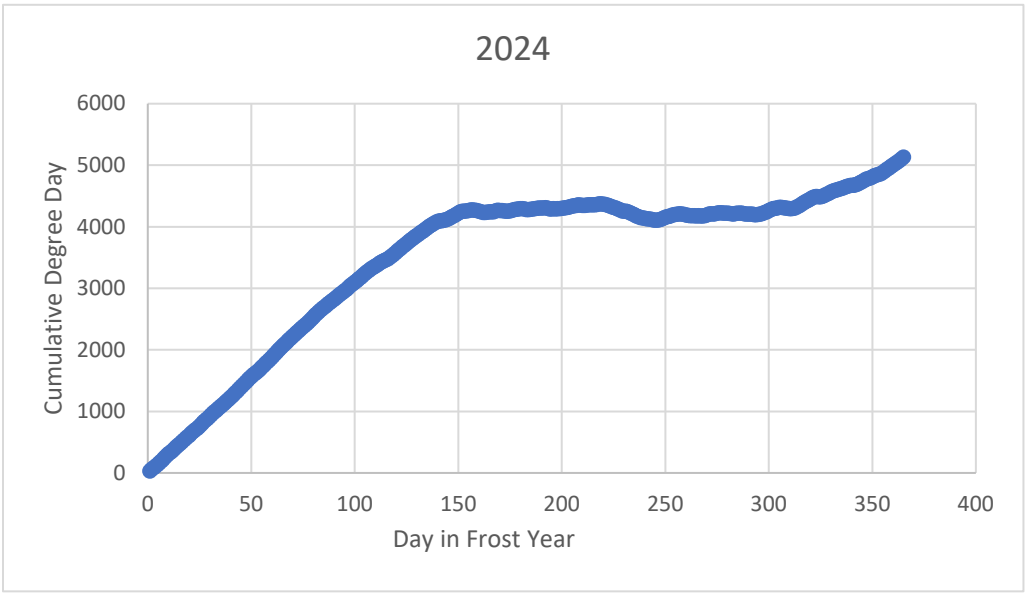

2019
Cumulative Degree Day
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year

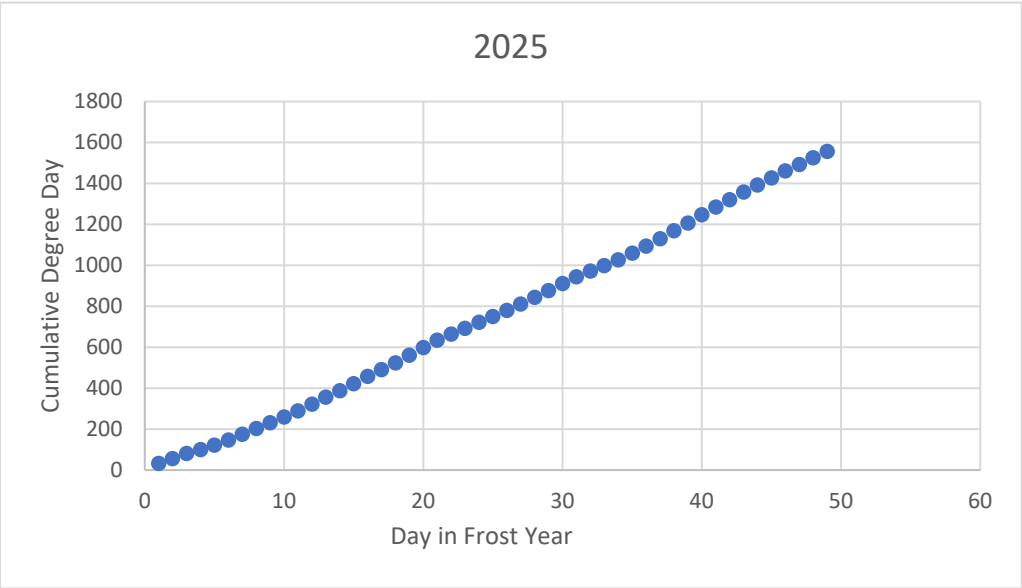

2020
Cumulative Degree Day
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


2021
Cumulative Degree Day
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


2022
Cumulative Degree Day
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


2023
Cumulative Degree Day
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


2024
Cumulative Degree Day
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
300
350
400
Day in Frost Year


2025
Cumulative Degree Day
1800
1600
1400
1200
1000
800
600
400
200
0
0
10
20
30
40
50
60
Day in Frost Year

ATTACHMENT D2.2
FROST INDEX DETERMINATION

Results of Graphical analysis of Freeze Cumulative Degree Day Plots						
	Beginning of Freeze		End of Freeze			
Year	Days	Deg-Day	Days	Deg-Day	**Deg-Day**	**Days**
1975	164	4682	243	4368	314	79
1976	179	4723	289	3937	786	110
1977	204	5209	270	5037	172	66
1978	186	5066	276	4342	724	90
1979	173	4889	265	4679	210	92
1980	170	5051	187	5023	28	17
1981	198	4996	268	4740	256	70
1982	186	4551	265	4165	386	79
1983	177	4737	279	4425	312	102
1984	182	4645	273	4216	429	91
1985	170	4739	228	4651	88	58
1986	203	4869	268	4773	96	65
1987	198	4987	241	4784	203	43
1988	185	5344	252	5091	253	67
1989	181	5262	251	5025	237	70
1990	183	5398	249	5020	378	66
1991	185	5185	238	5042	143	53
1992	177	5081	217	4828	253	40
1993	178	5071	215	4825	246	37
1994	200	5116	253	5070	46	53
1995	174	5459	225	5450	9	51
1996	201	5613	219	5576	37	18
1997	219	5524	238	5372	152	19
1998	190	5401	218	5293	108	28
1999	185	5495	203	5486	9	18
2000	187	5278	223	5114	164	36
2001	205	5469	249	5282	187	44
2002	185	5756	201	5741	15	16
2003	201	5772	215	5720	52	14
2004	246	6177	263	6139	38	17
2005	242	5316	262	5230	86	20
2006	186	5733	204	5696	37	18
2007	185	5527	252	5325	202	67
2008	203	5959	253	5799	160	50
2009	203	5729	214	5698	31	11
2010	186	5387	246	5241	146	60
2011	187	5744	231	5369	375	44
2012	124	4567	144	4398	169	20
2013	186	5168	204	5108	60	18
2014	202	5532	215	5429	103	13
2015	181	4910	223	4836	74	42
2016	180	5600	191	5592	8	11
2017	263	4836	279	4751	85	16

2018	184	4273	273	3872	401	89
2019	178	4258	273	3928	330	95
2020	182	4549	279	4238	311	97
2021	196	4470	286	4163	307	90
2022	166	4062	277	3538	524	111
2023	175	4329	262	4017	312	87
2024	222	4342	246	4106	236	24

These were calculate in accordance with step 1 of the Smith and Rager procedure						
Freeze index						
				Avg. Temp (F)	F	
Year	Avg. Temp	(n)	% values	w/ 95% data	Degree-Day (F-day)	Duration (Days)
1975	47.43	366	100%	47.43	314	79
1976	45.88	365	100%	45.88	786	110
1977	49.92	365	100%	49.92	172	66
1978	47.41	365	100%	47.41	724	90
1979	48.02	366	100%	48.02	210	92
1980	50.78	365	100%	50.78	28	17
1981	55.05	363	99%	55.05	256	70
1982	39.16	365	100%	39.16	386	79
1983	47.91	366	100%	47.91	312	102
1984	47.87	365	100%	47.87	429	91
1985	49.79	365	100%	49.79	88	58
1986	48.72	365	100%	48.72	96	65
1987	49.74	366	100%	49.74	203	43
1988	51.84	365	100%	51.84	253	67
1989	50.77	365	100%	50.77	237	70
1990	50.36	365	100%	50.36	378	66
1991	51.27	366	100%	51.27	143	53
1992	50.73	365	100%	50.73	253	40
1993	50.68	364	100%	50.68	246	37
1994	53.03	365	100%	53.03	46	53
1995	53.47	366	100%	53.47	9	51
1996	52.15	365	100%	52.15	37	18
1997	51.71	359	98%	51.71	152	19
1998	52.82	364	100%	52.82	108	28
1999	52.20	364	100%	52.20	9	18
2000	52.24	364	100%	52.24	164	36
2001	53.50	364	100%	53.50	187	44
2002	54.00	365	100%	54.00	15	16
2003	54.39	365	100%	54.39	52	14
2004	52.82	364	100%	52.82	38	17
2005	54.10	365	100%	54.10	86	20
2006	52.30	365	100%	52.30	37	18
2007	53.02	366	100%	53.02	202	67
2008	53.54	365	100%	53.54	160	50

2009	50.68	365	100%	50.68	31	11
2010	53.50	363	99%	53.50	146	60
2011	52.64	366	100%	52.64	375	44
2012	57.71	236	65%	57.71	169	20
2013	52.40	349	96%	52.40	60	18
2014	52.79	357	98%	52.79	103	13
2015	52.07	335	92%	52.07	74	42
2016	53.21	332	91%	53.21	8	11
2017	48.50	365	100%	48.50	85	16
2018	45.13	365	100%	45.13	401	89
2019	46.12	366	100%	46.12	330	95
2020	46.55	365	100%	46.55	311	97
2021	46.66	365	100%	46.66	307	90
2022	44.17	365	100%	44.17	524	111
2023	45.59	366	100%	45.59	312	87
2024	46.07	365	100%	46.07	236	24

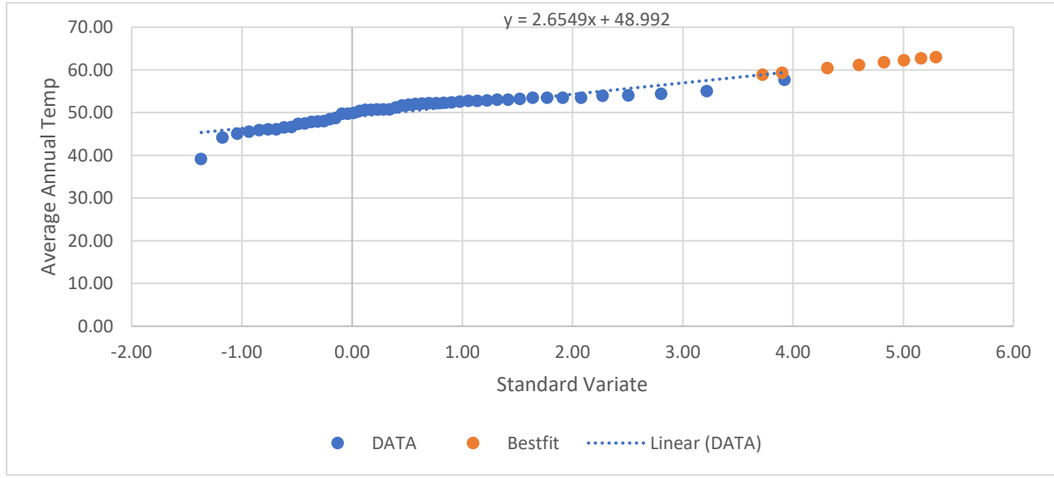
ATTACHMENT D3
DETERMINATION OF PARAMETERS AT A 200-YEAR RECURRENCE INTERVAL

ATTACHMENT D3.1
MEAN ANNUAL TEMPERATURE AT 200-YEAR RECURRENCE INTERVAL

Project No. 111360
Project Name: Mt. Taylor Uranium Mine
Calculated By: JB

n= number of observations
n= 50

Mean Annual Temperature Distribution					
Year	Average Temperature	Rank	Recurrence interval	Probability	Standard Variate
2012	57.71	1	51.0	0.02	3.92
1981	55.05	2	25.5	0.04	3.22
2003	54.39	3	17.0	0.06	2.80
2005	54.10	4	12.8	0.09	2.50
2002	54.00	5	10.2	0.11	2.27
2008	53.54	6	8.5	0.13	2.08
2010	53.50	7	7.3	0.16	1.91
2001	53.50	8	6.4	0.19	1.77
1995	53.47	9	5.7	0.21	1.64
2016	53.21	10	5.1	0.24	1.52
1994	53.03	11	4.6	0.28	1.41
2007	53.02	12	4.3	0.31	1.32
1998	52.82	13	3.9	0.34	1.22
2004	52.82	14	3.6	0.38	1.14
2014	52.79	15	3.4	0.42	1.05
2011	52.64	16	3.2	0.46	0.98
2013	52.40	17	3.0	0.50	0.90
2006	52.30	18	2.8	0.55	0.83
2000	52.24	19	2.7	0.59	0.76
1999	52.20	20	2.6	0.65	0.70
1996	52.15	21	2.4	0.70	0.63
2015	52.07	22	2.3	0.76	0.57
1988	51.84	23	2.2	0.82	0.51
1997	51.71	24	2.1	0.89	0.45
1991	51.27	25	2.0	0.96	0.39
1980	50.78	26	2.0	1.04	0.34
1989	50.77	27	1.9	1.13	0.28
1992	50.73	28	1.8	1.22	0.23
2009	50.68	29	1.8	1.32	0.17
1993	50.68	30	1.7	1.43	0.12
1990	50.36	31	1.6	1.55	0.07
1977	49.92	32	1.6	1.68	0.01
1985	49.79	33	1.5	1.83	-0.04
1987	49.74	34	1.5	2.00	-0.09
1986	48.72	35	1.5	2.19	-0.15
2017	48.50	36	1.4	2.40	-0.20
1979	48.02	37	1.4	2.64	-0.26
1983	47.91	38	1.3	2.92	-0.31
1984	47.87	39	1.3	3.25	-0.37
1975	47.43	40	1.3	3.64	-0.43
1978	47.41	41	1.2	4.10	-0.49
2021	46.66	42	1.2	4.67	-0.55



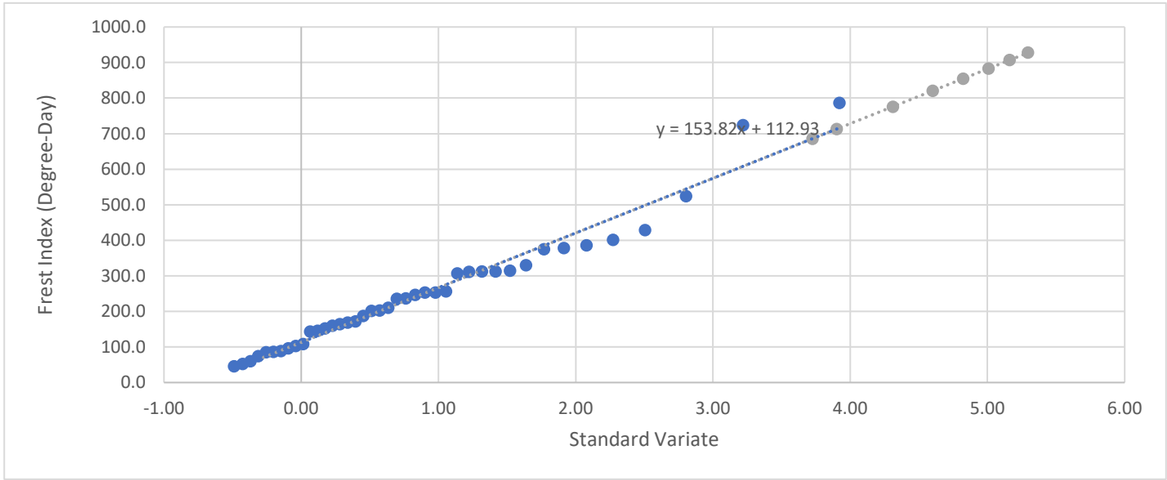
Best Fit			
Y	2.6549	x+	48.992
Recurrence interval	Standard Variate	Average Temperature	
42	3.73	58.9	
50	3.90	59.4	
75	4.31	60.4	
100	4.60	61.2	
125	4.82	61.8	
150	5.01	62.3	
175	5.16	62.7	
200	5.30	63.1	

ATTACHMENT D3.2
FROST INDEX AT 200-YEAR RECURRENCE INTERVAL

Project No. 111360
Project Name: Mt. Taylor Uranium Mine
Calculated By: JB

n= number of observations
n= 50

Frost Index Distribution					
Year	Frost index	Rank	Recurrence interval	Probability	Standard Variate
1976	786	1	51.00	0.02	3.92
1978	724	2	25.50	0.04	3.22
2022	524	3	17.00	0.06	2.80
1984	429	4	12.75	0.09	2.50
2018	401	5	10.20	0.11	2.27
1982	386	6	8.50	0.13	2.08
1990	378	7	7.29	0.16	1.91
2011	375	8	6.38	0.19	1.77
2019	330	9	5.67	0.21	1.64
1975	314	10	5.10	0.24	1.52
1983	312	11	4.64	0.28	1.41
2023	312	12	4.25	0.31	1.32
2020	311	13	3.92	0.34	1.22
2021	307	14	3.64	0.38	1.14
1981	256	15	3.40	0.42	1.05
1988	253	16	3.19	0.46	0.98
1992	253	17	3.00	0.50	0.90
1993	246	18	2.83	0.55	0.83
1989	237	19	2.68	0.59	0.76
2024	236	20	2.55	0.65	0.70
1979	210	21	2.43	0.70	0.63
1987	203	22	2.32	0.76	0.57
2007	202	23	2.22	0.82	0.51
2001	187	24	2.13	0.89	0.45
1977	172	25	2.04	0.96	0.39
2012	169	26	1.96	1.04	0.34
2000	164	27	1.89	1.13	0.28
2008	160	28	1.82	1.22	0.23
1997	152	29	1.76	1.32	0.17
2010	146	30	1.70	1.43	0.12
1991	143	31	1.65	1.55	0.07
1998	108	32	1.59	1.68	0.01
2014	103	33	1.55	1.83	-0.04
1986	96	34	1.50	2.00	-0.09
1985	88	35	1.46	2.19	-0.15
2005	86	36	1.42	2.40	-0.20
2017	85	37	1.38	2.64	-0.26
2015	74	38	1.34	2.92	-0.31
2013	60	39	1.31	3.25	-0.37
2003	52	40	1.28	3.64	-0.43
1994	46	41	1.24	4.10	-0.49



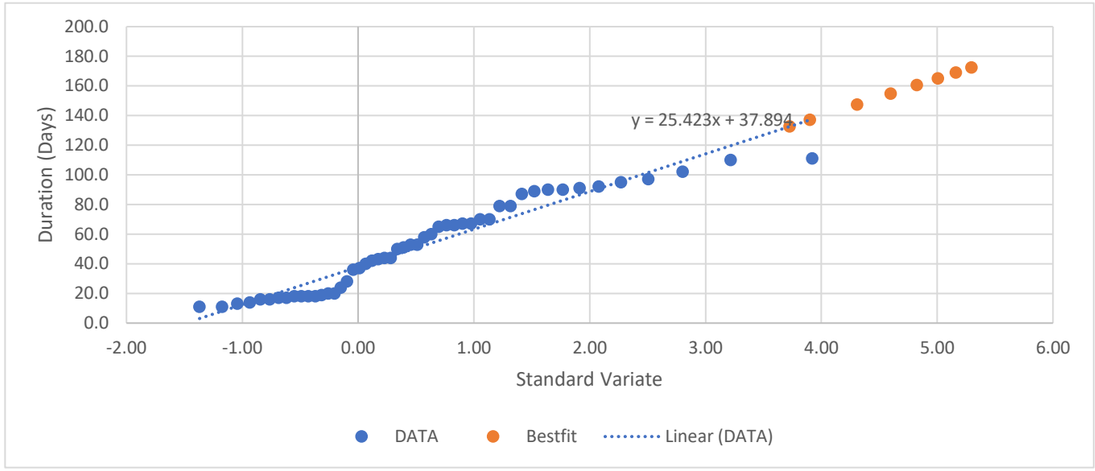
Best Fit			
Y	153.82	x+	112.93
Recurrence interval	Standard Variate	Frost Index	
42	3.73	686.0	
50	3.90	713.1	
75	4.31	776.0	
100	4.60	820.5	
125	4.82	855.0	
150	5.01	883.2	
175	5.16	906.9	
200	5.30	927.5	

ATTACHMENT D3.3
DURATION OF FREEZE SEASON AT 200-YEAR RECURRENCE INTERVAL

Project No. 111360
Project Name: Mt. Taylor Uranium Mines
Calculated By: JB

n= number of observations
n= 50

Duration of Freeze Distribution					
Year	Duration	Rank	Recurrence interval	Probability	Standard Variate
2022	111.0	1	51.00	0.02	3.92
1976	110.0	2	25.50	0.04	3.22
1983	102.0	3	17.00	0.06	2.80
2020	97.0	4	12.75	0.09	2.50
2019	95.0	5	10.20	0.11	2.27
1979	92.0	6	8.50	0.13	2.08
1984	91.0	7	7.29	0.16	1.91
1978	90.0	8	6.38	0.19	1.77
2021	90.0	9	5.67	0.21	1.64
2018	89.0	10	5.10	0.24	1.52
2023	87.0	11	4.64	0.28	1.41
1975	79.0	12	4.25	0.31	1.32
1982	79.0	13	3.92	0.34	1.22
1981	70.0	14	3.64	0.38	1.14
1989	70.0	15	3.40	0.42	1.05
1988	67.0	16	3.19	0.46	0.98
2007	67.0	17	3.00	0.50	0.90
1977	66.0	18	2.83	0.55	0.83
1990	66.0	19	2.68	0.59	0.76
1986	65.0	20	2.55	0.65	0.70
2010	60.0	21	2.43	0.70	0.63
1985	58.0	22	2.32	0.76	0.57
1991	53.0	23	2.22	0.82	0.51
1994	53.0	24	2.13	0.89	0.45
1995	51.0	25	2.04	0.96	0.39
2008	50.0	26	1.96	1.04	0.34
2001	44.0	27	1.89	1.13	0.28
2011	44.0	28	1.82	1.22	0.23
1987	43.0	29	1.76	1.32	0.17
2015	42.0	30	1.70	1.43	0.12
1992	40.0	31	1.65	1.55	0.07
1993	37.0	32	1.59	1.68	0.01
2000	36.0	33	1.55	1.83	-0.04
1998	28.0	34	1.50	2.00	-0.09
2024	24.0	35	1.46	2.19	-0.15
2005	20.0	36	1.42	2.40	-0.20
2012	20.0	37	1.38	2.64	-0.26
1997	19.0	38	1.34	2.92	-0.31
1996	18.0	39	1.31	3.25	-0.37
1999	18.0	40	1.28	3.64	-0.43
2006	18.0	41	1.24	4.10	-0.49
2013	18	42	1.21	4.67	-0.55



Best Fit			
Y	25.423	x+	37.894
Recurrence interval	Standard Variate	durations	
42	3.73	132.6	
50	3.90	137.1	
75	4.31	147.5	
100	4.60	154.8	
125	4.82	160.5	
150	5.01	165.2	
175	5.16	169.1	
200	5.30	172.5	

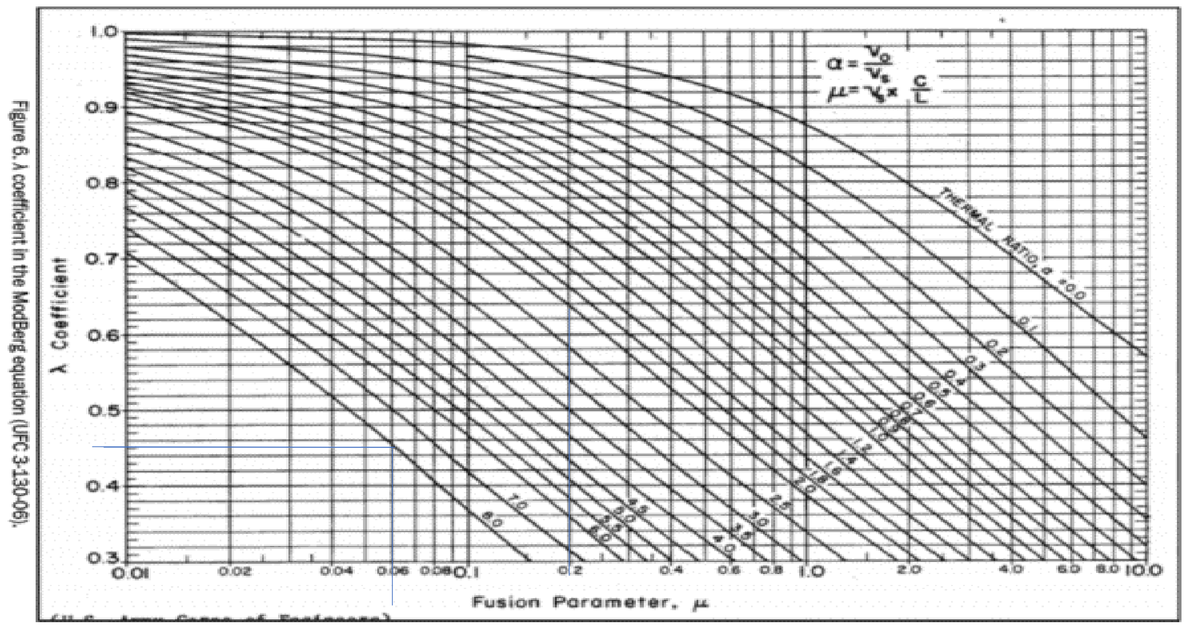
ATTACHMENT D4
FROST DEPTH DETERMINATION

Layer	Optimum Dry Density (PCF)	Water content (%)	dry density		Thermal Conductivity Kf (BTU/ Ft hr F)	Thermal Conductivity Ku (BTU/ Ft hr F)	Average Thermal Conductivity (1/2*(Ku+Kf))	Volumetric Heat Capacity (Cavg)	Latent heat of fusion	Depth (Inches)
Mulch	115	10	97.75	85% proctor	0.83	0.87	0.85	23.9	1407.60	12
Pediment	110.7	11	94.10	85% proctor	0.80	0.82	0.81	23.8	1490.46	33

n-factor	0.7

	Avg temp	F	Duration	Vs	Vo	Thermal ratio	Fusion parameter					eqn 52	eqn 53	Lambda parameter				
								K	Ci	L	Thickness ft	Ci average	Li average		Ri	Ri/2	Sum Ri-1	Ati
Mulch Layer	63.1	927.5	173	3.8	31.1	8.25	0.06	0.85	23.9	1407.6	1.00	23.9	1407.6	0.45	1.18	0.59	0.00	243.16
Pediment	63.1	927.5	173	3.8	31.1	8.25	0.06	0.81	23.8	1490.5	2.75	23.8	1468.4	0.45	3.39	1.70	1.18	3460.37
Mean		927.5						0.8	23.9	1449.0	1.9	23.9	1438.0	0.45				
	649.27									Total FT	3.75							3703.53
										total inches	45							

Frost Depth (feet) **2.27**
Frost Depth (inches) **27.28**



APPENDIX E
Technical Memorandum – Radon Cover Design and Analysis

Draft Technical Memorandum

To:	Rio Grande Resources, Ltd.	From:	Jason Andrews, P.E. Jay Blythe, E.I.T.
Company:	Rio Grande Resources, Ltd.	Date:	October 9, 2025
EA No.:	111360		
Re:	Mt. Taylor Uranium Mine – Radon Cover Design and Analyses		

1.0 INTRODUCTION

This technical memorandum presents the results of modeling of emanation of radon-226 from the top surface of the proposed cover over the expanded disposal cell. These results comprise radon attenuation modeling based on the proposed cover design, and cover materials.

The cover system design consists of a three-layer cover system over contaminated soils, with a total thickness of approximately 57 inches (4.75 feet) as shown on Figure E-1. The final cover system will consist of the following layers from top to bottom.

- 12 inches of rock mulch cover for erosion protection.
- 33 inches of onsite pediment soils for bio intrusion and frost protection.
- 12 inches of clay layer to minimize infiltration and emanation of radon gas

For the radon emanation modeling, the rock mulch layer was not included.

The radon emanation modeling shows that the planned cover system reduces the rate of radon emanation to values below the Nuclear Regulatory Commission (NRC) limit of 20 picocuries per square meter per second (pCi/m^2-sec) averaged over the entire expanded disposal cell.

2.0 DESCRIPTION OF MODEL AND INPUT VALUES

Radon emanation calculations for the cover system were made based on the RADON model (NRC, 1989), a one-dimensional model that calculates radon flux from decay of a radium-226 source. As part of the NRC Radon Barrier Workshop (June 25-26, 2018), the NRC indicates that the RADON modeling code (RAECOM) is available at the Wise Uranium Project website http://www.wise-uranium.org/ctc.html. The Wise Uranium Project Uranium Mill Tailings Cover Calculator was used to model the proposed cover system. The key input parameters to the model include the radium-226 activity concentration, the coefficient of diffusion of radon through the cover materials, and the density and moisture content values for the cover materials that affect the diffusion of radon. The input parameters and values used in the model are outlined below.

2.1 *Radium Activity Concentrations*

Radium-226 activity values used in the model were taken from Radiological Characterization Reports by AVM Environmental Services, In. (AVM) for the Windblown Area, Ore Pad Area and Mine Compound (AVM 2023), for the Treatment Ponds (AVM 2024), and the North Controlled Area (AVM 2025). The radium-226 activity values used in the model are summarized below below. Attachment E-1 includes pages extracted from the AVM reports used to calculate representative radium activities for the model.

