

# 2009 Annual Report Mining Act Reclamation Program

to the New Mexico Mining Commission







Mining and Minerals Division
Mining Act Reclamation Program
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#### **Cover Photo Information**

The cover photos were taken at the Freeport – McMoRan Inc. Chino Mine located in Grant County. The photos depict large-scale reclamation of portions of the Chino Mine's inactive tailings impoundments at the mine site. The outslopes of tailings pond 6 are in the foreground and the outslopes of tailings pond 4W are in the background. Tailings pond 6 consists of approximately 900 acres of tailings. Of the 900 acres, 620 acres of Pond 6 is under reclamation, with the remaining 280 acres reserved for operational needs. Pond 4W is approximately 380 acres. Of the 380 acres, 200 acres of Pond 4W are under reclamation, with approximately 180 acres reserved for operational needs. For scale, a D11 dozer can be seen in the upper right-hand corner of the photo on the right. Reclamation is to be completed in accordance with the relevant conditions of the permit and the approved design criteria. Freeport-McMoRan Chino Inc. began the reclamation activities during the summer of 2008. The post mine land-use for these tailings facilities will be wildlife habitat. The reclamation is planned to be completed by the end of 2012.

The cover photos were taken in December of 2009 and depict the progression of the reclamation since commencement of activities. The photos show the final grading of the cover material on the southwest outslope of Pond 6, and show the excavation of the nearby large borrow areas located off the toe of the outslopes. The borrow areas are used to supply cover material for placement onto the tailings. Cover material is used to support plant growth and prevent water seepage into the tailings. The type of cover design being applied to the tailings is called a "store and release cover," which is designed to capture water from precipitation and runoff, and release it back to the atmosphere via evaporation and transpiration.

Suitable cover material is being excavated in the nearby borrow areas and placed upon the pre-graded tailing impoundments, resulting in a minimum of three feet of clean cover material placed over the entire surface of the impoundments. The reclamation plan for the tailings impoundments provides for a stormwater design that will convey stormwater away from the impoundments through a system of conveyance channels. The characteristics of the cover material was tested and approved by MMD as suitable growth medium that can support a self-sustaining ecosystem. The covered impoundments will eventually be seeded with a mixture of forbs, grasses, and shrubs prior to being mulched with straw. The mid-slope drainage benches, recognizable in the photo, are generally constructed at nominal 100-foot inter- bench slope lengths. The inter-bench outslopes are being graded to a gradient of 3:1 (3 high to 1 vertical) resulting in a composite outslope gradient of 3.5:1 (3.5 high to 1 vertical).

In addition to ponds 4W and 6, Chino is also in the process of reclaiming Ponds 1, 2, B, and C at the mine site. The reclamation, at these facilities, is to be completed by the end of 2012. Approximately 1,600 acres of disturbance will be reclaimed at the conclusion of theses reclamation effort.

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#### 1. Introduction

This report summarizes activities regulated by, and related to, the Mining Act Reclamation Program (MARP) of the New Mexico Mining and Minerals Division (MMD). Part 13 of the New Mexico Mining Act Rules (the Rules) requires an annual report be provided to the New Mexico Mining Commission. The report is to contain a general description of mining operations, reclamation practices, and production figures for the state.

Specifically, this report identifies activities related to the permitting and regulation of mines under the Mining Act for the two-year time frame from January 2008 through December 2009. The report also provides tables identifying all mining operations that have obtained a permit, or submitted a permit application under the Mining Act Reclamation Program since its inception in 1994.

The report includes production figures for New Mexico mines active during the 2008 calendar year, the most recent year that statistics are available. Mine operators are required to report these figures to MMD each calendar year. The production figures include statistics from all mines active in New Mexico, and not just those regulated under the Mining Act.

Additionally, the report discusses reclamation activities and practices related to specific mines in the state of New Mexico. The statistics addressing reclaimed, versus unreclaimed, acreage originate from data provided to MMD in annual reports submitted by the mine operators, and identify activities which have taken place during the period from January 1 to December 31, 2008.

MARP continues to make adjustments to the Program, due to the increase in uranium exploration projects and new uranium mining applications coming into New Mexico. This involves training staff in the technical issues related to uranium mine reclamation and radiation health physics, developing guidelines for performing reclamation at uranium mines, and distributing staff workloads to accommodate the additional number of applications. Additionally, MARP continues to develop its database, electronic permitting and geographical information systems (GIS) into the MARP work processes. Uranium exploration applications, as well as other applications, are now being made available on the MMD website.

Finally, Section B of 19.10.13.1302 NMAC states that the report shall include proposed amendments to the Rules, if any. The New Mexico Mining Commission made changes, in 2009, to sections 19.10.2 (Fees), 19.10.3 (Minimal Impact Operations), 19.10.4 (Exploration) and 19.10.12 (Financial Assurance) of the New Mexico Mining Act Rules. The new rules were put into effect on March 31, 2009 and April 30, 2009.

## 2. New Mexico Mining Operations as of December 2009

The Mining Act Reclamation Program was established in the spring of 1994. Since then, all mining operations falling under the definition of "existing" mines – that is, operations having operated between January 1, 1970 and June 18, 1993 – have been fully permitted, including an approved closeout plan and financial assurance, with the exception of those mines shown in Table 3.

A number of new mines – operations initiating activity after June 1993 – have been added to the list of permitted mines. These new mines all fall under the category of minimal impact exploration and mining operations. Exploration operations are small, extractive operations, typically under 5 acres, involved in the sampling of ore bodies prior to full-scale mine development. This year has seen a significant increase in the number of new exploration applications involving uranium, gold, silver, copper, and humate exploration. General Permit operations cannot excavate materials greater than 200 cubic yards per year, or disturb greater than 2 acres of surface at any one time. The General Permit category is typically used by hobby and recreational miners. The Exploration and General Permit categories, totaling 316 permits, make up the largest number of permitted operations under the Mining Act Reclamation Program. All mining operations that have submitted permit applications, and have required a significant amount of Program time, are identified under the categories of: Regular Existing Mine, Regular New Mine, Minimal Impact Existing Mine, Minimal Impact New Mine, Exploration Project and General Permit, and are depicted in Appendix No. 1, in Tables 9 through 15. Table 1 below shows the various types of mining and exploration operations, by category, that have received approved permits since the start of the program in 1994.

**Table 1. Mining Operations Approved Since 1994** 

Type of Operation	Description	Number of Operations
Regular Existing Mining	>10 acres of disturbance	30
Regular New Mining	>10 acres of disturbance	0
Minimal Impact Existing Mining	<10 acres of disturbance	19
Minimal Impact New Mining	<10 acres of disturbance	24
Regular Exploration	> 5 acres of disturbance	2
Minimal Impact Exploration	<5 acres of disturbance	138
General (Recreational)	<200 cubic yards/yr of disturbance	184

Total Mining Operations Permitted 397

Table 2 identifies specific types of permit applications submitted to MMD during 2009 and identifies those applications that have been approved and those that are still pending. The Mining Act Program had a large number of exploration submittals in 2009. For the first time since earlier in the program, two regular new mine permit applications were initiated in 2009. Both of these mines are for uranium properties in the Mt. Taylor area. The Mining Act Program continues to work on a large number of permit modifications and revisions,

which can be just as time consuming in processing and approving as new permit applications. Modifications and revisions involved updating reclamation acreage, permit transfers, name changes and financial assurance instruments and amounts. The Tyrone Mine and the Chino Mine are both in the process of updating their Closeout Plans. These updates are major revisions to the mine permits, involving updating financial assurance, changes to the reclamation plans, and extended negotiations with the operator, other agencies, and the public. Another revision, that the Program has been involved with over the last two years, involves the Chevron Mining Inc. Questa Mine. The Questa Mine Closeout Plan revision is particularly involved because of the need to coordinate reclamation plans with the Environmental Protection Agency's (EPA) Remedial Investigation and Feasibility Study, conducted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Table 2. 2009 Approved and Pending Permit Applications

Type of Operation	Description	Number of Operations				
Type of Operation	Description	Pending	Approved	Denied		
Regular New Mining	> 10 acres of disturbance	2	0	0		
Minimal Impact New Mining	< 10 acres of disturbance	5	1	0		
Regular Exploration	> 5 acres of disturbance	1	0	0		
Minimal Impact Exploration	< 5 acres of disturbance	8	10	1		
General Permits	< 200 cubic yards/yr of disturbance	0	12	0		
Revisions	Revision to an Existing Permit	1	0	0		
Modifications	Modification to an Existing Permit	6	10	0		

Table 3 identifies regular existing and minimal impact mining operations that have not yet received approval for their closeout plans. The two United Nuclear Corporation mines, the Northeast Church Rock and the St. Anthony Mine, were involved in a lengthy court battle and are now working with MMD to develop permits. Two other operations, the Clodbuster Mine and the Challenge Mine, have been issued a series of notices of violation, over the years, and remain out of compliance. The General Pumice Mine has also been issued a number of violations, over the years, for lack of compliance with the Mining Act. The main issue has been the slow progress in obtaining an approved reclamation permit for the site. The owner/operator of the mine is the City of Espanola. The City of Espanola backfilled and re-graded the entire site in 2008. Reclamation was completed in 2009, however, an approved permit and financial assurance must still be obtained. The Nacimiento Mine is an abandoned, open-pit copper operation near Cuba, New Mexico. The owner is deceased, and a responsible party has not been identified for the reclamation of the site. Portions of the Nacimiento Mine are situated on state and federal property. The USFS, New Mexico State Land Office, and New Mexico Environment Department have worked together in the past, with limited CERLA funds, to do a small amount of remediation. The Northstar Mine is an existing mining operation that was required to obtain an approved permit from MMD. Although all information and financial assurance has been provided by the operator, MMD is waiting for the operator to provide right-to-enter evidence to MMD. The Northeast Church Rock Mine is another existing uranium mine that had been operated by United Nuclear Corporation. The U.S. Environmental Protection Agency (USEPA) is managing a

clean-up action of the site for the Navajo Nation. The Section 12 is an old uranium mine that was added to the list in 2008, after it was determined to fall under the NM Mining Act. MMD is still waiting for a closeout plan for the Section 12 Mine.

Table 3. Existing Mining Operations without Approved Closeout Plans as of December 2009

Mine Name	Operator	Disturbed Acres
Nacimiento Mine	Leaching Technology, Inc.	611
St. Anthony Mine	United Nuclear Corporation	430
Northeast Church Rock <sup>1</sup>	United Nuclear Corporation	40
Challenge Mine and Mill	Challenge Mining Company	17
Clodbuster Mine and Mill	Agronics, Inc.	27
General Pumice Mine	City of Espanola	10
North Star Mine	North American Metals LLC	2
Section 12 Mine	Southwest Resources Inc.	5

<sup>&</sup>lt;sup>1</sup> Closeout of this site is being managed by the U.S. Environmental Protection Agency

#### 3. Reclamation Practices under the New Mexico Mining Act

Thirty-eight sites, under permit with the Mining Act Reclamation Program, have now undergone some form of reclamation. In some cases, the entire site has been reclaimed; in others, a portion of the site has undergone reclamation. Once reclamation has taken place, mine operators must wait 12 years before they are eligible to apply for a complete release from the Mining Act's requirements. However, operators are allowed to apply for a partial financial assurance release once per year, per permit. Several operators have received partial release for work performed towards final reclamation for activities such as performing earthwork to achieve a post-mining contour, placing cover over reclaimed areas, and performing demolition work at the site. The total amount of financial assurance released in 2009 was \$22,243,030. The majority of these funds were released back to Freeport-McMoRan Tyrone Inc., for approximately 1,260 acres of reclamation performed at the Tyrone Mine.

Operations where reclamation has been completed on the entire site include: Cunningham Hill Mine; Las Conchas Unit of the Las Conchas/El Cajete Mine; Boston Hill Mine; San Pedro Mine and Mill; KB Mine; KM Mine; Jersey Lily, Snowflake and Virtue Mines; Brockman Mine; Chino Limestone Mine; Hiawatha and Little Jim Mine; Cyprus Deming Tailings; Deming Jigging Mill; Old Stope Leach Mine; Velarde Mill; Lordsburg Mine; Mesa Verde Resources Mill; Georgetown Mine; U.S. Hill Mine and the Pinos Altos Mine. Three of these mines have received a complete release for reclamation, or for achieving the postmine land use under the New Mexico Mining Act: the Boston Hill Mine, in Grant County, the Mesa Verde Resources Mill, in Sandoval County, and the CR Minerals Mill, in Santa Fe County. The Boston Hill Mine received a complete release for achieving the post-mining land use in 2002; Mesa Verde Resources Mill received a complete release in 2005, and CR Minerals, in 2008.

