BANNER MILL

Draft Closure/Closeout Plan

Prepared for:

Pyramid Peak Mining, LLC

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SLR

Banner Mine and Mill Site
Closeout Plan

Prepared for:

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This document has been prepared by SLR International Corporation. The material and data in this report were prepared under the supervision and direction of the undersigned.

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ACRONYMS

amsl	above mean sea level
bgs	Below Ground Surface
CQA	Construction Quality Assurance
EAP	Emergency Action Plan
EPA	United States Environmental Protection Agency
FA	Financial Assurance
HDPE	high-density polyethylene
KVA	kilo-volt-ampere
lbs/ac	Pounds per Acre
LMC	Lordsburg Mining Company
m	meter
MMD	Mining and Minerals Division of the Energy, Minerals and Natural Resources Department of New Mexico
MSGP	Multi-sector General Permit
NMAC	New Mexico Administrative Code
NMMA	New Mexico Mining Act
O&M	Operation & Maintenance
OSE	Office of the State Engineer
PLS	Pure Live Seed
PMLU	Post Mining Land Use
PNM	Public Service Company of New Mexico
PPM	Pyramid Peak Mining Company
SWPPP	Stormwater Pollution Prevention Plan
tpd	Tons per day
UTM	Universal Transverse Mercator

1. INTRODUCTION

1.1 PURPOSE OF PLAN

Pyramid Peak Mining LLC (PPM) owns and operates the Banner Mill (Project), a precious metal processing operation located approximately four miles southwest of Lordsburg, New Mexico. The Banner Mill is a gold and silver ore milling operation which utilizes a rock crusher, ball mill, and flotation circuit to process gold-bearing ore from the Summit Mine, located 57 miles to the north of the property. The Banner Mill Site permit area, as permitted under HI001RE, comprises approximately 428.5 acres of patented mineral leases situated upon private lands located in Sections 10, 11, 12, 13, 14, 23 and 24, T23S, R19W and in Section 7, T23S, R18W N.M.P.M. in Hidalgo County, New Mexico (**Figure 1-1**).

On April 1, 2020, PPM applied for a permit revision to enter the Project into standby status in accordance with the New Mexico Administrative Code (NMAC) Title 19, Chapter 10, Part 7 (19.10.7). As part of the submittal an updated Closeout Plan must be completed in accordance with NMAC 19.10.5.506.

1.2 REGULATORY AUTHORITY

In 1993, the New Mexico legislature enacted the New Mexico Mining Act (NMMA) requiring closure/closeout plans to be put in place for applicable mines within the state. Rules to implement the requirements of the NMMA were promulgated in 1994. This plan was prepared to comply with applicable regulations and requirements stipulated in the NMMA (NMAC Title 19, Chapter 10, Part 5).

The NMMA established a goal of promoting responsible utilization and reclamation of lands impacted by mining while also recognizing that mining is vital to New Mexico. The program is administered by the Mining and Minerals Division of the Energy, Minerals and Natural Resources Department of New Mexico (MMD) and approved existing mine permits apply for the life of the operation.

The MMD's New Mexico Mining Rules (Rules) and advisory Closeout Plan Guidelines (Guidelines) provide a foundation for the development of Closeout Plans. Subpart 506.A of the NMMA states that "… closeout plans shall be based on site-specific characteristics and the anticipated life of the mining operation. Site-specific characteristics include, but are not limited to, disturbances from previous mining operations, past and current mining methods utilized, geology, hydrology and climatology of the area." The Guidelines recognize that each site presents a unique set of circumstances and that many of the existing mines subject to closure requirements were largely developed prior to the NMMA without the requirement for reclamation.

The landowner proposes the post-mining land use, which must be approved by the Director of the MMD. Post-mining land uses include, but are not limited to, agricultural (e.g., cropland, grazing land, or forestry), commercial, industrial, or ecological uses that would comply with applicable laws and regulations. Determining future land-use is the first step in developing a closeout plan and establishing financial assurance for the site. The post-mining land use is discussed in **Section 6**.

1.3 HISTORY OF THE SITE AND CLOSEOUT PLAN SUBMITTALS

1.3.1 HISTORY OF THE BANNER MILL SITE

The Banner Mill Site and adjacent properties had been acquired by Lordsburg Mining Company (LMC) through lease and then purchase from Federal Resources and Phelps Dodge Corporation beginning in 1990. The holdings included an inactive 500 ton per day (tpd) flotation mill and tailings disposal facilities, a cyanide-gold heap leach site, other contiguous mining properties, leases, exploration potential and old mines encompassing some 1,500 acres of fee lands and additional unpatented mining claims. Located about four miles south of Lordsburg, the property has historical, pre-NMMA, production of approximately 4.5 million tons averaging 2.7 % copper, 1.6 ounces per ton silver and 0.07 ounce per ton gold. Mined ore was either milled and concentrated, leached, or sold as sized siliceous smelter flux to nearby copper smelters. Mining was conducted in shafts up to 2,000 feet below ground surface (bgs), and numerous surface cuts along linear, epithermal vein systems. The historical surface impact was extensive.

LMC resumed exploration, direct shipping of precious metal-bearing siliceous flux from surface and underground resources and commenced simultaneous safeguarding and reclamation of the property in 1991. When the NMMA was promulgated in 1993, LMC continued activities in accordance with the Regulations, starting with registration as a regular existing mine and submittal of a Site Assessment Plan dated June 17, 1994. Since that time there has been a continuous record of fee payments, on-going operations, reclamation and compliance. Notable reclamation work includes safeguarding and backfilling of more than 30 open shafts, slopes and surface cuts, revegetation, release of the Westar cyanide-heap leach facility, equipment salvage, and site restoration of the old Banner Mill in preparation for new construction over the old site. As reclamation was completed, substitutions and partial releases of Financial Assurance (FA) from clean-up of the post-NMMA disturbances were made.

Copper smelters at Playas, Hurley, and El Paso were the outlets for LMC's products and, with their closures in the late 1990s, the concentrator plans were postponed, and precious metal flux mining was suspended. LMC's operations remained active by converting the mining and crushing facilities from direct shipping flux to construction aggregate production, which continued through 2013. The shops and equipment also support contract mine reclamation and construction services to regional customers, including the State of New Mexico.

In 2002, St. Cloud Mining Company and LMC were acquired by lmagin Minerals, whose focus was in industrial minerals, reclamation contracting, and construction aggregates. In 2006, the Banner Mill Site, the Summit Mine, and the concentrator at St. Cloud and LMC itself were sold. LMC was sold to Santa Fe Gold Corporation in 2007. Appropriate permit transfer and replacement financial assurance were requested by MMD and were completed on June 26, 2008. On June 30, 2008, LMC acquired the remaining Lordsburg area assets from St. Cloud Mining Company, which effectively re-consolidated the original Federal Resources and Phelps Dodge properties.

With the dramatic increase in precious metal prices beginning in 2006, an updated feasibility study was prepared, and project financing was secured by LMC. An application for permit revision was submitted to MMD in August 2008 that included the construction of a new 400 tpd mill unit and lined Tailings

Impoundment. Commercial production of a precious metal-bearing flotation concentrate commenced in 2009, at which time tailings deposition began at the Tailings Impoundment. Permit revision 08-3 was issued on April 15, 2010.

An application for permit revision was submitted to MMD in February 2014 that included the construction of three Tailings Decant Cells, one Tailings Dry Stacking Unit, and the expansion of the Tailings Impoundment by increasing the height of the Tailings Impoundment without modifying the area of disturbance. LMC applied for standby status on August 5, 2015 and following that submittal, LMC filed for bankruptcy. PPM acquired the Project in 2016 and permit revision 14-1 was issued in March 2017.