Windblown Area (WA): The representative radium-226 activity value for contaminated soils within the WA north of the mine site was estimated from a static gamma radiation survey performed by AVM (2023) on May 17 and May 31, 2023. Attachment E-1.1 includes Table 2 from the AVM report illustrating the results of the survey, and Figure 1 from the AVM report illustrating the location of the WA. From a total of 12 survey locations using data for the "Bare 2x2 Nal Detector", a mean activity value of 9.8 pCi/g Ra-226 is estimated.

Ore Pad Area (OPA): The representative radium-226 activity value for contaminated soils within the OPA was estimated from a static gamma radiation survey performed by AVM (2023) on May 31, 2023. Attachment E-1.1 includes Table 2 from the AVM report illustrating the results of the survey, and Figure 1 from the AVM report illustrating the location of the OPA. From a total of 5 survey locations using data for the "Bare 2x2 Nal Detector", a mean activity value of 431.6 pCi/g Ra-226 is estimated.

Mine Compound Area (MCA): The representative radium-226 activity value for contaminated soils within the MCA was estimated from a static gamma radiation survey performed by AVM (2023) from May 18 through May 31, 2023. Attachment E-1.1 includes Table 2 from the AVM report illustrating the results of the survey, and Figure 1 from the AVM report illustrating the location of the MCA. From a total of 20 survey locations using data for the "Bare 2x2 Nal Detector", a mean activity value of 13.1 pCi/g Ra-226 is estimated.

Pond Area (PA): The representative radium-226 activity value for contaminated soils within the PA was estimated from a static gamma radiation survey performed by AVM (2024) from October 18, 2023. Attachment E-1.2 includes Table 1 from the AVM report illustrating the results of the survey, and Figure 1 from the AVM report illustrating the location of the PA. From a total of 40

survey locations using data for the "Bare 2x2 Nal Detector", a mean activity value of 4.8 pCi/g Ra-226 is estimated.

North Controlled Area (NCA): The representative radium-226 activity value for contaminated soils within the NCA was estimated from a static gamma radiation survey performed by AVM (2025) from September 19 through December 12, 2024. Attachment E-1.3 includes Table 2 from the AVM report illustrating the results of the survey, and Figure 1 from the AVM report illustrating the location of the NCA. From a total of 47 survey locations using data for the "Bare 2x2 Nal Detector", a mean activity value of 47.1 pCi/g Ra-226 is estimated.

Ra-226 activity concentration is a required model input. For the purposes of modeling radiation emanation, the arithmetic mean radium-226 concentration value from all four distinct source areas (WA, OPA, MCA, PA and NCA) of 101 pCi/g was used. For this to be a reasonable assumption in the assessment of radon flux from the cover, it is recommended that the materials from the OPA be placed at the base of the disposal cell as the OPA materials have the highest mean activity of radon (431.6 pCi/g).

2.2 *Radon Emanation Coefficient*

Radon emanation coefficient is a required model input. For all cover materials, a radon emanation coefficient of 0.35 was used. This is the conservative, default value used in the model.

2.3 *Density and Porosity*

Attachment E-2 includes laboratory testing data for the cover layer materials. While material density of the cover layers is not a direct model input, material placement and performance density affects the porosity and long-term moisture model input values. The general textures of the contaminated materials to be consolidated into the expanded disposal cell consist of some variable percentages of silt, clay and sand. As such, a density of 100 lb/cf (1.60 g/cc) was assumed for contaminated materials below the cover. For the 12-inch layer of radon barrier clay on top of the waste, a value of 99 lb/cf (1.59 g/cc) was used which is equivalent to 90 percent of the standard Proctor dry density of the clay sample from EA-BSB04 collected from Borrow Area A-B in January 2025. For the pediment frost protection soil layer above the radon barrier, a value of 94 lb/cf (1.51 g/cc) was used which is equivalent to 85 percent of the mean standard Proctor dry density of samples EA-BSB04 (sand), EA-BSC12 (sandy clay), and EA-BSC09 (silty clay) collected from Borrow Area A-B in January 2025. The same density of 94 lb/cf (1.51 g/cc) was used for the upper rock mulch layer as the soil matrix of the rock mulch layer is anticipated to be the same as, or similar to, the pediment soil layer.

Porosity is a required model input. Porosity values for the waste material, the pediment soil layer, and the rock mulch layer are not very sensitive to calculation of radon flux in the model, and the values can range +/- 20 percent individually with only a +/-10 percent change in radon flux. In contrast, radon flux calculated by the model is sensitive to porosity of the radon barrier. A similar range of +/- 20 percent change in radon barrier porosity can change the calculated radon flux value to zero (with a lower porosity value), or can double the calculated radon flux (with a higher porosity value) A typical porosity value for the mixed sand, silt and clay of 0.35 was assumed for

the waste materials. The porosity of the radon barrier clay layer was estimated from the compaction test report for sample EA-BSC09 (silty clay). From the compaction test report, a void ratio of 0.62 can be determined, and an associated porosity of 0.38 is calculated. For the pediment layer and upper rock mulch layer, a porosity of 0.35 is assumed.

2.4 *Long-Term Moisture Content*

Long-term moisture content of the cover layers is a required model input. The long-term moisture contents for the frost protection layer and rock mulch layer were assumed to be 6% based on the NRC guidance (1989). While the long-term moisture contents of both the waste materials and the radon barrier are sensitive to calculation of radon flux, the long term moisture content of the radon barrier is particularly sensitive to calculation of radon flux. The long-term, 15-bar, moisture content of the radon barrier clay layer was determined to be 15.1 percent from EA-BSC09 (silty clay) collected from Borrow Area A-B in January 2025 (Attachment E-2). This value represents a sample of the material remolded to 90 percent of the standard Proctor density. The long term, 15-bar, moisture content for the contaminated material below the radon barrier was also assumed to be 15.1 percent since the materials are below the depth of influence from evapotranspiration.

2.5 *Radon Diffusion Coefficient*

The radon diffusion coefficient was calculated within the model (based on an empirical relationship with degree of saturation). The values that were used are provided in the results provided in Attachment E2. The lower the diffusion coefficient value, the lower the resulting rate of radon emanation.

3.0 RESULTS

The input values and results from the modeling are summarized in Table E-1. The model output is provided in Attachment E-3.

The radon emanation model results presented in Table E-1 above show that the cover system reduces the rate of radon-222 emanation to 11 $pCi/m^2/sec$ at the top of the radon barrier which is in compliance with the NRC allowable emanation of less than 20 $pCi/m^2/sec$.

REFERENCES

Nuclear Regulatory Commission (NRC). (1989). *Calculation of Radon Flux Attenuation by Earthen Uranium Mill Tailings Covers, Regulatory Guide 3.64*.

Nuclear Regulatory Commission (NRC). (2018). *Proceedings of the Radon Barriers Workshop*. Dated July 25-26. NRC Headquarters, Rockville, MD.

AVM Environmental Services, Inc. (AVM). (2023) *Surface and Subsurface Soil Radiologic Characterization, Windblown Area, Ore Pad Area and Mine Compound, Mount Taylor Mine Site, San Mateo, NM.* Prepared for Rio Grande Resource Corporation. August 14, 2023.

AVM Environmental Services, Inc. (AVM). (2024) *Treatment Pond Radiologic Characterization, Mount Taylor Mine Site, San Mateo, NM.* Prepared for Rio Grande Resource Corporation. May 22, 2024.

AVM Environmental Services, Inc. (AVM). (2025) *North Controlled Area Soil Radiologic Characterization, Mount Taylor Mine Site, San Mateo, NM.* Prepared for Rio Grande Resource Corporation. June 5, 2025.

Enclosures

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Table E-1 Soil Inputs and Calculated Radon Flux

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Figure E-1 Final Reclamation Cover System

LIST OF ATTACHMENTS

Attachment E-1 Radium Activity Concentration References
Attachment E-1.1 AVM 2023 – Windblown Area, Ore Pad Area, Mine Compound
Attachment E-1.2 AVM 2024 – Treatment Pond
Attachment E-1.3 AVM 2025 – North Controlled Area
Attachment E-2 EA Laboratory Material Testing Results
Attachment E-3 Radon Model Output

Table E-1 – Soil Inputs and Calculated Radon Flux

Layer No[1]	Layer Description[1]	Thickness[1] (cm)	Thickness[1] (in)	Porosity (%)	Dry Density (g/cm^3)	Initial Water Content (%)	Radium-226 Activity (pCi/gm)	Emanation Coefficient[2]	15-Bar Moisture Content (%)	Radon Flux[3] pCi/m^2/s
4	Rock Mulch[4]	30.5	12	0.35[5]	1.51[5] 94 (pcf)	15.8[5]	0	0.35	6[6]	11.09
3	Pediment Layer (Frost Protection and Biointrusion)	83.8	33	0.35[5]	1.51[5] 94 (pcf)	15.8[5]	0	0.35	6[6]	11.61
2	Clay Layer (Radon Barrier)	30.5	12	0.38[7]	1.59[7] 99 (pcf)	16.1[7]	0	0.35	15.1[7]	19.49
1	Contaminated Materials[8]	500.0	197	0.35	1.51 100 (pcf)	15.8	115	0.35	15.1	27.35

Notes:
1 - See Figure E1.
2 – Required model assumption for all materials.
3 – Calculated Ra-226 flux through layer.
4 – The soil matrix of the rock mulch layer is similar to, or the same as, the pediment layer and thus governs the properties of the rock mulch layer.
5 – Mean values from compaction test reports for samples EA-BSC09 (silty clay), EA-BSC12 (sandy clay), and EA-BSB04 (sand) from Borrow Areas A-B (Attachment E-2). Porosity values are assumed for mixed sand, silt, and clay.
6 - Long term moisture content NRC (1989).
7 – Input values for clay radon barrier from compaction test report for sample EA-BSC09 (Attachment E-2) assuming a density of 90% of maximum standard Proctor density. The long-term 15-bar moisture content from the soil water characteristic curve (SWCC) for sample EA-BSC09 (Attachment E-2)
8 – The contaminated materials below the cover are assumed to be 5 meters (16. 4 feet) thick. Soil properties of the waste materials are assumed to be characteristic of a mixed sand, silt and clay with the same/similar values for porosity, dry density, and initial water content as the rock mulch and pediment layers. The long-term 15-bar moisture content of the waste materials is assumed to be the same/similar value as the clay radon barrier as the waste materials are below the influence of evapotranspiration.

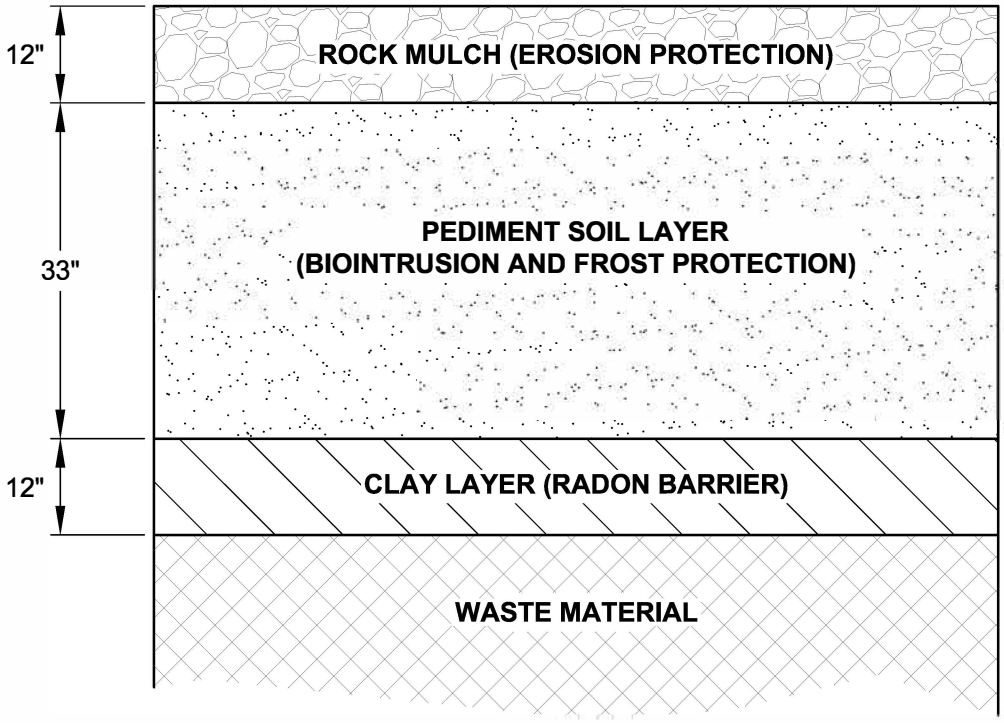
TABLE

Table E-1 – Soil Inputs and Calculated Radon Flux

Layer No[1]	Layer Description[1]	Thickness[1] (cm)	Thickness[1] (in)	Porosity (%)	Dry Density (g/cm^3)	Initial Water Content (%)	Radium-226 Activity (pCi/gm)	Emanation Coefficient[2]	15-Bar Moisture Content (%)	Radon Flux[3] pCi/m^2/s
4	Rock Mulch[4]	30.5	12	0.35[5]	1.51[5] 94 (pcf)	15.8[5]	0	0.35	6[6]	11.09
3	Pediment Layer (Frost Protection and Biointrusion)	83.8	33	0.35[5]	1.51[5] 94 (pcf)	15.8[5]	0	0.35	6[6]	11.61
2	Clay Layer (Radon Barrier)	30.5	12	0.38[7]	1.59[7] 99 (pcf)	16.1[7]	0	0.35	15.1[7]	19.49
1	Contaminated Materials[8]	500.0	197	0.35	1.51 100 (pcf)	15.8	115	0.35	15.1	27.35

Notes:
1 - See Figure E1.
2 – Required model assumption for all materials.
3 – Calculated Ra-226 flux through layer.
4 – The soil matrix of the rock mulch layer is similar to, or the same as, the pediment layer and thus governs the properties of the rock mulch layer.
5 – Mean values from compaction test reports for samples EA-BSC09 (silty clay), EA-BSC12 (sandy clay), and EA-BSB04 (sand) from Borrow Areas A-B (Attachment E-2). Porosity values are assumed for mixed sand, silt, and clay.
6 - Long term moisture content NRC (1989).
7 – Input values for clay radon barrier from compaction test report for sample EA-BSC09 (Attachment E-2) assuming a density of 90% of maximum standard Proctor density. The long-term 15-bar moisture content from the soil water characteristic curve (SWCC) for sample EA-BSC09 (Attachment E-2)
8 – The contaminated materials below the cover are assumed to be 5 meters (16. 4 feet) thick. Soil properties of the waste materials are assumed to be characteristic of a mixed sand, silt and clay with the same/similar values for porosity, dry density, and initial water content as the rock mulch and pediment layers. The long-term 15-bar moisture content of the waste materials is assumed to be the same/similar value as the clay radon barrier as the waste materials are below the influence of evapotranspiration.

FIGURE



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Project No. 111360

October 2025

Engineering Analytics, Inc.

FIGURE E-1
FINAL RECLAMATION COVER SYSTEM
MT. TAYLOR MINE

ATTACHMENT E-1
RADIUM ACTIVITY CONCENTRATION REFERENCES

ATTACHMENT E-1.1
AVM 2023 – WINDBLOWN AREA, ORE PAD AREA, MINE COMPOUND

Surface and Subsurface Soil Radiologic Characterization

Windblown Area, Ore Pad Area and Mine Compound

Mount Taylor Mine Site

San Mateo, NM

Prepared by:

AVM Environmental Services, Inc.

1717 Del Norte Blvd.

Grants, NM 87020

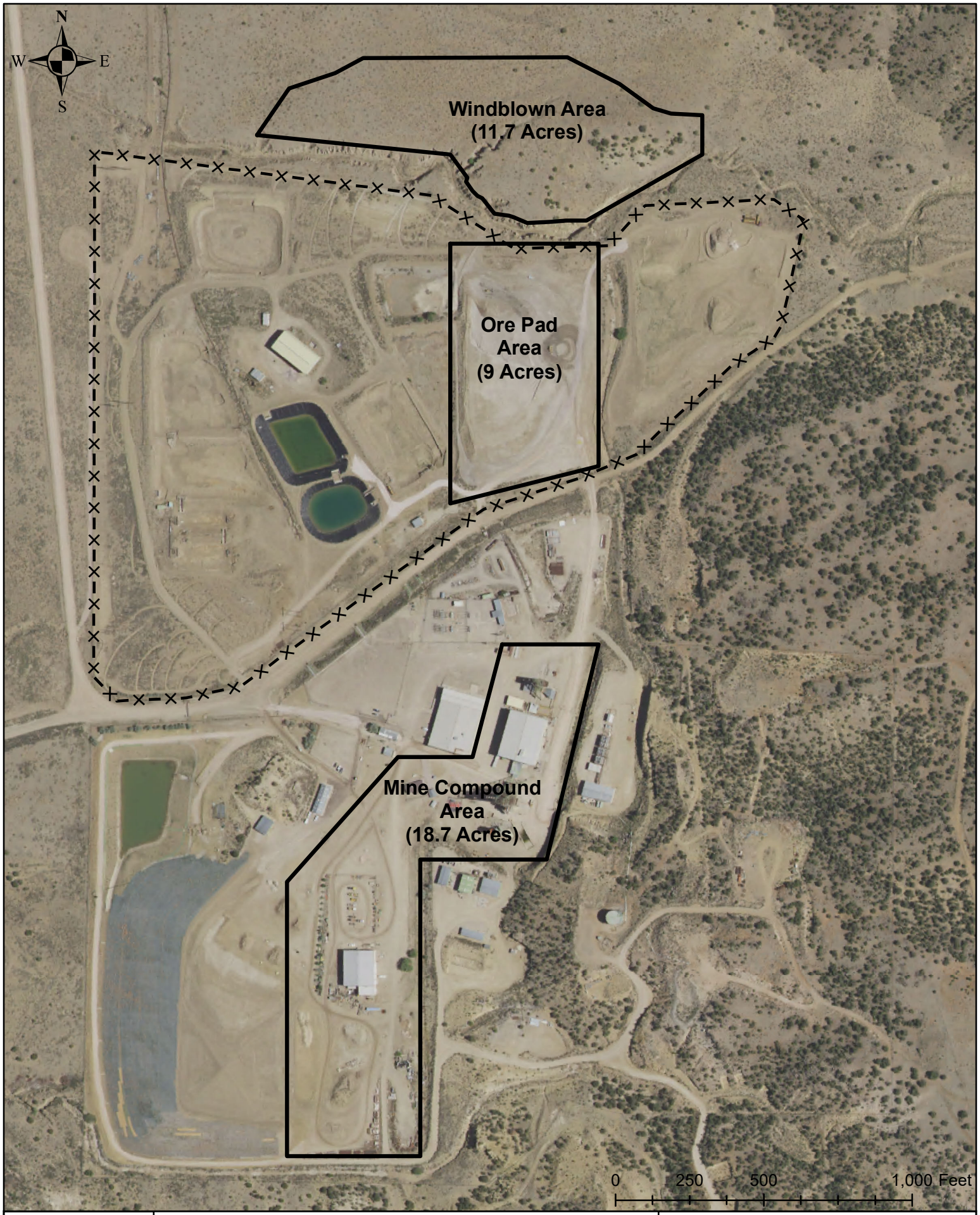
Prepared for:

Rio Grande Resource Corporation

PO Box 1150

Grants, NM 87020

August 14, 2023



AVM Environmental Services, Inc.

Figure 1
Mt. Taylor Mine Site
Soil Radiologic Characterization Areas

Legend

North Controlled Fence

Soil Radiologic Characterization Area

Table 2
Static Gamma Radiation Survey at Soil Sampling/Test Pit Locations

Survey Date	Survey Point ID/Description	Survey Point Coordinate NAD83 StatePlane NM West, Feet		Static Gamma Radiation Survey				Gamma Exposure Rate µR/hr
				Bare 2x2 NaI Detector		Collimated (0.5" Pb) 2x2 NaI Detector		
		Northing	Easting	CPM	Estimated Ra-226 pCi/g	CPM	Estimated Ra-226 pCi/g	
05/17/23	WBSB-01	1,581,413	2,782,866	26,897	6.1	6,297	1.7	33
05/17/23	WBSB-02	1,581,390	2,782,444	26,749	6.1	6,350	1.7	33
05/17/23	WBSB-03	1,581,356	2,783,329	24,529	4.9	6,073	1.3	31
05/17/23	WBSB-04	1,581,339	2,782,706	30,064	7.7	6,069	1.3	37
05/17/23	WBSB-05	1,581,329	2,783,062	31,828	8.6	6,945	2.7	41
05/17/23	WBSB-06	1,581,271	2,782,942	35,410	10.4	7,288	3.3	47
05/17/23	WBSB-07	1,581,187	2,783,253	37,965	11.7	8,183	4.7	47
05/17/23	WBSB-08	1,581,164	2,782,988	55,849	20.6	11,042	9.3	70
05/31/23	WBSB-09	1,581,254	2,782,870	36,491	10.9	6,599	2.1	44
05/31/23	WBSB-10	1,581,263	2,783,140	34,898	10.1	7,286	3.2	48
05/31/23	WBSB-11	1,581,277	2,783,335	29,002	7.2	6,602	2.2	34
05/31/23	WBSB-12	1,581,228	2,782,908	40,341	12.9	7,153	3.0	55
05/31/23	OPSB-01	1,580,834	2,782,884	2,328,550	1157	716,621	1138	2,100
05/31/23	OPSB-02	1,580,812	2,783,138	505,097	245	160,357	248	650
05/31/23	OPSB-03	1,580,599	2,783,013	700,063	343	247,434	387	900
05/31/23	OPSB-04	1,580,328	2,782,874	408,698	197	133,199	205	450
05/31/23	OPSB-05	1,580,386	2,783,136	446,083	216	156,044	241	450
05/30/23	MCSB-01	1,579,585	2,783,019	35,807	10.6	10,538	8.5	41
05/30/23	MCSB-02	1,579,573	2,783,167	34,096	9.7	9,678	7.1	39
05/30/23	MCSB-03	1,579,343	2,782,883	34,019	9.7	9,832	7.3	39
05/30/23	MCSB-04	1,579,317	2,783,098	34,656	10.0	10,811	8.9	40
05/24/23	MCSB-05	1,579,183	2,782,702	52,231	18.8	14,892	15	65
05/24/23	MCSB-06	1,579,162	2,783,064	31,976	8.7	8,548	5.3	37
05/24/23	MCSB-07	1,579,040	2,783,010	52,974	19.2	18,511	21	65
05/23/23	MCSB-08	1,578,849	2,782,249	107,010	46.2	39,626	55.0	125
05/23/23	MCSB-09	1,578,850	2,782,582	28,188	6.8	8,193	4.7	33
05/23/23	MCSB-10	1,578,758	2,782,444	39,814	12.6	12,984	12	43
05/22/23	MCSB-11	1,578,611	2,782,258	53,106	19.2	18,055	20	60
05/22/23	MCSB-12	1,578,521	2,782,569	29,299	7.3	9,090	6.1	33
05/22/23	MCSB-13	1,578,301	2,782,557	21,952	3.7	6,254	1.6	25
05/23/23	MCSB-14	1,578,278	2,782,258	21,642	3.5	6,366	1.8	25
05/18/23	MCSB-15	1,578,214	2,782,398	48,059	16.7	15,633	17	51
05/18/23	MCSB-16	1,578,084	2,782,313	30,445	7.9	11,069	9.3	33
05/18/23	MCSB-17	1,578,085	2,782,599	18,059	1.7	5,891	1.0	19
05/18/23	MCSB-18	1,578,071	2,782,424	17,170	1.3	5,046	<0.6	19
05/31/23	MCSB-19	1,578,837	2,782,317	69,850	27.6	24,522	31	80
05/31/23	MCSB-20	1,578,650	2,782,298	55,167	20.3	18,497	21	65

WB
Sum = 117.2
Mean = 9.8
n = 12
SD = 4.2

OPA
Sum = 2158
Mean = 431.6
n = 5
SD = 409.4

MCA
Sum = 261.5
Mean = 13.1
n = 20
SD = 10.5

ATTACHMENT E-1.2
AVM 2024 – TREATMENT POND

Treatment Pond Radiologic Characterization

Mt. Taylor Mine Site
San Mateo, NM

Prepared by:
AVM Environmental Services, Inc.
1717 Del Norte Blvd.
Grants, NM 87020

Prepared for:
Rio Grande Resource Corporation
PO Box 1150
Grants, NM 87020

June 4, 2024

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1.0 Introduction and Background

This report provides the results of the Treatment Pond Radiologic Characterization (TPRC) that was conducted at the Mt. Taylor Mine (Site) in Cibola County, near San Mateo, New Mexico. This TPRC was performed to check the status and estimate radiologic contamination exceeding the Site Radiation Cleanup Criteria (RCC) of 6.8 pCi/g Radium (Ra)-226 within six treatment ponds at the Site: Treatment Ponds 1, 4, 5, 6, 7 and 8. Any synthetic liners and previously identified radiologically impacted soils were removed from the treatment ponds during material removal efforts conducted in 2019, prior to this characterization. Additionally, various treatment pond concrete structures (hydraulic control structures) were left in place either intact or partially demolished, with concrete rumble remaining nearby most structures. The majority of the demolished concrete pieces were placed in piles south of the TPRC area. The TPRC area includes treatment pond dikes, bottoms, and concrete structures, as shown in the Figure 1. The methods and procedures used were consistent with the June 2020 Work Plan for Post-Mining Radiological Surveys of Permit Area and Impacted Lands (2020 Work Plan) and the applicable survey methods described in the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM, EPA 2000a). The RCC specified in the March 2016 *Joint Guidance for the Cleanup and Reclamation of Existing Uranium Mining Operations in New Mexico* (EMNRD, 2016) (2016 Guidance) by the Energy, Minerals & Natural Resources Department (EMNRD) and the New Mexico Environment Department (NMED) was used for the investigation level (IL). The Ra-226 cleanup criteria of 5.0 pCi/g above the background level in land averaged over 100 square meters in surface soil (top six inches) specified in the Joint Guidance is taken from the UMTRCA (40 CFR 192) regulation, which is based on an unrestricted land use exposure scenario. A 6.8 pCi/g Ra-226 IL (5.0 pCi/g plus 1.8 pCi/g background level) has been established for the Site.

The Site was an underground uranium mine located in Cibola County, near San Mateo, New Mexico. The mine was developed by Gulf Mineral Resources Company (Gulf) in the 1970s and ore production occurred from 1979 to 1982. Following transfer of the Site to Chevron Resources Company in 1985, the ore production resumed and continued until 1990. Rio Grande Resources (RGR) acquired the Site in 1991. In 1999 the Site entered standby status under Mine Permit C1002RE with EMNRD. On December 29, 2017, the permit changed to an active status, and on December 3, 2019, RGR notified MMD of intentions to begin the Site closeout/closure process. The following sections describe the strategy, methods and procedures that were used and the results of the TPRC conducted at the Site.

2.0 Previous Radiologic Characterizations

Surface gamma radiation surveys were performed periodically within operationally controlled areas of the Site to monitor changes in radiological conditions during a period of remedial excavations in the Mine Water Treatment Unit (MWTU) ponds, construction of the disposal cell and placement of contaminated mine materials, and gradual removal of ore from the ore stockpile. The most recent gamma survey prior to this characterization, conducted March 2020, showed elevated gamma radiation levels in certain operational areas within the Controlled Area boundaries, including areas within the treatment ponds. The gamma

survey results are summarized in the June 2020 Work Plan, and indicate surface soils in portions of treatment Ponds 4 through 8, and the entire Pond 1 area exceed the 6.8 pCi/g Ra-226 IL.

3.0 Objective of the Radiological Characterization

The Site is a former uranium mine, therefore the surface and subsurface soil is expected to be impacted by radionuclides associated with the uranium decay series, with Ra-226 being the primary Constituent of Concern (COC). The objective of this characterization is to evaluate Ra-226 contamination exceeding the Site IL of 6.8 pCi/g Ra-226 in surface and subsurface soils to facilitate volume estimates of radiologic impacted material within the TPRC area.

4.0 Field Investigation

Field investigations for this characterization were conducted consistent with the June 2020 Work Plan and were performed during the period of November 2, 2023 through April 29, 2024. The specified TPRC areas are shown in Figure 1. The field investigations included both static 0.5-inch thick lead collimated and uncollimated (bare) 2x2 sodium iodide (NaI) detector gamma radiologic survey measurements and Differential Global Positioning System (DGPS) based bare detector gamma scan surveys, along with ex-situ soil screening, soil sampling, and offsite vendor laboratory confirmatory sample analysis. Geo-located gamma scans were conducted to provide Ra-226 concentration level estimates in surface soil and to assist in determining data point (static gamma, soil sampling) locations to assess surface and subsurface radiologic contamination relative to the IL. Ex-situ gamma radiation soil screening was performed on soil samples collected during this TPRC to provide real-time information to estimate surface and subsurface contamination depths. Offsite vender laboratory soil sample analysis was performed to confirm contamination relative to the IL levels estimated by the field ex-situ gamma radiation soil screening.

4.1 Surface Gamma Radiation Scan and Static Survey

The instrument configuration for direct gamma radiation level measurements during this characterization consisted of lead collimated and bare 2x2 NaI scintillation detectors (Eberline SPA-3) for detection of gamma radiation, coupled to a scaler/rate meter (Ludlum 2221 or Ludlum 2241). This instrument configuration is used widely for this type of survey and is recommended by the MARSSIM. The scaler/rate meters were interfaced with a sub-meter accurate DGPS with surveying software and a data logger/controller for electronically recording the gamma radiation levels to the corresponding geo-location coordinates. The coordinate system used for this work was the State Plane Coordinate System (NAD83, New Mexico West, US Feet) system. Direct gamma radiation surveys using a NaI scintillation detector provide radiation levels in counts per unit time, generally obtained as counts per minute (cpm).