The Mining Act Reclamation Program encourages innovative and experimental reclamation, particularly at sites where steep slopes and/or acid-producing materials present reclamation challenges. Four large operations, permitted under the Mining Act Reclamation Program, are currently evaluating test plots constructed over the last several years. The test plot programs are evaluating seeding rates, fertilizer rates, soil amendments, and infiltration rates using various soil covers and cover depths. It is still early to draw conclusions from vegetation results, but trends are beginning to develop. Chevron Mining Inc.'s Questa Mine, Freeport-McMoRan's Tyrone and Chino Mines, and GCC Rio Grande's Tijeras Mine all have successful, ongoing test plot programs at their mines.

MARP is also encouraging geomorphic reclamation approaches at hard rock mines. Geomorphic reclamation involves the use of reconstruction techniques, particularly on outslopes, which mimic natural drainage patterns to create a more stable and natural looking post-mine topography. Utilizing this new approach, the coal mines in New Mexico have enjoyed significant successes in erosion reduction, maintenance cost reductions, and greater vegetation success. Hard rock mine operators are beginning to learn how this technique might improve their reclamation strategies. The Tyrone, Tijeras and Questa mines are all exploring ways to incorporate geomorphic design into their reclamation plans.

The overall disturbed acreage under permit with the Mining Act Reclamation Program is 24,202 acres. The total number of acres reclaimed throughout the entire history of the Program (1994-2008) is 4,239 acres. Table 4 shows the approximate number of acres disturbed and reclaimed, as of December 2008, for each mine under permit with the Mining Act Reclamation Program. Based on information supplied by operators in their 2008 annual reports, a total of 1,127 acres were reclaimed in 2008.

The biggest contributor to this total was the Tyrone Mine, where approximately 1066 acres of reclamation took place in 2008. The operator, of the Tyrone Mine, Freeport-McMoRan, has reclaimed a total of approximately 3,241 acres since initiating reclamation in 2003.

During calendar years 2008 and 2009, Freeport-McMoRan Tyrone Inc. continued several large-scale reclamation projects, addressing the cleanup and reclamation of tailings impoundments and waste rock piles at their Tyrone Mine in Grant County. In 2008-2009, Freeport-McMoRan completed reclamation on approximately 947 acres associated with the No.1, 1A and 1X tailings impoundments. In 2008-2009, Freeport-McMoRan also completed the reclamation of approximately 288 acres associated with the No. 1 stockpile. Since the inception of reclamation activities in 2003, Freeport-McMoRan has spent an estimated \$83 million on reclamation activities. During 2008, Freeport-McMoRan reported spending \$22,243,030 on reclamation activities. During 2009, Freeport-McMoRan reported spending \$2,204,526 on reclamation activities.

During calendar year 2008, Freeport-McMoRan Chino Inc. began large-scale reclamation of their inactive tailing piles comprising approximately 1,600 acres. The inactive tailing piles include Ponds 1, 2, B, C, 4W, and 6. The reclamation of the inactive tailing piles is expected to be completed by the end of 2012.

To date, as part of the Continental Mine reclamation, the Freeport McMoran Cobre Mining Company has closed approximately 83 historic shafts and adit features and reclaimed approximately 150 acres of the Hanover Empire Zinc Mining Area. The Continental Mine is currently inactive and has an approved Standby Plan.

In 2008 and 2009, the El Cajete Mine continued to undergo reclamation. Another approximately 15 acres of reclamation was performed during this time frame. The operation's U.S. Forest Service permit expired in November 2007, and consequently, its Mining Act permit was suspended. The operator was asked to finish reclaiming the entire site by the end of 2009.

During the summer of 2007, ASARCO reclaimed the Deming Tailings facility, located just north of Deming, New Mexico. Approximately 50 acres of original tailings and 65 acres, of an area affected by wind borne and windblown tailings, were reclaimed.

Recently, a downturn in the demand for metals worldwide has forced a reduction in copper production and a scaling back of reclamation programs at the Tyrone and Chino Mines.

Table 4. Number of Acres Disturbed and Reclaimed as of December 2008

Permit Number	Name	Permit Type	Disturbed Acres To Date	Reclaimed Acres To Date
BE001RE	Tijeras Mine and Mill	Regular Existing	575	66.2
CA002MN	Deadwood / Last Chance Mine	Minimal Impact New	1	0
CA003ME	Hiawatha and Little Jim Mine	Minimal Impact Existing	2	2
CI002RE	Mount Taylor Mine	Regular Existing	147.7	0
CI003MN	ANP No. 2 Mine	Minimal Impact New	2	0
CI004MN	Haskani Mine	Minimal Impact New	13.3	0.5
CI005RE	Tinaja Pit Mine	Regular Existing	40	0
CI006MN	Ray Claims Nos. 4 & 6 Mine	Minimal Impact New	6	0.5
CI007RE	JJ No. 1 / L Bar Mine	Regular Existing	11	0
GR001RE	Pinos Altos Mine	Regular Existing	9	9
GR002RE	Continental Mine and Mill	Regular Existing	928	19
GR006RE	Chino Limestone Quarry Mine	Regular Existing	55	55
GR007RE	Little Rock Mine	Regular Existing	88	0
GR008RE	Jersey Lily, Snowflake & Virtue Mines	Regular Existing	22	17
GR009RE	Chino Mine and Mill	Regular Existing	9,479	0
GR010RE	Tyrone Mine and Mill	Regular Existing	8,415	3,241
GR011ME	Summit Mine	Minimal Impact Existing	3	0
GR012MN	KB Mine	Minimal Impact New	41	41
GR018ME	Banks (Lost New Summit No. 1) Mine	Minimal Impact Existing	3	0
GR020RE	Georgetown Mine	Regular Existing	2	2
GR025ME	Mathis Lime Quarry Mine	Minimal Impact Existing	5	0
GR028RE	Center Mine	Regular Existing	3	0
GR029ME	Mount Royal Mine and Mill	Minimal Impact Existing	1	0
GR030ME	Chemical Lime Mine & Mill	Minimal Impact Existing	4.4	4.4
HI001RE	Lordsburg Mine and Mill	Regular Existing	15	15
HI002RE	Brockman Mine	Regular Existing	40	40
HI004MN	KM Mine	Minimal Impact New	9	9
HI008ME	Volcano Mine	Minimal Impact Existing	8	0
LI001ME	Warner Gulch Placer Mine	Minimal Impact Existing	2	2
LI005ME	Capitan Iron Mine	Minimal Impact Existing	12	0
LU001RE	Deming Jigging Plant	Regular Existing	16	16
LU008RE	Cyprus Deming Tailings Impoundment	Regular Existing	20	20
LU009RE	Asarco Deming Mill	Regular Existing	56.5	44
MK003ME	Star Lake Menefee Mine	Minimal Impact Existing	4	2
MK005RE	Section 27 Mine	Regular Existing	15	0
MK006RE	St. Anthony Mine	Regular Existing	435	0
MK007ME	Star Lake Mesa Verde Mine	Minimal Impact Existing	33	21
MK008ME	Pueblo Alto Mine	Minimal Impact Existing	10	7

Permit Number	Name	Permit Type	Disturbed Acres To Date	Reclaimed Acres To Date
MK009RE	Old Stope Leach Mine	Regular Existing	81	78
MK010MN	U-Mate Mine	Minimal Impact New	2	0
MK011MN	Morningstar Mine	Minimal Impact New	14	12
OT002MN	B.O.W. Mine	Minimal Impact New	0	0
RA001ME	Northstar Mine	Minimal Impact Existing	1.5	0
RA003ME	Cullum Pumice Mine	Minimal Impact Existing	20	0
RA004RE	Rocky Mountain Mine	Regular Existing	21	0
RA005RE	Velarde Mill	Regular Existing	27	27
RA006ME	General Pumice Mine	Minimal Impact Existing	17	0
SA001RE	Las Conchas / El Cajete Mine	Regular Existing	68	39.5
SA004MN	Copar South Pit Mine	Minimal Impact New	9	3
SA005ME	Menefee Mill	Minimal Impact Existing	9.7	0
SA009MN	Eagle Mesa Mine	Minimal Impact New	10	0
SA011MN	San Luis Mine	Minimal Impact New	10	5
SF001ME	San Pedro Mine and Mill	Minimal Impact Existing	12	12
SF002RE	Cunningham Hill Mine	Regular Existing	307	289
SF003ME	Silver Silica Mine	Minimal Impact Existing	4	0.5
SF006ME	CR Minerals Mill	Minimal Impact Existing	8	8
SI001ME	St. Cloud U.S. Treasury Mine	Minimal Impact Existing	10	2
SI005MN	Burbank Canyon Mine	Minimal Impact New	8	0
SI006RE	Zeolite Mine and Mill	Regular Existing	48	24.5
SI007ME	Midnight Mine	Minimal Impact Existing	4	0
SO001RE	Socorro Perlite Mine and Mill	Regular Existing	160	43.4
SO002MN	Sais Quarry Mine	Minimal Impact New	3.7	0
TA001RE	Questa Mine and Mill	Regular Existing	2300	21
TA002RE	El Grande Mine and Mill	Regular Existing	170	14
TA003RE	U. S. Hill Mine	Regular Existing	60	26.5
TA005RE	No Agua Mine and Mill	Regular Existing	276	0
VA001ME	Lucero Quarry Mine	Minimal Impact Existing	9.3	0

TOTAL ACREAGE: 24,202.1 4,239

#### 4. Mineral Production Statistics for New Mexico in 2008

Over \$2.3 billion worth of minerals were extracted in New Mexico during 2008, exceeding the prior record of \$2.2 billion set in 2007 (Table 5).

Confidentiality laws do not allow production values specific to a mining operation to be made public. Therefore, we have provided production values by commodity, and not by a specific mining operation. Total production for commodities with less than three producers also must be held confidential. Not all commodities listed come under the Mining Act, but they have been included to provide a comprehensive list of all minerals produced in New Mexico. Many of the operations classified as *industrial minerals* and *aggregates* do not fall under the Mining Act's jurisdiction. Coal and potash operations do not fall under the Mining Act. Coal mines are permitted under the New Mexico Surface Coal Mining Act. Potash mines and refineries are not regulated under either act.

New Mexico remains a leading United States mineral producer, ranking first in potash, perlite and zeolite; third in copper; sixth in molybdenum; and twelfth in coal production. The principal minerals, in descending order of value, are copper, coal, potash and molybdenum. According to the U.S. Geological Survey, New Mexico ranked fourteenth in 2008 when ranking states by the production value of non-energy minerals. Our state produces 2.5 percent of the total U.S. non-energy minerals production value.

In 2008 copper remained New Mexico's leading commodity for production value, and coal remained the leading commodity for revenue generation and payroll. Potash set a record production value of \$612.7 million. In response to the economic downturn in the fall of 2008, the quantity of minerals produced decreased from 2007 levels for all commodities except aggregates. Production and production values are expected to decrease further in 2009 and 2010 in response to the decreased mineral commodity demand and financial market instability.

Mineral industry payroll exceeded \$337.8 million in 2008, a 7.2 percent increase over 2007. Copper remained the largest employer New Mexico's mining industry, followed by coal and potash. The total number of employees in the mining industry topped 7,200, up 4.1 percent from 2007. Direct employment rose 5.6 percent to 5,689 employees. Reclamation employment increased 15.1 percent to a record 585 workers. Contract employment reversed its recent upwards trend in 2008, decreasing 1.4 percent to 1,461 (Figure 1). Employment figures decreased in 2009. Many mining companies suspended contract workers and reduced the number of direct employees in early 2009 in response to the plummeting commodity prices in fall 2008. While commodity prices had rebounded by December 2009, many mines remained on reduced production schedules that required fewer workers.

New Mexico mining companies spent \$198.9 million on capital improvements and equipment in 2008, a 33 percent increase from 2007 spending.