1.3.2 HISTORY OF THE CLOSEOUT PLAN SUBMITTALS

In 1997 a Closeout Plan was submitted to MMD under permit No. HI001RE for the existing Project-related disturbance. The Closeout Plan and FA was amended by LMC in 2008 with the application to expand the Tailings Impoundment. A second Closeout Plan and FA adjustment was submitted in 2014, in conjunction with the application to permit the Dry Stacking Unit and Tailings Decant Cells.

2. EXISTING FACILITIES AND ENVIRONMENTAL SETTING

2.1 MILLING/MINING FACILITIES

The major Project facilities and general layout of the Mill Site are shown on **Figure 2-1** and described below.

2.1.1 MILL SITE

The Mill Site utilizes a rock crusher, ball mill, and flotation circuit to process gold-bearing ore from the Summit Mine. Ore is initially placed on the Coarse Ore Stockpile, then processed through the Rock Crusher. The output from the Rock Crusher is deposited on the Fine Ore Stockpile, which is used as feedstock for the Ball Mill where the ore is pulverized. The Rock Crusher has the capacity to process approximately 400 tpd. The pulverized ore is then fed to the Flotation Circuit where metal-bearing minerals are recovered. The Flotation Circuit uses water from the pond on the Tailings Impoundment supplemented by water pumped from the Banner Mine No. 2 Shaft.

2.1.2 TAILINGS DECANT CELLS

At the time of issuance of this Closeout Plan, one Tailings Decant Cell had been partially constructed. Upon completion, there will be three Tailings Decant Cells. The Tailings Decant Cells consist of an eight-inch thick concrete slab with a 50-foot-long flat floor and a 40-foot ramp at 10% gradient to access the cell with a rubber-tire loader. A four-foot high, 10-inch thick end wall and side walls provide tailings containment. Trench drains are spaced 20 feet apart on the floor of each decant cell, and a 60-mil high-density polyethylene (HDPE) geomembrane liner is placed below the concrete slab and on berms around the concrete Tailings Decant Cells. An 18-inch layer of compacted crusher fines is placed on top of the HDPE geomembrane as the base layer for the concrete slab.

As one Tailings Decant Cell is in the process of filling, one is draining while another is in the process of unloading. Each cell will accommodate approximately one week's worth of tailings production. Decanted water gravity drains to the existing Tailings Impoundment and then is pumped back into the mill circuit for reuse. The tailings that settled in the Tailings Decant Cells is removed after being drained to a water content suitable for loading and spreading in the Dry Stacking Unit.

2.1.3 DRY STACKING UNIT

Tailings from the Tailings Decant Cells is placed in the Dry Stacking Unit in approximately two-foot thick lifts and allowed to further dry to the optimum moisture content to allow the tailings to be dry stacked. Lift placement will occur every 20 to 99 days, with longer periods occurring during later stacking. The current dry stacking design provides tailings storage for approximately 1,250 days at maximum mill production rates of 400 tpd. Stormwater runoff from the Dry Stacking Unit discharges to the Tailings Impoundment.

2.1.4 TAILINGS IMPOUNDMENT

The Tailings Impoundment has a capacity of 150,000 tons and is designed to receive up to 200,000 gallons per day of tailings slurry. The impoundment is located in a small arroyo and has a footprint of approximately five acres. The Tailings Impoundment is lined with a 60-mil HDPE liner and includes a leachate collection system. The tailings dam is constructed in accordance with the design approved and permitted by the Office of the State Engineer (OSE) Dam Safety Bureau.

2.1.5 MILL SITE POND

The Mill Site Pond collects stormwater runoff from the Coarse Ore Stockpile, the Fine Ore Stockpile, and the Mill Area. The Mill Site Pond is lined with a 60-mil HDPE liner and has a capacity of four acre-feet. Water collected in the Mill Site Pond is evaporated.

2.1.6 STORMWATER MANAGMENT

PPM manages both run-on and run-off stormwater controls to create positive drainage from any stockpiled materials. Stormwater run-off is diverted around the Mill Area, Tailings Impoundment, Tailings Decant Cells, Dry Stacking Unit, and the Mill Building via the North, South, and Upper Mill Diversion Channels. All diversion channels are designed to convey flows from a 100-year, 24-hour storm event. Stormwater management is conducted in accordance with the Stormwater Management Plan (Inspections Plus Inc, 2016) including the design, construction, and maintenance of best management practices for stormwater and erosion control.

2.1.7 ANCILLARY FACILITIES

In addition to the major facilities identified above, there are several support facilities and structures dispersed across the Mill Site. These include water tanks, access roads, office facilities, the laboratory, a shop/warehouse building, and pipelines.

Electric power is supplied by Public Service Company of New Mexico (PNM). A one half-mile long, 2,000 kilo-volt-ampere (KVA) line has been built to the site by PNM from an upgraded, electric-power service facility located at the north end of the property.

2.2 ENVIRONMENTAL SETTING

2.2.1 GEOLOGY AND SOILS

The country rock at the Banner Mill Site is basalt for a depth of at least 2,000 feet bgs. The vein that was historically mined for its copper content is a granodiorite porphyry dike (Lasky, S.G., 1938, Geology and Ore Deposits of the Lordsburg Mining District Hidalgo County, New Mexico).

Soils are very poorly developed and sparse throughout the site area and are described as stony clay loam. However, the thin soils at the property area support a light growth of juniper trees, mesquite brush, and several varieties of cactus.

2.2.2 CLIMATE

The area lies near the Continental Divide at an elevation of approximately 4,700 feet above mean sea level (amsl). The climate is typical of the higher southwest desert, having hot summers and cool to warm winters. Average temperatures range from 45 degrees Fahrenheit (˚F) in winter to 80˚F in mid-summer. Winter low temperatures average about 25˚F and summer highs average about 95˚F. Annual precipitation is approximately 12 inches, half of which falls in the July-October period. Winter snowstorms are uncommon. Annual evapotranspiration in the area is on the order of 50 inches.

2.2.3 PHYSICAL FEATURES

The Mill Site sits at the head of a small basin surrounded by low, rounded hills which rise to an elevation of approximately 5000 feet amsl. The basin drains to the west into the Animas Valley playa. The lower part of the basin was historically used as a tailings repository and is now the site of the Tailings Impoundment constructed for the Summit project.

There are no perennial streams in the area and the drainages run only in response to heavy storm events. The permanent water table at the Mill Site is approximately 750 feet bgs as measured at the Banner Mine No. 2 shaft (Summit PEA 2014).

2.2.4 MATERIAL CHARACTERISTICS

Prior characterization test work of the ores and tailings produced by the Summit Mine and Banner Mill operations show that they do not have acid formation potential. The ores contain less than one percent total sulfide while also containing several percent calcium carbonate. In addition, the ores do not contain significant levels of arsenic, mercury, antimony, lead or other deleterious elements commonly associated with gold and copper ore that might potentially leach from the ore or tailings materials in the event of acid generation.