During this characterization, systematic gamma radiation scan surveys using bare 2x2 NaI detectors were performed at the Site to determine the level of Ra-226 in surface soil within the characterization areas.

Although bare detectors do not avoid lateral gamma radiation shine, bare detectors have a large field of view and provide a large scan coverage area for an efficient and conservative lateral extent of contamination assessment. To better characterize the surface soil and to assist in the selection of data point locations, the surface gamma scan survey was performed at a higher density, 30-feet transect spacing compared to the March 2020 scan density of about 60-ft transect spacing. Thirty feet spaced geo-projected transects for Treatment Ponds 4, 5, 6, 7 and 8 were digitally created using a mapping software and loaded on the field data logger/controller. A gamma scan survey was not conducted at Treatment Pond 1 since the March 2020 gamma scan showed uniformly elevated measurements over the entire area making the additional surface gamma scan with a bare detector unnecessary in selecting data point locations. Data point locations were selected in Treatment Pond 1 by selecting locations that would adequately characterize the elements of the treatment pond as well as the areal extent of the area, as shown in Figure 2. Additionally, three of the data point locations in Treatment Pond 1 were biasedly located in material removal excavations performed prior to this characterization. Based on a conservative field of view (FOV) of at least six feet diameter for a bare 2x2 NaI detector for Ra-226 gamma radiations, scanning transects spacing of 30 feet would provide at least a 20% scan coverage. The gamma scan survey was performed by scanning along these transects with a bare 2x2 NaI detector at 12 inches above the ground surface at a scan rate of about three feet per second, with a data collection time interval of two seconds.

The geo-located gamma scan data includes the gamma scan point ID, date and time, location coordinates, and bare detector gamma cpm. The scan data was exported from the data logger and the bare detector cpm were converted to equivalent Ra-226 estimate using the Site-specific correlation (Ra-226 pCi/g = 0.0005 x CPM)-7.3228 R^2 = 0.97) (2020 Work Plan). The scan data was mapped using mapping software, arranged in color coded ranges and then reviewed to identify areas that exceeded the IL. The color-coded range was structured to include the 6.8 pCi/g Ra-226 IL as shown in Figure 2. The characterization gamma scan survey included approximately 3,810 gamma scan data points within the TP characterization area. The gamma scan data was exported from the scan system data logger into an Excel file. The detector cpm was converted into equivalent estimated surface soil Ra-226 concentration in pCi/g using the Site-specific correlation for bare detectors as discussed in Section 4.5 of the 2020 Work Plan. A typical gamma scan data export table from the scan system data logger is shown in Table 1. Gamma scan survey data for this characterization are provided in an electronic file.

Thirty seven data point locations were selected within the Treatment Ponds 4, 5, 6, 7 and 8 characterization area based on surface gamma scan survey results and twelve data point locations were selected in the Treatment Pond 1 characterization area as described above, totaling in forty nine data point locations. One-minute static gamma radiation surveys were performed prior to collecting a soil sample at each data point location using a collimated 2x2 NaI detector. The survey data were recorded on Static Gamma Radiation Survey Forms, which are included in Appendix A. A Site-specific correlation for a 2x2 NaI 0.5-inch thick lead collimated detector was previously performed during the August 2023 Soil Radiologic Characterization. This correlation regression yielded an equation of Ra-226 = (cpm x 0.0016) – 8.41 with an acceptable R^2 value of 0.83. The collimated detector measurements were converted to soil Ra-226

concentrations using this correlation equation. The static gamma survey results are summarized in Table 2.

Treatment pond concrete structures located within the TPRC areas were surveyed by collecting a one minute collimated detector static gamma count on the intact structure walls. The static gamma survey was conducted with the collimated detector housing at contact with the concrete surface, which located the detector at 1.75 inches from the concrete surface. The results of the concrete surveys are included in Appendix B. In order to convert the collimated detector static survey results in cpm to the Ra-226 IL in pCi/g, the 2x2 NaI collimated detector was calibrated for the same survey geometry at the Department of Energy (DOE) Grants concrete calibration Pad. The calibration is included in Appendix C. The calibration indicates a level of 7,200 cpm for the 0.5 inch thick lead collimated detector at contact would be equivalent to the 6.8 pCi/g Ra-226 IL in concrete.

4.2 Soil Sampling and Ex-Situ Gamma Radiation Soil Screening

Soil sampling and on-Site ex-situ gamma radiation soil screening were performed from November 2, 2023, through April 29, 2024. These methods were used to estimate surface and subsurface soil Ra-226 contamination exceeding the IL at data point locations within the TPRC areas. The ex-situ gamma radiation soil screening was conducted to provide a real-time estimate of Ra-226 concentrations in soil samples. This method is more reliable than in-situ direct gamma radiation level measurements and allows for more certain real-time Ra-226 concentration assessments. The on-Site ex-situ soil screening method consists of selectively measuring the 609 KeV region gamma radiations of Bi-214, a decay product of Ra-226. A single channel analyzer (Ludlum L2221) integrated with a Ludlum 44-20 3x3 NaI scintillation detector was used to measure the 609 keV energy peak region of Bi-214. The soil sample was placed around the plastic lined detector in a heavily lead shielded counting chamber. The heavily shielded counting chamber lowers the system background counts, thus improving the system's minimum detectable concentration (MDC). A reference soil with the Ra-226 concentration of 6.6 pCi/g, comparable to the 6.8 pCi/g IL, was prepared and was used for soil screening during this characterization. The 6.6 pCi/g reference soil provides a conservative estimate of Ra-226 concentration in samples below the IL.

A total of 49 data point locations were selected for this TPRC, shown in Figure 2. Thirty seven data point locations were selected within the Treatment Pond 4, 5, 6, 7 and 8 characterization areas. The surface gamma scan indicated that no significant gamma shine was observed within these characterization areas. As a result, surface (0 to 6 inches) soil samples were not collected at the data points within this characterization area. The surface soil Ra-226 level was determined using the 0.5 inch thick collimated detector static gamma survey at these 37 data point locations. A one minute collimated detector static gamma survey provides a significantly higher certainty for a data point survey and the collimator mitigates any low level lateral gamma radiation shine from any nearby hot spots. A one minute collimated static gamma survey and both surface and subsurface soil samples were collected at the remaining twelve data point locations, which are all located within the Treatment Pond 1 characterization area.

Soil samples were collected from each of the 49 data point locations. The number and depth of the samples at each data point location varied depending upon location and soil screening results. At the 37 data points from the Treatment Pond 4, 5, 6, 7 and 8 characterization areas, a subsurface (6-12 inch) soil sample was collected, and ex-situ soil gamma screened. At five data point locations in this characterization area, TP-5B, TP-11, TP-15B, TP-16B and TP-21, a subsurface soil sample at a depth of 1-2 feet was collected and ex-situ soil screened since the 6-12 inch subsurface sample soil screening result was above the IL. At location TP-5B, an additional subsurface soil sample at a depth of 2-3 feet was collected since the 1-2 feet subsurface sample screening result was 6.0 pCi/g, near the IL. No additional subsurface soil samples were necessary at these locations. At each of the remaining 12 data points located in the Treatment Pond 1 characterization area, a surface and a subsurface (6 – 12") soil sample was collected, and ex-situ soil screened. At three data points located on the pond dike crests, TP-39, TP-41 and TP-46, the surface soil sample ex-situ soil screening results were above the IL. The 6-12 inch subsurface soil sample ex-situ soil screening results were above the IL in only one data point location, TP-36. The 1-2 feet subsurface soil sample ex-situ soil screening results at TP-36 was below the IL. No additional subsurface soils samples were necessary at these locations.

A backhoe was used to excavate a trench at each selected data point location for subsurface soil sample collection. The trenches were excavated in approximately 6 to 12 inches depth intervals. At each interval, a subsurface soil sample was collected from the base of the excavation for ex-situ soil screening. Stainless steel sampling trowels were used to collect all of the soil samples. The excavation continued until on-Site ex-situ soil screening indicated Ra-226 concentrations below the 6.8 pCi/g IL. The soil sample logs and the field soil screening forms are included in Appendix A. The soil ex-situ gamma screening data is summarized in Table 3, which includes Ra-226 concentrations of the samples relative to the 6.8 pCi/g IL.

Although the primary objective of the ex-situ gamma radiation soil screening was to determine the Ra-226 concentrations above or below the 6.8 pCi/g IL, Ra-226 concentrations were estimated in all soil samples collected and screened. A calibration/correlation of the ex-situ soil screening system was performed using a 6.6 pCi/g, a 25 pCi/g and a 50 pCi/g reference soil. This correlation is included in Appendix C. The estimated Ra-226 concentration of the subsurface soil samples determined using this correlation are included in Tables 3 and 4.

A total of nine, including one field quality assurance/quality check (QA/QC) duplicate, soil samples that were ex-situ soil screened on-Site were sent to an offsite vendor laboratory, Energy Laboratories, in Casper, WY. These soil samples were analyzed for Ra-226 using EPA Method 901.1 (modified for soil matrix) for the confirmation of the on-Site ex-situ soil screening results. The laboratory results report is included in Appendix D and are summarized in Table 3. As shown in the table, the estimated Ra-226 levels determined by the on-Site ex-situ soil screening are comparable with the laboratory Ra-226 results, specifically in regard to determining the Ra-226 levels above or below the IL.

4.3 Treatment Pond 1 Area Characterization Summary

In addition to subsurface soil samples, surface soil samples were collected at data points from within the Treatment Pond 1 characterization area to confirm the static gamma survey with a collimated detector, which indicated that the surface soil may not be elevated, as indicated by the 2020 bare detector surface soil gamma scan. As outlined in Tables 3 and 4, the soil screening results show that the surface and subsurface (6-12") soil Ra-226 levels are below the 6.8 pCi/g IL in all six samples located on the pond bottom in Treatment Pond 1. The surface and subsurface (6-12 inch) soil sample at location TP-35, which was collected from the base of a previously excavated area from the north dike, and the surface and subsurface (6-12 inch) soil sample at location TP-45, which was collected from the east dike crest, show Ra-226 levels below the 6.8 pCi/g IL. The ex-situ soil screening results show that samples collected from the crests of the dikes at four data point locations (TP-36, TP-39, TP-41 and TP- 46) the Ra-226 levels exceed the IL. Similar to TP-35, data point TP-41 was located at the base of a previous excavation. The subsurface soil (6-12 inch) Ra-226 levels are below the IL at all data point locations except for one location, TP-36. The screening results show the Ra-226 level at TP-36 in the 6-12 inch subsurface soil sample at 10.4 pCi/g, which is above the IL, and the 1-2 feet subsurface soil sample showed the Ra-226 level below the IL at 2.3 pCi/g. As shown in Figure 3, surface soil in the Treatment Pond 1 dikes exceeded the IL in some areas, but the subsurface soil is generally below the IL.

A one minute collimated detector static gamma survey was conducted on the concrete structure within the Treatment Pond 1 characterization area. The concrete structure was designated CS-10 and is located on the western dike inside slope. The gamma survey shows radiation cpm levels ranging from 9,408 to 25,471 cpm, above the 6.8 pCi/g Ra-226 IL equivalent of 7,200 cpm at all 7 survey points selected withing the concrete structure. Portions of the elevated gamma cpm levels may be due to apparent waste rock material near and surrounding the concrete structure, and from concrete surface staining from the historic retention of mine wastewater and sediments. A gamma radiation level of 90,000 cpm was observed in the bottom of the concrete sump, likely due to the remaining layer of mine waste sediments and soil. Further direct radiation surveys of the concrete structure in place may not be effective. Removal of the concrete structures and radiation surveys of the underlying soil and sampling and surveying of the concrete may provide a better understanding of the Ra-226 levels within the concrete structure.

4.4 Treatment Pond 4, 5, 6 and 7 Area Characterization Summary

Because lateral gamma radiation shine was not a significant concern at these ponds, the surface soil (0-6 inch) Ra-226 levels were determined by a collimated detector one minute gamma static survey. As shown in Table 2, Table 4, and Figure 2, the surface static gamma survey results show the surface soil (0-6 inch) Ra-226 level in Treatment Pond 4, 5, 6 and 7 pond bottoms are below the IL, except for areas that are down gradient of the concrete structures and at a few isolated areas of elevated gamma radiation levels, likely remnants from previous removal efforts. The elevated surface static gamma levels near the concrete structures appear to be due to contaminated sediment in the concrete structure sumps and from apparent

mine waste material around the structures. The soil along the north dike crest of Treatment Pond 4 appears to be generally below the IL. The surface soil along the east and west dike crests are generally above the IL. The subsurface soil along the east and west dike crests are generally below the IL, except for the 6-12 inch subsurface sample at TP-11. Ex-situ soil screening results from the 6-12 inch subsurface sample at TP-11 of 64.4 pCi/g is likely due to apparent mine waste rock visible in the area. The Ra-226 levels in the subsequent 1–2 feet subsurface soil sample at TP-11 is below the IL. The surface soil on the south dike crest of Treatment Pond 4 appears to be below the IL, except near the concrete structure. The soil on the west dike outside slopes and crests of Treatment Pond 5, 6 and 7 are generally below the IL, except near the concrete structures. The surface soil on the east dike crest of Treatment Pond 5 is above the IL at various isolated locations, shown in Figures 2 and 3.

One minute collimated detector static gamma surveys conducted at nine concrete structures, shown in Figure 1, located on the dike inside slopes and/or crests at Treatment Pond 4, 5, 6, and 7 show gamma radiation levels ranging from 5,500 cpm to 45,600 cpm. As stated previously, the IL equivalent cpm for the concrete survey is 7,200 cpm. Portions of the elevated gamma cpm levels may be due to apparent waste rock material near and surrounding the concrete structure, and from concrete surface staining from the historic retention of mine wastewater and sediments. Mine waste sediments were also observed inside all the concrete structure sumps, which showed elevated gamma survey readings of up to 31,000 cpm. The concrete structure static gamma survey forms are included in Appendix B. In general, the majority of the concrete comprising the structures are likely to be below the IL, but it will be difficult to assess by gamma radiation surveys as concrete surface staining from the retention of mine waste water and sediments and apparent waste rock material near and surrounding the concrete structure are still present. Further direct radiation surveys of the concrete structure in place may not be effective.

Removal of the concrete structures and radiation surveys of the underlying soil and sampling and surveying of the concrete may provide a better understanding of the Ra-226 levels within the concrete structure. Several random pieces of the demolished concrete structures were surveyed for gamma radiation. The demolished concrete structure pieces are piled in fairly low gamma shine area south of Treatment Pond 7. The results, included in Appendix B, show all pieces surveyed were below the 7200 cpm IL, which supports the assumption that the sediments and apparent waste rock material near and surrounding the concrete structures may be impacting the direct gamma survey of the in-place concrete structures.

4.5 Treatment Pond 8 Area Characterization Summary

As shown in Table 2, Table 4, Figure 2 and 3, the surface static gamma survey results show the surface soil (0-6 inch) Ra-226 level in the bottom of Treatment Pond 8 is below the IL, except in a small isolated area at data point TP-6, which is estimated by ex-situ soil screening at 9 pCi/g. The 6–12 inch subsurface soil sample at TP-6 showed Ra-226 level at 3.1 pCi/g, well below the IL. Surface soil Ra-226 levels in portions of the south and west dike slopes and crests are above the IL. Ra-226 in the subsurface soil at these locations are below the IL. Elevated surface gamma scans with a bare detector along the east dike crest and outside

slope appear to be mostly due to lateral gamma radiation shine from adjacent areas outside of the Treatment Pond 8 characterization area.

4.6 Borrow Area A Soil Piles

Two soil piles located in the East Borrow area were sampled to estimate Ra-226 levels relative to the IL. Soil in these piles apparently came from the mine water treatment ponds. Pile 1 contained shrub/wood debris and treatment pond waste residue. Pile 2 contained fine treatment pond waste residue along with pieces of synthetic liner. Gamma exposure rates were measured at several locations on each pile. Exposure rates on pile 1 ranged from 100 to 200 uR/hr, and ranged from 100 to 300 uR/hr on Pile 2. A five-point composite soil sample was collected from both the surface and from within Pile 1. A soil sample was not collected from Pile 2 because the gamma exposure rate measurements indicated Ra-226 levels significantly above the IL and the fine pond waste residue on the surface of the pile posed airborne radiation safety concerns and the spread of contamination in the area due to windy conditions. As shown in Table 3, ex-situ soil gamma screening of the samples from Pile 1 indicates Ra-226 levels significantly above the IL.

5.0 Soil Sampling and Analysis

Soil samples from the Treatment Pond areas collected for on-Site ex-situ gamma radiation soil screening were collected consistent with the 2020 Work Plan. Field QA/QC duplicate samples were split at a frequency of 10% of the total number of soil samples collected. A total of 67 surface and subsurface soil samples were collected during this characterization. Field sampling equipment used for soil sampling included: stainless steel scoops, bowls, and spoons that were decontaminated between sample locations. The soil sampling equipment decontamination was conducted by brushing off loose visible soil and wiped with clean towels. Excavator buckets were cleaned by removing any loose, visible soil. Any soils excavated from the test pits were returned to the test pit excavations from which the soil came. Personal protection equipment (PPE), such as gloves, were brushed off and scanned for residual contamination and were disposed of.

Surface and subsurface soil samples were analyzed by on-Site ex-situ gamma radiation soil screening (AVM SOP-4) to estimate Ra-226 concentrations. A completed Chain-of-Custody (COC) along with confirmatory soil samples were placed in labeled Ziploc bags, and packaged in a cooler with a sealed lid and shipped to Energy Laboratories, Inc for Ra-226 analysis. The soil samples were analyzed for Ra-226 with a reporting limit of 0.5 pCi/g, using EPA Method 901.1 (modified for soil matrix). The completed COCs are included with the analytical results reports in Appendix D.

6. 0 Quality Assurance and Quality Control Measures

QA/QC measures were implemented during this characterization to ensure that decisions were made based on data of acceptable quality. All radiologic survey instruments have been calibrated at least annually. Additionally, operational functions checks were performed on all radiologic instruments daily prior to use.

The calibration and function check documents are included in Appendix C. During this characterization, no instruments were found to be out of calibration or inoperable as indicated by the operational function checks. The instrument background measurements for bare 2x2 NaI detectors during daily operational function checks were less than 10,000 cpm as shown in Appendix C. The bare detector field of view (FOV) at 12 inches above the ground surface is conservatively assumed at an area of six feet diameter. The 2x2 NaI detector response factor is determined to be 0.0005 pCi/g/cpm from the linear regression for the Site-specific correlation included in Appendix C. Based on the above detector parameters, the Ra-226 minimum detectable concentrations (MDCs) for a scan survey at a scan speed of three feet per second, calculated using MARSSIM guidance, were less than 1.0 pCi/g, which is significantly below 50% of the 6.8 pCi/g IL. The instrument background measurements for the 0.5 inch thick lead collimated 2x2 NaI detectors during daily operational function checks were less than 3,200 cpm, as shown in Appendix C. The bare detector field of view (FOV) at 12 inches above the ground surface is conservatively assumed at an area of 1.5 feet diameter. The collimated 2x2 NaI detector response factor is determined to be 625 cpm/pCi/g from the linear regression for the Site-specific correlation included in Appendix C. Based on the above collimated detector parameters, the Ra-226 minimum detectable concentrations (MDCs) for a one minute static survey, calculated using MARSSIM guidance, was less than 0.5 pCi/g, which is significantly below 50% of the 6.8 pCi/g IL. The ex-situ soil gamma radiation screening system was calibrated prior to mobilization in the field and daily operational function checks were performed prior to use. The calibration and function check documentation are included in Appendix C. Based on the highest system background (blank) measurements from daily operational function checks and efficiency (pCi/g/cpm), the highest Ra-226 MDC for the screening system calculated was less than 1.0 pCi/g, significantly less than the 6.8 pCi/g IL. The MDCs during the supplemental characterization met the QA objective.

The QA/QC measures also included nine field QA/QC duplicate soil samples out of the 67 soil samples collected sent to the off-site vendor laboratory for analysis to confirm contamination relative to the IL levels estimated by the field ex-situ gamma radiation soil screening. The QA/QC duplicate vendor laboratory results are included in Table 3. All QA/QC sample results confirm Ra-226 concentration levels relative to the IL level determined by the field ex-situ gamma radiation soil screening. The Ra-226 concentration in QA/QC duplicate samples estimated by on-sit ex-situ gamma radiation soil screening are comparable to the off-site vendor laboratory analytical results.

Tables

Table 1
Typical Gamma Scan Data Exported from the Scan System Data Logger

ID	Time	Northing[1] (feet)	Easting[1] (feet)	MSL Elevation (feet)	CPM 2x2 Bare NaI Detector	Ra-226 pCi/g[2]	Zone_ID
1	10/18/2023 8:12	1579902.54	2781775.10	7300	24761	5.06	Treatment_Ponds
2	10/18/2023 8:12	1579903.88	2781775.74	7300	23724	4.54	Treatment_Ponds
3	10/18/2023 8:12	1579904.17	2781778.02	7300	25456	5.41	Treatment_Ponds
4	10/18/2023 8:12	1579903.99	2781781.66	7300	25463	5.41	Treatment_Ponds
5	10/18/2023 8:12	1579904.34	2781785.64	7300	24786	5.07	Treatment_Ponds
6	10/18/2023 8:12	1579904.46	2781790.40	7300	23246	4.30	Treatment_Ponds
7	10/18/2023 8:12	1579903.97	2781795.09	7301	23822	4.59	Treatment_Ponds
8	10/18/2023 8:12	1579903.49	2781800.02	7300	25694	5.53	Treatment_Ponds
9	10/18/2023 8:12	1579904.14	2781805.18	7301	31410	8.39	Treatment_Ponds
10	10/18/2023 8:12	1579904.09	2781810.07	7301	28672	7.02	Treatment_Ponds
11	10/18/2023 8:12	1579904.27	2781814.71	7301	25935	5.65	Treatment_Ponds
12	10/18/2023 8:12	1579904.36	2781819.65	7301	26984	6.17	Treatment_Ponds
13	10/18/2023 8:12	1579904.09	2781821.94	7301	26902	6.13	Treatment_Ponds
14	10/18/2023 8:12	1579903.77	2781822.84	7301	28593	6.98	Treatment_Ponds
15	10/18/2023 8:12	1579903.22	2781827.06	7301	28036	6.70	Treatment_Ponds
16	10/18/2023 8:12	1579902.15	2781831.73	7302	27870	6.62	Treatment_Ponds
17	10/18/2023 8:12	1579902.11	2781836.90	7302	26062	5.71	Treatment_Ponds
18	10/18/2023 8:13	1579902.06	2781842.31	7302	27827	6.59	Treatment_Ponds
19	10/18/2023 8:13	1579903.05	2781848.05	7302	27534	6.45	Treatment_Ponds
20	10/18/2023 8:13	1579902.68	2781853.78	7302	25994	5.68	Treatment_Ponds
21	10/18/2023 8:13	1579903.18	2781859.71	7302	26539	5.95	Treatment_Ponds
22	10/18/2023 8:13	1579903.39	2781865.09	7302	28415	6.89	Treatment_Ponds
23	10/18/2023 8:13	1579903.06	2781874.06	7302	26264	5.81	Treatment_Ponds
24	10/18/2023 8:13	1579902.23	2781879.73	7303	23133	4.25	Treatment_Ponds
25	10/18/2023 8:13	1579903.30	2781885.83	7303	24734	5.05	Treatment_Ponds
26	10/18/2023 8:13	1579903.75	2781891.77	7303	22704	4.03	Treatment_Ponds
27	10/18/2023 8:13	1579903.75	2781897.38	7303	22324	3.84	Treatment_Ponds
28	10/18/2023 8:13	1579902.96	2781902.73	7303	20758	3.06	Treatment_Ponds
29	10/18/2023 8:13	1579899.92	2781907.85	7303	19594	2.48	Treatment_Ponds
30	10/18/2023 8:13	1579899.78	2781914.18	7304	20910	3.14	Treatment_Ponds
31	10/18/2023 8:13	1579900.82	2781919.94	7304	20171	2.77	Treatment_Ponds
32	10/18/2023 8:13	1579901.72	2781925.63	7304	22063	3.71	Treatment_Ponds
33	10/18/2023 8:13	1579901.53	2781931.45	7304	20831	3.10	Treatment_Ponds
34	10/18/2023 8:13	1579901.71	2781937.44	7305	22406	3.88	Treatment_Ponds
35	10/18/2023 8:13	1579904.08	2781942.73	7305	22237	3.80	Treatment_Ponds
36	10/18/2023 8:13	1579903.40	2781948.33	7305	21049	3.20	Treatment_Ponds
37	10/18/2023 8:13	1579903.70	2781954.27	7305	20684	3.02	Treatment_Ponds
38	10/18/2023 8:13	1579904.71	2781959.77	7306	19715	2.54	Treatment_Ponds
39	10/18/2023 8:13	1579904.25	2781965.50	7306	19402	2.38	Treatment_Ponds
40	10/18/2023 8:13	1579903.80	2781971.03	7306	19788	2.57	Treatment_Ponds

(1) projection: StatePlane NAD 1983 NM West - Feet

(2) Ra-226 pCi/g determined from surface soil gamma radiation scan using 2x2 NaI detector and Site-specific gamma radiation level (cpm) correlation

Table 2
Static Gamma Radiation Survey at Data Point/Soil Sample Locations

Data Point ID	Treatment Pond ID	Survey Date	Data Point Coordinate NAD83 StatePlane NM West, Feet		Static Gamma Radiation Survey Collimated (0.5" PB) 2x2 Detector	
			Northing	Easting	Static Gamma CPM	Surface Soil Static Gamma Estimated Ra-226 pCi/g
TP-1	8	11/13/2023	1581160	2782050	8154	4.6
TP-2	8	11/13/2023	1581049	2782082	6452	1.9
TP-3	8	11/13/2023	1581054	2782194	8391	5.0
TP-4	8	11/13/2023	1581056	2781878	6148	1.4
TP-5	8	11/13/2023	1581009	2781973	6414	1.9
TP-5B	8	11/13/2023	1580938	2781891	12872	12.2
TP-6	8	11/13/2023	1580922	2782111	10909	9.0
TP-7	8	11/13/2023	1580883	2782046	25660	32.6
TP-8	4	11/13/2023	1580701	2781885	6271	1.6
TP-9	4	11/13/2023	1580657	2781727	11168	9.5
TP-10	4	11/13/2023	1580626	2781847	7220	3.1
TP-11	4	11/13/2023	1580610	2781955	47231	67.2
TP-12	4	11/13/2023	1580536	2781864	9564	6.9
TP-13	4	11/13/2023	1580469	2782022	29197	38.3
TP-14	4	11/13/2023	1580448	2781724	14340	14.5
TP-15	4	11/13/2023	1580405	2781891	7949	4.3
TP-15B	4	11/13/2023	1580374	2781812	37940	52.3
TP-16	4/5	11/2/2023	1580347	2781902	6253	1.6
TP-16B	5	11/2/2023	1580328	2781811	34845	47.3
TP-17	5	11/2/2023	1580244	2781736	6229	1.6
TP-18	5	11/2/2023	1580226	2782002	7005	2.8
TP-19	5	11/2/2023	1580227	2782127	10742	8.8
TP-20	5	11/2/2023	1580228	2781915	6205	1.5
TP-21	5	11/2/2023	1580208	2781840	32143	43.0
TP-22	5	11/2/2023	1580165	2781780	15930	17.1
TP-23	5/6	11/1/2023	1580123	2781924	7359	3.4
TP-24	6	11/1/2023	1580069	2781800	7873	4.2
TP-25	6	11/1/2023	1580062	2782028	6629	2.2
TP-26	6	11/1/2023	1580069	2781851	19833	23.3
TP-27	6	11/1/2023	1580070	2781925	6839	2.5
TP-28	6	11/2/2023	1580058	2781819	19305	22.5
TP-29	6/7	11/1/2023	1580018	2781918	6952	2.7
TP-30	7	11/1/2023	1579960	2781881	7672	3.9
TP-31	7	11/1/2023	1579960	2781945	6195	1.5
TP-32	7	11/1/2023	1579963	2781801	8654	5.4
TP-33	7	11/1/2023	1579962	2782026	5955	1.1
TP-34	7	11/1/2023	1579905	2781906	5895	1.0
TP-35	1	4/15/2024	1580506	2782478	9284	6.4
TP-36	1	4/15/2024	1580485	2782620	21880	26.6
TP-37	1	4/15/2024	1580440	2782508	7677	3.9
TP-38	1	4/15/2024	1580409	2782635	10030	7.6
TP-39	1	4/15/2024	1580389	2782407	13401	13.0
TP-40	1	4/15/2024	1580369	2782563	8484	5.2
TP-41	1	4/15/2024	1580303	2782726	34091	46.1
TP-42	1	4/15/2024	1580282	2782640	8149	4.6
TP-43	1	4/15/2024	1580242	2782586	8081	4.5
TP-44	1	4/15/2024	1580214	2782663	8627	5.4
TP-45	1	4/15/2024	1580206	2782536	10022	7.6
TP-46	1	4/15/2024	1580316	2782449	32407	43.4