There were 207 registered active mining operations in New Mexico in 2008. These

operations included five coal mines; three potash mines, five potash refineries and two potash compaction plants; one molybdenum mine and one molybdenum mill; two copper mines, one copper concentrator and two solvent extraction/electro-winning (SX/EW) plants; 20 industrial mineral mines and 13 industrial mineral mills; and 152 stone and aggregate operations.

Table 5. Mineral Production, Production Value, Rank, Employment, Payroll & Revenues, 2008

Mineral	Production <sup>1</sup>	Production Rank <sup>2</sup>		Production Value \$	Employment <sup>3</sup>	Reclamation Employment <sup>4</sup>	Payroll \$ <sup>5</sup>	G	Revenue enerated \$ 6
Coal	25,751,868	12	\$	662,697,319	1,729	136	\$ 116,377,056	\$	39,920,920
Copper	226,738,082	3	\$	699,665,170	1,970	244	\$ 67,549,648	\$	6,413,291
Gold	6,997	-	\$	6,095,087	44	4	\$ 128,500	\$	43,467
Industrial Minerals 7	2,108,801	-	\$	157,840,649	506	27	\$ 20,607,996	\$	1,097,818
Aggregates 8	16,740,148	-	\$	102,273,471	960	76	\$ 27,962,271	\$	1,435,837
Other Metals	46,858	-	\$	646,734	0	0	\$ -	\$	-
Molybdenum	4,370,536	6	\$	114,567,202	528	20	\$ 22,572,083	\$	-
Potash 9	1,076,759	1	\$	612,745,114	1,399	24	\$ 80,309,807	\$	9,208,813
Silver	206,913	-	\$	3,103,695	2	2	\$ 5,335	\$	25,072
Uranium 10	-	-	\$	-	62	52	\$ 2,382,039	\$	204,448
TOTAL			\$2	2,359,634,440	7,220	585	\$ 337,894,735	\$	58,349,666

Source: Mine Registration, Reporting and Safeguarding Program of the Mining and Minerals Division, unless otherwise noted.

<sup>&</sup>lt;sup>1</sup> Production for coal, industrial minerals, aggregates, other metals and potash is reported in short tons; copper and molybdenum in pounds; and gold and silver in troy ounces.

<sup>&</sup>lt;sup>2</sup> Production rank is based on 2008 production value in relation to other U.S. states. Sources: Non-coal, Mineral Resources Program, U.S. Geological Survey (minerals.er.usgs.gov); Coal, Energy Information Administration, U.S. Department of Energy (www.eia.doe.gov).

<sup>&</sup>lt;sup>3</sup> Category includes direct and contract employees. Gold, silver and other metals are co-products of copper production: production-related employment and payroll for these commodities are reported in the copper numbers. Gold employment and payroll is for reclamation activities at closed mines.

<sup>&</sup>lt;sup>4</sup> Reclamation employment is included in total employment numbers.

<sup>&</sup>lt;sup>5</sup> Payroll is for direct employees and does not include contract employees. Payroll does not include benefits.

<sup>&</sup>lt;sup>6</sup> Value reflects federal and state revenues. State revenue includes royalties and rentals from state trust land mineral leases, and severance, resources excise and energy conservation tax revenues. Federal revenue includes 50% state share of federal royalties. Sources: State data, N.M. Taxation and Revenue Department (http://www.state.nm.us/tax/) and State Land Office (http://www.nmstatelands.org/); Federal data, Minerals Management Service (http://www.mms.gov/).

<sup>&</sup>lt;sup>7</sup> Category includes gypsum, perlite, salt, limestone, calcite, dimension stone, silica flux, clay, humate, scoria, pumice and zeolites.

<sup>&</sup>lt;sup>8</sup> Category includes base course, caliche, clay and shale, crushed rock, dimension flagstone, fill dirt, gravel, limestone, red dog, rip-rap, sand, scoria, topsoil and travertine.

<sup>&</sup>lt;sup>9</sup> Production is K<sub>2</sub>O mill production.

<sup>&</sup>lt;sup>10</sup> Employment and payroll numbers are for permitting, care and maintenance and reclamation activities.

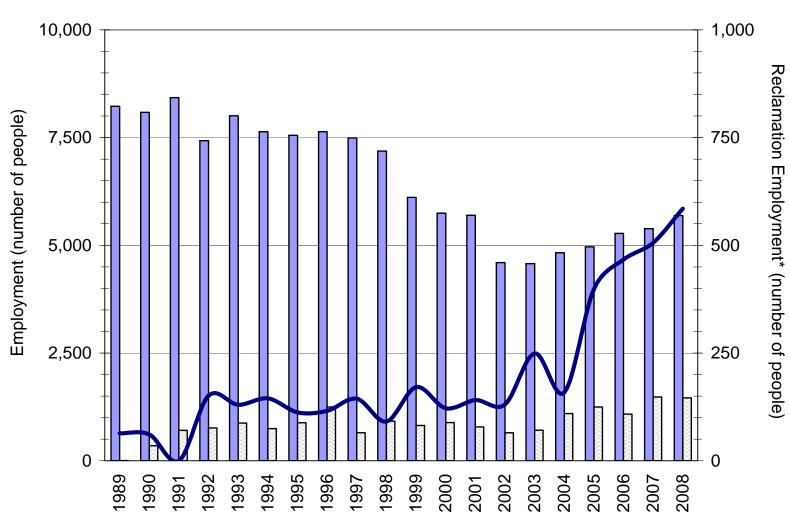


Figure 1. Mineral Industry Employment, 1989 - 2008

**Contract** 

Reclamation

Direct

<sup>\*</sup> Reclamatiom employement is a subset of direct and contract

## 5. Uranium Mining and Exploration in 2009

The Mining Act Reclamation Program (MARP) has jurisdiction over exploration and conventional uranium mining activities, but does not cover in-situ leach uranium mining or uranium mill sites. The Mining Act exempts mining activity regulated by the Nuclear Regulatory Commission (NRC). The NRC regulates in-situ leach operations and uranium milling operations; therefore, they are exempt from the Mining Act.

Uranium recovery in New Mexico ceased in December 2002. Currently, uranium mining activity in New Mexico focuses on the reclamation of the remaining mines and mills left over from the boom years. The Rio Algom's Ambrosia Lake mill, United Nuclear Corporation's Church Rock mill and the Homestake's Milan mill are all undergoing reclamation under authority of the New Mexico Environment Department and Nuclear Regulatory Commission.

There are four uranium mine operations permitted by the Mining Act Reclamation Program in the state: Rio Grande Resources' Mt. Taylor mine, United Nuclear Corporation's Section 27 mine, Rio Tinto Energy's JJ No 1/L-Bar mine and Rio Algom's Old Stope mining properties. The Mt. Taylor mine, a flooded underground mine in Cibola County, remains on standby status and must modify its state permits with the Mining and Minerals Division and New Mexico Environment Department before mining can recommence. Rio Algom finished reclamation at the Old Stope leach properties and is awaiting the twelve-year final bond release. In October 2009, both United Nuclear Corporation and Rio Tinto Energy (Kennecott Energy Company) received final reclamation permit approval for the Section 27 and the Sohio JJ No. 1 mines. Both companies have also provided financial assurance to the state for the cost of the reclamation. Final reclamation of the JJ No. 1 mine will involve the closure of eleven vent shafts, regrading, topsoil application and revegetation. Rio Tinto began reclamation at the JJ No. 1 site during the fall of 2009. United Nuclear Corporation plans to perform the Section 27 reclamation during 2010. Reclamation work will include sealing the shafts and vent holes, encapsulating non-economic ore piles, regrading and covering old rock piles, revegetation with native plants and addressing radiation hazards at the mine site. United Nuclear Corporation continues work towards approval of closeout and reclamation plans, as required by the New Mexico Mining Act, for the St. Anthony mine.

New Mexico has experienced a significant increase in uranium activity in the past four years. According to the Energy Information Administration, New Mexico ranks second, behind Wyoming, in domestic uranium reserves with 341 million pounds of  $U_3O_8$  at \$50 per pound. Rising market prices have led to renewed interest in uranium production. Spot prices rose from a low of \$6.50 per pound in 2000 to \$35.50 per pound in December 2009.

Since January 2006, 30 uranium exploration applications have been submitted to the Mining and Minerals Division. As of December 2009, 12 applications have been approved, three are pending, two are on hold and 13 have been denied or withdrawn (Table 6 and Figure 7). Most of the uranium exploration applications have been for minimal impact projects that total less than five acres of disturbance. The Marquez Canyon exploration permit represents the first major uranium regular exploration permit (19.10.4 NMAC) issued

by MMD since the adoption of the New Mexico Mining Act of 1993 and the first major exploration permit issued for any commodity since July 1996.

Two new conventional uranium mines are under development in New Mexico (Table 7): Roca Honda Resources' Roca Honda mine and Laramide Resources' La Jara Mesa mine. The proposed Roca Honda Mine is located in McKinley County on two sections of land within the Cibola National Forest and one section of state trust land. Roca Honda Resources has submitted both the Sampling and Analysis Plan and the Permit Application Package to the Mining and Minerals Division. Roca Honda Resources must also submit a formal mine plan application to the U.S. Forest Service, which will be handled through the Forest Service Environmental Impact Statement (EIS) process.

The proposed La Jara Mesa mine is located in Cibola County on Cibola National Forest land on the edge of the Mt. Taylor Traditional Cultural Property. Laramide Resources has submitted a permit application to the U.S. Forest Service for the proposed mine, which will be handled through the Forest Service EIS process. Laramide Resources has also initiated the permitting process with the Mining and Minerals Division by submitting a Sampling and Analysis Plan.

While uranium mining companies are eager to move forward, several significant obstacles lie in the path of large-scale uranium development in the near future. First, all of New Mexico's uranium mills have been demolished and new milling infrastructure is needed. Second, the Navajo Nation, which overlays a major portion of the Grants Mineral Belt uranium deposits in New Mexico, declared a moratorium on uranium production on Navajo Indian Country in April 2005. Third, the New Mexico Cultural Properties Review Committee approved the emergency listing of Mount Taylor on the State Historic Registry as a Traditional Cultural Property in June 2008. A year later, the Cultural Properties Review Committee voted unanimously to make the listing permanent. The protected area includes approximately 344,000 acres.

MARP staff continue to develop their knowledge base in the area of uranium mine reclamation and radiation health physics, and to develop reclamation approaches specific to uranium mining. All uranium mining is expected to create surface disturbances. However, with conventional uranium mining, the impacts can include radiological hazards exposed at the surface both during and after mining. The exposure to uranium-238, radium-226, related daughter products, and heavy metals require that extra mitigation measures be taken during mining operations, and at reclamation of the mine site. MARP has been developing guidelines to address uranium mine reclamation that incorporate the most appropriate technologies to reclaim uranium mines, that involve meeting site-specific radiation criteria and that address the issue of long-term erosion at these sites. These guidelines are being discussed with the federal land management agencies, such as the Bureau of Land Management and the U.S. Forest Service, as well as the New Mexico Environment Department. The MARP staff have undergone training to understand the potential radiological hazards posed by being on-site at a uranium mine, as well as the technical issues associated with reclaiming disturbed lands that may be impacted with radiological hazards.