2.3 PERMITS AND DISCHARGE PLANS

A summary of permits and authorizations for the Banner Mill is provided below:

AGENCY	PERMIT/LICENSE OR REGISTRATION	DATE	NUMBER	COMMENTS
U.S. EPA	Lordsburg (Storm Water) NPDES Permit	7/5/2016	NMR05HA95	Banner Mill Site
	Banner (Storm Water Plan)	2/2008	NA	Banner Mill Site
NMED	Air Quality Permit (crusher)	2/23/2009	0822M3	Banner Mill Site
	Ground Water Discharge Permit Renewal	09/25/2019	DP-1651	Banner Mill Site
	Septic Tank Permit	12/91	-	Crusher Site
State Eng.	Water Right Declaration	5/28/91	12/84	Banner Shaft
	Impoundment (Dam)	05/08	NA	To be issue prior to construction
MSHA	Registration and Training Plan	04/08	29-02357	Mine Safety
NM Taxation and Revenue	Business Registration and ID	2008	2203226006	Reporting
	Bulk Fuel Storage	2007	51397	Containment and Reports

AGENCY	PERMIT/LICENSE OR REGISTRATION	DATE	NUMBER	COMMENTS
	Weighmaster's Certificate	1995	NA	Portable Scales
NM Mine Inspector	Emergency Notification Plan and Registration	04/08	NA	Safety
NM MMD	Lordsburg Mine Permit	1994	HI001RE	Reclamation
	Mill Site Modification	July 2 2008	-	Submitted and Ruled Administratively Complete
	Tailings Revision	July 2008	-	Submitted
	Tailings Impoundment Expansion & Tailings Dewatering and Dry Stacking Unit	January 2014	-	Submitted

An Operations and Maintenance Manual (O&M) and Emergency Action Plan (EAP) is also in place (2016) for the Banner Mill Tailings Impoundment.

3. DESCRIPTION OF COMPLETED RECLAMATION

3.1 SHAFTS, ADITS OR TUNNELS

All of the known shafts, adits, or tunnels within the Project site have been previously closed, reseeded and released, or partially released from Financial Assurance. There are other known pre-NMMA mine workings on the property that have been closed, posted, and/or fenced and other openings are known to exist. PPM shall continue to review and monitor these openings, and fill or safeguard them as may be possible or prudent; however, these activities are not included in this Closeout Plan.

4. CLOSURE RECLAMATION PLAN AND SCHEDULE

4.1 SURFACE SHAPING AND STORMWATER MANAGEMENT

PPM will regrade and/or backfill the Tailings Decant Cells, Dry Stacking Unit, Tailings Impoundment, and Stockpiles in a manner that ensures positive drainage from areas to be covered and revegetated and eliminate, to the extent practicable, ponding on final cover surfaces. PPM will construct top surfaces and final cover surfaces to a final grade of 0.5% to 5% to direct stormwater off covered surfaces and will provide other erosion controls as necessary. PPM will construct surface water controls (safety berms) that will prevent run-on to the Tailings Decant Cells, the Dry Stacking Unit, and the Tailings Impoundment from upgradient slopes.

Erosion controls will be designed for a 100-year, 24-hour storm event and include, but are not limited to, features such as silt fences, hay bales, water bars, mulching, drainage ditches, retention ponds, and outlet channels lined with rip rap if necessary. PPM will provide both run-on and run-off controls such as diversion ditches, retention ponds, and channels lined with rip rap to create positive drainage from any stockpiled materials. Surface water diversion ditches shall be provided on outslopes to adequately convey stormwater to retention ponds or outlet channels located at the outslope toe or to any other retention structure. Diversion ditches, retention ponds, and outlet channels shall be lined with riprap, consisting of well-graded rock fragments, as necessary. PPM will provide detailed plans for stormwater and best management practices for post-closure erosion control to MMD prior to initiating closure, and implementation of closure activities will begin within 180 days of receiving MMD approval.

4.2 COVER PLACEMENT

Cover material will be placed at the Tailings Impoundment, Tailings Decant Cells, Dry Stacking Unit, and Roads in a manner that promotes stormwater runoff and revegetation. The cover material for the Tailings Decant Cells and the Tailings Impoundment will be a suitable store-and-release cover described in **Sections 4.8.2 and 4.8.4**. Cover materials will consist of soils salvaged during excavation work from the initial Tailings Impoundment construction activities and crusher fines that are currently stockpiled at the Banner Mill Site, and organic matter obtained locally, such as biosolids, recycled green waste much, or manure from feed lots or dairies. Stones greater than 24 inches in diameter will be placed randomly over the reclaimed area at a density of five tons per acre.

4.3 TOPSOIL SALVAGE

Topsoil and/or overburden material has been recovered from construction activities throughout the Banner Mill Site and collected and stockpiled for use in reclamation as depicted on **Figure 2-1.** Topsoil stockpiles are constructed and maintained to prevent mass movement, and if necessary, include a variety of erosion control measures including, but not limited to, silt fences, hay bales, water bars, and mulching.

4.4 REVEGETATION

PPM's seed mix includes cool and warm-season grasses, perennial forbs, and shrubs that have been successfully used in mine reclamation and range improvement projects in many parts of New Mexico. The seed mix is designed for application prior to the summer rains and the seeding will be completed accordingly. The seed mix is specially designed to provide forage and cover for wildlife and grazing livestock and to provide early establishment of ground cover, erosion control, and diversity in growth forms. However, the primary seed mix is expected to change to accommodate seed supply variances or in response to new information on plant performance as the closeout date is realized.

PPM may request to modify the primary seed mix using species similar in function and attributes to the species shown below and shall submit a proposed seed mix for MMD approval 30-days prior to the use of a specified seed mix.

PPM may also transplant locally harvested cactus species from the company's adjacent private lands into areas to be revegetated. This harvesting shall be done in a manner to minimize the impacts and maximize the survival rate. No less than 200 total transplanted cacti shall be transplanted to the Tailings Impoundment and Mill Site following closure, and will consist of prickly pear, ocotillo, and small barrel cacti. These species have been successfully relocated in previous projects.

Covered, ripped surfaces shall be revegetated and seeded in accordance with PPM's revegetation plan and shall consist of the seed mix species and application rates provided in **Table 4.1**.

Table 41 Seed Mix and Application Rates

Species	Total Estimated Cost
Indian ricegrass	2.16 pounds per acre (lbs/ac)
Purple three awn	0.52 lbs/ac
Blue grama	1.60 lbs/ac
Galleta grass	0.87 lbs/ac
Blue flax	0.45 lbs/ac
Sand dropseed	0.12 lbs/ac
Desert globemallow	0.26 lbs/ac
Scarlet globemallow	0.26 lbs/ac
Fourwing saltbrush	3.35 lbs/ac
New Mexico saltbrush	0.38 lbs/ac
Total	**10.42 lbs/ac**

4.5 METHODS

Following surface shaping and the placement of cover, PPM will leave the seedbed in a roughened condition to reduce overland flow and promote the infiltration of precipitation. Seeding will be conducted using a drill seeder; however, if the solid surface configuration and high rock fragment content of the

cover preclude the use of a drill seeder, the seed will be broadcast, at double the rate provided in **Table 4.1**, and covered using a chain- or tire-drag. Straw or native grass mulch will be applied at a rate of at least two tons per acre, and stabilized using a tackifier emulsion, or by crimping following seeding. Mulch will be weed-free and contain a minimum of variable seeds associated with the mulch source (e.g., barley or wheat seeds).

4.5.1 FERTILIZER APPLICATION

A light fertilizer, or other means (e.g. biosolids or other topdressing amendments) of amending the topdressing which provides necessary nutrients to plant seedling survival will be applied to all covered surfaces at the time of seeding. Fertilizer will be applied at a level to attain a nutrient level (NPK Level) of at least 50% of the nutrient level in the reference area. The application rate and type of nutrient amendment will be approved by MMD at least 180 days prior to seeding and fertilizer application.

4.5.2 WILDLIFE PROTECTION

PMM will minimize adverse impacts to wildlife and construct habitat features. Measures will involve a hazard evaluation and then implementation of the appropriate mitigation measures to be used at closeout, based on site-specific characteristics, by taking the following measures:

a) Restricting access of wildlife and domestic animals to toxic chemicals or otherwise harmful materials;
b) The perimeter of the Tailings Impoundment is enclosed with fencing, to exclude wildlife and livestock. Wildlife exclusion fencing was constructed in accordance with New Mexico Department of Game and Fish wildlife fencing guidelines, consisting of eight-foot high chain link or woven wire, and wrapped around the bottom one to two feet with smaller mesh material that extends to, or below, ground, to exclude smaller animals; and
c) PPM will establish wildlife habitat features, such as rock piles and/or brush piles to promote floral and faunal diversity.