Table 3

Treatment Pond Characterization Area Soil Sample Field Ex-Situ Screening and Vendor Laboratory Results Summary

Sample Data						Field Soil Screening Data							Laboratory Data			
Sample ID	Sample Depth (ft)	Pond /Area	Sample Date	Sample Time	Description	Screen Date	Sample Weight grams	609 (559-669) Kev Gross Counts CP5M	CPM	6.6 pCi/g Ra-226 Reference Soil CPM	Soil Gamma Screening Estimated Ra-226 pCi/g	Soil IL (< or >)	Sample Sent to Lab	Ra-226 pCi/g	Error Estimate pCi/g	MDC pCi/g
TP-1	6"-12"	8	11/13/2023	1130	Light brown/white specks	11/16/2023	3000	1481	296	488	2.7	<	-	-	-	-
TP-2	6"-12"	8	11/13/2023	1300	Light brown sandy	11/16/2023	3000	1227	245	488	2.0	<	-	-	-	-
TP-3	6"-12"	8	11/13/2023	1150	Brown packed clay	11/16/2023	3000	1242	248	488	2.0	<	-	-	-	-
TP-4	6"-12"	8	11/13/2023	1115	Brown packed clay	11/16/2023	3000	1410	282	488	2.5	<	-	-	-	-
TP-5	6"-12"	8	11/13/2023	1250	Light brown sandy	11/16/2023	3000	1102	220	488	1.6	<	-	-	-	-
TP-5B	6"-12"	8	11/13/2023	1025	Light grey/brown silty sand	11/16/2023	3000	4353	871	488	10.7	>	-	-	-	-
TP-5B	1.5'-2.0'	8	11/14/2024	915	Light grey/brown silty sand	11/16/2024	3000	2676	535	488	6.0	≈	-	-	-	-
TP-5B	2'-3'	8	11/14/2023	920	Rocky light grey silty	11/16/2023	3000	1928	386	488	3.9	<	-	-	-	-
TP-5B	3'-3.5'	8	11/14/2023	930	Light brown silty	11/16/2023	3000	1251	250	488	2.0	<	-	-	-	-
TP-6	6"-12"	8	11/13/2023	1315	Brown silty sand w/ stones	11/16/2023	3000	1643	329	488	3.1	<	-	-	-	-
TP-7	6"-12"	8	11/13/2023	1210	Light brown silty/loam clay	11/16/2023	3000	1478	296	488	2.7	<	-	-	-	-
TP-8	6"-12"	4	11/13/2023	1330	Light brown packed silty clay	11/16/2023	3000	1341	268	488	2.3	<	-	-	-	-
TP-9	6"-12"	4	11/14/2023	755	Light brown packed silty clay	11/16/2023	3000	1361	272	488	2.3	<	-	-	-	-
TP-10	6"-12"	4	11/14/2023	900	Brown silty loam	11/16/2023	3000	1153	231	488	1.8	<	-	-	-	-
TP-11	6"-12"	4	11/13/2023	1345	Light brown/white specks	11/16/2023	3000	23511	4702	488	64.4	>	x	61.5	1.4	0.7
TP-11	1.5'-2'	4	11/16/2023	1105	Light brown packed silty clay	11/16/2023	3000	1439	288	488	2.6	<	x	1.1	0.1	0.1
TP-12	6"-12"	4	11/14/2023	850	Brown packed clay & silty	11/16/2023	3000	1320	264	488	2.2	<	-	-	-	-
TP-13	6"-12"	4	11/13/2023	1405	Light brown silty sand	11/16/2023	3000	1389	278	488	2.4	<	-	-	-	-
TP-14	6"-12"	4	11/14/2023	810	Light brown/white specks	11/16/2023	3000	1388	278	488	2.4	<	-	-	-	-
TP-15	6"-12"	4	11/14/2023	835	Light brown sandy	11/16/2023	3000	1120	224	488	1.7	<	-	-	-	-
TP-15B	6"-12"	4	11/14/2023	825	Brown silty with cobble	11/16/2023	3000	7551	1510	488	19.7	>	x	15.2	0.5	0.3
TP-15B	1'-1.5'	4	11/16/2023	1135	Light brown sandy	11/16/2023	3000	1362	272	488	2.4	<	x	1.2	0.2	0.2
TP-16	6"-12"	4/5	11/7/2023	1225	Brown silty clay	11/8/2023	3000	1321	264	541	2.2	<	-	-	-	-
TP-16B	6"-12"	5	11/7/2023	1048	Brown hardpack silty	11/8/2023	3000	3782	756	541	9.1	>	-	-	-	-
TP-16B	1'-1.5'	5	11/16/2023	1150	Brown hardpack silty clay	11/16/2023	3000	1960	392	488	4.0	<	-	-	-	-
TP-17	6"-12"	5	11/2/2023	1135	Light brown sandy/silty	11/8/2023	3000	1373	275	541	2.4	<	-	-	-	-
TP-18	6"-12"	5	11/7/2023	1000	Light brown sandy/silty	11/8/2023	3000	1191	238	541	1.9	<	-	-	-	-
TP-19	6"-12"	5	11/2/2023	1340	Light brown hardpack silty	11/8/2023	3000	1463	293	541	2.6	<	-	-	-	-
TP-20	6"-12"	5	11/7/2023	1010	Dark brown silty/clay	11/8/2023	3000	1164	233	541	1.8	<	-	-	-	-
TP-21	6"-12"	5	11/7/2023	1025	Brown silty clay	11/8/2023	2716	8363	1673	541	22.0	>	-	-	-	-
TP-21	1'-1.5'	5	11/16/2023	1205	Brown silty clay	11/16/2023	3000	1440	288	488	2.6	<	-	-	-	-
TP-22	6"-12"	5	11/7/2023	1040	Light brown sandy/silty	11/8/2023	3000	1186	237	541	1.9	<	-	-	-	-
TP-23	6"-12"	5/6	11/2/2023	1330	Brown silty loam, thin clay	11/8/2023	3000	1314	263	541	2.2	<	-	-	-	-
TP-24	6"-12"	6	11/2/2023	1115	Brown loamy clay	11/8/2023	3000	1218	244	541	1.9	<	-	-	-	-
TP-25	6"-12"	6	11/2/2023	1310	Light brown sandy	11/8/2023	3000	1231	246	541	2.0	<	-	-	-	-
TP-26	6"-12"	6	11/7/2023	1210	Brown silty packed, specks rock	11/8/2023	3000	1213	243	541	1.9	<	-	-	-	-
TP-27	6"-12"	6	11/7/2023	1150	Light brown sandy	11/8/2023	3000	1053	211	541	1.5	<	-	-	-	-
TP-28	6"-12"	6	11/2/2023	1125	Light brown sandy/silty	11/8/2023	3000	1305	261	541	2.2	<	-	-	-	-

Table 3 (cont.)

Treatment Pond Characterization Area Soil Sample Field Ex-Situ Screening and Vendor Laboratory Results Summary

Sample Data						Field Soil Screening Data							Laboratory Data			
Sample ID	Sample Depth (ft)	Pond /Area	Sample Date	Sample Time	Description	Screen Date	Sample Weight grams	609 (559-669) Kev Gross Counts CP5M	CPM	6.6 pCi/g Ra-226 Reference Soil CPM	Soil Gamma Screening Estimated Ra-226 pCi/g	Soil IL (< or >)	Sample Sent to Lab	Ra-226 pCi/g	Error Estimate pCi/g	MDC pCi/g
TP-29	6"-12"	6/7	11/7/2023	845	Light brown sandy/silty	11/8/2023	3000	1302	260	541	2.2	<	-	-	-	-
TP-30	6"-12"	7	11/7/2023	901	Dark brown silty/clay	11/8/2023	3000	1367	273	541	2.4	<	-	-	-	-
TP-31	6"-12"	7	11/7/2023	915	Light brown sandy/silty	11/8/2023	3000	1267	253	541	2.1	<	-	-	-	-
TP-32	6"-12"	7	11/2/2023	1103	Brown loamy clay	11/8/2023	3000	1278	256	541	2.1	<	-	-	-	-
TP-33	6"-12"	7	11/2/2023	1255	Light brown sandy	11/8/2023	3000	1419	284	541	2.5	<	-	-	-	-
TP-34	6"-12"	7	11/2/2023	1245	Light brown sandy/silty	11/8/2023	3000	1332	266	541	2.3	<	-	-	-	-
TP-35	0-6"	1	4/15/2024	950	Light brown loamy/silty clay	4/17/2024	3000	1774	355	494	3.5	<	-	-	-	-
TP-35	6"-12"	1	4/16/2024	1050	Brown silty clay	4/17/2024	3000	954	191	494	1.2	<	-	-	-	-
TP-36	0-6"	1	4/16/2024	840	Light brown loamy/silty clay	4/17/2024	3000	2684	537	494	6.1	≈	-	-	-	-
TP-36	6"-12"	1	4/16/2024	1100	light brown silty clay w/ grey rocks	4/17/2024	3000	4247	849	494	10.4	>	x	8.8	0.5	0.3
TP-36	1'-2'	1	4/17/2024	1120	Light brown silty/sandy clay	4/17/2024	3000	1352	270	494	2.3	<	x	0.7	0.2	0.2
TP-37	0-6"	1	4/16/2024	820	Dark brown silty/sandy clay	4/17/2024	3000	1145	229	494	1.7	<	-	-	-	-
TP-37	6"-12"	1	4/16/2024	1300	Dark brown clay w/ small rock	4/17/2024	3000	1153	231	494	1.8	<	-	-	-	-
TP-38	0-6"	1	4/16/2024	830	Light brown loamy/silty clay	4/17/2024	3000	2196	439	494	4.7	<	-	-	-	-
TP-38	6"-12"	1	4/16/2024	1215	Brown silty/sandy clay w/ roots	4/17/2024	3000	1067	213	494	1.5	<	-	-	-	-
TP-39	0-6"	1	4/16/2024	910	Light brown loamy/silty clay	4/17/2024	3000	4898	980	494	12.3	>	-	-	-	-
TP-39	6"-12"	1	4/16/2024	1035	Brown silty clay w/ roots	4/17/2024	3000	1505	301	494	2.8	<	-	-	-	-
TP-40	0-6"	1	4/15/2024	945	Light brown loamy/silty clay	4/17/2024	3000	1106	221	494	1.6	<	-	-	-	-
TP-40	6"-12"	1	4/16/2024	1250	Light brown silty/sandy clay	4/17/2024	3000	1140	228	494	1.7	<	-	-	-	-
TP-41	0-6"	1	4/16/2024	845	Light brown loamy/silty clay	4/17/2024	2800	12188	2612	494	35.1	>	x	43.5	1.1	0.5
TP-41	6"-12"	1	4/16/2024	1115	Light brown silty clay	4/17/2024	2700	1243	276	494	2.4	<	x	1.9	0.3	0.3
TP-42	0-6"	1	4/15/2024	930	Light brown loamy/silty clay	4/17/2024	2936	1171	239	494	1.9	<	-	-	-	-
TP-42	6"-12"	1	4/16/2024	1240	Brown silty/sandy clay	4/17/2024	3000	975	195	494	1.3	<	-	-	-	-
TP-43	0-6"	1	4/15/2024	940	Light brown loamy/silty clay	4/17/2024	3000	1165	233	494	1.8	<	-	-	-	-
TP-43	6"-12"	1	4/16/2024	1230	light brown silty clay w/ roots	4/17/2024	3000	1101	220	494	1.6	<	-	-	-	-
TP-44	0-6"	1	4/15/2024	915	Light brown loamy/silty clay	4/17/2024	3000	1224	245	494	2.0	<	-	-	-	-
TP-44	6"-12"	1	4/16/2024	1125	Light brown loamy/silty clay	4/17/2024	3000	1101	220	494	1.6	<	-	-	-	-
TP-45	0-6"	1	4/16/2024	850	Light brown loamy/silty clay	4/17/2024	2700	1558	346	494	3.4	<	-	-	-	-
TP-45	6"-12"	1	4/16/2024	1015	Brown silty clay	4/17/2024	3000	1109	222	494	1.6	<	-	-	-	-
TP-46	0-6"	1	4/16/2024	900	Light brown loamy/silty clay w/ grey rock	4/17/2024	3000	21504	4301	494	58.7	>	-	-	-	-
TP-46	6"-12"	1	4/16/2024	1025	Dark brown silty/clay w/ small rocks	4/17/2024	3000	1766	353	494	3.5	<	x	2.3	0.3	0.2
EBP-1	Surface	East Borrow	4/30/2024	830	Composite from surface of pile	4/30/2024	3000	16930	3386	533	45.9	>	-	-	-	-
EBP-1	Internal	East Borrow	4/30/2024	853	Composite from various depths from inside pile	4/30/2024	3000	14135	2827	533	38.1	>	-	-	-	-

Table 4
Treatment Pond Surface and Subsurface Soil Ra-226 Level Summary

Data Point ID	Treatment Pond ID	Static Gamma Estimated Ra-226 pCi/g 0-6" (surface) Soil	Ex-Situ Soil Screening Estimated Ra-226 pCi/g			
			0-6" Soil (surface)	6"-12" Soil	1'-2' Soil	2'-3' Soil
TP-1	8	4.6	-	2.7	-	-
TP-2	8	1.9	-	2.0	-	-
TP-3	8	5.0	-	2.0	-	-
TP-4	8	1.4	-	2.5	-	-
TP-5	8	1.9	-	1.6	-	-
TP-5B	8	12.2	-	10.7	6.0	3.9
TP-6	8	9.0	-	3.1	-	-
TP-7	8	32.6	-	2.7	-	-
TP-8	4	1.6	-	2.3	-	-
TP-9	4	9.5	-	2.3	-	-
TP-10	4	3.1	-	1.8	-	-
TP-11	4	67.2	-	64.4	2.6	-
TP-12	4	6.9	-	2.2	-	-
TP-13	4	38.3	-	2.4	-	-
TP-14	4	14.5	-	2.4	-	-
TP-15	4	4.3	-	1.7	-	-
TP-15B	4	52.3	-	19.7	2.4	-
TP-16	4/5	1.6	-	2.2	-	-
TP-16B	5	47.3	-	9.1	4.0	-
TP-17	5	1.6	-	2.4	-	-
TP-18	5	2.8	-	1.9	-	-
TP-19	5	8.8	-	2.6	-	-
TP-20	5	1.5	-	1.8	-	-
TP-21	5	43.0	-	22	2.6	-
TP-22	5	17.1	-	1.9	-	-
TP-23	5/6	3.4	-	2.2	-	-
TP-24	6	4.2	-	1.9	-	-
TP-25	6	2.2	-	2	-	-
TP-26	6	23.3	-	1.9	-	-
TP-27	6	2.5	-	1.5	-	-
TP-28	6	22.5	-	2.2	-	-
TP-29	6/7	2.7	-	2.2	-	-
TP-30	7	3.9	-	2.4	-	-
TP-31	7	1.5	-	2.1	-	-
TP-32	7	5.4	-	2.1	-	-
TP-33	7	1.1	-	2.5	-	-
TP-34	7	1.0	-	2.3	-	-
TP-35	1	6.4	3.5	1.2	-	-
TP-36	1	26.6	6.1	10.4	2.3	-
TP-37	1	3.9	1.7	1.8	-	-
TP-38	1	7.6	4.7	1.5	-	-
TP-39	1	13.0	12.3	2.8	-	-
TP-40	1	5.2	1.6	1.7	-	-
TP-41	1	46.1	35.1	2.4	-	-
TP-42	1	4.6	1.9	1.3	-	-
TP-43	1	4.5	1.8	1.6	-	-
TP-44	1	5.4	2.0	1.6	-	-
TP-45	1	7.6	3.4	1.6	-	-
TP-46	1	43.4	58.7	3.5	-	-

Note: Surface Soil Static Gamma Estimated pCi/g levels were estimated from .5" lead collimated detector static gamma measurements.

Figures



Figure 1
Mt. Taylor Mine Site
Treatment Pond Characterization
Areas and Concrete Structure Locations

Legend

- Concrete Structure
- North Controlled Fence
- Treatment Pond Characterization Area

Environmental Services, Inc.



N
W E
S

Environmental Services, Inc.

Figure 2
Mt. Taylor Mine Site
Treatment Ponds Characterzation Area
Data Point Locations and
Gamma Survey Data

Legend

Estimated Ra-226

- <1.8 pCi/g
- 1.9 - 6.8 pCi/g
- 6.9 - 10.0 pCi/g
- 10.1 - 20.0 pCi/g
- 20.1 - 30.0 pCi/g
- 30.1 - 40.0 pCi/g
- >40.1 pCi/g
- Data Point
- North Controlled Fence
- Treatment Pond Characterization Area

Note: Ra-226 pCi/g is determined from surface soil gamma radiation scan and static cpm using 2x2 NaI detector and Site specific gamma radiation level (cpm) correlation.



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AVM Environmental Services, Inc.

Figure 3
Mt. Taylor Mine Site
Treatment Ponds Characterzation Area
Estimated Depth of Contamination above the 6.8 pCi/g Ra-226 Investigation Level

Legend

- Treatment Pond Characterization Area
- Berm Profile above the Ra-226 6.8 pCi/g Investigation Level
- 6 Inch Contamination depth above the Ra-226 6.8 pCi/g Investigation Level
- 1 ft Contamination depth above the Ra-226 6.8 pCi/g Investigation Level
- 1.5 ft Contamination depth above the Ra-226 6.8 pCi/g Investigation Level
- Concrete Structure
- North Controlled Fence

Appendices

Appendix A	Surface and Subsurface Contamination Field Investigation Documentation (Soil Sample Log Forms, Field Soil Sample Ex-Situ Gamma Radiation Screening Forms)
Appendix B	Concrete Structure Radiologic Investigation
Appendix C	Radiologic Instrument Calibration and Operational Function Check and Collimated Detector Correlation Documentation
Appendix D	Soil Sample COC and Laboratory Analytical Results Report

AVM Environmental Services, Inc.
Gamma Radiation Survey

Static Gamma Radiation Survey Field Form

Instrumentation : Scaler/Ratemeter L2221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or _____ No.

Survey Area/Unit Decsription Mt Taylor Mine Site Treatment Ponds

Survey Date/Time	Survey Point ID/Description	Survey Point Coordinate		Gamma Radiation Reading, CPM	Comments/Notes
		Northing	Easting		
11-13-23	TP-1	1581160.23	2782050.33	8154	
11-13-23	TP-2	1581048.51	2782082.19	6452	
11-13-23	TP-3	1581053.56	2782193.53	8391	
11-13-23	TP-4	1581056.28	2781877.80	6148	
11-13-23	TP-5	1581008.60	2781973.38	6414	
11-13-23	TP-5B	1580937.63	2781890.74	12872	
11-13-23	TP-6	1580921.93	2782110.62	10909	
11-13-23	TP-7	1580883.33	2782045.88	25660	
11-13-23	TP-8	1580701.01	2781884.91	6271	
11-13-23	TP-9	1580657.09	2781726.59	11168	
11-13-23	TP-10	1580625.66	2781846.72	7220	
11-13-23	TP-11	1580609.85	2781954.68	47231	
11-13-23	TP-12	1580536.13	2781863.94	9564	
11-13-23	TP-13	1580469.14	2782022.02	29197	
11-13-23	TP-14	1580448.27	2781723.76	14340	
11-13-23	TP-15	1580405.00	2781891.33	7949	
11-13-23	TP-15B	1580374.22	2781811.70	37940	
11-2-23	TP-16	1580347.37	2781901.68	6253	
11-2-23	TP-16B	1580327.56	2781811.01	34845	
11-2-23	TP-17	1580244.30	2781736.20	6229	
11-2-23	TP-18	1580226.28	2782002.49	7005	
11-2-23	TP-19	1580226.78	2782127.17	10742	
11-2-23	TP-20	1580228.47	2781915.38	6205	
11-2-23	TP-21	1580207.85	2781839.85	32143	
11-2-23	TP-22	1580164.80	2781780.30	15930	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey

Static Gamma Radiation Survey Field Form

Instrumentation : Scaler/Ratemeter 2221 SN290801, Detector SPA-3 #30
Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓
2"x2" NaI Detector Collimated ✓ Yes or ____ No.
Survey Area/Unit Decsription Mt. Taylor Mine Site Treatment Ponds

Survey Date/Time	Survey Point ID/Description	Survey Point Coordinate		Gamma Radiation Reading, CPM	Comments/Notes
		Northing	Easting		
11-2-23	TP-23	1580122.85	2781924.41	7359	
11-2-23	TP-24	1580068.98	2781799.51	7873	
11-2-23	TP-25	1580062.13	2782027.54	6629	
11-2-23	TP-26	1580069.28	2781851.47	19833	
11-2-23	TP-27	1580070.01	2781925.21	6839	
11-2-23	TP-28	1580057.59	2781819.32	19305	
11-2-23	TP-29	1580017.82	2781917.62	6952	
11-2-23	TP-30	1579960.47	2781880.55	7672	
11-2-23	TP-31	1579960.46	2781944.76	6195	
11-2-23	TP-32	1579963.04	2781801.01	8654	
11-2-23	TP-33	1579962.22	2782025.52	5955	
4-10-24	TP-34	1579905.48	2781906.24	5895	
4-10-24	TP-35	1580505.83	2782477.73	9284	
4-10-24	TP-36	1580484.67	2782620.22	21880	
4-10-24	TP-37	1580439.62	2782507.78	7677	
4-10-24	TP-38	1580408.58	2782634.69	10030	
4-10-24	TP-39	1580389.39	2782406.73	13401	
4-10-24	TP-40	1580369.24	2782563.39	8484	
4-10-24	TP-41	1580303.17	2782725.85	34091	
4-10-24	TP-42	1580282.42	2782639.66	8149	
4-10-24	TP-43	1580242.16	2782585.55	8081	
4-10-24	TP-44	1580214.10	2782662.94	8627	
4-10-24	TP-45	1580205.92	2782535.59	10022	
4-10-24	TP-46	1580316.03	2782448.56	32407	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Subsurface Soil Sample Log Form
Mt. Taylor Mine Site

Sample ID	Sample Date/Time	Sample Depth	Sample Description	Comments/Notes
TP-32	11-2-23 @1103	6"-12"	Brown Clay/loamy	
TP-24	11-2-23 @1115	6"-12"	Brow Clay/loamy Roots	
TP-28	11-2-23 @1125	6"-12"	light brown Sandy/Silty Roots	
TP-17	11-2-23 @1135	6"-12"	light brown Sandy/silty Roots	
TP-34	11-2-23 @1245	6"-12"	light brown Sandy/silty Roots	
TP-33	11-2-23 @1255	6"-12"	light brown Sandy Roots	
TP-25	11-2-23 @1310	6"-12"	light brown Sandy Roots	
TP-23	11-2-23 @1330	6"-12"	Brown Silty loam - Small layer of Rock Clay	
TP-19	11-2-23 @1340	6"-12"	light brown hardpack silty Roots	
TP-29	11-7-23 @845	6"-12"	light brown Silty/Sandy Roots	
TP-30	11-7-23 @901	6"-12"	Dark Brown Clay & Silt Sandstone Refusal @ 28"	
TP-31	11-7-23 @915	6"-12"	light brown Silty Sand Sandstone Bed @16"	
TP-18	11-7-23 @1000	6"-12"	light brown silty Sand	
TP-20	11-7-23 @1010	6"-12"	Dark brown Silty/Sand & Clay	
TP-21	11-7-23 @1025	6"-12"	Brown Silty Clay	

AVM Environmental Services, Inc.
Subsurface Soil Sample Log Form
Mt. Taylor Mine Site

Sample ID	Sample Date/Time	Sample Depth	Sample Description	Comments/Notes
TP-22	11-7-23 @1040	6"-12"	Light Brown Silty Sand	
TP-16B	11-7-23 @1048	6"-12"	Brown hardpack Silty	
TP-27	11-7-23 @1150	6"-12"	light brown Sandy sandstone @1.4'	
TP-26	11-7-23 @1210	6"-12"	Brown Silty/Rock speckled w/ white Soil	
TP-16	11-7-23 @1225	6"-12"	Brown Clay Silty Hard Rock	
TP-5b	11-13-23 @1025	6"-12"	Light Grey/ brown silty Sand gravel	
TP-4	11-13-23 @1115	6"-12"	Brown Packed Clay	
TP-1	11-13-23 @1130	6"-12"	light brown/grey-white limestone	plastic debris
TP-3	11-13-23 @1150	6"-12"	Brown Packed Clay	
TP-7	11-13-23 @1210	6"-12"	light brown Silty/loamy Clay	
TP-5	11-13-23 @1250	6"-12"	light brown Sandy	
TP-2	11-13-23 @1300	6"-12"	light brown Sandy	
TP-6	11-13-23 @1315	6"-12"	brown Silty Sand w/stones	
TP-8	11-13-23 @1330	6"-12"	light brown Packed Silt Clay	
TP-11	11-13-23 @1345	6"-12"	light brown/white Silty	

AVM Environmental Services, Inc.
Subsurface Soil Sample Log Form
Mt. Taylor Mine Site

Sample ID	Sample Date/Time	Sample Depth	Sample Description	Comments/Notes
TP-13	11-13-23 @1405	6"-12"	light brown Silty Sand	
TP-9	11-14-23 @755	6"-12"	light brown Packed silty Clay	
TP-14	11-14-23 @810	6"-12"	light brown Packed white specks 1" Rock	
TP-15B	11-14-23 @825	6"-12"	Brown silty w/ cobble	
TP-15	11-14-23 @835	6"-12"	light brown Sandy	
TP-12	11-14-23 @850	6"-12"	light brown packed silty Dark brown Clay	
TP-10	11-14-23 @900	6"-12"	Brown Silty loamy moist	
TP-5B	11-14-23 @920	2'-3.0'	Grey Rocky	
TP-5B	11-14-23 @930	3'-3.5'	light brown Silty	
TP-11	11-16-23 @1105	1.5'-2'	light brown Packed Clay	
TP-11	11-16-23 @1112	2'-2.5'	light brown Packed Clay	
TP-15B	11-16-23 @1135	1'-1.5'	light brown Sandy	
TP-16B	11-16-23 @1150	1'-1.5'	brown Hard pack Clay	
TP-21	11-16-23 @1205	1'-1.5'	brown Silty Clay	

AVM Environmental Services, Inc.
Subsurface Soil Sample Log Form
Mt. Taylor Mine Site

Sample ID	Sample Date/Time	Sample Depth	Sample Description	Comments/Notes
TP-44	4-15-24 915	0-6"	light brown loam/silt/clay	
TP-42	4-15-24 930	0-6"	"	
TP-43	4-15-24 940	0-6"	"	
TP-40	4-15-24 945	0-6"	"	
TP-35	4-15-24 950	0-6"	"	
TP-37	4-16-24 820	0-6"	Dark brown / Sandy / silty clay	
TP-38	4-16-24 830	0-6"	light brown loam/silt clay	
TP-36	4-16 24 840	0-6"	"	
TP-41	4-16-24 845	0-6"	"	
TP-45	4-16-24 850	0-6"	"	
TP-46	4-16-24 900	0-6"	" Slight grey.	
TP-~~4~~VP39	4-16 24 910	0-6"	"	
TP-45	4-16-24 1015	6"-12"	Brown silty clay	
TP-46	4-16 24 1025	6"-12"	Dark brown Silty clay w/ Rocks	
TP-39	4-16 24 1035	6"-12"	Brown silty clay Roots	

AVM Environmental Services, Inc.
Subsurface Soil Sample Log Form
Mt. Taylor Mine Site

Sample ID	Sample Date/Time	Sample Depth	Sample Description	Comments/Notes
TP-35	4-16-24 1050	6"-12"	Brown Silt, Clay	
TP-36	4-16-24 1100	6"-12"	light brown Silty Clay hardpack Grey Rocks	
TP-41	4-16-24 1115	6"-12"	light brown Silty Clay	
TP-44	4-16-24 1125	6"-12"	light brown loamy/silty Clay	
TP-38	4-16-24 1215	6"-12"	Brown silty/Sandy Clay Roots	
TP-43	4-16-24 1230	6"-12"	light brown silty/sand clay Roots	
TP-42	4-16-24 1240	6"-12"	Brown Silty/Sand Clay	
TP-40	4-16-24 1250	6"-12"	light brown Silty Sand Clay	
TP-37	4-16-24 1300	6"-12"	Dark Brown Clay w Stones 3/4"	
TP-36	4-17-24 1120	1'-2'	light brown Sandy-Silty Clay hard rock	
TP-36	4-17-24 1130	2'-3'	" " Not hard rock	

AVM Environmental Services, Inc.
Subsurface Soil Sample Log Form
Mt. Taylor Mine Site

Sample ID	Sample Date/Time	Sample Depth	Sample Description	Comments/Notes
EBP-1 Surface	4-30-24 830	0-6"	Composite Sample from surface of pile	grey material present
EBP-1 Internal	4-30-24 853	Various	Composite Sample from various depths inside of pile	"

AVM Environmental Services, Inc.
Field Soil Sample Gamma Radiation Screening Form
Mt. Taylor Mine Site

Instrumentation : Scaler/Ratemeter L2221 S#68782, Detector 44-20 S# 295573
Instrument Calibration Date: 5-10-23, Instrument Function Check Performed: Y
Survey Area/Unit Decsription Mt. Taylor Mine Site