Table 6. Uranium Exploration Applications, 2006 - 2009

#### **Approved Applications**

Project Name	Operator	Surface Ownership	Number of Holes	Drilling Completion
Ambrosia Lake	Neutron Energy	State	6	summer 2007
Armijo	Grants Joint Venture	Private/Bureau of Land Management	215	2010
Elizabeth Claims	Neutron Energy	Private	28	summer 2010
F-33	Grants Joint Venture	Bureau of Land Management	23	2010
La Jara Mesa	Laramide Resources	U.S. Forest Service	10	fall 2006, winter 2007
Lily	Uranium Company of New Mexico	Bureau of Land Management	10	fall 2007
Marquez Canyon	Neutron Energy	Private	44	2010
Riley	Max Resources	U.S. Forest Service	14	spring 2007
Riley No. 2	Max Resources	U.S. Forest Service, Private	5	summer 2008
Roca Honda	Strathmore Mineral Resources	State	4	summer-fall 2007, spring 2008
Section 13 ISR	Uranium Resources, Inc.	Private	10	2009
Treeline	Western Energy Development	Private	6	summer 2006

#### **Pending Applications**

Project Name	Operator	Surface Ownership	Number of Holes
Deer Claims *	Vane Minerals LLC	U.S. Forest Service	25
Baca	Red Basin LLC	U.S. Forest Service	25
White Mesa	Red Basin LLC	U.S. Forest Service	25
Cebolleta	Neutron Energy	Private	84
Eric #1 *	Robert March	U.S. Forest Service	2

<sup>\*</sup> Application on hold at applicant's request Denied and Withdrawn Applications

Project Name	Operator	Surface Ownership
Church Rock Exploration	Strathmore Resources (US) Ltd.	Bureau of Land Management
Crownpoint	Quincy Energy	Indian Trust
DD No. 1	Todd D. Sterk, Rampart Resources	Private
Hosta Butte Section 3	Quincy Energy	Indian Trust
La Jara Mesa Extension	Urex Energy Corp.	U.S. Forest Service
North Zia	Cibola Exploration Inc.	U.S. Forest Service
Roca Honda Sec. 10	Roca Honda Resources, LLC	U.S. Forest Service
Roca Honda Sec. 5,9&10	Roca Honda Resources, LLC	U.S. Forest Service
San Mateo Mesa	United Energy	U.S. Forest Service
Section 11	Southwest Resources	Private
Section 12	Southwest Resources	Private
Treeline II	Western Energy Development	U.S. Forest Service
Treeline III	Western Energy Development	Private

Table 7. Uranium New Mine Applications, 2009

**Pending Mine Applications** 

Project Name	Operator	Operator Surface Ownership	
La Jara Mesa Mine	Laramide Resources	U.S. Forest Service	22
Roca Honda Mine	Roca Honda Resources	U.S. Forest Service State Land Office	183

#### 6. Financial Assurance Update

Appendix 2 (Table 16) summarizes the types and amounts of financial assurance provided to the State of New Mexico by mining operators who have obtained approved permits and closeout plans. The forms of financial assurance include surety bonds, cash deposits, letters of credit, collateral (real estate), and third-party guarantees.

Financial assurance posted with the Mining and Minerals Division totals over \$596 million. In 2009, financial assurance totaling \$1.4 million was added for three mining operations (JJ No.1, Section 27 and Alley Gypsum mines) and six exploration projects (Mogollon, Armijo, F-33, Elizabeth Claims, Marquez Canyon and Copper Flat). The existing financial assurance amounts for both the Star Lake Mesa Verde and San Luis mines were changed to accommodate permit modifications. And \$22.2 million of financial assurance was released to Freeport-McMoRan Gold and Silver for reclamation activities completed at the Tyrone Mine.

# 7. Amendments to the New Mexico Mining Act Rules

The New Mexico Mining Commission (NMMC) met in February and March in 2009 to address new rule changed proposed by the Mining and Minerals Division. The NMMC passed rules focused on exploration permits and, in particular, minimal impact exploration permits. The rule changes include financial assurance for all exploration permits (including minimal impact permits), more detailed standards for reclamation of exploration sites, and greater detail regarding the requirements to plug and abandon exploration boreholes. Section 19.10.3.302.K of the Rules now requires more specific standards for topsoil removal and storage, revegetation, and wildlife protection. Section 19.10.3.302.L now provides more detailed requirements for plugging and abandonment of exploration boreholes.

Additionally, the Rule changes include an extension of the sunset date for fee collection to March 31, 2012, and increases certain fees related to exploration permit applications and new mine permit applications. For example the fee for a minimal impact exploration operation went from \$100.00, to \$500.00; and the fee for a minimal impact mining operation has gone from \$350.00, to \$1,000.00. The new rules went into effect on March 16, 2009 (fees) and April 30, 2009 (financial assurance and plugging and abandonment requirements).

The Mining and Minerals Division (MMD) has initiated discussions with the Director's Advisory committee (DAC) concerning further rule changes to exploration, establishing timeframes for the review of permit applications, changes to Part 1 of the Rules, having to do with definitions, changes to clarify the public notice process related to permit applications, changes to Part 3 of the Rules having to do with Minimal Impact Operations, and changes to improve consistency with the regulatory language between common elements of all permit types. MMD released a draft set of rule changes to the DAC, and initiated discussions on December 9, 2009.

#### 8. Database and Geographical Information Systems Initiative

The Mining Act Reclamation Program (MARP) is working with the Energy, Minerals and Natural Resources Department (EMNRD) Information Technology Office application developers to upgrade the MARP database. The MARP database tracks the activities of Program staff in permitting, inspecting, and monitoring of mines and reclamation efforts; the administration and release of financial assurances, and regulatory reporting. The Program has completed the business rules and the database requirements document in fall 2009. The database upgrades include the requirement that all permits be related to corresponding geospatial components. This process has progressed to the testing phase.

The Mining Act Reclamation Program (MARP) implemented a Geographic Information Systems (GIS) initiative in 2006 to support its regulatory activities. The initiative goals are to enable MARP program staff to more accurately track disturbed and reclaimed areas of mine sites and to increase work efficiency by utilizing geospatial information in permitting activities. The Program continues to request and integrate geospatial information from mine operators into the permitting process. The GIS initiative also involves the active collection of geospatial data by program staff. Future plans involve making web-based products of the GIS available to the public, where appropriate, for easier access to, and understanding of, state permitting activities.

The Mining and Minerals Division GIS Analyst/Specialist is compiling a geodatabase that includes permit boundaries, mine units, drill holes and other mapped features of pending, approved and denied permit applications to the MARP program. The resulting work will be integrated into the enterprise-level geodatabase currently in the testing phase in the Energy, Minerals and Natural Resources Department (EMNRD).

Currently, mine operators are required to provide information concerning disturbed areas and reclaimed areas (pre- and post-treatment) to MARP in their annual reports. The Program continues to request that maps be submitted in a digital format compatible with the Mining and Minerals Division GIS structure.

Permit applications, revisions and modifications for exploration projects and mining operations are required to include geographic coordinates of permit boundaries, drill holes, and mine units. The Program maps and compares coordinates that are supplied in the tables to the permit maps supplied in a permit application, revision or modification. This has become a part of the application review process.

Permit leads continue to use global positioning systems (GPS) to gather location data during inspections, creating a complete record of permit details, over time, throughout the state. Permit leads utilize GPS technology in the field to navigate to areas of concern, to identify specific sampling sites, and to track acreage. During the course of inspections, program staff traces the perimeter of both mine disturbances and reclamation areas and then downloads and manipulates this information to create geospatial polygons and maps. When overlaid on permit boundary maps, aerial photographs, topographic maps, land-use maps, cultural properties and other datasets, this information aids the permit leads with

visual assessments of a mine and helps determine compliance with permit requirements. Figure 2 illustrates the use of GPS and GIS during inspections. Inspection of the EI Grande Mine and Mill permit included a walk-about with a GPS unit to delineate the areas of reclaimed units in the revegetation stage and in-substrate contouring. Point data was collected that represented established and proposed outflow from the site, setting the stage for future monitoring. We are able to integrate and view inspection photos on a digital map at photo points taken with a GPS-enabled camera.



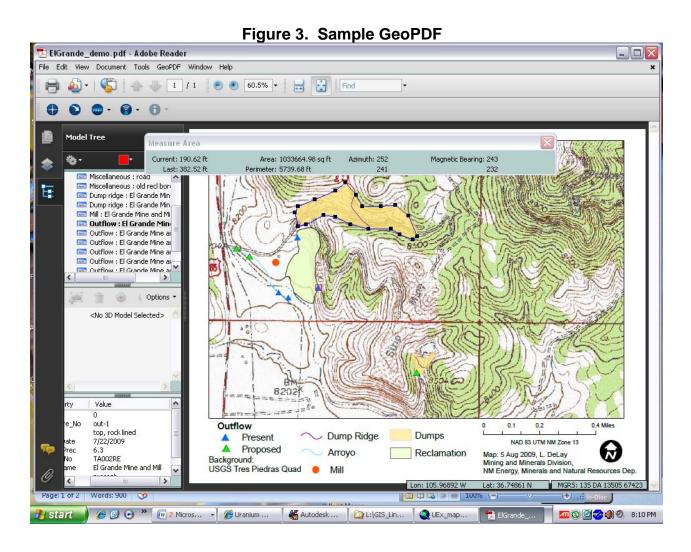
Figure 2. El Grande Mine and Mill permit feature delineation and photo locations

Point locations of permit sites and geospatial information are currently viewed through several internal web map applications, providing program staff with access to the developing maps of permit boundaries and features. Test plots and sampling sites, used to measure the effects of specific reclamation treatments, can be more comprehensively monitored for changes, over time, using the geospatial data. The next phase of web mapping will be developed through the enterprise GIS that EMNRD is implementing.

The Program is testing a new file format, the GeoPDF, that may simplify the map and geospatial data exchange between the Program and mine operators. A GeoPDF (Figure 3) can be published to share GIS and maps with non-GIS users in the familiar PDF (Portable File Document) file format. In a GeoPDF, map layers and legends can be turned on and off; coordinates can be displayed as the computer mouse hovers over the map; length and

area can be measured, and information about map features can be shared. End-users can mark up the map with new location information and send back to the Program for review and integration into the GIS.

The Division continues to support training for our permit leads in the use of GPS and GIS. These training opportunities include college courses and vendor-sponsored software training. The Program receives periodic GIS-related demonstrations and GPS field training from the Division GIS Analyst/Specialist.



#### 9. Tribal Consultation Policy

In 2009, the New Mexico Legislature passed the State Tribal Collaboration Act (STCA), mandating "StateTribal Collaboration and Communication." The new law requires each Department to consult with an Indian nation, tribe or pueblo, designate a Department Tribal Liaison Officer and perform annual reporting on implementation of the Act.

In December 2009, Governor Bill Richardson announced the signing and adoption of Tribal Collaboration Communication Policies by every Cabinet-level agency, a first in New Mexico's history. All cabinet agencies now have a formal process in place for communication and collaboration with the sovereign tribal governments in New Mexico. These policies form a strong foundation for to working on a government-to-government basis to better address the needs and concerns of New Mexico's Native American citizens.

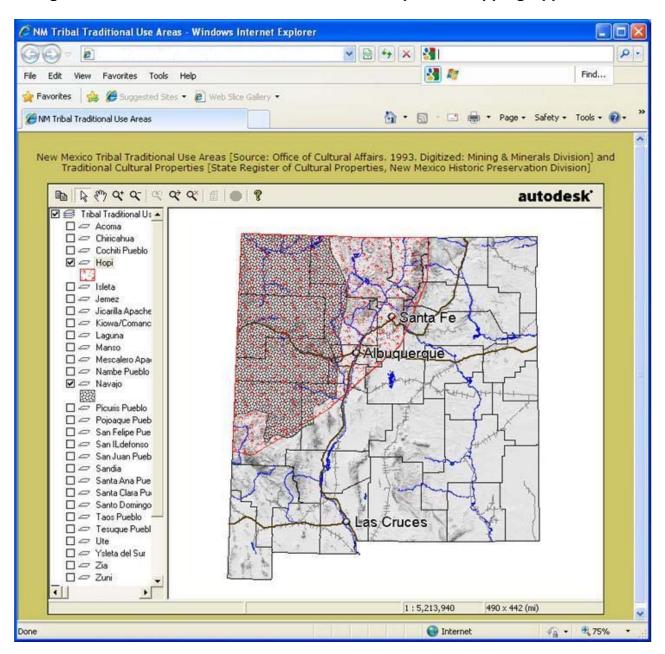
The Tribal Collaboration Communication Policies were created collaboratively by six state-tribal workgroups. The Energy, Minerals and Natural Resources Department (EMNRD) worked in a group with the New Mexico Environment Department, the Office of the State Engineer and the Department of Game and Fish. EMNRD's effort was led by the Department's Tribal Liaison, Arthur "Butch" Blazer, who is also the State Forester.

The Department's Policy establishes the principles and framework for effective tribal consultation. The Mining and Minerals Division (MMD) has been working for some time to integrate tribal consultation into the permitting frameworks of both the coal and hard rock mine reclamation programs. MMD has held a number of meetings with tribal officials to discuss specific proposed permitting actions and to hear the concerns the tribes may have.

Government-to-government consultation with Native American Tribes is also part of MMD's process to identify and evaluate potential impacts to historic, cultural and sacred properties by mandating. Protection of historic and cultural resources is an integral part of the MMD regulatory process. All of MMD's programs integrate archaeological investigations into their baseline data requirements and have specific regulatory provisions for the identification, protection and consideration of affects to cultural resources as part of the permit and project decision-making process.