4.6 SITE STABILIZATION AND SURFACE CONFIGURATION

Final slopes and drainage configurations shall be compatible with the Post Mining Land Use (PMLU) defined in **Section 6.1**. All man-made piles, such as stockpiles and ore piles, reconstructed slopes, embankments, and roads shall be designed, constructed, and maintained to prevent mass movement, to minimize future impact to the environment, and protect air and water resources.

4.7 CONSTRUCTION QUALITY ASSURANCE

A Construction Quality Assurance (CQA) plan will be submitted to MMD for approval no less than 180 days prior to commencement of closeout construction. Detailed engineering designs addressing slopes, surface erosion controls, and stormwater management structures, including riprap-lined channels will be submitted for MMD, NMED, and OSE approval. The CQA plan will include a description of work to be

conducted, soil testing results, laboratory analytical reports, and identification of the location of borrow areas.

The CQA plan will be supplemented to include a final report, to be submitted to MMD not more than 180 days after construction completion. The report will include a summary of work conducted, as-built drawings, and final design specifications for slopes, covers, and stormwater management structures. The report will provide a final topographic map with no greater than two-foot contour intervals for the top surfaces and not greater than five-foot intervals for slopes and include construction photographs.

4.8 BANNER MILL SITE FACILITIES

4.8.1 MILL SITE

The building and supporting infrastructure (i.e., access roads) will remain intact as designed and allow for an industrial PMLU. Some ancillary facilities, such as water tanks, shop/warehouse building, and pipelines will be demolished and removed from the Mill Site as determined at the initiation of closeout. A soils investigation will be conducted at the Mill Site and where ancillary facilities were demolished to identify impacted soils or sediments, if present, for removal and consolidation in the Tailings Impoundment. The areas where facilities have been removed and/or soils have been removed will be regraded to promote stormwater runoff, if necessary, and mulched, fertilized, and seeded. An ultimate grading plan with topographic contours is provided in **Figure 4-1**.

4.8.2 TAILINGS DECANT CELLS

Following completion of operation, the reclamation of the Tailings Decant Cells consists of removing all tailings and making 3.5-inch to 4-inch perforations through the concrete and HDPE liner in a 10-foot square grid pattern. Once perforated, the cell will be covered and graded to promote stormwater runoff. Regraded surfaces of the Tailings Decant Cells will be covered with a suitable store-and-release cover material consisting of 12 inches of fill material and 12 inches of growth media. The textural characteristics of the cover material will be supportive of a self-sustaining ecosystem and consist of a native alluvial material and/or other growth medium containing 25% by volume rock fragments in the size range of three inches to ten inches and will include organic matter obtained locally, such as biosolids, recycled green waste mulch, or manure from feed lots or dairies. Following cover placement, the reclaimed area will be mulched, fertilized, and seeded. An ultimate grading plan with topographic contours is provided in **Figure 4-1**.

4.8.3 DRY STACKING UNIT

Following completion of operation, the tailings remaining within the Dry Stacking Unit will be consolidated in the Tailings Impoundment or removed from the Banner Mill Site for secondary uses. The ground surface will be graded to drain to the North Diversion Channel at a slope of 0.5% to 5%.

Regraded surfaces of the Dry Stacking Unit will be covered with a minimum of 12 inches of growth media. The textural characteristics of the cover material will be supportive of a self-sustaining ecosystem and consist of a native alluvial material and/or other growth medium containing 25% by volume rock fragments in the size range of three inches to ten inches and will include organic matter obtained locally, such as biosolids, recycled green waste mulch, or manure from feed lots or dairies. Stones greater than 24 inches in diameter will be placed randomly over the reclaimed area at a density of five tons per acre. Following cover placement, the reclaimed area will be mulched, fertilized, and seeded. An ultimate grading plan with topographic contours is provided in **Figure 5-1**.

4.8.4 TAILINGS IMPOUNDMENT

Following completion of operation, the Tailings Impoundment will be dewatered at the end of operations by pumping from the Leachate Collection Well which will remain available for sampling until post-closure monitoring is complete. Prior to final closure, a proposal for disposal of pumped water will be submitted to NMED for approval.

The remaining tailings within the Tailings Impoundment will be consolidated with tailings from the Dry Stacking Unit and the liner beneath the consolidated tailings will be perforated. The exposed liner will be folded in over the consolidated tailings and the area will be covered with a minimum of 24 inches of suitable store-and-release cover material. The area will be graded to promote runoff at a slope of 2% to 5% and a drainage ditch will be constructed to drain to the North Diversion Channel. The textural characteristics of the cover material will be supportive of a self-sustaining ecosystem and consist of a native alluvial material and/or other growth medium containing 25% by volume rock fragments in the size range of three inches to ten inches and will include organic matter obtained locally, such as biosolids, recycled green waste mulch, or manure from feed lots or dairies. Stones greater than 24 inches in diameter will be placed randomly over the reclaimed area at a density of five tons per acre. Following cover placement, the reclaimed area will be mulched, fertilized, and seeded. An ultimate grading plan with topographic contours is provided in **Figure 4-1**.

4.8.5 MILL SITE POND

Following completion of operation, the water remaining in the Mill Site Pond will be allowed to evaporate. Prior to final closure, a proposal for disposal of pumped water will be submitted to NMED for approval. Following dewatering, a soils investigation will be conducted on the sediment remaining in the Mill Site Pond to identify impacted sediments, if present, for removal and consolidation in the Tailings Impoundment. The Mill Site Pond liner will be perforated and a minimum of 12 inches of growth material will be placed over the liner. The area will be graded to promote runoff at a slope of 0.5% to 5% and the area will be mulched, fertilized, and seeded.

4.8.6 STOCKPILES

Following completion of operation, all stockpiles such as waste dumps, topsoil stockpiles, and ore piles will be utilized as cover material in the closeout process. Any remaining stockpiles will be graded to a stable slope. A final slope of 3H:1V was utilized for the purposes of this closeout plan; however, the final slope may be modified at the time of closeout with the approval of MMD. Erosion controls designed for a 100-year, 24-hour storm event will be constructed, if necessary, and the area will be mulched, fertilized, and seeded. An ultimate grading plan with topographic contours is provided in **Figure 4-1**.

4.8.7 ANCILLIARY FACILITIES

Following completion of operation, ancillary facilities including offices, shop/warehouse, water tanks, pipelines, and power transmission that are not associated with the industrial PMLU will be demolished or salvaged and removed from the Banner Mill Site. A soils investigation will be conducted where ancillary facilities were demolished to identify impacted soils or sediments, if present, for removal and consolidation in the Tailings Impoundment. The areas where facilities have been removed and/or soils have been removed will be regraded to promote stormwater runoff, if necessary, and mulched, fertilized, and seeded.

4.8.8 ROADS

Roads within the portion of the Banner Mill Site that will be designated with the industrial PMLU will remain in place. Roads located within the Tailings Impoundment, Tailings Decant Cells, and Dry Stacking Unit areas will be graded for stormwater control. Following grading, roads will be ripped and a minimum of 12 inches of growth material will be placed. Following cover placement, the reclaimed area will be mulched, fertilized, and seeded.

4.9 CLOSEOUT PLAN SCHEDULE

A reclamation schedule is required pursuant to 19.10.5.506.B1 NMAC. The reclamation of the Banner Mill Site will commence within 180 days of receiving MMD, and other applicable agency, approval of the detailed plans and CQA plan. Closeout will be completed within two years after it is initiated.