Area exposure rate: 10-12 uR/hr

Date	Soil Sample ID	Sample Weight Grams	609 (559-669) Kev Gross Counts, CP5M	Weight Corrected CP5M	CPM	Reference Soil Compare (< or >)	Comments
11-8-23	Blank	-	314		63		
11-8-23	66 pCi/g Ra-226 Ref Soil	3000	2707		541		
11-8-23	TP-32 6"-12" 11-2-23 @1103	3000	1278		256		
11-8-23	TP-24 6"-12" 11-2-23 @1115	3000	1218		244		
11-8-23	TP-28 6"-12" 11-2-23 @1125	3000	1305		261		
11-8-23	TP-17 6"-12" 11-2-23 @1135	3000	1373		275		
11-8-23	TP-34 6"-12" 11-2-23 @1245	3000	1332		266		
11-8-23	TP-33 6"-12" 11-2-23 @1255	3000	1419		284		
11-8-23	TP-25 6"-12" 11-2-23 @1310	3000	1291		258		
11-8-23	TP-23 6"-12" 11-2-23 @1330	3000	1314		263		
11-8-23	TP-19 6"-12" 11-2-23 @1340	3000	1463		293		QA/QC 5 min: 1423
11-8-23	TP-29 6"-12" 11-7-23 @845	3000	1302		260		
11-8-23	TP-30 6"-12" 11-7-23 @901	3000	1367		273		
11-8-23	TP-31 6"-12" 11-7-23 @915	3000	1267		253		
11-8-23	TP-18 6"-12" 11-7-23 @1000	3000	1191		238		

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Field Soil Sample Gamma Radiation Screening Form
Mt. Taylor Mine Site

Instrumentation : Scaler/Ratemeter L2221 SN 68782, Detector 44-20 SN 295573
Instrument Calibration Date: 5-10-23, Instrument Function Check Performed: Y
Survey Area/Unit Decsription Mt. Taylor Mine Site

Area exposure rate: 10-12 uR/hr

Date	Soil Sample ID	Sample Weight Grams	609 (559-669) Kev Gross Counts, CP5M	Weight Corrected CP5M	CPM	Reference Soil Compare (< or >)	Comments
11-8-23	TP-20 6"-12" 11-7-23 @ 1010	3000	1164		233		
11-8-23	TP-21 6"-12" 11-7-23 @ 1025	2716	7571	8363	1673		
11-8-23	TP-22 6"-12" 11-7-23 @ 1040	3000	1186		237		
11-8-23	TP-16B 6"-12" 11-7-23 @ 1048	3000	3782		756		
11-8-23	TP-27 6"-12" 11-7-23 @ 1150	3000	1053		211		QA/QC cpsmin = 1052
11-8-23	TP-26 6"-12" 11-7-23 @ 1210	3000	1213		243		
11-8-23	TP-16 6"-12" 11-7-23 @ 1225	3000	1321		264		
11-16-23	Blank	-	335		67		
~~11-16-23~~	~~6.6 pCi/g Ref Soil~~	~~3000~~	~~335~~		~~67~~		
11-16-23	6.6 pCi/g Ref Soil	3000	2479		488		
11-16-23	TP-5B 6"-12" 11-13-23 @ 1025	3000	4353		871		
11-16-23	TP-4 6"-12" 11-13-23 @ 1115	3000	1410		282		
11-16-23	TP-1 6"-12" 11-13-23 @ 1130	3000	1481		296		
11-16-23	TP-3 6"-12" 11-13-23 @ 1150	3000	1242		248		
11-16-23	TP-7 6"-12" 11-13-23 @ 1210	3000	1478		296		

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Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Field Soil Sample Gamma Radiation Screening Form
Mt. Taylor Mine Site

Instrumentation : Scaler/Ratemeter L2221 S#68782, Detector 44-20 S# 295523
Instrument Calibration Date: 5-10-23, Instrument Function Check Performed: Y
Survey Area/Unit Decsription Mt. Taylor Mine Site

Area exposure rate: 10-12 uR/hr

Date	Soil Sample ID	Sample Weight Grams	609 (559-669) Kev Gross Counts, CPSM	Weight Corrected CPSM	CPM	Reference Soil Compare (< or >)	Comments
11-16-23	TP-5 6"-12" 11-13-23 @ 1250	3000	1102		220		
11-16-23	TP-2 6"-12" 11-13-23 @ 1300	3000	1227		245		
11-16-23	TP-6 6"-12" 11-13-23 @ 1315	3000	1643		329		
11-16-23	TP-8 6"-12" 11-13-23 @ 1330	3000	1341		268		
11-16 23	TP-11 6"-12" 11-13-23 @ 1345	3000	23511		4702		avac CPSM: 23785
11-16-23	TP-13 6"-12" 11-13-23 @ 1405	3000	1389		278		
11-16 23	TP-9 6"-12" 11-~~13~~-23 @ ~~810~~ 755	3000	1361		272		
11-16-23	TP-14 6"-12" 11-14-23 @ 810	3000	1388		278		
11-16-23	TP-15B 6"-12" 11-14-23 @ 825	3000	7551		1510		
11-16-23	TP-15 6"-12" 11-14-23 @ 835	3000	1120		224		
11-16-23	TP-12 6"-12" 11-14-23 @ 850	3000	1320		264		
11-16-23	TP-10 6"-12" 11-14-23 @ 900	3000	1153		231		
11-16-23	TP-5B 2'-3' 11-14-23 @ 920	3000	1928		386		
11-16-23	TP-5B 3'-3.5' 11-14-23 @ 930	3000	1251		250		
11-16-23	TP-11 1.5'-2' 11-16-23 @ 1105	3000	1439		288		

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Field Soil Sample Gamma Radiation Screening Form
Mt. Taylor Mine Site

Instrumentation : Scaler/Ratemeter L2221 S# 68782, Detector 44-20 S# 295573
Instrument Calibration Date: 5-10-23, Instrument Function Check Performed: ✓
Survey Area/Unit Decsription Mt. Taylor Mine Site

Area exposure rate: 10-12

Date	Soil Sample ID	Sample Weight Grams	609 (559-669) Kev Gross Counts, CP5M	Weight Corrected CP5M	CPM	Reference Soil Compare (< or >)	Comments
11-16-23	TP-15B 1'-1.5' 11-16-23 @1135	3000	1362		272		
11-16 23	TP-16B 1'-1.5' 11-16 23 @1150	3000	1960		392		
11-16-23	TP-21 1'-1.5' 11-16-23 @1205	3000	1440		288		
11-16-23	TP-5B 1.5'-2.0' 11-14-23 @915	3000	2676		535		

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Field Soil Sample Gamma Radiation Screening Form
Mt. Taylor Mine Site

Instrumentation : Scaler/Ratemeter L2221 S# 63782, Detector 44-20 S# 295573
Instrument Calibration Date: 5-10-23, Instrument Function Check Performed: Y
Survey Area/Unit Decsription Mt. Taylor mine site

Area exposure rate: 10.12

Date	Soil Sample ID	Sample Weight Grams	609 (559-669) Kev Gross Counts, CP5M	Weight Corrected CP5M	CPM	Reference Soil Compare (< or >)	Comments
4-17-24	Blank		310		62		
4-17-24	6.6 pCi/g Ra-226 Ref Soil	3000	2468		494		
4-17-24	TP-45 6"-12" 4-16-24 @ 1015	3000	1109		222		
4-17-24	TP-46 6"-12" 4-16-24 @ 1025	3000	1766		353		
4-17-24	TP-39 6"-12" 4-16-24 @ 1035	3000	1505		301		
4-17-24	TP-36 6"-12" 4-16-24 @ 1100	3000	4247		849		
4-17-24	TP-41 6"-12" 4-16-24 @ 1115	2700	1243	1381	276		
4-17-24	TP-44 6"-12" 4-16-24 @ 1125	3000	1101		220		
4-17-24	TP-38 6"-12" 4-16-24 @ 1215	3000	1067		213		
4-17-24	TP-42 6"-12" 4-16-24 @ 1240	3000	975		195		
4-17-24	TP-40 6"-12" 4-16-24 @ 1250	3000	1140		228		
4-17-24	TP-37 6"-12" 4-16-24 @ 1300	3000	1153		231		QA/QC CP5M: 1101
4-17-24	TP-35 6"-12" 4-16-24 @ 1050	3000	954		191		
4-17-24	TP-43 6"-12" 4-16-24 @ 1230	3000	1101		220		
4-17-24	TP-44 0-6" 4-15-24 @ 915	3000	1224		245		

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Field Soil Sample Gamma Radiation Screening Form
Mt. Taylor Mine Site

Instrumentation : Scaler/Ratemeter Ludlum 2221 S#68782, Detector 44-20 S# 295573
Instrument Calibration Date: 5-10-23, Instrument Function Check Performed: ✓
Survey Area/Unit Decsription Mt. Taylor mine Site

Area exposure rate: 10-12

Date	Soil Sample ID	Sample Weight Grams	609 (559-669) Kev Gross Counts, CP5M	Weight Corrected CP5M	CPM	Reference Soil Compare (< or >)	Comments
4-17-24	TP-42 0-6" 4-15-24 @ 930	2936	1171	1197	239		
4-17-24	TP-43 0-6" 4-15-24 @ 940	3000	1165		233		
4-17-24	TP-40 0-6" 4-15-24 @ 945	3000	1106		221		
4-17-24	TP-35 0-6" 4-15-24 @ 950	3000	1774		355		
4-17-24	TP-37 0-6" 4-16-24 @ 820	3000	1145		229		
4-17-24	TP-38 0-6" 4-16-24 @ 830	3000	2196		439		
4-17-24	TP-36 0-6" 4-16-24 @ 840	3000	2684		537		QA/QC CP5M: 2673
4-17-24	TP-41 0-6" 4-16-24 @ 845	2800	12188	13059	2612		
4-17-24	TP-45 0-6" 4-16-24 @ 850	2700	1558	1731	346		
4-17-24	TP-46 0-6" 4-16-24 @ 900	3000	21504		4301		
4-17-24	TP-39 0-6" 4-16-24 @ 910	3000	4898		980		
4-17-24	TP-36 1'-2' 4-17-24 @ 1120	3000	1352		270		

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Field Soil Sample Gamma Radiation Screening Form
Mt. Taylor Mine Site

Instrumentation : Scaler/Ratemeter 2221 S#68782, Detector 44-20 S# 295573
Instrument Calibration Date: 5-10-23, Instrument Function Check Performed: Y
Survey Area/Unit Decsription Mt. Taylor Mine Site

Area exposure rate: 10-12 uR/hr.

Date	Soil Sample ID	Sample Weight Grams	609 (559-669) Kev Gross Counts, CP5M	Weight Corrected CP5M	CPM	Reference Soil Compare (< or >)	Comments
4-30-24	Blank	—	327		65		
4-30-24	6.6 pC/g Ra-226	3000	2663		533		
4-30-24	EBP-1 Surface 4-30-24 @830	3000	16930		3386		
4-30-24	EBP-1 Internal 4-30-24 @853	3000	14135		2827		

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Road 4/5 CS-1 Ra-226 6.8pCi/g ILT 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-1 East inside wall	7970	
"	CS-1 South East wall	30312	
"	CS-1 West inside wall	9022	
"	CS-1 South west wall	13633	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 S#290801 Detector SPA-3 #30

Instrument Calibration Date: 2-19-24 Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Description Treatment Pond 5 CS-2 Ra-226 6.8 pCi/L ≈ 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-2 ~~West~~ North wall	10559	
"	CS-2 West wall	11509	
"	CS-2 West Wall Divider	12688	
"	CS-2 West wall	7355	
"	CS-2 South wall	8901	
"	CS-2 base North	17024	Sediments
"	CS-2 base South	18844	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Pond 6 CS-3 Ra-226 6.8 pCi/g 1L = 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-3 South wall	13081	
"	CS-3 South base	14425	
"	CS-3 North base	34721	Elevated gamma readings around Structure 2 103000

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Pond to CS-4 Ra-226 6.8 pCi/g 12 ≈ 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-4 North upper box top	7155	
"	CS-4 East upper box top	6952	
"	CS-4 South upper box top	6938	
"	CS-4 West upper box top	10395	
"	CS-4 North lower box Top	8988	
"	CS-4 west lower box top	15543	
"	CS-4 South lower box top	9062	
"	CS-4 North lower box wall	26459	
"	CS-4 West lower box wall	39452	
"	CS-4 South lower box wall	39466	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Pond 6 CS-4 Ra-226 6.8 pCi/gIL = 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-4 East lower box wall	23780	
11	CS-4 Lower box base	14800	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter 12221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Pond 6 CS-5 Ra-226 6.8 pCi/g 1L ≈ 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-5 South upper box top	6281	
"	CS-5 North upper box top	5938	
"	CS-5 East lower box top	6477	
"	CS-5 West lower box top	6762	
"	CS-5 North lower box top	7119	
"	CS-5 North lower box inside wall	6806	
"	CS-5 East lower box inside wall	6426	
"	CS-5 South lower box inside wall	6122	
"	CS-5 West lower box inside wall	7241	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 SN290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Pond 6/7 CS-6 Ra-226 6.8pCi/g ILTE 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-6 South/East Top	5762	
"	CS-6 South/East inside wall	5711	
"	CS-6 East inside wall	5590	
"	CS-6 North/East inside wall	5838	
"	CS-6 Middle base	6702	
"	CS-6 South base	7255	
"	CS-6 South/west inside wall	6004	
"	CS-6 West inside wall	6542	
"	CS-6 North/west inside wall	7271	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Pad 7 CS-7 Ra-226 6.8pCi/g IL # 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-7 North West box top	11804	
"	CS-7 North East box top	10611	
"	CS-7 East box top	11861	
"	CS-7 South box top	10354	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Pond 7 CS-8 Ra-226 6.8 pC/g ILT 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-8 box base	31092	
"	CS-8 North inside wall	20294	
"	CS-8 South inside wall	15894	
"	CS-8 ~~South~~ North wall	22039	
"	CS-8 ~~South~~ North base	29815	
"	CS-8 South wall	14452	
"	CS-8 South base	14080	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 S# 290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Pond 7 CS-9 Ra-226 6.8 pCi/g ILR ≈ 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-9 North upper box Top	6342	
4-22-24	CS-9 East upper box Top	6099	
"	CS-9 South upper box ~~wall~~ Top	6891	
"	CS-9 West upper box Top	8801	
"	CS-9 North lower box Top	9122	
"	CS-9 North lower box inside wall	27352	
"	CS-9 West lower box Top	15852	
"	CS-9 West lower box inside wall	45633	
"	CS-9 South lower box Top	10558	
"	CS-9 lower box base of Sump	20500	mine residue / soil

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Structures

Instrumentation : Scaler/Ratemeter L2221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Treatment Pond 1 CS-10 Ra-226 6.8 pCi/g, IL = 7200

Survey Date/Time	Survey Area ID/Description	Gamma Radiation Reading CPM	Comments/Notes
4-22-24	CS-10 North/East wall	25471	
"	CS-10 North/West wall	13104	
"	CS-10 North base	13052	
"	CS-10 Sump base	90000	mine residue / soil
"	CS-10 South/East wall	16022	
"	CS-10 South/West wall	9408	
"	CS-10 South base	10272	

Technician Signature _____, Reviewed by _____

AVM Environmental Services, Inc.
Scaler/Ratemeter - 2" x 2" NaI Detector Function Check

Function Check Source ID: 1% U_3O_8 Ore in Sealed can

2" x 2" NaI Detector ID: SPA-3 S#408522-30

Acceptable background Count (cpm) Range (20%) 6524 to 9786 (Bare)

Acceptable background Count (cpm) Range (20%) 2537 to 3805 (collimated)

Acceptable Source Count (cpm) Range (20%) 77104 to 115656

Date	Scaler/Ratemeter	Physical Check	Cal Due	Battery[1] Volts or OK	HV Volts	THR mV[2]	Window In or OUT[3]	C.C.[4]	BKG Counts cpm	Source Counrts cpm	Within Acceptable Range Y or N	MDC pCi/gm	Tech
2-19-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8351 Bare 3120 Coll.	96758	y	–	VP
4-7-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8272 Bare 3110 Coll.	97815	y	–	VP
4-8-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8249 Bare 3095 Coll.	96288	y	–	VP
4-10-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8440 Bare 3065 Coll.	96064	y	–	VP
4-15-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8345 Bare 3119 Coll.	97475	y	–	VP
4-16-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8411 Bare 3124 Coll.	96227	y	–	VP
4-17-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8401 Bare 3193 Coll.	97111	y	–	VP
4-22-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8093 Bare 3194 Coll.	96431	y	–	VP
4-23-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8205 Bare 3092 Coll.	95968	y	–	VP
4-30-24	L2221 S#290801	✓	2-19-25	ok	900	10	out	1	8264 Bare 3263 Coll.	96356	y	–	VP
									Bare Coll.				
									Bare Coll.				
									Bare Coll.				
									Bare Coll.				
									Bare Coll.				
									Bare Coll.				

Note: (1) Battery Voltage for Ludlum 2221 must be >5.3 volts; (2) Threshhold must be at 10.0 mV; (3) Window Position must be OUT; (4) CC on L2241-2 set at 0.001
For L2241-2 Check HV and Threshold using Ludlum 500 pulser.

AVM Environmental Services, Inc.
Scaler/Ratemeter - 2" x 2" NaI Detector Function Check

Function Check Source ID: 1% U_3O_8 Ore in Sealed can

2" x 2" NaI Detector ID: SPA-3 S#408522-30

Acceptable background Count (cpm) Range (20%) 6391 to 9587 (Bare)

Acceptable background Count (cpm) Range (20%) 2546 to 3820 (collimated)

Acceptable Source Count (cpm) Range (20%) 77687 to 116531

Date	Scaler/Ratemeter	Physical Check	Cal Due	Battery[1] Volts or OK	HV Volts	THR mV[2]	Window In or OUT[3]	C.C.[4]	BKG Counts cpm	Source Counrts cpm	Within Acceptable Range Y or N	MDC pCi/gm	Tech
10-17-23	L2221 S#240801	✓	5-15-24	6.0	900	10	out	1	7978 Bare / 3024 Coll.	97941	Y	–	VP
10-18-23	L2221 S#240801	✓	5-15-24	OK	900	10	out	1	7874 Bare / 2931 Coll.	98494	Y	–	VP
10-25-23	L2221 S#240801	✓	5-14-24	ok	900	10	Out	1	7950 Bare / 2916 Coll.	98651	Y	–	VP
11-1-23	L2221 S#240801	✓	5-14-24	ok	900	10	out	1	7824 Bare / 3111 Coll.	99371	Y	–	VP
11-2-23	L2221 S#240801	✓	5-14-24	OK	900	10	out	1	7980 Bare / 2910 Coll.	98416	Y	–	VP
11-7-23	L2221 S#240801	✓	5-14-24	ok	900	10	out	1	7901 Bare / 3090 Coll.	97213	Y	–	VP
11-13-23	L2221 S#240801	✓	5-14-24	ok	900	10	out	1	7880 Bare / 2974 Coll.	97008	Y	–	VP
11-20-23	L2221 S#240801	✓	5-14-24	OK	900	10	out	1	7811 Bare / 2840 Coll.	96911	Y	–	VP
									Bare / Coll.				
									Bare / Coll.				
									Bare / Coll.				
									Bare / Coll.				
									Bare / Coll.				
									Bare / Coll.				
									Bare / Coll.				
									Bare / Coll.				

Note: (1) Battery Voltage for Ludlum 2221 must be >5.3 volts; (2) Threshhold must be at 10.0 mV; (3) Window Position must be OUT; (4) CC on L2241-2 set at 0.001
For L2241-2 Check HV and Threshold using Ludlum 500 pulser.

AVM Environmental Services, Inc.
Micro R Meter Function Check Form

Micro R Meter: Ludlum 19, SR#76248

Function Check Source ID: 1% U_3O_8 Ore in Sealed can

Function Check @ Calibration 135

Acceptable Function Check Reading (uR/hr) Range (20%) 108 to 162

Date	Physical Check	Cal Date	Battery(1) Volts or OK	BKG Reading uR/hr	Source Reading (2) uR/hr	Within Acceptable Range Y or N	Cal Due	Tech
11-13-23	✓	11-3-23	ok	10-12	130	y	11-3-24	VP
4-7-24	✓	11-3-23	ok	10-12	140	y	11-3-24	VP
4-8-24	✓	11-3-23	ok	10-12	140	y	11-3-24	VP
4-10-24	✓	11-3-23	ok	10-12	130	y	11-3-24	VP
4-15-24	✓	11-3-23	ok	10-12	130	y	11-3-24	VP
4-16-24	✓	11-3-23	ok	10-12	140	y	11-3-24	VP
4-17-24	✓	11-3-23	ok	10-12	140	y	11-3-24	VP
4-22-24	✓	11-3-23	ok	10-12	130	y	11-3-24	VP
4-23-24	✓	11-3-23	ok	10-12	130	y	11-3-24	VP
4-30-24	✓	11-3-23	ok	10-12	140	y	11-3-24	VP

Note: (1) Battery Voltage must be within BAT TEST Range (2) Function Check Source must be placed in the circle on the front side of the meter

AVM Environmental Services, Inc.
Ludlum SCA L2221 - 44-20 3x3 NaI Detector Function Check
559 - 659 KeV Gamma Radiation Soil Screening

L2221 #290801

Ludlum 44-20 3x3 NaI Detector, #PR295573

Function Check Source ID: 1% U_3O_8 Ore in Sealed can

Acceptable background Count (cpm) Range (20%) 53 to 79

Acceptable Source Count (cpm) Range (20%) 12557 to 18835

Date	Physical Check	Cal Date	Battery[1] Volts or OK	HV Volts	Threshhold mV [2]	Window mV	Window In/Out	BKG Counts cpm	Source Counrts cpm	Within Acceptable Range Y or N	MDC pCi/gm	Tech
5-17-23	✓	5-10-23	✓	577	559	100	in	70	16805	Y	—	VP
5-18-23	✓	5-10-23	✓	578	559	100	in	66	16200	Y	—	VP
5-22-23	✓	5-10-23	✓	582	559	100	in	68	15900	Y	—	VP
5-23-23	✓	5-10-23	✓	582	559	100	in	71	15508	Y	—	VP
5-25-23	✓	5-10-23	✓	578	559	100	in	73	16253	Y	—	VP
5-30-23	✓	5-10-23	✓	577	559	100	in	72	16101	Y	—	VP
5-31-23	✓	5-10-23	✓	575	559	100	in	64	15789	Y		VP
6-1-23	✓	5-10-23	✓	577	559	100	in	71	16224	Y	—	VP
11-8-23	✓	5-10-23	✓	576	559	100	in	60	16170	Y	—	VP
11-16-23	✓	5-10-23	✓	577	559	100	in	68	15327	Y	—	VP
4-17-24	✓	5-10-23	✓	578	559	100	in	74	15518	Y	—	VP
4-30-24	✓	5-10-23	✓	577	559	100	in	69	16122	Y	—	VP

Note: (1) Battery Voltage for Ludlum 2221 must be >5.3 volts; (2) Threshhold must be at 220 mV; (3) Window @ 440, must be IN

AVM Environmental Services Inc.
Scaler/Ratemeter - Detector Calibration Form

Scaler/Ratemeter: L2221 S# 290801
Detector: SPA-3 S# 408522-30

Source: U308 ore in can S# FC-2 Strength 1%

Scaler/Ratemeter Threshhold set @ 10 mV, Window IN/OUT Out, Window N/A mV

HV	Reading, CPM (Source)	Reading, CPM (Background)
500	17200	470
550	37012	738
600	57214	998
650	71774	1379
700	84865	1633
750	93899	1765
800	95561	1837
850	96093	1895
900	97180	2012
950	97636	2018
1000	100155	2037
1050	113726	2090
1100	133647	2249
1150	161780	2497
1200	199910	3198
1250		
1300		
1350		
1400		

Background reading at designated function check location in AVM office.

Count #	Reading (CPM) Bare	Collimated
1	8139	3129
2	8284	3144
3	8301	3004
4	8107	3170
5	8155	3171
Average	8197	3124

FC Range (6524-9786) (2537-3805)

Count Readings with 1 percent U_3O_8 can directly under collimated detector on designated function check location in AVM office.

Count #	Reading (CPM)
1	96354
2	95928
3	96716
4	96662
5	96241
Average	96380

HV Set @ 900 VDC (Instrument) 900 VDC (DVM Fluke 8020B)

Input Sensitivity (THR), mV 10

Function Check with 1 percent U_3O_8 ore in can. Can Directly under the detector in the collimator.
Acceptable Function check range is 77104 to 115656 CPM

Notes:

Date 2-19-24 By

AVM Environmental Services Inc.
Scaler/Ratemeter - Detector Calibration Form

Scaler/Ratemeter LZ221 S# 290801
Detector SPA-3 S# 408522-30

Source U308 ore in can S# FC-2 Strength 1%

Scaler/Ratemeter Threshhold set @ 10 mV, Window IN/OUT out, Window N/A mV

HV Set @ 900 VDC (Instrument) 900 VDC (DVM Fluke 8020B)

Count Readings for Calibration Pad GPB (0.0 ± 0.3 pCi/gm Ra-226)

	Bare (Uncollimated) @ 1'		Collimated @ 1'	
#1	11498	cpm	2766	cpm
#2	11820	cpm	2839	cpm
#3	11614	cpm	2849	cpm
#4	11823	cpm	2833	cpm
#5	11777	cpm	2772	cpm
BKG Average	11706	cpm	2812	cpm

Count Readings for Calibration Pad GPL (87.78 pCi/gm Ra-226)

	Bare (Uncollimated) @ 1'		Collimated @ 1'	
#1	90635	cpm	53328	cpm
#2	90696	cpm	53884	cpm
#3	90626	cpm	53443	cpm
#4	90778	cpm	54004	cpm
#5	91414	cpm	53996	cpm
Gross Average	90830	cpm	53731	cpm
Net Source Pad	79123	cpm	50919	cpm
Eff(net cpm/87.78 pCi/gm	901	cpm/pCi/gm	580	cpm/pCi/gm

µR/hr Reading for Calibration Pad GPL (87.78 pCi/gm Ra-226)

Ludlum Model 19 serial # 76248

Reading @ 1' 115 µR/hr
1.27E-03 µR/hr/cpm

Date 2-19-24 By

AVM Environmental Services Inc.

Scaler/Ratemeter Calibration Form

Model : L2221 S/N: 68782

Reference Instrument/Source: Ludlum Pulser 500, S/N:114513

HV Calibration

HV Test (2 points): Ref/Inst 600/600 Ref/Inst 900/900

Ratemeter Calibration

Instrument Threshold @ 100 (10 mV), WIN: Out, HV 900VDC; Pulser Threshold @ 200 (20mV)

Range/Mode	Range Multiplier	Calibration Point (Pulser Setting) cpm x multiplier	Target CPM (±5%)	As Found Reading		Left or Set Reading
Ratemeter	x1	40x1	38-42	40		40
	x1	40x10	380-420	397		397
	x10	40x100	3800-4200	3996		3996
	x100	40x1K	38K-42K	39948		39948
	x1K	40x10K	380K-420K	400751		400751
Digital Ratemeter	-	40x1	38-42	39-40		39-40
	-	40x10	380-420	392-401		392-401
	-	40x100	3800-4200	3996-4005		3996-4005
	-	40x1K	38K-42K	39K-40K		39K-40K
	-	40x10K	380K-420K	400K		400K

Threshold/Gain Calibration

WIN OUT

Pulser Amplitude (mV)	Pulser CPM		L2221 Theshold (mv)	Target CPM	L2221 CPM Found		L2221 CPM Left or Set @
10.0	40000		100 (10 mV)	27K -33K	31255		31255
20.0	40000		200 (20 mV)	27K -33K	30801		30801
30.0	40000		300 (30 mV)	27K -33K	30951		30951
40.0	40000		400 (40 mV)	27K -33K	29579		29579
50.0	40000		500 (50 mV)	27K -33K	31042		31042

Note: Use R174 Gain Control on Power Supply Board to adjust L2221 CPM @75% for Threshold/Gain Calibration

Window Cut-off Points Check

L2221 Threshold set @100 (10.0 mv)

WIN @ 100 (10.0 mV) ✓ WIN @ 400 (40.0 mV) ✓

WIN @ 200 (20.0 mV) ✓ WIN @ 500 (50.0 mV) ✓

Date 2-19-24 Calibrated By

AVM Environmental Services Inc.