The Mining and Minerals Division has developed an internal Geographic Information System (GIS) tool identifying traditional use areas derived from documents associated with the Indian Claims Commission Act of 1946 (see Figure 4). The proximity of proposed permits and mining activities to cultural properties and resources can be investigated during the permit review process and readily illustrated during meetings.

Figure 4. Traditional Tribal Use and Cultural Properties Mapping Application



**Table 8. Mining Act Reclamation Program Staff** 

		T
Employee Name & Title	Telephone	E-Mail Address
Holland Shepherd		
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Joe Vinson		
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Soil Scientist		
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Geologist/Hydrologist		
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Plant Scientist	,	
David Ennis		
Senior Reclamation Specialist	(505)476-3434	david.ennis@state.nm.us
Geologist/Hydrologist	,	

Appendix 1.	Mining Operations	in New Mexico as o	of December 2009

Table 9. Regular Existing Mines as of December 2009

Permit No.	Mine Name	Operator	Permit Status	Mining Status	Commodity
BE001RE	Tijeras Mine and Mill	GCC Rio Grande, Inc.	Approved	Active Mining, Active Reclamation	Limestone
CA005RE	Challenge Mine and Mill	Challenge Mining Company	Pending	Permanent Closure, Reclamation Pending	Gold, Silver
CI002RE	Mount Taylor Mine	Rio Grande Resources Corporation	Approved	Standby	Uranium
CI005RE	Tinaja Pit Mine	C & E Concrete, Inc	Approved	Active Mining	Limestone
CI007RE	JJ No. 1 / L Bar Mine	Kennecott Energy Company	Approved	Permanent Closure, Active Reclamation	Uranium
GR001RE	Pinos Altos Mine	Freeport-McMoRan Chino	Approved	Permanent Closure, Reclaimed Awaiting Release	Copper
GR002RE	Continental Mine and Mill	Freeport-McMoRan Cobre	Approved	Standby, Active Reclamation	Copper
GR006RE	Chino Limestone Mine	Freeport-McMoRan Chino	Approved	Permanent Closure, Reclaimed Awaiting Release	Limestone
GR007RE	Little Rock Mine	Freeport-McMoRan Tyrone	Approved	Standby	Copper
GR008RE	Jersey Lily, Snowflake and Virtue Mines	Freeport-McMoRan Tyrone	Approved	Permanent Closure, Reclaimed Awaiting Release	Silica Flux
GR009RE	Chino Mine and Mill	Freeport-McMoRan Chino	Approved	Active Mining, Active Reclamation	Copper, Gold, Silver, Molybdenum
GR010RE	Tyrone Mine and Mill	Freeport-McMoRan Tyrone	Approved	Active Mining, Active Reclamation	Copper
GR020RE	Georgetown Mine	Sierra Corporation	Approved	Permanent Closure, Reclaimed Awaiting Release	Copper, Gold, Silver
GR028RE	Center Mine	Douglas E. Hanson	Approved	Active Mining	Silica Flux
HI001RE	Lordsburg Mine and Mill	Lordsburg Mining Company	Approved	Under Development	Gold
HI002RE	Brockman Mine	Freeport-McMoRan Chino	Approved	Permanent Closure, Reclaimed Awaiting Release	Silica Flux
LU001RE	Deming Jigging Mill	American Minerals, Inc.	Approved	Permanent Closure, Reclaimed Awaiting Release	Manganese
LU008RE	Cyprus Deming Tailings Impoundment	Freeport-McMoRan Chino	Approved	Permanent Closure, Reclaimed Awaiting Release	Copper, Zinc, Lead
LU009RE	Asarco Deming Mill	Asarco, Inc.	Approved	Permanent Closure, Reclaimed Awaiting Release	Copper, Zinc, Lead

Permit No.	Mine Name	Operator	Permit Status	Mining Status	Commodity
MK004RE	Northeast Church Rock Mine	United Nuclear Corporation	Pending	Permanent Closure, Active Reclamation	Uranium
MK005RE	Section 27 Mine	United Nuclear Corporation	Approved	Permanent Closure, Active Reclamation	Uranium
MK006RE	St. Anthony Mine	United Nuclear Corporation	Pending	Permanent Closure, Reclamation Pending	Uranium
MK009RE	Old Stope Leach Mine	Rio Algom, LLC	Approved	Permanent Closure, Reclaimed Awaiting Release	Uranium
RA004RE	Rocky Mountain Mine	CR Minerals, LLC	Approved	Active Mining	Pumice
RA005RE	Velarde Mill	Oglebay Norton Specialty Minerals	Approved	Permanent Closure, Reclaimed Awaiting Release	Mica
SA001RE	Las Conchas/El Cajete Mine	Copar Pumice Company	Approved	Permanent Closure, Active Reclamation	Pumice
SA002RE	Clod Buster Mine and Mill	Agronics, Inc.	Pending	Permanent Closure	Humate
SA003RE	Nacimiento Mine	Leaching Technology, Inc.	Denied	Permanent Closure	Copper
SF002RE	Cunningham Hill Mine	LAC Minerals Company	Approved	Permanent Closure, Reclaimed Awaiting Release	Gold
SI006RE	Zeolite Mine and Mill	St. Cloud Mining Company	Approved	Active Mining, Active Reclamation	Zeolites
SO001RE	Socorro Perlite Mine and Mill	Dicaperl Corporation	Approved	Active Mining, Active Reclamation	Perlite
TA001RE	Questa Mine and Mill	Chevron Mining Inc.	Approved	Active Mining, Active Reclamation	Molybdenum
TA002RE	El Grande Mine and Mill	Dicaperl Corporation	Approved	Active Mining, Active Reclamation	Perlite
TA003RE	U. S. Hill Mine	Pueblo of Picuris	Approved	Permanent Closure, Reclaimed Awaiting Release	Mica
TA005RE	No Agua Mine and Mill	Harborlite Corporation	Approved	Active Mining	Perlite

Total Number of Regular Existing Mine Permit Applications	35
Number of Regular Existing Mine Permits Approved	30
Number of Regular Existing Mine Permits Pending	4
Number of Regular Existing Mine Permits Denied	1

Table 10. Regular New Mines as of December 2009

Permit No.	Mine Name	Operator	Permit Status	Mining Status	Commodity
CI008RN	La Jara Mesa Mine	Laramide Resources Inc.	Pending	Under Development	Uranium
MK025RN	Roca Honda Mine	Roca Honda Resources, LLC	Pending	Under Development	Uranium
OT001RN	Wind Mountain Quarry Mine	Addwest Minerals, Inc.	Withdrawn	Permanent Closure	Nepheline Syenite
SI004RN	Copper Flat Mine	Alta Gold Company	Withdrawn	Permanent Closure	Copper, Gold

Total Number of Regular New Mine Permit Applications	4
Number of Regular New Mine Permits Approved	0
Number of Regular New Mine Permits Pending	2
Number of Regular New Mine Permits Withdrawn	2

Table 11. Minimal Impact Existing Mines as of December 2009

Permit No.	Mine Name	Operator	Permit Status	Mine Status	Commodity
CA003ME	Hiawatha And Little Jim Mine	Volcanic Stone Company	Approved	Permanent Closure, Reclaimed Awaiting Release	Tin
GR011ME	Summit Mine	Lordsburg Mining Company	Approved	Under Development	Gold
GR016ME	Malone Mine	Louis Osmer	Released	Permanent Closure, Reclaimed and Released	Silica
GR018ME	Banks (Lost New Summit No. 1) Mine	Micrex Development Corporation	Approved	No Mining, No Reclamation	Silica Flux, Silver
GR019ME	Boston Hill Mine	Town Of Silver City	Released	Permanent Closure, Reclaimed and Released	Manganese
GR025ME	Mathis Lime Quarry Mine	Mathis Rocks	Approved	Permanent Closure, Active Reclamation	Limestone
GR029ME	Mount Royal Mine and Mill	Micrex Development Corporation	Approved	No Mining, No Reclamation	Gold
GR030ME	Chemical Lime Mine & Mill	Chemical Lime Company	Approved	Permanent Closure, Active Reclamation	Silica Flux
HI008ME	Volcano Mine	Dane Mining & Exploration	Approved	Permanent Closure, Reclaimed Awaiting Release	Gold, Silver, Silica
LI001ME	Warner Gulch Placer Mine	American Eagle Mining Company	Approved	Active Mining, Active Reclamation	Gold
LI005ME	Capitan Iron Mine	El Capitan Ltd.	Approved	Under Development	Iron
MK003ME	Star Lake Menefee Mine	Menefee Mining Corporation	Approved	Active Mining	Humate
MK007ME	Star Lake Mesa Verde Mine	Mesa Verde Resources	Approved	Active Mining	Humate
MK008ME	Pueblo Alto Mine	Mesa Verde Resources	Approved	No Mining, No Reclamation	Humate
MK024ME	Section 12 Mine	Southwest Resources Inc.	Pending	Enforcement, Permanent Closure	Uranium
RA001ME	Northstar Mine	Northern American Metal LLC	Pending	Under Development	Gold
RA003ME	Cullum Claims Mine	Pueblo of Santa Clara	Approved	Permanent Closure	Pumice
RA006ME	General Pumice Mine	City Of Espanola	Pending	Permanent Closure, Active Reclamation	Pumice
SA005ME	Menefee Mill	Menefee Mining Corporation	Approved	Active Mining	Humate
SA010ME	Mesa Verde Resources Mill	Mesa Verde Resources	Released	Permanent Closure, Reclaimed and Released	Humate
SF001ME	San Pedro Mine and Mill	St. Cloud Mining Company	Approved	Permanent Closure, Reclaimed Awaiting Release	Copper, Gold

Permit No.	Mine Name	Operator	Permit Status	Mine Status	Commodity
SF003ME	Silver Silica Mine	Oro Blanco Mining Company, LLC	Approved	Active Mining, Active Reclamation	Silica
SF006ME	CR Minerals Mill	CR Minerals Company	Released	Permanent Closure, Reclaimed and Released	Pumice
SI001ME	St. Cloud US Treasury Mine	St. Cloud Mining Company	Approved	Permanent Closure, Active Reclamation	Silica, Gold, Silver
SI007ME	Midnight Mine	Larry L. Harris	Approved	Permanent Closure, No Reclamation	Gold, Copper
VA001ME	Lucero Quarry Mine	New Mexico Travertine, Inc.	Approved	Active Mining	Travertine

Total Number of Minimal Impact Existing Mine Permit Applications	26
Number of Minimal Impact Existing Mines Approved	19
Number of Minimal Impact Existing Mines Released	4
Number of Minimal Impact Existing Mines Pending	3

Table 12. Minimal Impact New Mines as of December 2009

Permit No.	Mine Name	Operator	Permit Status	Mine Status	Commodity
CA002MN	Deadwood / Last Chance Mine	Micrex Development Corporation	Approved	No Mining, No Reclamation	Silica, Silver
CI003MN	ANP No. 2 Mine	Denali Enterprises	Approved	No Mining, No Reclamation	Travertine
CI004MN	Haskani Mine	Denali Enterprises	Approved	No Mining, No Reclamation	Travertine
CI006MN	Ray Claims No. 4 and No. 6 Mines	International Stone Company	Approved	Active Mining	Travertine
DA002MN	Shamrock Environmental Mine	Espanola Transit Mix Company	Approved	Permanent Closure, Reclaimed Awaiting Release	Precious Metals
DA003MN	Alley Gypsum Mine	Alley Gypsum Mining	Approved	Active Mining	Gypsum
GR012MN	KB Mine	Southwest Silica Flux Co., Inc.	Approved	Permanent Closure, Reclaimed Awaiting Release	Silica
GR022MN	Farmers Back Breaker Mine	Larry Moore	Enforcement	Enforcement, No Reclamation	Gold
GR023MN	Copper Conglomerate Mine	Copper Creek Exploration	Denied		Copper
GR031MN	Toro Mine	Toro Mining and Minerals, Inc.	Released	Permanent Closure, Reclaimed and Released	Perlite
GR036MN	Grooms Placer Mine	Mother Lode Mining Company	Approved	Under Development	Gold
GR056MN	McCauley Perlite Mine	St. Cloud Mining Company	Approved	Under Development	Perlite
GR058MN	Billali Mine	Richard and Leslie Billingsley	Approved	Under Development	Gold, Silver
HI004MN	KM Mine	Southwest Silica Flux Company, Inc.	Approved	Permanent Closure, Reclaimed Awaiting Release	Silica
LU011MN	Herb Bailey No. 1 Mine	Boot Heel Minerals	Enforcement	Enforcement, No Reclamation	Turquoise
LU012MN	Herb Bailey No. 2 Mine	Boot Heel Minerals	Enforcement	Enforcement, No Reclamation	Turquoise
MK010MN	U-Mate Mine	U-Mate International, Inc.	Approved	Active Mining	Humate
MK011MN	Morningstar Mine	Morningstar Corporation	Approved	Permanent Closure, No Reclamation	Humate
MK012MN	Jaramillo Humate Mine	Anasazi Stone, LLC	Pending	Under Development	Humate
OT002MN	B.O.W. Mine	B.O.W. Corporation	Approved	Under Development	Garnet
OT003MN	Joel Nanez Mine	Joel Nanez	Withdrawn		Gypsum
OT005MN	Orogrande Placer Gold Mine	W.W. Mining & Production	Pending	Under Development	Gold
SA004MN	Copar South Pit Mine	Copar Pumice Company	Approved	Active Mining	Pumice
SA006MN	Copper City Mine	Crystal Mining Corp.	Approved	Enforcement, No Reclamation	Humate
SA009MN	Eagle Mesa Mine	Rammsco, Inc.	Approved	Active Mining	Humate