5. POST CLOSURE MONITORING AND MAINTENANCE

5.1 EROSION MONITORING

PPM will visibly inspect reclaimed lands for signs of excessive erosion and will mitigate significant erosion features to prevent further degradation of the site. Inspections will be conducted annually for a period of three years following closeout completion. The drainage channels, diversion structures, retention ponds, and auxiliary erosion control measures constructed within the Tailings Decant Cells, Dry Stacking Unit, and Tailings Impoundment, will be inspected in accordance with nationally recognized standards of the U.S Natural Resource Conservation Service, or alternative equivalent best management practices.

PPM will verbally report evidence of significant rill, gully, or sheet erosion on any reclaimed area to MMD.PPM will then provide MMD with a written report that describes the nature and extent of erosion including a corrective action plan and schedule for implementation. The plan will be implemented as soon as practical following regulatory approval.

5.2 VEGETATION MONITORING

PPM will conduct vegetation monitoring of both volunteer (natural) revegetation and revegetated areas during the third year, sixth year, tenth year, and eleventh year following seeding. Monitoring will include, at a minimum, canopy cover, plant diversity, and woody stem density. The monitoring will be conducted to meet statistical adequacy during two consecutive years (tenth and eleventh year) of the last four years prior to financial assurance release. The canopy cover survey and woody stem density survey will be conducted using survey and analysis techniques approved by MMD. At least 90 days prior to the first monitoring event, PPM will submit a vegetation monitoring plan for MMD approval. As part of the monitoring plan, a reference area representative of the vegetation community of the undisturbed area contiguous to the Banner Mill Site will be identified. The vegetation monitoring of the reclaimed areas will be compared with the reference area to ensure compliance with 19.10.5.508E NMAC. PPM will provide proposals for a reference area (or areas) to MMD for approval prior to conducting vegetation monitoring. The reference area study will be completed within two years following commencement of closeout.

Vegetation monitoring will commence upon approval of the monitoring plan. PPM will provide MMD notice at least two weeks prior to conducting the approved monitoring. Results of the monitoring will be provided to MMD. PPM will inter-seed, or re-seed, areas that have volunteer vegetation as well as other areas if necessary.

5.3 GROUNDWATER AND SURFACE WATER

Prior to closeout, a proposal will be submitted to NMED for post-closeout groundwater and surface water monitoring based on the current monitoring requirements. Current groundwater and surface water monitoring is defined by the stormwater NPDES permit and the NMED Groundwater Discharge Permit. Stormwater sampling varies based on the operational and staffing activities at the site consists of collecting water quality samples and visual observations on a quarterly basis at:

- South Diversion Outfall
- North Diversion Outfall
- Lower Mill Site Diversion Outfall

Groundwater monitoring consists of collecting groundwater quality samples and visual observations on a quarterly basis at:

- Banner Shaft #2
- MW-1

Inspections will continue for a period of no less than 12 years, following cessation of milling operations at the Banner Mill Site, or until the specific units are released under the NMMA.

6. POST CLOSURE LAND USE

6.1 LAND USE

The Post Mining Land Use (PMLU) will be split between "industrial" and "grazing/wildlife habitat". The industrial PMLU will allow the buildings and supporting infrastructure to remain in place. Any disturbed areas situated within the Banner Mill Site, but located outside of the immediate industrial site, including the Tailings Impoundment, the Tailings Decant Cells, and Dry Stacking Unit will be revegetated to an acceptable standard to achieve the PMLU of "grazing/wildlife habitat."

Compliance with 19.10.5.507A and 19.10.5.508 NMAC shall be achieved by the following:

a) Vegetation in the reclaimed area will meet approved MMD revegetation standards;

b) PPM will take measures at closeout to minimize adverse impacts to waterflow and other wildlife, resulting from ponding or water impoundment within the Tailings Impoundment, Tailings Decant Cells or Dry Stacking Unit area. Measures will involve a hazard evaluation followed by implementation of appropriate mitigation measures if required; and

c) PPM will establish wildlife habitat features, such as rock piles and/or brush piles to promote floral and faunal diversity.

Prior to closeout, if an alternative post mine land use is identified for the Tailings Impoundment, Dry Stacking Unit, and/or the Tailings Decant Cell, this use will be submitted for approval to MMD.

6.2 PUBLIC HEALTH AND SAFETY

PPM will ensure that the Tailings Impoundment, Tailings Decant Cells, and Dry Stacking Unit areas do not pose a current or future hazard to public health or safety and will take measures to safeguard and limit future access to the area only to authorized personnel by implementing the following measures at closeout:

a) Where applicable and necessary, to restrict access by unauthorized personnel and provide for public safety, a berm and/or fence shall be placed around the perimeter of the Tailings Impoundment, Decant Cells and Dry Stacking Unit. Within 180 days of approval of this Permit Revision, PPM will submit, for MMD approval, a map showing the locations of berms and fences to be placed around the impoundment facility. PPM shall also provide written details describing the types of berms and fencing to be used

b) Signage posted on fencing at 100-foot intervals and at all access points, warning of potential hazards present;

c) To allow access for maintenance activities by authorized personnel, locked gates will be placed in appropriate locations in association with the berm/fence combination; and

d) Prior to discharging to either the Tailings Impoundment, Tailings Decant Cells, and Dry Stacking Unit, PPM will ensure that all berms, storm water diversion channels, and/or the dam structure of the Tailings Impoundment will have the capacity for such discharges, while maintaining appropriate safety measures, in accordance with the regulations of the Dam Safety Bureau of the OSE, where applicable.

7. CLOSURE COSTS

The closure costs are provided below and the calculation spreadsheets detailed cost estimate for the amount of FA for this Closeout Plan are provided in **Attachment A**. The FA amount is required to be reviewed periodically and adjusted, and it is anticipated this will be done as the area of disturbance resulting from the operations fluctuates. The amount of financial assurance will be maintained at a level that is adequate to cover all the disturbed areas. The area of disturbance will not be increased beyond the amount provided for without first providing an increase in the financial assurance amount.

The spreadsheets for making the calculation are the same as those used for the previous Closeout Plan. The present increase in financial assurance has resulted from the adjustments to the prior estimate to account for inflation and, in some cases (e.g., reclamation and revegetation) because of changes from the original method for estimating cost to one that is consistent with applicable regulations and guidelines or current industry practice.

The capital closure cost estimate covers construction costs including construction management, CQA, and reporting. The post-closure O&M cost estimate covers periodic inspections, maintenance, and reporting. The 2020 closure cost estimate is summarized in **Table 7.1** and can be found in **Appendix A**. Key assumptions upon which the closure cost estimate is based are listed below.

Table 7.1 Summary of Estimated Closure Costs (US$)

Description	Direct Costs	Indirect Costs	Total Estimated Cost
Remove Mill, Crushing Equipment and Related Infrastructure	$35,301	$22,219	$57,520
Soil Removal and Site Reclamation	$62,606	$38,862	$101,468
Grading and Pipe and Pump Removal	$8,201	$5,150	$13,351
Tailings Impoundment, Tailings Decant Cells, Dry Stack Unit Cover	$224,873	$71,537	$186,410
Reclamation and Revegetation	$88,765	$38,267	$127,032
Total – Capital Costs	**$309,746**	**$176,035**	**$485,781**
Post-Closure Monitoring and Maintenance	$35,918	$11,087	$47,005
Total	**$345,665**	**$187,122**	**$532,786**

Basis and Key assumptions

- The estimate provides for the closure of Banner Mill and Mill Tailings Facility (Banner Mill Site).
- The estimate assumes there have been no changes to the Site since 2014 and the material quantities and areas for closure, as well as the equipment productivity, are the same as the 2014 closure plan estimate.
- The estimate assumes that a General EPC/CM Contractor is retained to perform the closure. This Contractor will prepare the designs necessary for closure and prepare the final detailed closure

and post-closure plans necessary for approval by the stakeholders. The Contractor will then execute the closure.