Scaler/Ratemeter Calibration Form

Model : L2221 S/N: 290801

Reference Instrument/Source: Ludlum Pulser 500, S/N:114513

HV Calibration

HV Test (2 points): Ref/Inst 600/600 Ref/Inst 900/900

Ratemeter Calibration

Instrument Threshold @ 100 (10 mV), WIN: Out, HV 900VDC; Pulser Threshold @ 200 (20mV)

Range/Mode	Range Multiplier	Calibration Point (Pulser Setting) cpm x multiplier	Target CPM (±5%)	As Found Reading		Left or Set Reading
Ratemeter	x1	40x1	38-42	40		40
	x1	40x10	380-420	400		400
	x10	40x100	3800-4200	4002		4002
	x100	40x1K	38K-42K	40020		40020
	x1K	40x10K	380K-420K	400220		400220
Digital Ratemeter	-	40x1	38-42	39		39
	-	40x10	380-420	402		402
	-	40x100	3800-4200	4004		4004
	-	40x1K	38K-42K	40026		40026
	-	40x10K	380K-420K	400221		400221

Threshold/Gain Calibration

WIN OUT

Pulser Amplitude (mV)	Pulser CPM		L2221 Theshold (mv)	Target CPM	L2221 CPM Found		L2221 CPM Left or Set @
10.0	40000		100 (10 mV)	27K -33K	31194		31194
20.0	40000		200 (20 mV)	27K -33K	29354		29354
30.0	40000		300 (30 mV)	27K -33K	30765		30765
40.0	40000		400 (40 mV)	27K -33K	30082		30082
50.0	40000		500 (50 mV)	27K -33K	29842		29842

Note: Use R174 Gain Control on Power Supply Board to adjust L2221 CPM @75% for Threshold/Gain Calibration

Window Cut-off Points Check

L2221 Threshold set @100 (10.0 mv)

WIN @ 100 (10.0 mV) ✓ WIN @ 400 (40.0 mV) ✓

WIN @ 200 (20.0 mV) ✓ WIN @ 500 (50.0 mV) ✓

Date 2-19-24 Calibrated By

AVM Environmental Services Inc.
L2221 SCA/L44-20 Energy Calibration Form

SCA: L2221, SR #290801 Detector: Ludlum 44-20 (3x3 NaI Scintillator)

Calibration Source: Cs-137 Check Source, 5 uCi (August 2008) For 662 KeV Peak Cal

Threshold (input sensitivity) **652**

Window, In/Out **IN** Window **20**

HV Initial 100, At Peak 579

Maximum CPM: 198160 Background CPM: 13

HV Set @ 579 VDC

For Bi-214 609.2 KeV Peak (559 - 659 KeV ROI), Set Threshold @ 559, Window @ 100

Calibration Check w 1% U3O8 Ore Check Source: 15696 CPM

BKG = 65 cpm

Date 5-10-23 Calibrated By

AVM Enviro. tal Services, Inc.
Field Soil Sample Gamma Radiation Screening Form
Mt. Taylor Mine Site

Instrumentation : Scaler/Ratemeter L2221 S# 68782 , **Detector** L44-20 S# 295573
Instrument Calibration Date: 10-7-22 , **Instrument Function Check Performed:** ✓
Survey Area/Unit Decsription Mt Taylor Mine - Correlation Calibration

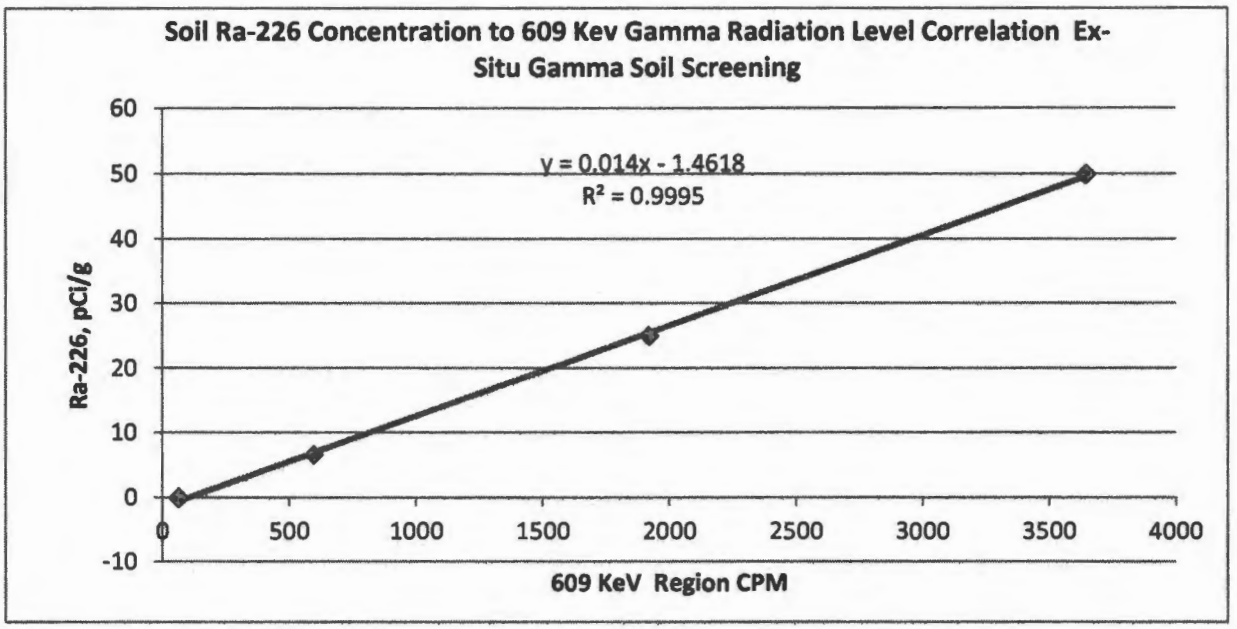
Area exposure rate:

Date/Time	Soil Sample ID	Sample Weight Grams	609 (559-669) Kev Gross Counts, CP5M	Weight Corrected CP5M	CPM	Reference Soil Compare (< or >)	Comments
5-10-23	Blank		329		66		
5-10-23	6.6 pCi/g Ref. Soil	3000	2998		600		
5-10-23	25 pCi/g Ref Soil	2984	9552	9603	1921		
5-10-23	50 pCi/g Ref Soil	2976	18078	18224	3645		

Technician Signature _____ , **Reviewed by** _____

AVM Environmental Services
Ex-Situ Soil Screening Gamma Radiation Level to Ra-226 Correlation
Mt. Taylor Mine Site Subsurface Soil Investigation

Reference Soil ID	Date	Ra-226 pCi/g	Wt gms	609 KeV CP5Min Gross (3x3 Nal Detector)	CPM
Blank	5/10/2023	-	-	329	66
6.6 pCi/g Ra-226 Ref Soil	5/10/2023	6.6	3000	2998	600
25 pCi/g Ra-226 Ref Soil	5/10/2023	25	3000	9603	1921
50 pCi/g Ra-226 Ref Soil	5/10/2023	50	3000	18224	3645



AVM Environmental Services, Inc.
Gamma Radiation Survey
Concrete Correlation Form

Instrumentation : Scaler/Ratemeter L2221 S#290801, Detector SPA-3 #30

Instrument Calibration Date: 2-19-24, Instrument Daily Function Check Performed: ✓

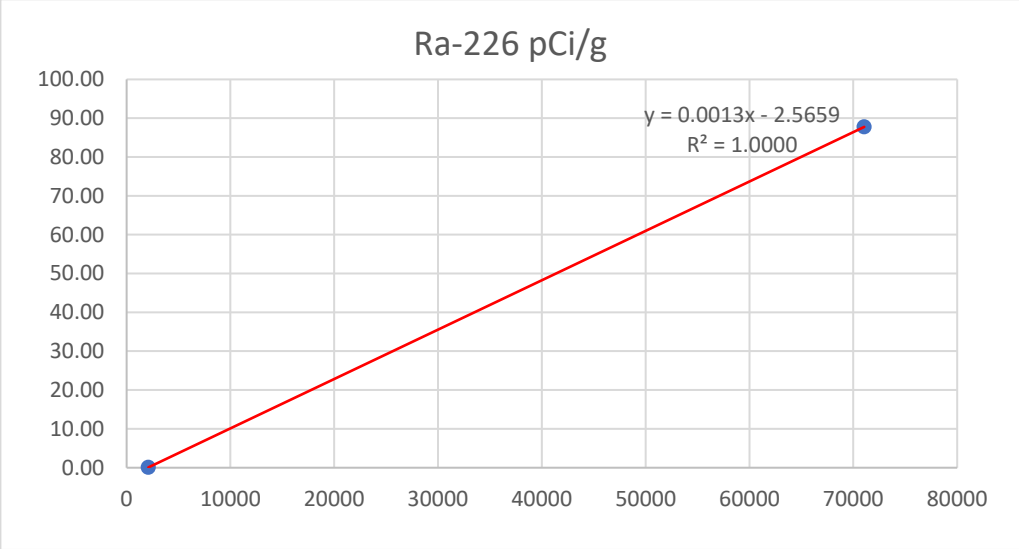
2"x2" NaI Detector Collimated ✓ Yes or ____ No.

Survey Area/Unit Decsription Grants Calibration Pad site - DOE

Survey Date	Calibration Pad ID	Gamma Radiation Reading, CPM		Comments/Notes
		SPA-3, 0.5-inch lead collimated	SPA-3, 1.0-inch lead collimated	
4-18-24	GPB	2019	1989	
		2148	1865	
		2123	2076	uR/hr @ Contact 9.5
11	GPL	70818	74469	
		71213	74463	uR/hr @ Contact 205
		71137	74487	

Technician Signature _____, Reviewed by _____

Grants DOE Calibration Pad
0.5 inch lead collimated 2x2 detector calibration for concrete investigation



Concrete ID	CPM	Ra-226 pCi/g
Cal Pad GPB	2097	0.10
Cal Pad GPL	71056	87.78

Designer and Manufacturer of Scientific and Industrial Instruments

www.ludlums.com

CERTIFICATE OF CALIBRATION

LUDLUM MEASUREMENTS, INC.
501 Oak Street
325-235-5494
Sweetwater, TX 79556, U.S.A.

ACCREDITED
CERT # 4084.01

Customer AVM ENVIRONMENTAL SERVICES INC ORDER NO. 20457182/547880

Mfg. Ludlum Measurements, Inc. Model 19 Serial No. 76248

M. Model Serial No.

Cal. Date 3-Nov-23 Cal Due Date 3-Nov-24 Cal. Interval 1 Year Meterface 202-1070

Check mark ☑ applies to applicable instr. and/or detector IAW mfg. spec. T. 73 °F RH 37 % Alt 708.1 mm Hg

☐ New Instrument Instrument Received ☐ Within Toler. +-10% ☑ 10-20% ☐ Out of Tol. ☐ Requiring Repair ☐ Other-See comments

☑ Mechanical ck. ☑ Meter Zeroed ☐ Background Subtract ☐ Input Sens. Linearity
☑ F/S Resp. ck ☑ Reset ck. ☐ Window Operation ☑ Geotropism
☑ Audio ck. ☐ Alarm Setting ck. ☑ Batt. ck.

☐ Calibrated in accordance with LMI SOP 14.8 ☑ Calibrated in accordance with LMI SOP 14.9

Instrument Volt Set 800 V Input Sens. 37 mV Det. Oper. 800 V at 37 mV Threshold Dial Ratio = mV

☐ HV Readout (2 points) Ref./Inst. / V Ref./Inst. / V

COMMENTS:

Gamma Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.
Multimeter uncertainty within 1.3% of reading, Gamma uncertainty within 5.0% of reading, Neutron uncertainty within 7.0% of reading, Count rate uncertainty within 5.4% of reading

RANGE/MULTIPLIER	REFERENCE CAL. POINT	INSTRUMENT REC'D "AS FOUND READING"	INSTRUMENT METER READING
5000	4000µR/hr	4200 µR/hr	4000 µR/hr
5000	1000µR/hr	1100	1000
500	400µR/hr = 69800 cpm	410	400
500	100µR/hr	110	100
250	200µR/hr = 33800 cpm	210	200
250	100µR/hr	100	100
50	6980 cpm	42	40
50	1750 cpm	10	10
25	3380 cpm	22	20
25	845 cpm	5	5

Range(s) Calibrated Electronically

Digital Readout	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING

Log Scale	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of other International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques.
All pass/fail determinations are based on the manufacturer's specifications without considering uncertainty factors.
Measurement results represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k=2.
The calibration system conforms to the requirements of ANSI/NCSL Z540-1-1994 and ANSI N323AB-2013

ISO/IEC 17025:2017(E)
State of Texas Calibration License No. LO-1963

Reference Instruments and/or Sources: Cs-137 S/N: ☐ 059 ☐ 2171CP ☐ 2261CP ☐ 720 ☐ 734 ☐ 781 ☐ 1131 ☐ 1616 ☐ 1696 ☐ 1909 ☐ 1916CP ☐ 2324/2521
☐ 5717CO ☐ 5719CO ☐ 60846 ☐ 70897 ☐ 73410 ☐ E552 ☐ G112 ☑ 2168CP ☐ S-394 ☐ S-1054 ☐ T10081 ☐ T10082 Neutron Am-241 Be ☐ T-304 Ra-226 ☐ Y982
☐ E551 ☐ 5105 ☐ CSV280

☐ Alpha S/N ☐ Beta S/N ☐ Other

☐ m 500 S/N 114520 ☐ Oscilloscope S/N ☑ Multimeter S/N 53950165

Operator Sheba Lee Sheba Lee Title Calibrator Date 3-Nov-23

QC'd By Title Final QC Date 3Nov23

This certificate shall not be reproduced except in full, without the written approval of Ludlum Measurements, Inc.
FORM C22A 01/07/2020 Page 1 of 1

AC Inst. Only ☐ Passed Dielectric (Hi-Pot) and Continuity Test ☐ Failed:

www.ludlums.com

CERTIFICATE OF CALIBRATION

LUDLUM MEASUREMENTS, INC.
501 Oak Street
325-235-5494
Sweetwater, TX 79556, U.S.A.

ACCREDITED
CERT # 4084.01

Model No. / Serial No. 500 / 114513

Customer AVM ENVIRONMENTAL SERVICES INC ORDER NO. 20460064/549833

Date 13-Dec-23 Cal Due Date 13-Dec-24 Cal. Interval 1 Year Procedure 500/Rev 8

☐ New Instrument Instrument Received ☑ Within Tolerance ☐ Out of Tol. ☐ Requiring Repair ☐ Other-See Comments

T. 73 °F RH 36 % Alt 714.2 mm Hg ☑ Meter Zeroed ☑ Mechanical Check

PULSE WIDTH Uncertainty within 0.85% of reading

	As Found	As Left	Acceptable Range (µs)
NEG PULSE	1.7	1.7	1.5 - 1.9
POS PULSE	1.7	1.7	< 2.25

PULSE AMPLITUDE (NEGATIVE) Uncertainty within 1.3% of reading

Reference Amplitude	As Found Amplitude Reading	As Left Amplitude Reading	Acceptable Range	Reference Amplitude	As Found Amplitude Reading	As Left Amplitude Reading	Acceptable Range
1 V	1 V	1 V	0.9 - 1.1	4 V	4.1 V	4.1 V	3.6 - 4.4
100 mV	100 mV	100 mV	90 - 110	400 mV	410 mV	410 mV	360 - 440
10 mV	10 mV	10 mV	9 - 11	40 mV	41 mV	41 mV	36 - 44
1 mV	1 mV	1 mV	0.9 - 1.1	4 mV	4.1 mV	4.1 mV	3.6 - 4.4

PULSE AMPLITUDE (POSITIVE) Uncertainty within 1.3% of reading

Reference Amplitude	As Found Amplitude Reading	As Left Amplitude Reading	Acceptable Range
3 V	3 V	3 V	2.7 - 3.3
300 mV	300 mV	300 mV	270 - 330
30 mV	30 mV	30 mV	27 - 33
3 mV	3 mV	3 mV	2.7 - 3.3

PULSE FREQUENCY (PERIOD) Uncertainty within 0.46% of reading

Pulser Range	As Found Period	As Left Period	Acceptable Range
x 10K	6.667	6.667	6.534 - 6.8
x 1K	66.70	66.70	65.34 - 68
x 100	667.2	667.2	653.4 - 680
x 10	6671	6671	6534 - 6800
x 1	66.71	66.71	65.34 - 68
x 0.1	90	90	88.2 - 91.8 Counts

Digital High Voltage Uncertainty within 1.3% of reading

Reference Voltage	As Found Voltage Reading	As Left Voltage Reading	Acceptable Range
500 V			490 - 510
1500 V			1470 - 1530

Analog High Voltage Uncertainty within 1.3% of reading

Reference Voltage	As Found Voltage Reading	As Left Voltage Reading	Acceptable Range
500 V	500	500	475 - 525
2000 V	2000	2000	1900 - 2100

CPM Reading	As Found cpm Reading	As Left cpm Reading	Acceptable Range
MAX	992	992	981 - 999
MIN	0-1	0-1	0 - 1*

* READING OF 0-99 IS ACCEPTABLE FOR INSTRUMENTS WITH A S/N 100000 AND BELOW OR MAIN BOARD = 5208-066

COMMENTS:
CAL'D W/ 39" CABLE.

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of other International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques.
All pass/fail determinations are based on the manufacturer's specifications without considering uncertainty factors.
Measurement results represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k=2.
The calibration system conforms to the requirements of ANSI/NCSL Z540-1-1994 and ANSI N323AB-2013
ISO/IEC 17025:2017(E)
State of Texas Calibration License No. LO-1963

Reference Instruments:
Frequency Counter Model BK 1856D S/N 332L14297 Cal Date 17-Feb 2023
Oscilloscope Model Tenma 72-6820 S/N 1102645 Cal Date 11-Oct 2023
Voltmeter Model Fluke 83 V S/N 94000441 Cal Date 2-Jun 2023

Calibrator William Tinsley William Tinsley Title Calibrator Date 13-December 2023
QC'd By [signature] Title Final QC Date 14 Dec 23

This certificate shall not be reproduced except in full, without the written approval of Ludlum Measurements, Inc.

AC Inst. Only ☑ Passed Dielectric (Hi-Pot) and Continuity Test ☐ Failed:

ANALYTICAL SUMMARY REPORT

May 24, 2024

Rio Grande Resources Corporation
PO Box 1150
Grants, NM 87020-1150

Work Order: C24040791 Quote ID: C16056

Project Name: MTM TP Soil Characterization

Energy Laboratories, Inc. Casper WY received the following 10 samples for Rio Grande Resources Corporation on 4/24/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C24040791-001	TP-11 [6-12]inches	11/13/23 13:45	04/24/24	Solid	Gamma Sample Preparation Drying/Grinding, Radiochemistry Gross Gamma
C24040791-002	TP-15B [6-12]Inches	11/14/23 8:25	04/24/24	Solid	Same As Above
C24040791-003	TP-11 [1-2]Feet	11/16/23 11:05	04/24/24	Solid	Same As Above
C24040791-004	TP-15B [1-1.5]Feet	11/16/23 11:35	04/24/24	Solid	Same As Above
C24040791-005	TP-41 [0-6]Inches	04/16/24 8:45	04/24/24	Solid	Same As Above
C24040791-006	TP-46 [6-12]Inches	04/16/24 10:25	04/24/24	Solid	Same As Above
C24040791-007	TP-36 [6-12]Inches	04/16/24 11:00	04/24/24	Solid	Same As Above
C24040791-008	TP-41 [6-12]Inches	04/16/24 11:15	04/24/24	Solid	Same As Above
C24040791-009	TP-36 [1-2]Feet	04/17/24 11:20	04/24/24	Solid	Same As Above
C24040791-010	TP-DS 01	04/17/24 13:00	04/24/24	Solid	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager .

Report Approved By:

CLIENT: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Work Order: C24040791

Report Date: 05/24/24

CASE NARRATIVE

ORIGINAL SAMPLE SUBMITTAL(S)
All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)
Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS
Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS
The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES
All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS
Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS
Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS
eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT

ISO 17025 DISCLAIMER:
The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER,WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-001
Client Sample ID: TP-11 [6-12]

Report Date: 05/24/24
Collection Date: 11/13/23 13:45
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	-0.8	pCi/g-dry	U			E901.1	05/16/24 15:53 / haw
Radium 224 precision (±)	8.0	pCi/g-dry				E901.1	05/16/24 15:53 / haw
Radium 224 MDC	13.3	pCi/g-dry				E901.1	05/16/24 15:53 / haw
Radium 226	61.5	pCi/g-dry				E901.1	05/16/24 15:53 / haw
Radium 226 precision (±)	1.4	pCi/g-dry				E901.1	05/16/24 15:53 / haw
Radium 226 MDC	0.7	pCi/g-dry				E901.1	05/16/24 15:53 / haw
Radium 228	0.4	pCi/g-dry	U			E901.1	05/16/24 15:53 / haw
Radium 228 precision (±)	1.2	pCi/g-dry				E901.1	05/16/24 15:53 / haw
Radium 228 MDC	1.7	pCi/g-dry				E901.1	05/16/24 15:53 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-002
Client Sample ID: TP-15B [6-12]

Report Date: 05/24/24
Collection Date: 11/14/23 08:25
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	0.9	pCi/g-dry	U			E901.1	05/17/24 12:48 / haw
Radium 224 precision (±)	3.1	pCi/g-dry				E901.1	05/17/24 12:48 / haw
Radium 224 MDC	5.2	pCi/g-dry				E901.1	05/17/24 12:48 / haw
Radium 226	15.2	pCi/g-dry				E901.1	05/17/24 12:48 / haw
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/24 12:48 / haw
Radium 226 MDC	0.3	pCi/g-dry				E901.1	05/17/24 12:48 / haw
Radium 228	1.6	pCi/g-dry				E901.1	05/17/24 12:48 / haw
Radium 228 precision (±)	0.4	pCi/g-dry				E901.1	05/17/24 12:48 / haw
Radium 228 MDC	0.5	pCi/g-dry				E901.1	05/17/24 12:48 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-003
Client Sample ID: TP-11 [1-2]

Report Date: 05/24/24
Collection Date: 11/16/23 11:05
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	0.4	pCi/g-dry	U			E901.1	05/17/24 14:57 / haw
Radium 224 precision (±)	1.5	pCi/g-dry				E901.1	05/17/24 14:57 / haw
Radium 224 MDC	2.6	pCi/g-dry				E901.1	05/17/24 14:57 / haw
Radium 226	1.1	pCi/g-dry				E901.1	05/17/24 14:57 / haw
Radium 226 precision (±)	0.1	pCi/g-dry				E901.1	05/17/24 14:57 / haw
Radium 226 MDC	0.1	pCi/g-dry				E901.1	05/17/24 14:57 / haw
Radium 228	1.1	pCi/g-dry				E901.1	05/17/24 14:57 / haw
Radium 228 precision (±)	0.2	pCi/g-dry				E901.1	05/17/24 14:57 / haw
Radium 228 MDC	0.3	pCi/g-dry				E901.1	05/17/24 14:57 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-004
Client Sample ID: TP-15B [1-1.5]

Report Date: 05/24/24
Collection Date: 11/16/23 11:35
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	0.5	pCi/g-dry	U			E901.1	05/17/24 16:01 / haw
Radium 224 precision (±)	2.1	pCi/g-dry				E901.1	05/17/24 16:01 / haw
Radium 224 MDC	3.6	pCi/g-dry				E901.1	05/17/24 16:01 / haw
Radium 226	1.2	pCi/g-dry				E901.1	05/17/24 16:01 / haw
Radium 226 precision (±)	0.2	pCi/g-dry				E901.1	05/17/24 16:01 / haw
Radium 226 MDC	0.2	pCi/g-dry				E901.1	05/17/24 16:01 / haw
Radium 228	1.3	pCi/g-dry				E901.1	05/17/24 16:01 / haw
Radium 228 precision (±)	0.4	pCi/g-dry				E901.1	05/17/24 16:01 / haw
Radium 228 MDC	0.4	pCi/g-dry				E901.1	05/17/24 16:01 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-005
Client Sample ID: TP-41 [0-6]

Report Date: 05/24/24
Collection Date: 04/16/24 08:45
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	1.7	pCi/g-dry	U			E901.1	05/20/24 09:23 / haw
Radium 224 precision (±)	6.6	pCi/g-dry				E901.1	05/20/24 09:23 / haw
Radium 224 MDC	10.9	pCi/g-dry				E901.1	05/20/24 09:23 / haw
Radium 226	43.5	pCi/g-dry				E901.1	05/20/24 09:23 / haw
Radium 226 precision (±)	1.1	pCi/g-dry				E901.1	05/20/24 09:23 / haw
Radium 226 MDC	0.5	pCi/g-dry				E901.1	05/20/24 09:23 / haw
Radium 228	1.5	pCi/g-dry				E901.1	05/20/24 09:23 / haw
Radium 228 precision (±)	0.7	pCi/g-dry				E901.1	05/20/24 09:23 / haw
Radium 228 MDC	1.0	pCi/g-dry				E901.1	05/20/24 09:23 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-006
Client Sample ID: TP-46 [6-12]

Report Date: 05/24/24
Collection Date: 04/16/24 10:25
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	2.3	pCi/g-dry				E901.1	05/20/24 10:26 / haw
Radium 224 precision (±)	1.3	pCi/g-dry				E901.1	05/20/24 10:26 / haw
Radium 224 MDC	2.0	pCi/g-dry				E901.1	05/20/24 10:26 / haw
Radium 226	2.3	pCi/g-dry				E901.1	05/20/24 10:26 / haw
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/20/24 10:26 / haw
Radium 226 MDC	0.2	pCi/g-dry				E901.1	05/20/24 10:26 / haw
Radium 228	1	pCi/g-dry				E901.1	05/20/24 10:26 / haw
Radium 228 precision (±)	0.4	pCi/g-dry				E901.1	05/20/24 10:26 / haw
Radium 228 MDC	0.5	pCi/g-dry				E901.1	05/20/24 10:26 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-007
Client Sample ID: TP-36 [6-12]

Report Date: 05/24/24
Collection Date: 04/16/24 11:00
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	4.2	pCi/g-dry				E901.1	05/20/24 11:44 / haw
Radium 224 precision (±)	2.3	pCi/g-dry				E901.1	05/20/24 11:44 / haw
Radium 224 MDC	3.6	pCi/g-dry				E901.1	05/20/24 11:44 / haw
Radium 226	8.8	pCi/g-dry				E901.1	05/20/24 11:44 / haw
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/20/24 11:44 / haw
Radium 226 MDC	0.3	pCi/g-dry				E901.1	05/20/24 11:44 / haw
Radium 228	1.3	pCi/g-dry				E901.1	05/20/24 11:44 / haw
Radium 228 precision (±)	0.5	pCi/g-dry				E901.1	05/20/24 11:44 / haw
Radium 228 MDC	0.7	pCi/g-dry				E901.1	05/20/24 11:44 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-008
Client Sample ID: TP-41 [6-12]

Report Date: 05/24/24
Collection Date: 04/16/24 11:15
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	2.2	pCi/g-dry				E901.1	05/20/24 13:27 / haw
Radium 224 precision (±)	1.3	pCi/g-dry				E901.1	05/20/24 13:27 / haw
Radium 224 MDC	2.0	pCi/g-dry				E901.1	05/20/24 13:27 / haw
Radium 226	1.9	pCi/g-dry				E901.1	05/20/24 13:27 / haw
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/20/24 13:27 / haw
Radium 226 MDC	0.3	pCi/g-dry				E901.1	05/20/24 13:27 / haw
Radium 228	1.6	pCi/g-dry				E901.1	05/20/24 13:27 / haw
Radium 228 precision (±)	0.5	pCi/g-dry				E901.1	05/20/24 13:27 / haw
Radium 228 MDC	0.6	pCi/g-dry				E901.1	05/20/24 13:27 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-009
Client Sample ID: TP-36 [1-2]

Report Date: 05/24/24
Collection Date: 04/17/24 11:20
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	0.6	pCi/g-dry	U			E901.1	05/20/24 16:12 / haw
Radium 224 precision (±)	2.1	pCi/g-dry				E901.1	05/20/24 16:12 / haw
Radium 224 MDC	3.6	pCi/g-dry				E901.1	05/20/24 16:12 / haw
Radium 226	0.7	pCi/g-dry				E901.1	05/20/24 16:12 / haw
Radium 226 precision (±)	0.2	pCi/g-dry				E901.1	05/20/24 16:12 / haw
Radium 226 MDC	0.2	pCi/g-dry				E901.1	05/20/24 16:12 / haw
Radium 228	1.3	pCi/g-dry				E901.1	05/20/24 16:12 / haw
Radium 228 precision (±)	0.3	pCi/g-dry				E901.1	05/20/24 16:12 / haw
Radium 228 MDC	0.3	pCi/g-dry				E901.1	05/20/24 16:12 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation
Project: MTM TP Soil Characterization
Lab ID: C24040791-010
Client Sample ID: TP-DS 01

Report Date: 05/24/24
Collection Date: 04/17/24 13:00
DateReceived: 04/24/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, GAMMA							
Radium 224	0.5	pCi/g-dry	U			E901.1	05/21/24 08:43 / haw
Radium 224 precision (±)	2.2	pCi/g-dry				E901.1	05/21/24 08:43 / haw
Radium 224 MDC	3.6	pCi/g-dry				E901.1	05/21/24 08:43 / haw
Radium 226	0.8	pCi/g-dry				E901.1	05/21/24 08:43 / haw
Radium 226 precision (±)	0.2	pCi/g-dry				E901.1	05/21/24 08:43 / haw
Radium 226 MDC	0.2	pCi/g-dry				E901.1	05/21/24 08:43 / haw
Radium 228	1.1	pCi/g-dry				E901.1	05/21/24 08:43 / haw
Radium 228 precision (±)	0.4	pCi/g-dry				E901.1	05/21/24 08:43 / haw
Radium 228 MDC	0.4	pCi/g-dry				E901.1	05/21/24 08:43 / haw

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Rio Grande Resources Corporation **Work Order:** C24040791 **Report Date:** 05/23/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E901.1										Batch: R306411
Lab ID: MB-306411	9	Method Blank				Run: GAM-HPGE 2_240516A				05/16/24 13:03
Radium 224		0.3	pCi/g-dry							U
Radium 224 precision (±)		0.9	pCi/g-dry							
Radium 224 MDC		1	pCi/g-dry							
Radium 226		0.1	pCi/g-dry							U
Radium 226 precision (±)		0.1	pCi/g-dry							
Radium 226 MDC		0.2	pCi/g-dry							
Radium 228		0.2	pCi/g-dry							U
Radium 228 precision (±)		0.2	pCi/g-dry							
Radium 228 MDC		0.4	pCi/g-dry							
Lab ID: C24040791-008ADUP	9	Sample Duplicate				Run: GAM-HPGE 2_240516A				05/20/24 15:10
Radium 224		-0.15	pCi/g-dry					230	30	UR
Radium 224 precision (±)		2.6	pCi/g-dry							
Radium 224 MDC		4.3	pCi/g-dry							
Radium 226		1.8	pCi/g-dry					3.9	30	
Radium 226 precision (±)		0.26	pCi/g-dry							
Radium 226 MDC		0.23	pCi/g-dry							
Radium 228		1.7	pCi/g-dry					6.9	30	
Radium 228 precision (±)		0.44	pCi/g-dry							
Radium 228 MDC		0.44	pCi/g-dry							

- Duplicate RPD for Ra224 is outside of the acceptance range for this analysis. However, the RER is less than or equal to the limit of 3, the RER result is 0.82. The RER result for Ra226 is 0.19 and Ra228 is 0.17.