Permit No.	Mine Name	Operator	Permit Status	Mine Status	Commodity
SA011MN	San Luis Mine	Horizon Ag-Products	Approved	Active Mining	Humate
SI005MN	Burbank Canyon Mine	Cornerstone Investment Circle, LLC	Approved	Under Development	Precious Metals
SI020MN	Coyote No. 1 Mine	Greg Richards	Approved	Active Mining	Zeolites
SI021MN	Coyote No. 1 Mine	Greg Richards	Approved	Active Mining	Zeolites
SI022MN	Smugglers Mine	Gordon Walters	Denied		Gold, Silver
SI023MN	Franklin Mine	Gordon Walters	Denied		Gold, Silver
SI024MN	Baxter (Badger) Claim Mine	Gordon Walters	Denied		Gold, Silver
SI025MN	Harding Mine	Wayne M. Rutland	Pending	Under Development	Gold, Silver
SJ001MN	Morningstar Mill	Morningstar Corporation	Pending	Active Mining	Humate
SJ002MN	Chaco Limestone Quarry	John Freidline	Approved	Under Development	Limestone
SO002MN	Sais Quarry Mine	New Mexico Travertine	Approved	Active Mining	Schist
SO004MN	Alamosa Mine	Tognoni & Lufkin	Enforcement	Enforcement, No Reclamation	Beryllium
SO005MN	San Lorenzo Claim Mine	Tim Apodaca	Approved	Under Development	Gold
SO012MN	San Antonio Pumice Pit	Bobby Garcia Trucking	Withdrawn		Pumice

Total Number of Minimal Impact New Mine Permit Applications	39
Total Number of Minimal Impact New Mine Permits Approved	24
Total Number of Minimal Impact New Mine Permits Released	1
Total Number of Minimal Impact New Mine Permits Pending	4
Total Number of Minimal Impact New Mine Permits Denied	4
Total Number of Minimal Impact New Mine Permits Withdrawn	2
Total Number of Minimal Impact New Mine Permits in Enforcement	4

Table 13. Regular Exploration Projects as of December 2009

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval
CI014ER	Cebolleta Exploration Project	Neutron Energy	Uranium	Pending	
LI003ER	Bonito Gold & Silver Project	David Dunn	Gold and Silver	Withdrawn	
LI009ER	El Capitan Exploration Drilling Project	El Capitan Precious Metals, Inc	Precious Metals	Pending	
LU016ER	Victorio Project	Galway Resources US, Inc.	Metals	On Hold	
MK023ER	Marquez Canyon Confirmation Drill Project	Neutron Energy	Uranium	Approved	3/31/2009
MK029ER	Eric #1 Project	Bob March	Uranium	Pending	
SA003ER	Georgia Claims Project	Centex American Gypsum	Gypsum	Approved	7/31/1996
SF005ER	Carache Canyon 4 Project	LAC Minerals (USA) Inc.	Gold	Withdrawn	
SO014ER	Sullivan Ranch Exploration Part 4 Project	BE Resources Inc.	Bertrandite	Pending	
TA001ER	Pilar Project	Golden Rod Mining	Gold	Withdrawn	

Total Number of Regular Exploration Permit Applications		
Number of Regular Exploration Permits Approved	2	
Number of Regular Exploration Permits Pending	3	
Number of Regular Exploration Permits On Hold	2	
Number of Regular Exploration Permits Withdrawn	3	

Table 14. Minimal Impact Exploration Projects as of December 2009

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval
BE001EM	HRI Inc. Exploration Project	HRI, Inc.	Uranium	Approved	3/19/1998
CA004EM	Gutapa Exploration Project	Sunburst Mining Company	Gold, Platinum	Approved	4/19/1997
CA005EM	Cow Springs Exploration Project	Sunburst Mining Company	Precious Metals	Withdrawn	
CA006EM	Deep Creek Project	Derek Kuester	Gold, Silver, Copper	Approved	5/19/1998
CA007EM	Faith Mining Association Project	Faith Mining Association	Gold, Rare Earths	Approved	11/1/2004
CA008EM	Southwest Research No. 1 Project	Southwest Research & Development	Gold, Silver, Platinum	Approved	11/23/1998
CA009EM	Apache Camp Exploration	Faith Mining Association	Gold	Approved	11/1/2004
CA011EM	Sunburst/Deadwood Exploration Project	Micrex Development	Gold, Silver, Copper	Approved	8/14/2007
CA011EM R1	Sunburst/Deadwood Exploration Project Renewal	Micrex Development	Gold, Silver, Copper	Approved	6/18/2008
CA012EM	Ormor No. 1 Lode Mining Claim	Heath Technologies, Inc.	Gold	Pending	
CA013EM	Lone Pine Hill Mineral Exploration Project	World Industrial Minerals	Gold	Pending	
CA014EM	Deer Claims Exploration Project	Vane Minerals Plc	Uranium	Pending	
CA015EM	Baca Project	Red Basin, LLC	Uranium	Pending	
CA016EM	White Mesa Project	Red Basin, LLC	Uranium	Pending	
CA017EM	Sunburst Deadwood Drilling	Mountain Rio Resources	Gold, Silver, Copper	Pending	
CA018EM	Mogollon Project	Columbus Silver (U.S.) Corp.	Gold, Silver	Pending	
CI001EM	ANP No. 1 Project	Acid Neutralization Product, Inc.	Travertine	Approved	10/26/1995
CI002EM	La Jara Mesa Confirmation Drill Project	Anaconda Resources, Inc.	Uranium	Approved	5/19/1998
CI004EM	Twenty Two Project	Jim Herrison	Travertine	Approved	11/19/2003
CI008EM	La Jara Mesa Exploration Project	Laramide Resources, Inc.	Uranium	Approved	10/12/2006
CI008EM R1	La Jara Mesa Exploration Project Renewal	Laramide Resources, Inc.	Uranium	Approved	10/18/2007
CI009EM	La Jara Mesa Extension Exploration Project	Urex Energy Corporation	Uranium	Denied	
CI010EM	Treeline II Exploration Project	Western Energy Development Corp.	Uranium	Denied	
CI0011EM	DD No. 1 Exploration Project	Rampart Resources, Inc.	Uranium	Withdrawn	
CI012EM	Armijo Project	Grants Ridge Joint Venture	Uranium	Approved	11/20/2009
CI013RE	F-33	Grants Ridge Joint Venture	Uranium	Approved	11/20/2009
DA001EM	Alivio Exploration Project	Louis Gonzales	Gold	Approved	4/21/2003
DA002EM	Golden Link Exploration Project	Don Snodgrass	Gold, Silver	Approved	5/5/2005

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval
GR001EM	Deadman Canyon Project	Copper Creek Exploration Ltd.	Copper	Approved	3/23/1995
GR002EM	Pinos Altos Project	Pinos Altos Gold Exp. Inc.	Gold	Approved	1/19/1996
GR004EM	Tyrone West Drilling Program	Copper Creek Exploration Ltd.	Copper	Approved	1/5/1996
GR005EM	Gold Rush Project	Harvey Lee Harvey	Gold, Silver	Approved	12/31/1999
GR006EM	Navarro Mineral Project	D. Gilbert Navarro	Gold	Approved	10/31/1996
GR007EM	Lone Mountain Project	Lone Mountain Mining Ltd.	Copper	Approved	12/8/1996
GR009EM	Good Cheer Group Project	Don Yelsma	Gold, Silver	Approved	12/19/1997
GR010EM	Beaumont Silver Mine Project	Lou Osmer	Silver	Approved	6/8/2003
GR010EM R1	Beaumont Exploration Project Renewal	Lou Osmer	Silver	Approved	6/8/2006
GR011EM	Shamrock Gold Mine Project	Lou Osmer	Gold	Approved	6/8/2003
GR012EM	Astrologer Gold Mine Project	Lou Osmer	Gold	Approved	6/8/2003
GR013EM	Chocolate Peak Project	Harold Hoegberg	Gold, Silver, Copper	Approved	8/6/1998
GR014EM	Copper Mountain South Project	Phelps Dodge Tyrone, Inc.	Copper	Approved	7/19/2000
GR015EM	Golden Eagle Exploration Project	John Bernal	Gold	Approved	3/22/2005
GR017EM	Toro Mining Exploration Project	Charles Grey	Perlite	Approved	9/19/2001
GR018EM	Emma Exploration Drilling Project	Phelps Dodge Tyrone, Inc.	Copper	Approved	9/30/2001
GR019EM	Southwest Area Drilling Project	Phelps Dodge Tyrone, Inc.	Copper	Approved	9/30/2001
GR020EM	Nellie Bly Exploration Project	Phelps Dodge Tyrone, Inc.	Copper	Approved	12/19/2002
GR021EM	Hachita Project	Ken Krahulec	Precious Metals	Approved	11/20/2002
GR022EM	Tyrone Peak Project	Phelps Dodge Tyrone, Inc.	Copper	Approved	12/18/2002
GR023EM	Brockman Exploration Project	Kennecott Exploration Company	Gold	Approved	3/27/2003
GR024EM	Don Snodgrass Project	Don Snodgrass	Silver, Gold	Approved	1/27/2005
GR024EM R1	Don Snodgrass Project Renewal	Don Snodgrass	Gold	Approved	6/8/2006
GR025EM	Lawrence Pierce Project	Lawrence Pierce	Gold	Approved	8/15/2005
GR026EM	Gutapa Project	Sunburst Mining Corp.	Gold, Platinum	Approved	1/9/1995
GR027EM	Neglected Mine Project	William Hinkle, Jr.	Gold, Silver, Copper	Approved	7/14/2004
GR027EM R1	Neglected Mine Project Renewal 2006	William Hinkle, Jr.	Gold	Approved	10/23/2006
GR027EM M	Neglected Mine Project Modification 2007	William Hinkle, Jr.	Gold, Silver, Copper	Approved	10/5/2007
GR027EM R3	Neglected Mine Project Renewal	Henkle and Associates	Gold, Silver, Copper	Approved	6/24/2008