- During the 12-year period following closure of the Site, the estimate provides for a Contractor to perform the required monitoring and inspection including care and maintenance.
- The estimate assumes all debris and refuse will be loaded and hauled off site for proper disposal.
- The estimate generally assumes that all underground utilities are removed and hauled offsite for recycle or disposal.
- The estimate assumes that demolition will follow a procedure that will maximize the potential to recycle/reuse equipment and materials rather than sending to a landfill. A demolition crew is provided to gut each building/facility of saleable/recyclable/reusable equipment and materials before a second crew actually demolishes the building. Following demolition, a sorting operation is provided to recover recyclables (building structural steel for example) before loading for shipment offsite.
- The estimate does not assume there is any value or revenue received from any of the equipment or materials removed from the Site. The estimate provides for transport costs only for equipment/materials transported for salvage or recycle. In reality, this may not be totally true depending upon the condition of the equipment and the market for such items at the time of closure. Scrap value, if any, is unlikely to be a significant percentage of the closure cost.
- Indirect costs were calculated using *Guidance for Calculating Capital Indirect Costs for Mine Reclamation and Closure Cost Estimates* by MMD. The indirect percentages below were selected from the guidance document for projects under $1 million.

  <u>Construction Indirect Costs</u>

o Contractor Profit and Overhead	20%
o Reclamation or Closeout Plan Management	4%
o Engineering Redesign	4%
o Contingencies	20%
o Procurement Costs	4%
o Mobilization and Demobilization	5%
o Contract Administration	2%
o Performance & Payment Bonds	3%
o Liability Insurance	1.5% of labor costs
Total	62% + 1.5% of labor costs
o Post-Closure Operations & Maintenance	30% + 1.5% of labor costs

- Subsistence, zone and incentive pay rate do not apply to any workers.
- Reclamation and reseeding costs for follow the Guidance for Estimating Reclamation Costs document by MMD. Costs include backfill and grading, scarifying and/or ripping and re-seeding all disturbed areas. Cactus for revegetation will be collected locally. Water for revegetation will be brought from Lordsburg by a 4,000-gallon truck.
- Tailings cover material will be obtained from onsite borrow sources such as the keyway stockpile and crusher fines.

8. REFERENCES

Chapman, Wood and Griswold Inc (2014), Technical Report Preliminary Economic Assessment Summit Gold-Silver Project Grand and Hidalgo Counties New Mexico

Informa. (2020). Equipment Watch Rental Rate Blue Book. Accessed via app.equipmentwatch.com on March 31, 2020.

Inspections Plus Inc (2016), Storm Water Pollution Prevention Plan (SWPPP), Prepared For Pyramid Peak Mining LLC – Banner Mill

Lordsburg Mining Company (1997), The Lordsburg Mining Company Existing Mine Close Out Plan (For existing Mine Permit Application No. HI-001-RE)

Lordsburg Mining Company (2008), Banner Mill Tailings Impoundment, Application for New Unit Revision of Existing Mine Clouse Out Plan Financial Assurance Proposal

Lordsburg Mining Company (2014), Banner Mill Site, MMD MARP Permit #HI 001 RE Permit Revision Application Tailings Impoundment Expansion & Tailings Dewatering and Dry Staking Unit

Mining and Minerals Division, Energy, Minerals and Natural Resources Department, Permit Revision 14-1 to Permit N0. HI001RE, Pyramid Peak Mining LLC, Banner Mill and Tailings Impoundment Facility Existing Mining Operation

NM Department of Labor. (2020). *Prevailing Wage Poster H 2020.* Downloaded from https://www.dws.state.nm.us/Portals/0/DM/LaborRelations/Prevailing_Wage_Poster_H_2020.pdf on March 26, 2020.

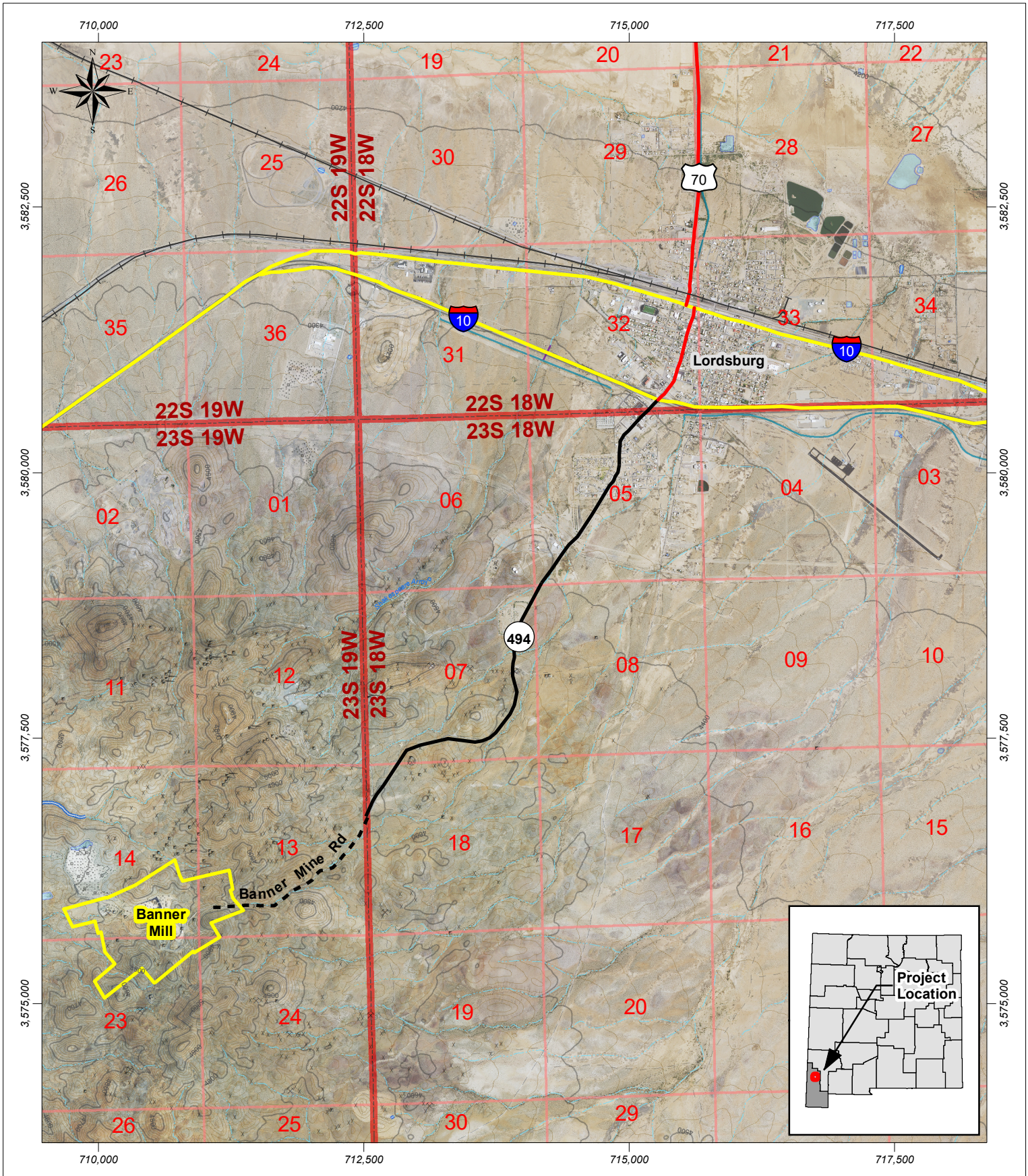
New Mexico Mining and Minerals Division. (2013). *Guidance For Estimating Reclamation Costs for Part 3 – Minimal Impact Exploration and Minimal Impact Mining and Part 4 – Regular Exploration Permit Applications.*