Qualifiers:

RL - Analyte Reporting Limit

R - Relative Percent Difference (RPD) exceeds advisory limit

ND - Not detected at the Reporting Limit (RL)

U - Not detected at Minimum Detectable Concentration (MDC)

Work Order Receipt Checklist

Rio Grande Resources Corporation C24040791

Login completed by: Cristen C. Smith
Date Received: 4/24/2024
Reviewed by: tjones
Received by: CCS
Reviewed Date: 4/30/2024
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	14.9°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

Chain of Custody & Analytical Request Record

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Account Information *(Billing information)*

Company/Name	Rio Grande Resources Corporation
Contact	Anita Willcox
Phone	505-287-7971
Mailing Address	PO Box 1150
City, State, Zip	Grants, NM 87020
Email	anita.willcox@ga.com
Receive Invoice	☐Hard Copy ▣Email
Receive Report	☐Hard Copy ▣Email
Purchase Order	MT11705
Quote	
Bottle Order	

Report Information *(if different than Account Information)*

Company/Name	AVM Environmental Services, Inc.
Contact	Victor Patel
Phone	505-287-4593
Mailing Address	1717 Del Norte Blvd
City, State, Zip	Grants, NM 87020
Email	vpatelavm@outlook.com
Receive Report	☐Hard Copy ▣Email

Special Report/Formats: ☐ LEVEL IV ☐NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Project Information

Project Name, PWSID, Permit, etc.	MTM TP Soil Characterization
Sampler Name	Victor Patel
Sampler Phone	505-287-4593
Sample Origin State	New Mexico
EPA/State Compliance	☐ Yes ▣ No

URANIUM MINING CLIENTS MUST indicate sample type
▣ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Oil
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	EPA 901.1 Modified for Soil	See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1	TP-11 6"-12"	11/13/2023	1:45 pm	1	S	✓			C24040791
2	TP-15B 6"-12"	11/14/2023	8:25 am	1	S	✓			
3	TP-11 1'-2'	11/16/2023	11:05 am	1	S	✓			
4	TP-15B 1'-1.5'	11/16/2023	11:35 am	1	S	✓			
5	TP-41 0"-6"	04/16/2024	8:45 am	1	S	✓			
6	TP-46 6"-12"	04/16/2024	10:25 am	1	S	✓			
7	TP-36 6"-12"	04/16/2024	11:00 am	1	S	✓			
8	TP-41 6"-12"	04/16/2024	11:15 am	1	S	✓			
9									

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Victor Patel	4-22-24/1000				
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Christen Smith	4/24/24 10:10	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

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Trust our People. Trust our Data.

Chain of Custody & Analytical Request Record

www.energylab.com

Account Information (Billing information)

Company/Name	Rio Grande Resources Corporation
Contact	Anita Willcox
Phone	505-287-7971
Mailing Address	PO Box 1150
City, State, Zip	Grants, NM 87020
Email	anita.willcox@ga.com
Receive Invoice	☐Hard Copy ▣Email
Receive Report	☐Hard Copy ▣Email
Purchase Order	MT11705
Quote	
Bottle Order	

Report Information (if different than Account Information)

Company/Name	AVM Environmental Services, Inc.
Contact	Victor Patel
Phone	505-287-4593
Mailing Address	1717 Del Norte Blvd
City, State, Zip	Grants, NM 87020
Email	vpatelavm@outlook.com
Receive Report	☐Hard Copy ▣Email
Special Report/Formats:	☐ LEVEL IV ☐NELAC ☐ EDD/EDT (contact laboratory) ☐ Other_____

Comments

Project Information

Project Name, PWSID, Permit, etc.	MTM TP Soil Characterization
Sampler Name	Victor Patel
Sampler Phone	505-287-4593
Sample Origin State	New Mexico
EPA/State Compliance	☐ Yes ▣ No

URANIUM MINING CLIENTS MUST indicate sample type
▣ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Oil
DW - Drinking Water

Analysis Requested

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	EPA 901.1 Modified for Soil	See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
1	TP-36 1'-2'	04/17/2024	11:20 am	1	S	✓			C24040791
2	TP-DS 01	04/17/2024	1:00 pm	1	S	✓			
3									
4									
5									
6									
7									
8									
9									

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Victor Patel	4-22-24 / 1000				
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Cristen Smith	4/24/24 10:10	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number (cash/check only)

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ATTACHMENT E-1.3
AVM 2025 – NORTH CONTROLLED AREA

North Controlled Area Soil Radiologic Characterization

Mt. Taylor Mine Site
San Mateo, NM

Prepared by:
AVM Environmental Services, Inc.
1717 Del Norte Blvd.
Grants, NM 87020

Prepared for:
Rio Grande Resource Corporation
PO Box 1150
Grants, NM 87020

June 5, 2025



N
W E
S

Environmental Services, Inc.

Figure 1
Mt. Taylor Mine Site
North Controlled Area Soil Radiologic Characterization Area

June 2025

Legend

- NCA Soil Radiologic Characterization Area
- Previously Characterized Area
- Active Treatment Ponds
- North Controlled Fence

Table 2
Mt. Taylor Mine Site - North Controlled Area Soil Radiological Characterization
Static Gamma Radiation Survey at Data Point/Soil Sample Locations

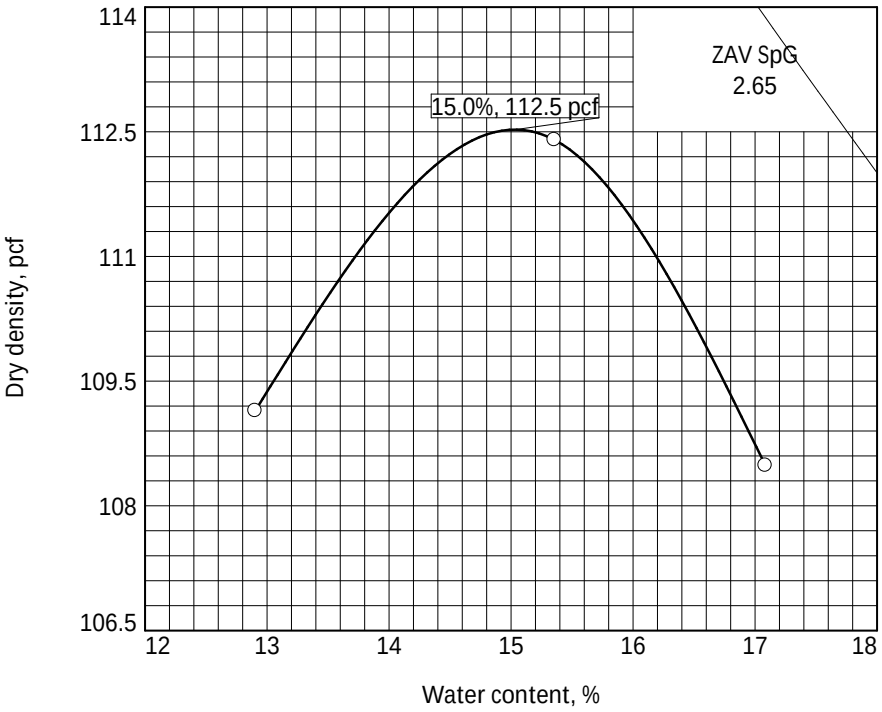
Data Point ID	Survey Date	Data Point Coordinate NAD83 StatePlane NM West, Feet		Static Gamma Radiation Survey Collimated (0.5" PB) 2x2 Detector	
		Northing	Easting	Static Gamma CPM	Surface Soil Static Gamma Estimated Ra-226 pCi/g
TP-01	9/19/2024	1580186.76	2781641.72	74549	111.8
TP-02	9/19/2024	1581347.96	2781655.87	23242	29.7
TP-03	9/19/2024	1581200.16	2781928.52	12217	12.0
TP-04	9/19/2024	1580830.01	2781918.97	11677	11.2
TP-05	9/19/2024	1580644.14	2781961.31	7643	4.7
TP-06	9/19/2024	1579534.44	2782004.83	28795	38.6
TP-07	9/19/2024	1580612.66	2782033.15	7755	4.9
TP-08	9/19/2024	1580712.40	2782055.84	9500	7.7
TP-09	11/25/2024	1579887.40	2782299.57	26878	35.5
TP-10	9/19/2024	1580089.57	2782156.92	10215	8.8
TP-11	9/19/2024	1580893.36	2782211.56	17075	19.8
TP-12	9/19/2024	1580498.58	2782193.94	7687	4.8
TP-13	9/19/2024	1581025.34	2782214.93	25917	34.0
TP-14	9/19/2024	1581007.22	2782310.10	31693	43.2
TP-15	9/19/2024	1580839.32	2782323.98	10771	9.7
TP-16	9/19/2024	1580514.25	2782350.77	20877	25.9
TP-17	11/22/2024	1581231.06	2782360.91	9788	8.2
TP-18	9/19/2024	1580678.19	2782412.82	23920	30.8
TP-19	9/19/2024	1581111.05	2782512.59	108929	166.8
TP-20	9/19/2024	1580575.91	2782540.15	42042	59.8
TP-21	1/27/2025	1580826.78	2782605.83	189626	295.9
TP-22	9/19/2024	1580005.97	2782577.72	27679	36.8
TP-23	10/28/2024	1580933.72	2782615.38	11721	11.3
TP-24	9/19/2024	1580664.84	2782653.22	184511	287.7
TP-25	11/22/2024	1581176.90	2782660.86	15304	17.0
TP-26	12/12/2024	1580859.02	2782663.51	154801	240.2
TP-27	9/19/2024	1580481.71	2782702.25	116173	178.4
TP-28	9/19/2024	1581078.62	2782722.31	69269	103.3
TP-29	9/19/2024	1580104.95	2782715.01	37349	52.3
TP-30	12/2/2024	1581088.55	2782875.42	7362	4.3
TP-31	11/25/2024	1580996.95	2783152.31	76057	114.2
TP-32	12/12/2024	1580437.62	2783254.26	11869	11.5
TP-33	11/25/2024	1581081.58	2783299.76	11765	11.3
TP-34	12/12/2024	1580838.74	2783312.73	18951	22.8
TP-35	10/23/2024	1580623.09	2783328.09	31729	43.3
TP-36	10/23/2024	1580793.59	2783353.65	12576	12.6
TP-37	10/23/2024	1580494.41	2783389.94	9058	7.0
TP-38	10/23/2024	1581073.21	2783415.97	13769	14.5
TP-39	10/23/2024	1580478.54	2783504.44	9606	7.9
TP-40	10/23/2024	1581112.23	2783628.43	13072	13.4
Inv-01	9/19/2024	1580780.75	2781697.35	14304	15.4
Inv-02	9/19/2024	1579936.57	2781697.29	9200	7.2
Inv-03	9/19/2024	1581223.91	2781793.57	13157	13.6
Inv-04	9/19/2024	1580827.72	2782178.60	36695	51.2
Inv-05	10/23/2024	1580653.58	2783716.79	7441	4.4
Inv-06	10/23/2024	1581080.53	2783861.07	19774	24.1
Inv-07	9/19/2024	1580754.28	2781792.25	10142	8.7

NCA
Sum = 2278.2
Mean = 47.1
n = 47
SD = 71.9

ATTACHMENT E-2
EA LABORATORY MATERIAL TESTING

COMPACTION TEST REPORT

Curve No.



Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method: Moist
Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Hammer Type: Manual
Layers: three Blows/Layer: 25
Mold Size: 0.03333 cu. ft.
Test Performed on Material Passing: #4 Sieve

NM: LL: NV PI: NP
Sp.G. (Assumed): 2.65
%>#4: %<No.200:
USCS: AASHTO:
Date Sampled:
Date Received:
Date Tested: 4/16/25
Tested By: SY

TESTING DATA	1	2	3	4	5	6
WM + WS	6114.4	6211.7	6171.7			
WM	4251.4	4251.4	4251.4			
WW + T #1	1015.2	1106.6	897.9			
WD + T #1	933.6	1009.1	810.6			
TARE #1	301.0	374.0	299.9			
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	12.9	15.4	17.1			
DRY DENSITY	109.1	112.4	108.5			

TEST RESULTS

Maximum dry density = 112.5 pcf

Optimum moisture = 15.0 %

Material Description: Sand

Remarks:

Project No. Client:
Project:

○ Source of Sample: EA-BSB04 Depth: 2' - 3' Sample Number: A

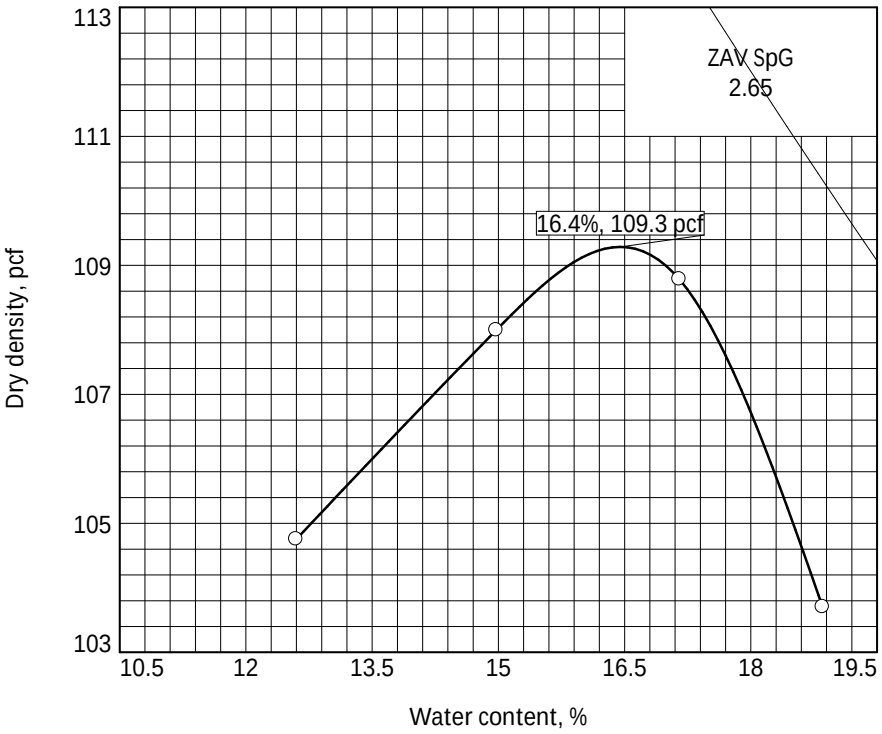
Checked by: AW
Title:

ENGINEERING ANALYTICS, INC.

Figure

COMPACTION TEST REPORT

Curve No.



Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method: Moist
Hammer Wt.: 5.5 lb.
Hammer Drop: 12 in.
Hammer Type: Manual
Layers: three Blows/Layer: 25
Mold Size: 0.03333 cu. ft.

Test Performed on Material
Passing: #4 Sieve

NM: LL: NV PI: NP
Sp.G. (Assumed): 2.65
%>#4: %<No.200:
USCS: AASHTO:
Date Sampled:
Date Received:
Date Tested: 4/10/25
Tested By: SY

TESTING DATA	1	2	3	4	5	6
WM + WS	6033.2	6176.7	6127.2	6113.4		
WM	4250.0	4250.0	4250.0	4250.0		
WW + T #1	1060.2	1080.7	1199.7	864.2		
WD + T #1	986.7	981.3	1095.7	774.7		
TARE #1	402.9	402.0	400.9	299.8		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	12.6	17.2	15.0	18.9		
DRY DENSITY	104.8	108.8	108.0	103.7		

TEST RESULTS

Maximum dry density = 109.3 pcf

Optimum moisture = 16.4 %

Material Description: Sandy Clay

Remarks:

Project No. Client:
Project:

○ Source of Sample: EA-BSC12 Depth: 2' - 3' Sample Number: A

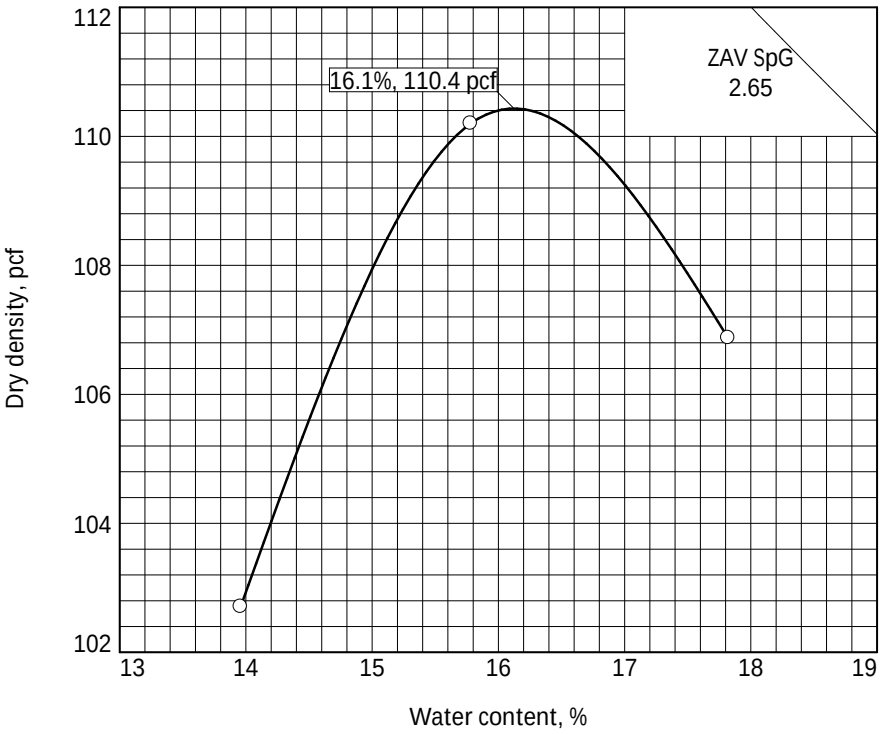
Checked by: AW
Title:

ENGINEERING ANALYTICS, INC.

Figure

COMPACTION TEST REPORT

Curve No.



Test Specification:
ASTM D 698-12 Method A Standard

Preparation Method	Moist
Hammer Wt.	5.5 lb.
Hammer Drop	12 in.
Hammer Type:	Manual
Layers	three
Blows/Layer	25
Mold Size	0.03333 cu. ft.

Test Performed on Material
Passing #4 Sieve

NM LL 26 PI 8
Sp.G. (Assumed): 2.65
%>#4 %<No.200
USCS AASHTO
Date Sampled
Date Received
Date Tested 4/16/2025
Tested By SY

TESTING DATA	1	2	3	4	5	6
WM + WS	6020.3	6179.7	6154.5			
WM	4250.8	4250.8	4250.8			
WW + T #1	1243.0	1130.4	1178.8			
WD + T #1	1136.1	1027.5	1056.4			
TARE #1	370.5	375.5	369.7			
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	14.0	15.8	17.8			
DRY DENSITY	102.7	110.2	106.9			

TEST RESULTS

Maximum dry density = 110.4 pcf

Optimum moisture = 16.1 %

Material Description

Silty Clay

Remarks:

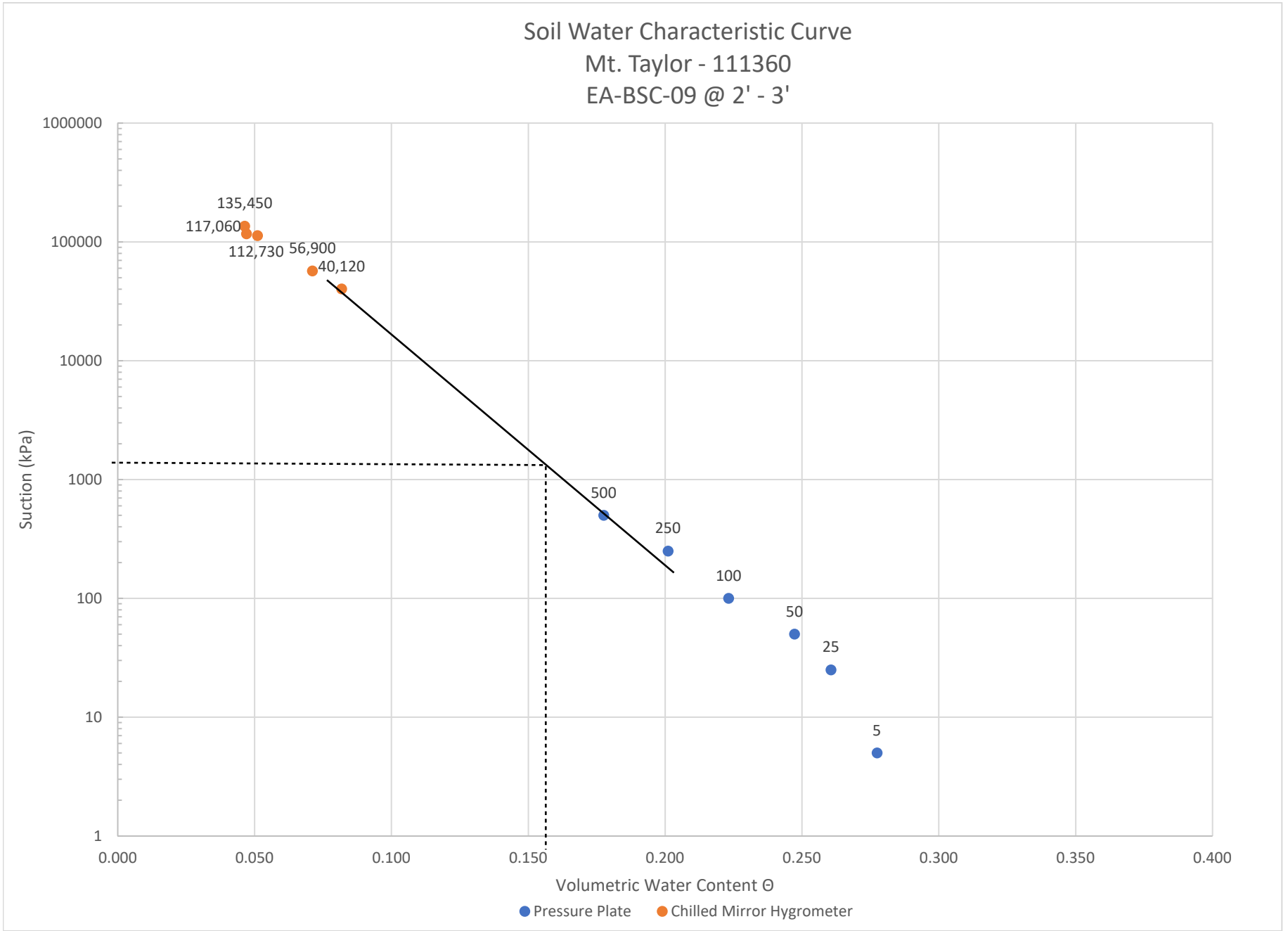
Project No. Client:
Project:

○ Source of Sample: EA-BSC09 Depth: 2' - 3' Sample Number: A

Checked by: KG
Title:

ENGINEERING ANALYTICS, INC.

Figure


Soil Water Characteristic Curve
Mt. Taylor - 111360
EA-BSC-09 @ 2' - 3'
1000000
100000
10000
1000
100
10
1
Suction (kPa)
135,450
117,060
112,730
56,900
40,120
500
250
100
50
25
5
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
Volumetric Water Content Θ
Pressure Plate
Chilled Mirror Hygrometer

ATTACHMENT E-3
RADON MODEL OUTPUT

Layer Data HELP

Layer No.	Thickness [m]	Ra-226 Activity Conc. [pCi/g]	Rn-222 Emanation Fraction	Porosity	Moisture Cont. [dry wt_%]	Fraction Passing #200 Mesh (75 µm) *)	Rn-222 Eff. Diff.Coeff *) [m^2/s]
1	5	101	0.35	0.35	15.1		
2	.30	0	.35	.38	15.1		
3	.84	0	.35	.35	6		
4	.30	0	.35	.35	6		
5							
6							
7							
8							

Options HELP

- Entrance Radon flux to Layer 1 [pCi/m^2s] *)
- Surface Radon conc. at top of system [pCi/L] *)
- Layer No. to be optimized *)
- Surface flux constraint for optimization [pCi/m^2s] *)
- Surface flux convergence criterion (fraction) *)
- Annual Precipitation [cm] *)
- Annual Lake Evaporation [cm] *)
- Depth to Water Table [m] *)

*) optional

Calculate Reset Form HELP

Results

```
 No.     [m]     [pCi/g]  Fract            [dry wt_%]  [m2/s]
  1    5         101      0.35     0.35      15.1       169.1E-9
  2    0.3       0        .35      0.38      15.1       462.0E-9
  3    0.84      0        .35      0.35      6          2.013E-6
  4    0.3       0        .35      0.35      6          2.013E-6


--------  Results of Radon Diffusion Calculation  --------

Layer  Thickness   Exit Flux  Exit Conc.     MIC
 No.      [m]      [pCi/m2s]   [pCi/L]
  1     5           27.35       46.12E3     0.440
  2     0.3         19.49       14.55E3     0.508
  3     0.84        11.61       4.796E3     0.777
  4     0.3         11.09       0E0         0.777

Total cover radon retention: 70.01%
```

Layer Data HELP

Layer No.	Thickness [m]	Ra-226 Activity Conc. [pCi/g]	Rn-222 Emanation Fraction	Porosity	Moisture Cont. [dry wt_%]	Fraction Passing #200 Mesh (75 µm) *)	Rn-222 Eff. Diff.Coeff *) [m^2/s]
1	5	101	0.35	0.35	15.1		
2	.46	0	.35	.38	15.1		
3	.84	0	.35	.35	6		
4	.30	0	.35	.35	6		
5							
6							
7							
8							

Options HELP

- Entrance Radon flux to Layer 1 [pCi/m^2s] *)
- Surface Radon conc. at top of system [pCi/L] *)
- Layer No. to be optimized *)
- Surface flux constraint for optimization [pCi/m^2s] *)
- Surface flux convergence criterion (fraction) *)
- Annual Precipitation [cm] *)
- Annual Lake Evaporation [cm] *)
- Depth to Water Table [m] *)

*) optional

Calculate Reset Form HELP

Results

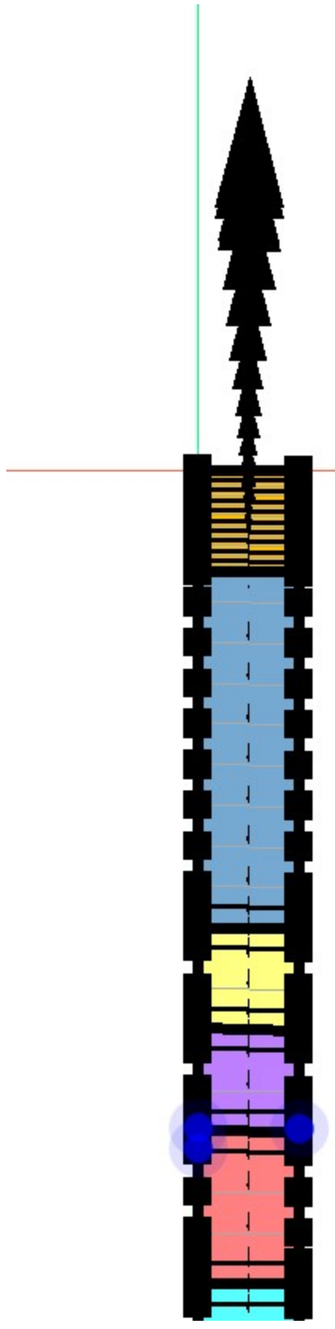
No.	[m]	[pCi/g]	Fract		[dry wt_%]	[m2/s]
1	5	101	0.35	0.35	15.1	169.1E-9
2	0.46	0	.35	0.38	15.1	462.0E-9
3	0.84	0	.35	0.35	6	2.013E-6
4	0.3	0	.35	0.35	6	2.013E-6

-------- Results of Radon Diffusion Calculation --------

Layer No.	Thickness [m]	Exit Flux [pCi/m2s]	Exit Conc. [pCi/L]	MIC
1	5	26.19	51.69E3	0.440
2	0.46	14.22	10.61E3	0.508
3	0.84	8.474	3.499E3	0.777
4	0.3	8.091	0E0	0.777

Total cover radon retention: 78.12%

APPENDIX F
Selected Results of Infiltration Analysis



Draw Graph

Add | Delete

Name	Y	X
Cummulative...	Cumulative Cha...	Time
cumulative c...	Cum Water Mass	Time
cumulative c...	Cumulative Cha...	Time
Domain Wat...	Domain Water ...	Time
error: cumul...	Water Balance Err	Time
Flux-Cover ...	Water Flux	Time
New Graph (2)	Custom 1	Time
New Graph (3)	VWC	Y
New Graph (4)	Domain Water ...	Distance
Percolation	Cum Water Vol...	Time
profile: vwc	VWC	Y
profile: Wat...	Water Rate	Time
VWC vs Time	VWC	Time
water balan...	Water Balance Err	Time
Water balan...	Cum Water Vol...	Time
Water Flux f...	Water Y-Flux	Time
WaterFlux	Water Y-Flux	Time
WaterFlux-C	Cum Water Vol	Time

Name: Water Flux from Clay to Waste

Kind: Mesh

Set Locations...