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval
GR028EM	Thornwell Exploration Project	Thornwell Rogers	Silver, Copper, Zinc	Approved	12/8/2005
GR029EM	Galway Lone Mountain Project	Galway Resources US, Inc.	Copper, Lead, Zinc	Approved	3/1/2007
GR030EM	Malone Project	Evolving Gold Corporation	Gold, Silver	Approved	7/30/2007
GR031EM	Gold Lake Prospect Project	New Mexico General Minerals LLC	Copper	Approved	10/22/2007
GR032EM	Galway Lone Mountain Project Modification 2007	Galway Resources US, Inc.	Copper, Lead, Zinc	Approved	8/17/2007
GR033EM	Continent Lone Mountain	Continent Resources Inc.	Gold, Silver, Copper	Approved	12/5/2008
GR034EM	Malone Exploration Project No. 2	Evolving Gold Corporation	Gold	Approved	1/22/2009
GR035EM	Gunsight Exploration Project	Philip Chambless	Turquoise	Approved	10/21/2009
GR036EM	Oro Project	Addwest Minerals, Inc.	Gold, Silver, Copper	Approved	6/19/2009
HI001EM	San Simon Project	Cyprus Metals Company	Copper	Approved	3/7/1995
HI002EM	Beck Mine Project	Beck Silver Mines	Gold, Silver	Approved	2/27/1995
HI003EM	Sterling Project	Noranda Exploration, Inc.	Copper	Approved	1/5/1996
HI004EM	Willow Draw Project	Mark Osterberg	Copper	Approved	3/25/1996
HI006EM	Hachita Peak Project	Teck Resources	Gold	Approved	10/31/1996
HI007EM	Apache Hills Project	Madison Resources (NM), Inc.	Metals	Approved	4/30/1997
HI009EM	Lordsburg Exploration Project	Entree Gold, Inc.	Gold, Copper	Approved	10/17/2008
HI010EM	Gold Hill Project	Entree Gold, Inc.	Gold, Copper	Approved	9/1/2009
HI011EM	Lordsburg West	AVEN Associates LLC	Gold, Silver, Copper	Pending	
LI001EM	Vera Cruz Project	Placer Dome, Inc.	Gold, Copper	Approved	11/23/1994
LI004EM	M & R Project	Richard Mendoza	Rare Earth	Approved	9/22/2003
LI008EM	El Capitan Reclamation Project	El Capitan Precious Metals, Inc.	Precious Metals	Approved	10/3/2008
LI010EM	Outlaw Exploration Project	Red Basin, LLC	Rare Earth Metals	Pending	
LU001EM	Victorio Project	Lone Mountain Mining Ltd.	Gold	Approved	10/31/1996
LU002EM	Homer's Little Diggins Project	Homer Nute	Agate	Approved	5/219/2005
LU002EM R1	Homer's Little Diggins Project Renewal	Homer Nute	Agate	Approved	5/23/2006
LU003EM	Mahoney Exploration Project	James M. Telford	Zinc	Approved	5/17/2005
LU010EM	Cameo Exploration Project	Philip Chambless	Turquoise	Approved	10/17/2005
LU013EM	Kling Exploration Project	C.A. Kling	Agate	Approved	12/11/2006
LU014EM	Galway Exploration Project 2006	Galway Resources US, Inc.	Silver, Gold, Etc	Approved	8/23/2006

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval
LU015EM	Victorio Mountain Exploration 2007	Galway Resources US, Inc.	Metals	Approved	9/17/2007
LU015EM R1	Victorio Mountain Exploration 2007	Galway Resources US, Inc.	Metals	Approved	10/21/2008
LU015EM R2	Victorio Mountain Galway Resources Exploration	Galway Resources US, Inc.	Metals	Approved	10/23/2009
MK009EM	Gamerco Project	U Mate International	Humate	Approved	7/31/1997
MK010EM	West Ambrosia Project	HRI, Inc.	Uranium	Approved	5/13/1998
MK011EM	Andrea Corporation Project	Hal Collins	Humate	Approved	9/16/2004
MK012EM	Treeline Exploration Project	Western Energy Development Corp.	Uranium	Approved	4/12/2006
MK013EM	Ambrosia Lake Exploration	Neutron Energy	Uranium	Approved	2/27/2007
MK014EM	Roca Honda Exploration	Strathmore Minerals Corp.	Uranium	Approved	5/9/2007
MK015EM	Church Rock Exploration Project	Strathmore Minerals Corp.	Uranium	Withdrawn	
MK016EM	Hosta Butte Section 3 Project	Quincy Energy Corp.	Uranium	Denied	
MK017EM	Crownpoint Section 19 Project	Quincy Energy Corp.	Uranium	Denied	
MK018EM	Treeline III Exploration Project	Western Energy Development Corp.	Uranium	Denied	
MK019EM	Section 12 Exploration Project	Southwest Resources Inc.	Uranium	Denied	
MK020EM	San Mateo Mesa Exploration Project	Uranium Energy Corp.	Uranium	Denied	
MK021EM	Section 11 Exploration	Southwest Resources Inc	Uranium	Withdrawn	
MK022EM	Roca Honda Sections 5, 9 and 10 Project	Roca Honda Resources	Uranium	Denied	
MK025EM	Section 13 ISR Exploration	Uranium Resources Inc.	Uranium	Approved	11/10/2008
MK026EM	Roca Honda Project Section 10	Roca Honda Resources	Uranium	Denied	
MK027EM	West Ranch Exploration Project	Ree-Co Uranium LP	Uranium	Enforcement	
MK028EM	Elizabeth Claims	Neutron Energy	Uranium	Approved	9/4/2009
MK031EM	North Zia Project	Cibola Exploration Inc.	Uranium	Denied	
MK032EM	Star Lake MVR Exploration	Mesa Verde Resources	Humate	Approved	9/16/2009
MK033EM	Pueblo Alto Exploration	Mesa Verde Resources	Humate	Approved	9/16/2009
OT002EM	Oro Grande Project	Lone Mountain Mining Ltd.	Gold, Copper	Approved	12/10/1996
OT003EM	Metalline Mining Exploration Project	Metalline Mining Co.	Garnet	Approved	2/19/2002
OT003EM R1	Metalline Mining Exploration Project Renewal	B.O.W. Corporation	Garnet	Approved	12/6/2005
OT004EM	B.O.W Exploration Project	B.O.W. Corporation	Garnet	Approved	1/7/2007
RA002EM	Mid Way Exploration Project	Al Puckett	Gold	Approved	8/23/2004

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval
SA001EM	Los Griegos Project	Copar Pumice Company	Pumice	Approved	7/7/1995
SA004EM	Vallecitos Drilling Project	Copar Pumice Company	Pumice	Approved	9/30/1997
SA012EM	Lily Exploration Project	Uranium Company of NM	Uranium	Approved	9/7/2007
SA013EM	San Luis Humate Exploration	Horizon Ag	Humate	Approved	3/24/2009
SF001EM	Cerro de Oro Nos. 2 and 11 Project	Joan Oller	Gold	Approved	9/12/1994
SF002EM	Jack's Place Project	Jack Nelson	Gold	Approved	9/12/1994
SF003EM	Three B's Nos. 1 and 2 Project	Brian Kew	Gold	Approved	9/12/1994
SF004EM	Rafelita Project	Joseph Gonzales	Gold	Approved	9/12/1994
SF006EM	Jones Hill Project	Champion Resources	Silver, Gold	Approved	11/10/1994
SF007EM	NMGMA Project	Texas Gold - NMGMA	Gold	Approved	11/1/1996
SF008EM	Jones Hill Project	Davenport Minerals Corp.	Gold, Silver, Copper	Approved	4/19/1999
SF009EM	Bixby Exploration Project	Paul Plunkett	Gold	Pending	
SI001EM	Hillsboro Project	Placer Dome, Inc.	Gold, Silver, Copper	Approved	11/23/1994
SI002EM	Hackberry Draw Project	Grubstake Mining & Exploration, Inc.	Gold	Approved	2/9/1995
SI006EM	Log Cabin Project	Troy L. Grimes	Gold, Silver	Withdrawn	
SI007EM	Drolte Mine Project	Drolte Mining	Metals	Approved	3/8/1995
SI008EM	Colossal Project	Ed Rudder	Gold	Approved	11/30/1996
SI009EM	Gold Run No. 1 Placer Project	John D. Whiteside	Gold	Approved	6/28/1995
SI010EM	Deep Pockets Nos. 1 and 2 Project	Arthur Hartman	Gold	Approved	4/18/1996
SI011EM	Drotle Claims Project	Mary Alice Drolte	Gold	Approved	4/9/1996
SI012EM	B. Franklin Claims Project	Dan Dodl	Gold, Silver, Platinum	Approved	6/19/1997
SI013EM	Gold Silver Exploration Project	Dan Medley	Gold	Approved	6/30/1998
SI014EM	Dictator Mine Project	Megastar Ventures	Gold, Silver, Copper	Approved	7/29/1998
SI015EM	Sonny's Tailings Project	Ken Schmatjen	Gold	Approved	7/13/2004
SI016EM	Iron Mountain Exploration Project	Great Western Exploration	Bertrandite	Approved	11/18/2004
SI016EM R1	Iron Mountain Exploration Project Renewal	Great Western Exploration	Bertrandite	Approved	4/3/2006
SI017EM	East of Winston Exploration Project	Great Western Exploration	Rare Earths	Approved	4/3/2006
SI018EM	Franklin Mine Project	Sonny Riggs	Gold	Approved	5/24/2006
SI019EM	Bat Cave Canyon Project	Sonny Riggs	Gold, Silver	Approved	2/13/2006

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval
SI020EM	Socorro 2006A Exploration Project	Melvin R. Mathis	Gold, Precious Metals	Approved	7/26/2006
SI020EM R1	Socorro 2006A Exploration Project Renewal	Melvin R. Mathis	Gold, Precious Metals	Approved	6/26/2007
SI021EM	Rifleshot Project	Geoinformatics Alaska Exploration	Silver, Copper, Zinc	Approved	9/9/2008
SI022EM	Copper Flat Exploration Project	New Mexico Copper Corp.	Copper	Approved	12/21/2009
SO001EM	San Juan Exploration Shaft	Al Meyers	Gold, Silver	Approved	12/31/1999
SO002EM	Northside Drilling Project	Kalahari Exploration LLC	Copper	Approved	8/31/2000
SO003EM	San Juan Drilling Project	Kalahari Exploration LLC	Copper, Gold	Withdrawn	
SO004EM	Alamosa Exploration Project	Bob Lufkin and David Tognoni	Bertrandite	Enforcement	
SO005EM	Andrea Ann Exploration Project	Cliff Strieber	Fluorite	Approved	3/22/2005
SO005EM R1	Andrea Ann Exploration Project Renewal 2006	Cliff Strieber	Fluorite	Approved	4/4/2006
SO005EM R2	Andrea Ann Exploration Project Renewal 2007	Cliff Strieber	Fluorite	Approved	11/13/2007
SO005EM M1	Andrea Ann Exploration Project Modification	Cliff Strieber	Fluorite	Approved	11/13/2007
SO005EM R4	Andrea Ann Exploration Project Renewal 2008	Cliff Strieber	Fluorite	Approved	10/31/2008
SO006EM	Sullivan Ranch Exploration Project	Great Western Exploration	Rare Earth	Denied	
SO007EM	Burma Exploration Project	Great Western Exploration	Bertrandite	Approved	5/5/2005
SO008EM	Socorro 2005A Exploration Project	Socorro Minerals Corp.	Gold, Precious Metals	Approved	5/5/2005
SO010EM	Sullivan Ranch (Revised) Project	Great Western Exploration	Bertrandite	Denied	NA
SO011EM	Bingham Exploration Project	Ramon Demark	Fluorite	Approved	8/23/2006
SO012EM	Riley Exploration Project	Max Resources Corporation	Uranium	Approved	5/11/2007
SO013EM	Riley Exploration Project No. 2	Max Resources Corporation	Uranium	Approved	5/27/2008
SO015EM	Iron Mountain Exploration Project	Be Resources Inc.	Bertrandite	Pending	
SO016EM	Burma Exploration Project	Be Resources Inc.	Bertrandite	Pending	
TA002EM	Champion Project	St. Mary Mineral Inc.	Copper	Approved	8/1/1995
TA002EM	Champion Project	Summo USA Corp.	Copper	Approved	4/19/1996
TO001EM	3 in 1 Project	n 1 Project George Ramirez Copper		Approved	7/31/1996
TO002EM	3 in 1 Project	Ciro Ramirez	Copper	Approved	6/22/1998

Total Number of Minimal Impact Exploration Project Applications	170
Number of Minimal Impact Exploration Projects Approved	138
Number of Minimal Impact Exploration Projects Pending	11
Number of Minimal Impact Exploration Projects On Hold	1
Number of Minimal Impact Exploration Projects Denied	12
Number of Minimal Impact Exploration Projects Enforcement	2
Number of Minimal Impact Exploration Projects Withdrawn	6