New Mexico Mining and Minerals Division. (2019). *Guidance for Calculating Capital Indirect Costs for Mine Reclamation and Closure Cost Estimates.*

New Mexico Environment Department (2019) Groundwater Quality Bureau (GWQB) Discharge Permit Renewal Pyramid Peak Mining LLC – Banner Mill

State of New Mexico Energy, Minerals and Natural Resource Department (2016) Approval of surety Bond No. 1136878, MMD Permit No. HI001RE and NMED Permit No. DP-1651

FIGURES



LEGEND:		COORDINATE SYSTEM:	DRAWN BY:	PYRAMID PEAK MINING, LLC
Banner Mill Permit Boundary	PYRAMID PEAK MINING, LLC	NAD 1983 UTM ZONE 12N PROJECTION: TRANSVERSE MERCATOR DATUM: NORTH AMERICAN 1983	L. REINSEL	FIGURE 1-1 GENERAL LOCATION MAP
		SCALE: 0 2,000 4,000 Feet 1 INCH : 4,000 FEET	DATE: 20200628	

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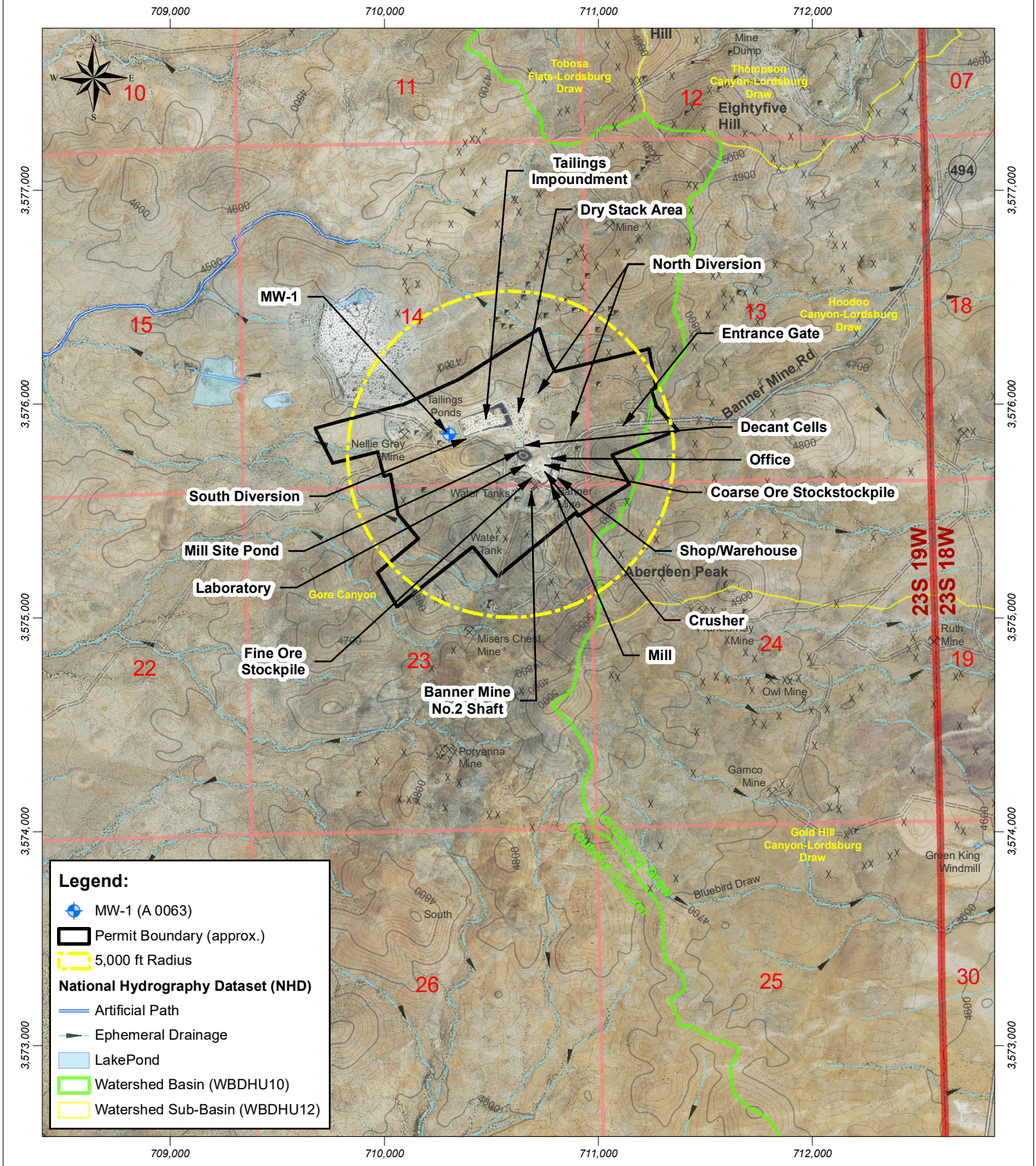

NOTES:		COORDINATE SYSTEM:	DRAWN BY:	PYRAMID PEAK MINING, LLC
	PYRAMID PEAK MINING, LLC	NAD 1983 UTM ZONE 12N PROJECTION: TRANSVERSE MERCATOR DATUM: NORTH AMERICAN 1983	L. REINSEL	FIGURE 2-1 SITE PLAN
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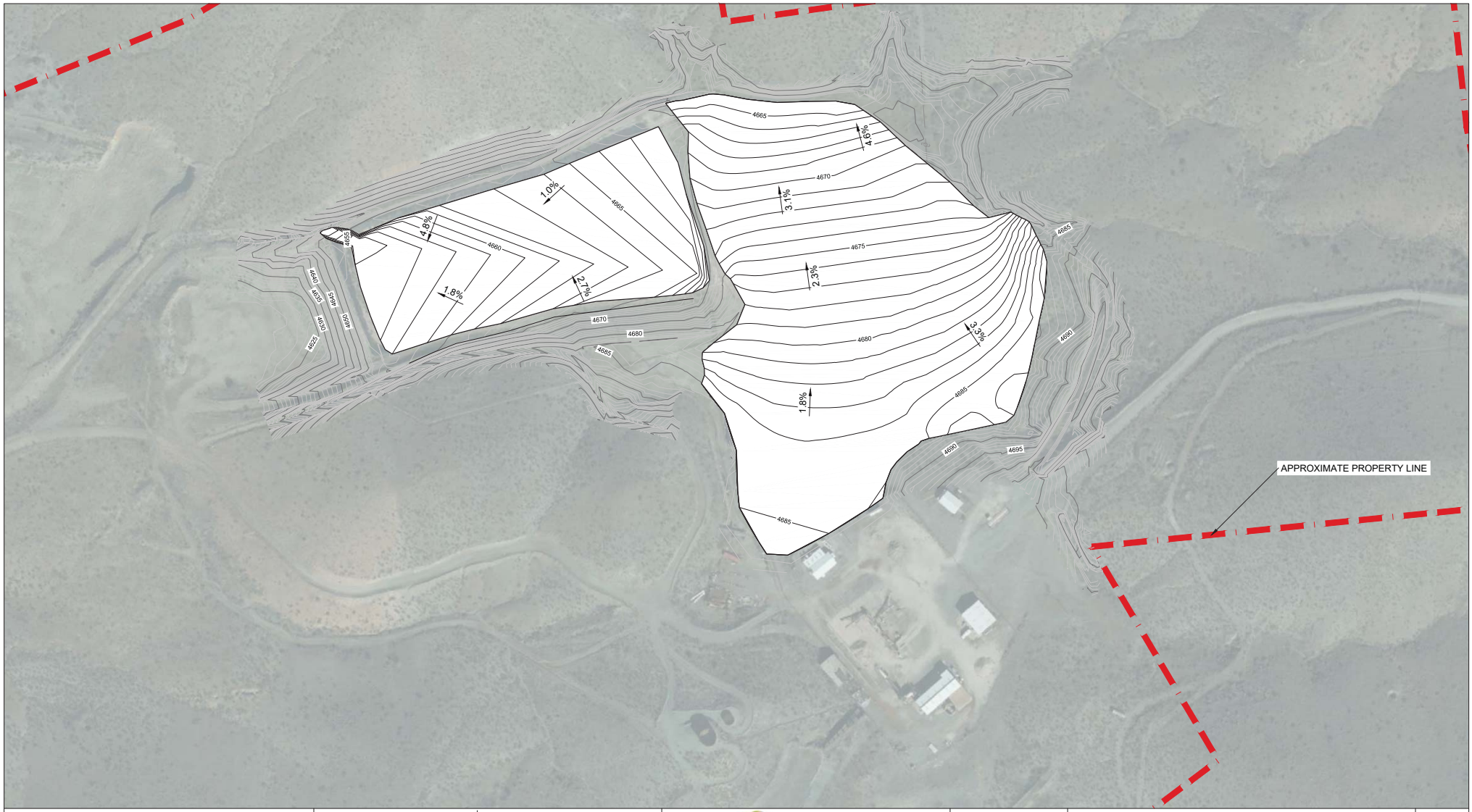
*Lrds_WellsTopo_AsizeP.mxd