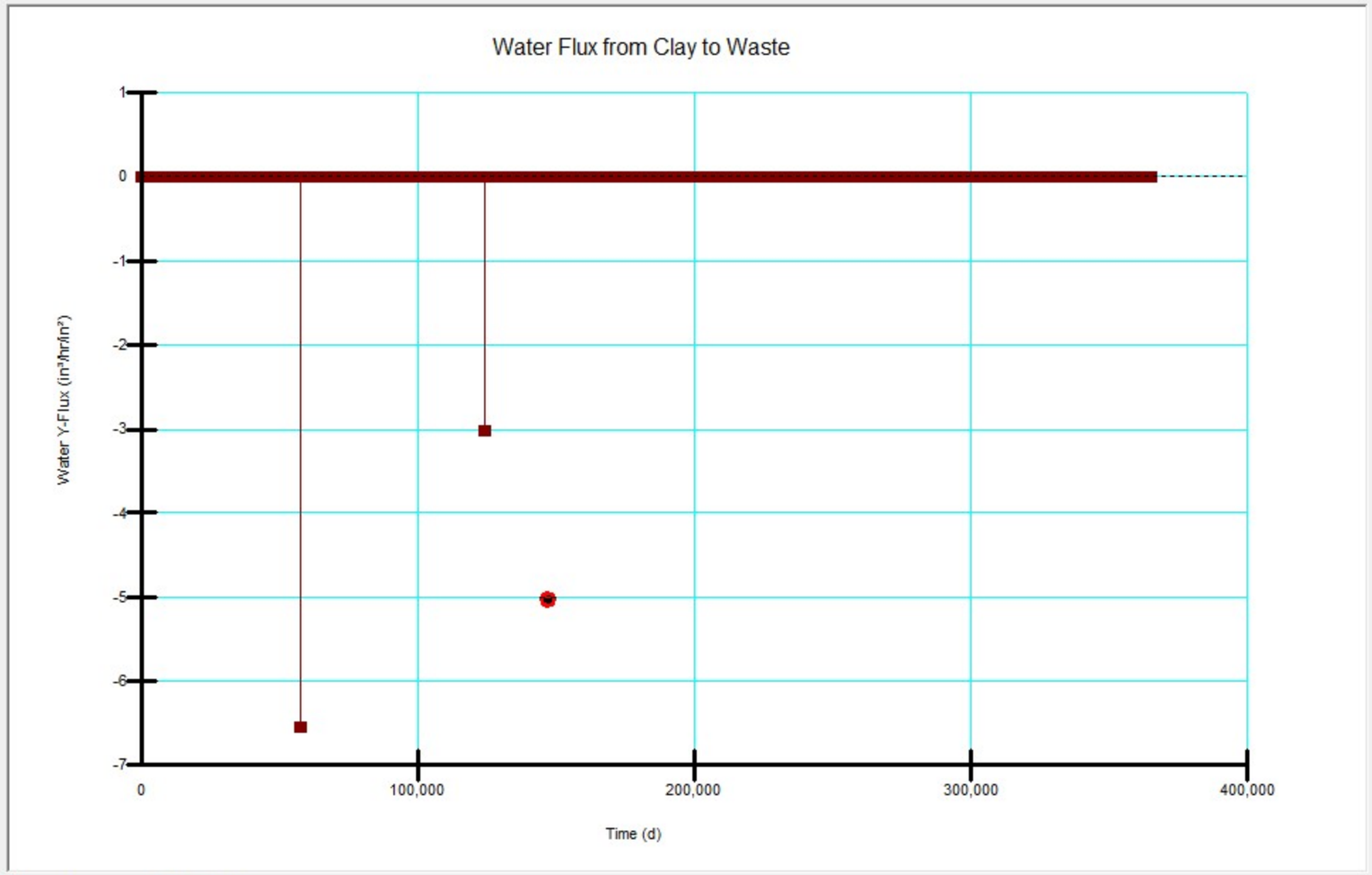
Water Flow | Water Y-Flux

vs. Time | Default

Select Time Steps: All

Step	Elapsed Time (d)	Analysis Name
1	0	Steady-State Seepage
210	21	Transient Seepage
1110	111	Transient Seepage
2010	201	Transient Seepage
2910	291	Transient Seepage

Sum (Y) vs. Average (X) Values

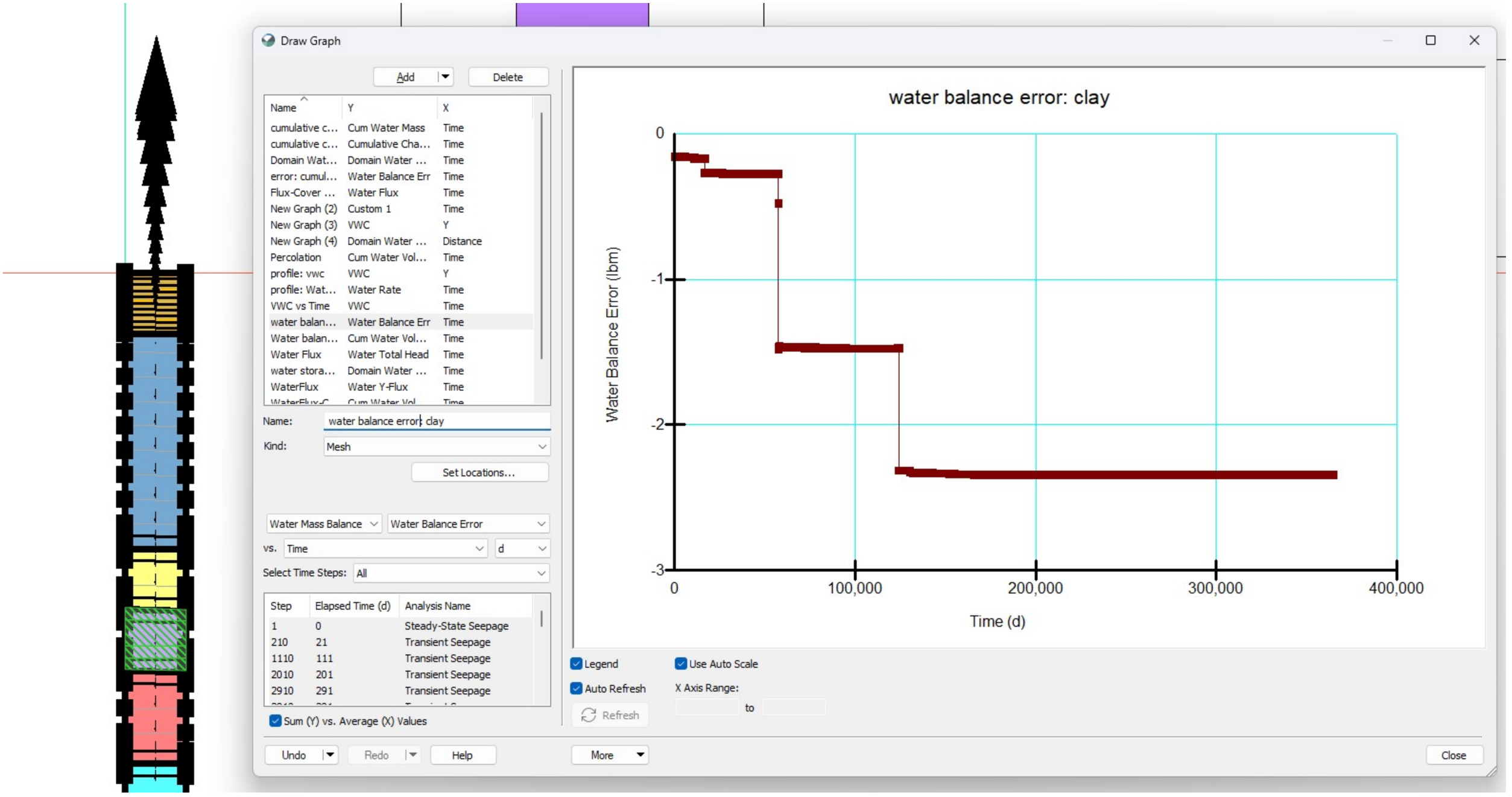


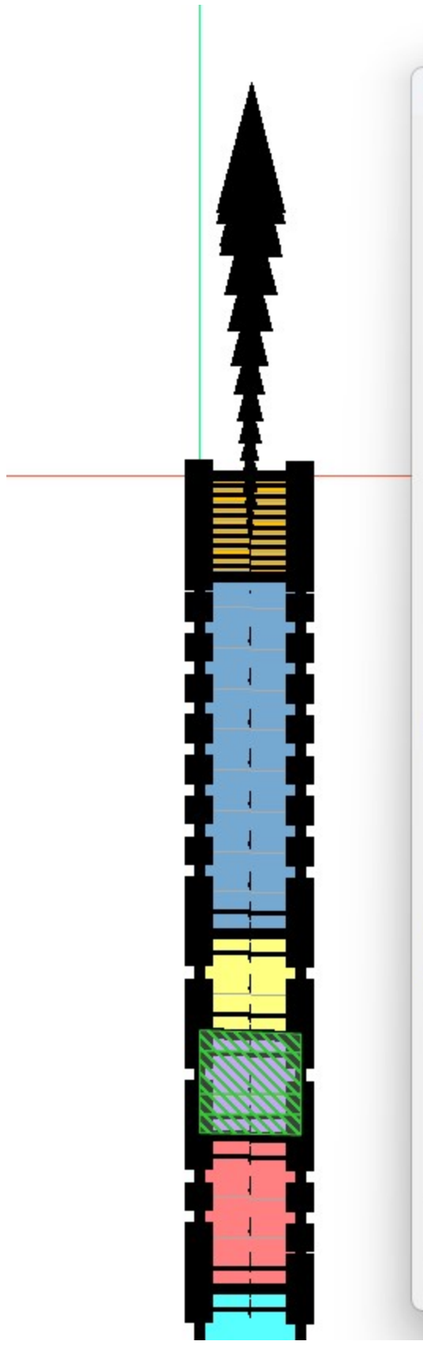
Legend | Use Auto Scale

Auto Refresh | X Axis Range: to

Refresh

Undo | Redo | Help | More | Close


Draw Graph
Add
Delete
Name
Y
X
cumulative c... Cum Water Mass Time
cumulative c... Cumulative Cha... Time
Domain Wat... Domain Water ... Time
error: cumul... Water Balance Err Time
Flux-Cover ... Water Flux Time
New Graph (2) Custom 1 Time
New Graph (3) VWC Y
New Graph (4) Domain Water ... Distance
Percolation Cum Water Vol... Time
profile: vwc VWC Y
profile: Wat... Water Rate Time
VWC vs Time VWC Time
water balan... Water Balance Err Time
Water balan... Cum Water Vol... Time
Water Flux Water Total Head Time
water stora... Domain Water ... Time
WaterFlux Water Y-Flux Time
Name: water balance error: clay
Kind: Mesh
Set Locations...
Water Mass Balance
Water Balance Error
vs. Time
d
Select Time Steps: All
Step Elapsed Time (d) Analysis Name
1 0 Steady-State Seepage
210 21 Transient Seepage
1110 111 Transient Seepage
2010 201 Transient Seepage
2910 291 Transient Seepage
Sum (Y) vs. Average (X) Values
water balance error: clay
Water Balance Error (lbm)
0
-1
-2
-3
0
100,000
200,000
300,000
400,000
Time (d)
Legend
Use Auto Scale
Auto Refresh
X Axis Range:
to
Refresh
Undo
Redo
Help
More
Close



Draw Graph

Add | Delete

Name	Y	X
cumulative c...	Cum Water Mass	Time
cumulative c...	Cumulative Cha...	Time
Domain Wat...	Domain Water ...	Time
error: cumul...	Water Balance Err	Time
Flux-Cover ...	Water Flux	Time
New Graph (2)	Custom 1	Time
New Graph (3)	VWC	Y
New Graph (4)	Domain Water ...	Distance
Percolation	Cum Water Vol...	Time
profile: vwc	VWC	Y
profile: Wat...	Water Rate	Time
VWC vs Time	VWC	Time
Water balan...	Cum Water Vol...	Time
Water Flux	Water Total Head	Time
water stora...	Domain Water ...	Time
water stora...	Domain Water ...	Time
WaterFlux	Water Y-Flux	Time

Name: water storage: clay

Kind: Mesh

Set Locations...

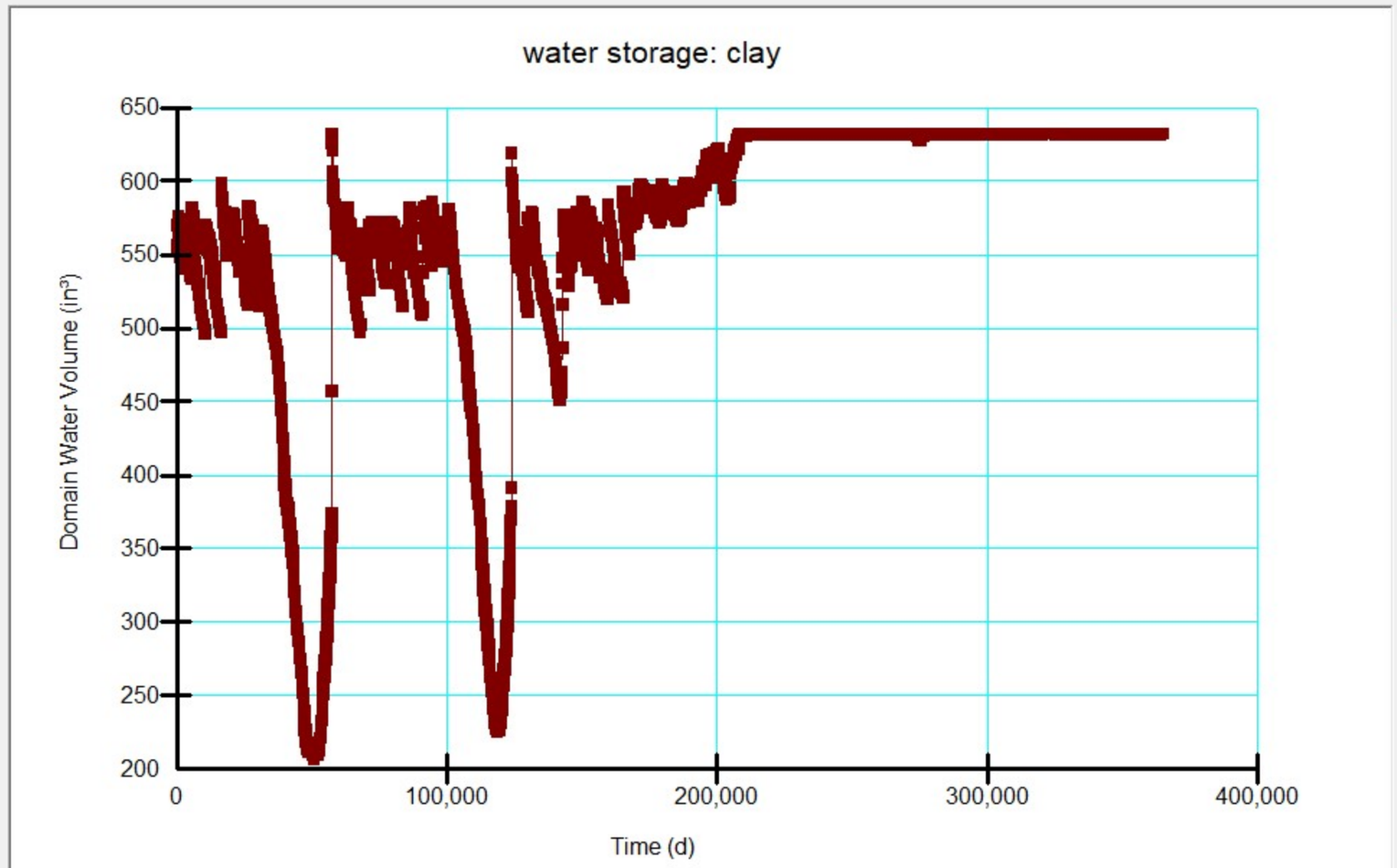
Water Mass Balance | Domain Water Volume

vs. Time | d

Select Time Steps: All

Step	Elapsed Time (d)	Analysis Name
1	0	Steady-State Seepage
210	21	Transient Seepage
1110	111	Transient Seepage
2010	201	Transient Seepage
2910	291	Transient Seepage

Sum (Y) vs. Average (X) Values

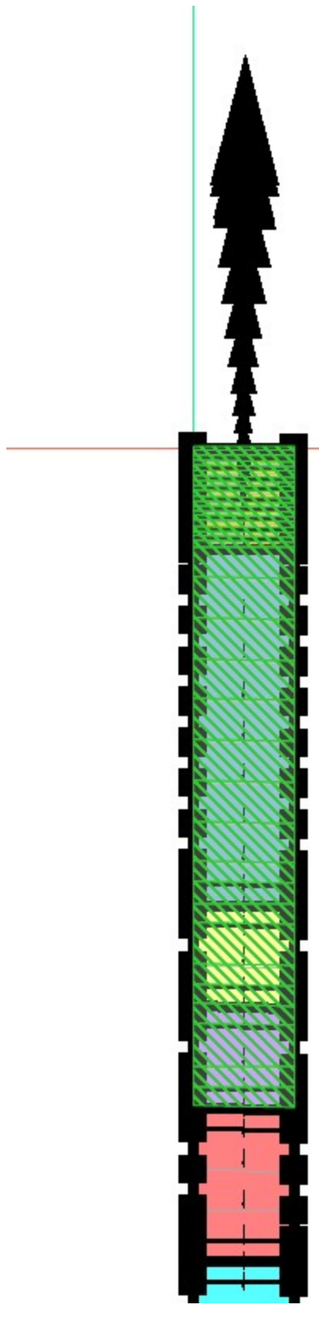


Legend | Use Auto Scale

Auto Refresh | X Axis Range:

Refresh | to

Undo | Redo | Help | More | Close



Draw Graph

Add | Delete

Name	Y	X
Cummulative...	Cumulative Cha...	Time
cumulative c...	Cum Water Mass	Time
cumulative c...	Cumulative Cha...	Time
Domain Wat...	Domain Water ...	Time
error: cumul...	Water Balance Err	Time
Flux-Cover ...	Water Flux	Time
New Graph (2)	Custom 1	Time
New Graph (3)	VWC	Y
New Graph (4)	Domain Water ...	Distance
Percolation	Cum Water Vol...	Time
profile: vwc	VWC	Y
profile: Wat...	Water Rate	Time
VWC vs Time	VWC	Time
water balan...	Water Balance Err	Time
Water balan...	Cum Water Vol...	Time
Water Flux	Water Total Head	Time
WaterFlux	Water Y-Flux	Time
WaterFlux-C	Cum Water Vol	Time

Name: ılative Change in Water Volume (Cover System)

Kind: Mesh

Set Locations...

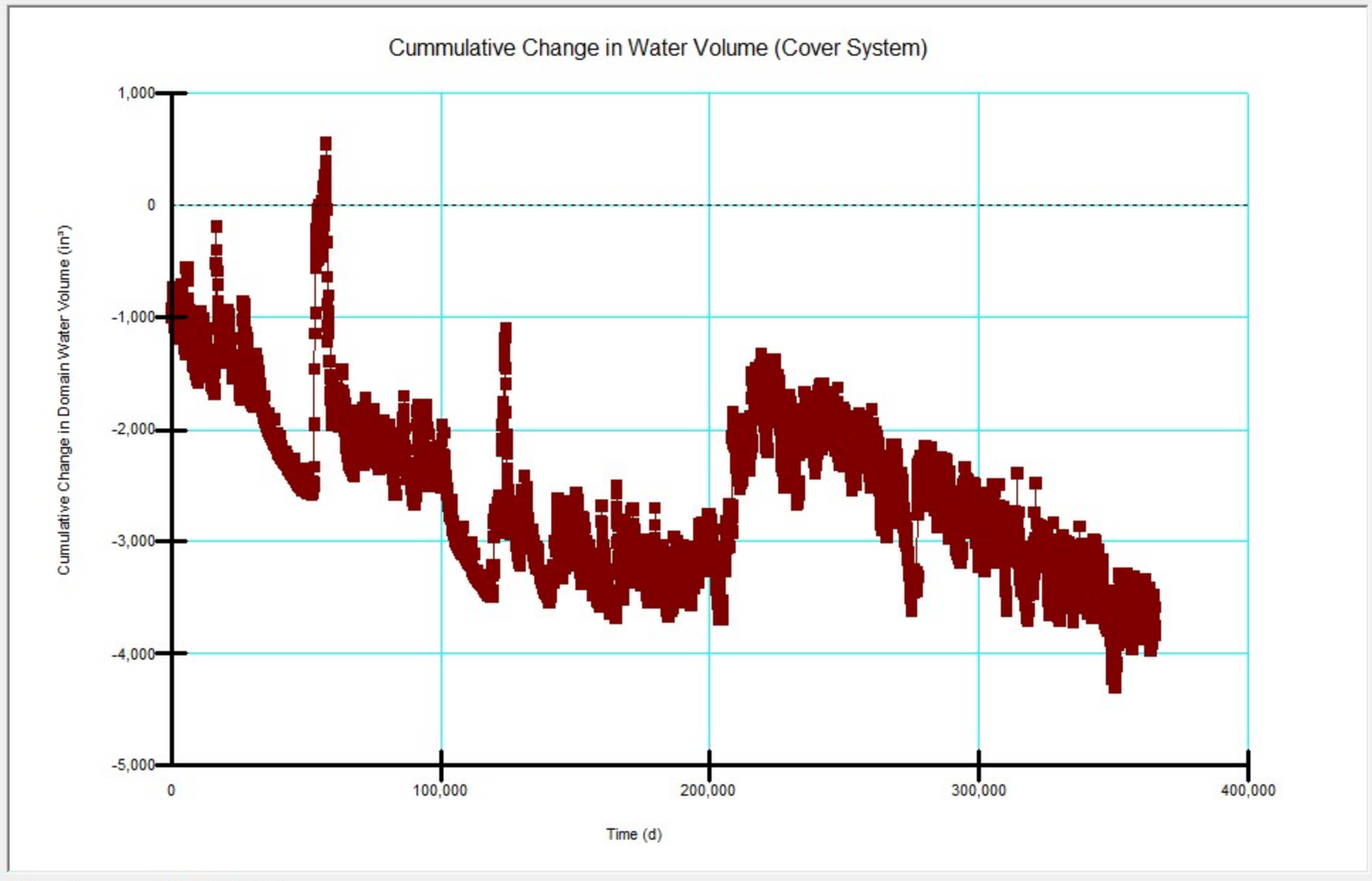
Water Mass Balance | Cumulative Change in Domain \

vs. Time | d

Select Time Steps: All

Step	Elapsed Time (d)	Analysis Name
1	0	Steady-State Seepage
210	21	Transient Seepage
1110	111	Transient Seepage
2010	201	Transient Seepage
2910	291	Transient Seepage

Sum (Y) vs. Average (X) Values

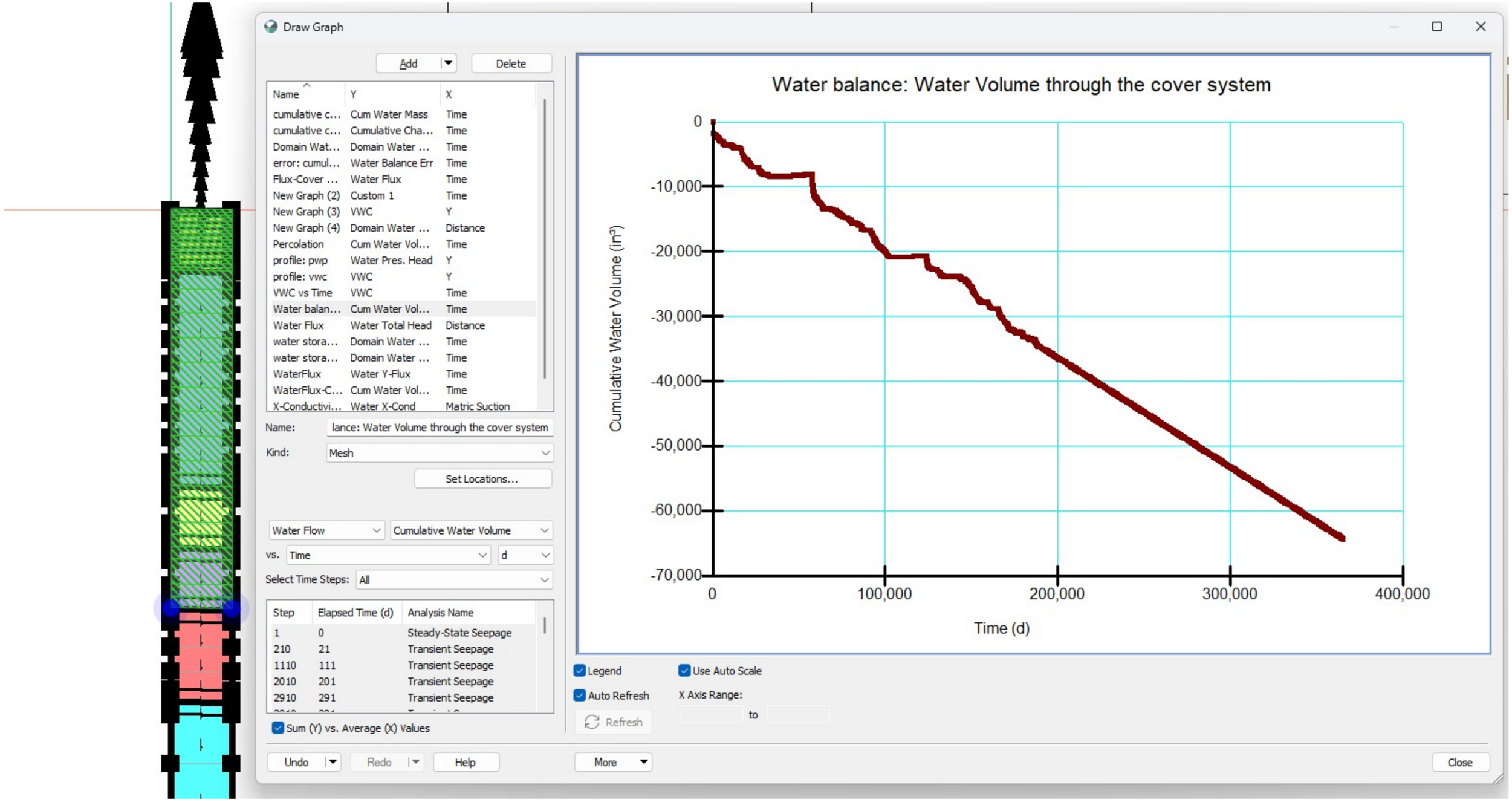


Legend | Use Auto Scale

Auto Refresh | X Axis Range:

Refresh | to

Undo | Redo | Help | More | Close


Draw Graph
Add
Delete
Name
Y
X
cumulative c... Cum Water Mass Time
cumulative c... Cumulative Cha... Time
Domain Wat... Domain Water ... Time
error: cumul... Water Balance Err Time
Flux-Cover ... Water Flux Time
New Graph (2) Custom 1 Time
New Graph (3) VWC Y
New Graph (4) Domain Water ... Distance
Percolation Cum Water Vol... Time
profile: pwp Water Pres. Head Y
profile: vwc VWC Y
VWC vs Time VWC Time
Water balan... Cum Water Vol... Time
Water Flux Water Total Head Distance
water stora... Domain Water ... Time
water stora... Domain Water ... Time
WaterFlux Water Y-Flux Time
WaterFlux-C... Cum Water Vol... Time
X-Conductivi... Water X-Cond Matric Suction
Name: lance: Water Volume through the cover system
Kind: Mesh
Set Locations...
Water Flow
Cumulative Water Volume
vs. Time
d
Select Time Steps: All
Step Elapsed Time (d) Analysis Name
1 0 Steady-State Seepage
210 21 Transient Seepage
1110 111 Transient Seepage
2010 201 Transient Seepage
2910 291 Transient Seepage
Sum (Y) vs. Average (X) Values
Water balance: Water Volume through the cover system
Cumulative Water Volume (in³)
0
-10,000
-20,000
-30,000
-40,000
-50,000
-60,000
-70,000
0
100,000
200,000
300,000
400,000
Time (d)
Legend
Use Auto Scale
Auto Refresh
X Axis Range:
to
Refresh
Undo
Redo
Help
More
Close

Flux-Cover System