REVISIONS				
NO	DATE	DESCRIPTION	BY	CHKD

100 0 100 200 FT

PYRAMID PEAK MINING, LLC

SLR INTERNATIONAL CORPORATION
17701 COWAN SUITE 210
IRVINE, CA 942614
Tel: (949) 553-8417

	DATE	NAME
DRAWN:	08/06/20	P.K
CHECKED:		
APPROVED:		

CLIENT: PYRAMID PEAK MINING, LLC

PROJECT: BANNER MILL SITE CLOSEOUT PLAN

TITLE: RECLAMATION PLAN

SLR PROJECT NUMBER: 123.01970.00015

PLOT DATE: 08/06/20

FIGURE 4-1

REV: 0

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APPENDIX A

DETAILED CLOSURE COST ESTIMATE

Item No	Description	# of Persons	Duration (days)	Labor Cost ($)	Equipment Cost ($)	Cost ($)	Rate ($)	Truck Driver III 24.92	Operator IV 28.32	Ironworker 43.35	Surveyor (Laborer IV) 26.54	Engineer 78.21	Laborer I 23.88	Laborer II 24.63	Laborer IV 26.54	Highway Flatbed Truck, 10t, 4x4 49.25	Highway Rear Dump Truck, 18 yd 115.15	Truck Mounted Concrete Drill 30.53	Loader, Cat 962M 127.95	Water Truck, 4000 gallon 76.63	Backhoe, Cat 415F2 47.71	Dozer, Cat D6K2 108.43	Telehandler, Cat TL642C 58.71	Pickup Truck 15.20
1	Remove Mill, Crushing Equipment, and Related Infrastructure																							
	Portable crushers and conveyors	2	4	1756	4094	5,850			32						32				32					
	Concentrator Equipment	2	10	6936	4697	11,633				160														
	Ball Mill	2	10	4987	1182	6,169	24	80							80	24							80	
	General Support	2	14	6144	0	6,144		112							112									
	Supervision (1/2 time)	0.5	24	2364	1459	3,824								96										96
	5% allowance for consumable supplies					1,681																		
	Subtotal					35,301																		
2	Soil Removal and Site Reclamation	# of Persons	Duration (hours)	Labor Cost ($)	Equipment Cost ($)	Cost ($)																		
	Dozer (strip 187.5 yards/hour)	1	26	736	2819	3,556			26													26		
	Truck (2 - hauling 94 yards/hour)	2	26	1296	2561	3,857	52									52								
	Loader (loading 187.5 yards/hour)	1	26	736	3327	4,063			26										26					
	Surveyor (1/4 time)	0.25	26	173	99	271					6.5													6.5
	Supervisor (1/4 time)	0.25	26	160	99	259								6.5										6.5
	Soil Investigation					50,000																		
	5% allowance for consumable supplies					600																		
	Subtotal					62,606																		
3	Remove Infrastructure	# of Persons	Duration (hours)	Labor Cost ($)	Equipment Cost ($)	Cost ($)																		
	Removal of piping, pumps and small equipment	2	32	1528	0	1,528							64											
	Perforate concrete/liners (600 holes @ 12/hour)	1	60	1699	1832	3,531			60									60						
	Backhoe, equipment removal support	1	32	906	1527	2,433			32												32			
	Supervisor (1/4 time)	0.25	32	197	122	319								8										8
	5% allowance for consumable supplies					391																		
	Subtotal					8,201																		
4	Tailings, Decant Cells, Dry Stack Cover	# of Persons	Duration (hours)	Labor Cost ($)	Equipment Cost ($)	Cost ($)																		
	Dozer (push 312.5 yards/hour)	1	113	3200	12253	15,453			113													113		
	Truck (2 - hauling 94 yards/hour)	2	210	10466	48363	58,829	420										420							
	Loader (loading 167.5 yards/hour)	1	210	5947	26870	32,817			210										210					
	Surveyor (1/4 time)	0.25	113	750	429	1,179					28													28
	Supervisor (1/4 time)	0.25	113	696	429	1,125								28										28
	5% allowance for consumable supplies					5,470																		
	Subtotal					114,873																		
5	Reclamation and Revegetation	# of acres	Rate ($/acre)			Cost ($)																		
	First Acre (incl. 40% indirect costs)	1	8900			8,900																		
	Additional Acres (incl. 40% indirect costs)	20.1	4900			98,490																		
		# of Persons	Duration (hours)	Labor Cost ($)	Equipment Cost ($)	Cost ($)																		
	Place riprap and cactus	2	75	4115	0	4,115			75						75									
	Irrigate and maintain (10 loads of water)	2	39	2140	2989	5,128			39						39						39			
	Supervisor (1/2 time)	0.5	75	924	570	1,494								37.5										37.5
	5% allowance for consumable supplies					537																		
	Materials	Quantity	Unit	Unit Rate ($)		Cost ($)																		
	Riprap	50	yard	12.5		625																		
	Cactus	200	each	0		-																		
	Water	40,000	gallons	0.004		160																		
	Subtotal					119,448																		
6	Post-Closure Monitoring and Maintenance	# of Persons	Duration (days)	Labor Cost ($)	Equipment Cost ($)	Cost ($)																		
	Engineer (2 days/year for 12 years)	1	24	15017	2918	17,936						192												192
	Maintenance (2 days/year for 12 years)	1	24	4585	2918	7,503							192											192
	Supervisor (1/4 time)	0.25	24	1182	730	1,912								48										48
	5% allowance for consumable supplies					1,368																		
		# per year	Duration (years)	Lab Cost ($/service)		Cost ($)																		
	Analytical Services (12 times	2	12	300		7,200																		
	Subtotal					35,918																		
	Total Hours	2,506					496	805	160	35	192	256	224	338		76	420	60	268	39	32	139	80	643

Total Direct Labor Costs	128,640
Total Direct Equipment Costs	122,286
Total Direct Revegetation Cost	77,492
Total Allowance for Consumable Supplies	10,046
Total Analytical Services Cost	7,200
Total Direct Costs	345,665