Table 15. General Permits as of December 2009

Permit No. Name		ate nitted	Date Issued	Location
BE001WET Robert Li	pinski 8/11	/2004	8/17/2004	Rio Grande
CI001DRY Internation	nal Stone Company 7/9/	2002	7/15/2002	Cerro Verde
ED001DRY Mark Hoo	oper 5/1/	2008	5/27/2008	10 miles south of White's City in the Yeso Hills; NE/4 Section 14, T26S, R24E
ED002DRY Mark Hoo	pper 5/18.	/2009	6/1/2009	
GR020DRY Ener G. 0	Corp., Inc. 7/31	/1997	8/7/1997	Near Chocolate Peak
GR022DRY Cathy He	slet 3/23	/1998	3/30/1998	Golden Duck
GR023WET Weston V	Volff 2/4/	1998	3/11/1998	Black Sand Claim Nos. 1-6; Pa Chal Ma Claim
GR025DRY John Ber	nal 5/4/	1998	5/12/1998	Golden Eagle No. 1 Claim
GR029DRY Paul Plur	nkett 4/21	/1998	4/28/1998	Gold Gulch; T20S, R16W, Section 26
GR030DRY John Hur	ntress 4/6/	1999	5/1/1999	American Turquoise; Section 35, T27S, R16W
GR031DRY Samuel N	Munoz 7/15	/1999	7/21/1999	Twin Sisters Creek
GR032DRY Dana Bat	tes 7/5/	2000	7/8/2000	Near Pinos Altos
GR033WET Weston V	Volff 7/10	/2000	7/24/2000	Gold Gulch
GR034WET Weston V	Volff 8/15	/2001	8/21/2001	Gold Gulch
GR035WET Weston V	Volff 9/3/	2002	9/4/2002	Gold Gulch
GR050WET Robert B	atchler 2/23	/1998	2/26/1998	Black Sand No. 1 Claim
GR051DRY Mark We	lch 1/24	/2003	2/17/2003	Steeple Rock Area
GR052WET Weston V	Volff 8/4/	2003	8/4/2003	Gold Gulch
GR053DRY John Scu	12/5	/2003	12/17/2003	Grant County
GR054WET Weston V	Volff 8/2/	2004	8/3/2004	Gold Gulch
GR055WET Weston V	Volff 9/15	/2005	9/21/2005	Gold Gulch
GR056WET Weston V	Volff 8/15	/2006	8/30/2006	Gold Gulch
GR057WET Weston V	Volff 8/9/	2007	9/26/2007	Gold Gulch
GR058WET Weston V	Volff 8/29	/2008	Approved	Gold Gulch; S/2 Section 21,NW/4 Section 28 and NE/4 Section 27 T20S, R16W; Black Sand Nos. 1-6, Pa Chal Ma, and Wolf Clan Nos. 1-2 Claims
GR059DRY Code Bre	eaker Enterprises Inc. 8/4/	2009	9/14/2009	NE/4 Section 32, T16S, R13W
LI027DRY Paul Plur	nkett 4/21	/1998	4/28/1998	Ancho Gulch; Section 4, T5S, R12E
LI028DRY Amos Bla	ack III 6/7/	1999	7/7/1998	Against the Wind, Ancho
LI029DRY Vincent S	Sanders 8/31	/2007	10/1/2007	Section 4, T5S, R12E

Permit No.	Name	Date Submitted	Date Issued	Location
LU001DRY	Homer Nute	5/27/2009	PENDING	N 32 02.793 W 107 56.571
MK001DRY	Ree-Co Uranium LP	5/27/2009	08/19/2009	T14N, R11W, Section 4 T14N, R11W, Sections 10 & 12 T14N, R10W,
OT031DRY	Harvey Snowden	8/26/1997	8/29/1997	Near Orogrande
OT032DRY	Harvey Snowden	8/31/1998	9/11/1998	Best Laugh Claim, Orogrande
OT033DRY	Amos Black III	6/7/1999	7/7/1998	Old Dry Placer No. 1, Orogrande
OT034DRY	Mike Pittman	5/16/2006	8/30/2006	Sections 4 & 5, T16S, R10E
OT035DRY	Daniel Curtis	6/27/2007	7/17/2007	Old Dry Placer No. 1; Section 10, T22S, R8E; Vicinity of Orogrande
RA001WET	Rhonda Shinpoch	4/28/1997	5/8/1997	Placer Creek
RA002WET	Ed Shinpoch	5/18/1998	6/2/1998	Placer Creek
RA003WET	Charles Alston	3/16/1998	3/30/1998	Placer Creek
RA004WET	Terry Nelson	4/21/1997	4/24/1997	Placer Creek
RA005WET	Donavon Maddox	5/19/1997	5/22/1997	Placer Creek
RA006WET	James White	5/7/1997	5/10/1997	Negrito Creek
RA007WET	Thomas Sena	5/19/1997	5/29/1997	Placer Creek, Apache Creek
RA008WET	Buell Williams	5/19/1997	5/29/1997	Tres Piedras Area
RA009WET	Arnold Hale	5/19/1997	5/29/1997	Placer Creek
RA011WET	Steven Hill	5/19/1997	5/29/1997	Placer Creek, Percha Creek
RA012WET	Lynn Files	5/19/1997	5/29/1997	Placer Creek
RA014WET	Philip Fattori	5/27/1997	5/27/1997	Placer Creek
RA015WET	Stuart Scantlin	6/3/1997	6/18/1997	Placer Creek
RA016WET	Jim Edwards	6/17/1997	6/18/1997	Placer Creek
RA017WET	Harold Phelps	6/25/1997	6/30/1997	Placer Creek
RA018WET	Robert Threlkeld	3/23/1998	3/30/1998	Placer Creek
RA019WET	Harold Conley	5/12/1998	6/11/1998	Placer Creek and Near Tusa Mountain
RA024WET	Bruce Gibson	2/11/1998	2/24/1998	Placer Creek
RA026WET	David Eckles	4/30/1998	5/11/1998	Placer Creek
RA030WET	Richard Freeze	6/26/1998	7/6/1998	Placer Creek
RA031Wet	Willy Skigen	6/26/1998	7/6/1998	Placer Creek
RA032WET	Mike Cogburn	4/23/1999	5/15/1999	Placer Creek
RA033DRY	Richard Vondrak	5/11/1999	6/21/1999	Barela Canyon

Permit No.	Name	Date Submitted	Date Issued	Location
RA034WET	Harold Phelps	5/24/1999	5/24/1999	Placer Creek
RA035WET	Amos Black III	6/7/1999	7/7/1998	Placer Creek Nos. 1-3
RA036WET	Mark Barber	6/25/1999	7/1/1999	Placer Creek
RA037WET	Robert Shober	6/22/1999	7/1/1999	Placer Creek
RA038WET	Larry Melvin	8/9/1999	8/21/1999	Placer Creek
RA039WET	Ed Shinpoch	3/20/2000	3/23/2000	Placer Creek
RA040WET	Timothy Haller	3/20/2000	3/23/2000	Placer Creek
RA041WET	Richard Freeze	5/3/2000	5/17/2000	Placer Creek
RA042WET	Mike Cogburn	5/11/2000	5/17/2000	Placer Creek
RA043WET	Jeff Shute	5/26/2000	5/26/2000	Placer Creek
RA044WET	Harold Conley	5/30/2000	5/30/2000	Placer Creek
RA045WET	Robert Shober	6/19/2000	7/1/2000	Placer Creek
RA046DRY	Richard Vondrak	6/20/2000	6/21/2000	Barela Canyon
RA047DRY	Robert Gibbens	7/2/2001	7/9/2001	Petaca Tantulum
RA047WET	John Fegel	6/30/2000	6/30/2000	North Placer Creek
RA048WET	Richard Bird	6/29/2000	7/6/2000	Placer Creek
RA049WET	Don Classen	7/20/2000	7/21/2000	Placer Creek
RA050WET	Steve Klahn	4/12/2001	4/16/2001	Placer Creek
RA051WET	Amos Black III	5/11/2001	5/14/2001	Placer Creek
RA052WET	David Krenek	5/15/2001	5/16/2001	Placer Creek
RA053WET	Richard Bird	5/21/2001	5/21/2001	Placer Creek
RA054WET	Richard Freeze	5/21/2001	5/21/2001	Placer Creek
RA055WET	Ed Shinpoch	5/25/2001	5/29/2001	Placer Creek
RA056WET	Ron Burnside	5/31/2001	5/31/2001	Placer Creek
RA057WET	Richard Torres	6/5/2001	6/5/2001	Placer, Goose, Pioneer Creeks
RA058WET	Harold Conley	6/15/2001	6/15/2001	Placer Creek
RA061WET	Robert Shober	7/19/2001	7/20/2001	Placer Creek
RA062WET	John Garcia	8/1/2001	8/1/2001	Placer Creek
RA063WET	Norman Van Camp	2/27/2002	2/27/2002	Placer Creek
RA064WET	Amos Black III	4/12/2002	4/16/2002	Placer Creek

Permit No.	Name	Date Submitted	Date Issued	Location
RA065WET	Ed Shinpoch	4/12/2002	4/16/2002	Placer Creek, Vallecitos Creek
RA066WET	Robert Shober	7/18/2002	7/18/2002	Placer Creek No. 1-3
RA067WET	Karl Murphy	4/25/2003	WITHDRAWN	Placer Creek No. 1-3
RA068WET	Cecil Morrow	5/12/2003	5/12/2003	Placer Creek No. 1-3
RA069WET	Jeff Jaramillo	5/28/2003	5/28/2004	Placer Creek No. 1-3
RA070WET	Ronald Stanley	6/1/2003	6/13/2003	Placer Creek No. 1-3
RA071WET	Gary Fannin	6/12/2003	6/13/2003	Placer Creek No. 1-3
RA072WET	Russel Palmer	6/6/2003	6/13/2003	Placer Creek No. 1-3
RA073WET	Joe Walker	7/30/2003	8/5/2003	Placer Creek, Apache Creek
RA074WET	Harold Phelps	8/12/2003	8/12/2003	Placer Creek
RA075WET	Matthew Hindi	8/14/2003	8/14/2003	Placer Creek
RA076WET	Jerry Emerson	11/7/2003	2/15/2003	Placer Creek Nos. 1-3
RA77WET	Eugene Leggett	1/8/2004	1/20/2004	Placer Creek, Apache Creek
RA078WET	Ronald Stanley	2/2/2004	2/25/2004	Placer Creek
RA079WET	Ed Shinpoch	4/2/2004	4/12/2004	Placer Creek
RA080WET	Joe Whitley	4/12/2004	4/20/2004	Placer Creek Nos. 1-3
RA081WET	Rex Anderson	4/21/2004	4/21/2004	Placer Creek Nos. 1-3
RA082WET	Robert Lipinski	5/18/2004	5/25/2004	Placer Creek
RA083WET	Richard Freeze	5/28/2004	6/3/2004	Placer Creek Nos. 1-3
RA084WET	David Alexander	5/28/2004	6/3/2004	Placer Creek Nos. 1-3
RA085WET	Alan Boissy	6/18/2004	6/21/2004	Placer Creek
RA086WET	Eugene Leggett	1/5/2005	1/7/2005	T28N, R6E, Sections 1 & 12
RA087WET	Ronald Stanley	2/23/2005	3/10/2005	Placer Creek Claims Nos. 1-3
RA088WET	Frank Mullally	4/11/2005	6/1/2005	Placer Creek Claims Nos. 1-3
RA089WET	Jeff Jaramillo	5/9/2005	5/25/2005	Placer Creek
RA090WET	Matthew Brandt	5/17/2005	6/8/2005	Placer Creek Nos. 1-3
RA091WET	Robert Maras	5/18/2005	6/10/2005	Placer Creek, Claims Nos. 1-3
RA092WET	Ed Shinpoch	5/20/2005	7/5/2005	Placer Creek Claims Nos. 1-2
RA093WET	Richard Freeze	6/9/2005	6/29/2005	Placer Creek Claims Nos. 1-3
RA094WET	David Nielson	6/27/2005	6/29/2005	Placer Creek

Permit No.	Name	Date Submitted	Date Issued	Location
RA095WET	Rex Anderson	8/18/2005	8/1/2005	Placer Creek Claims Nos. 1-3
RA096WET	Tijerina Luis	8/3/2005	8/9/2005	Placer Creek
RA097WET	Steven Wright	3/20/2006	5/3/2006	Placer Creek
RA098WET	Ed Shinpoch	4/10/2006	5/23/2006	Placer Creek
RA099WET	Carl Kirby	4/17/2006	5/3/2006	Placer Creek
RA100WET	Robert Hall	5/3/2006	5/24/2006	Placer Creek
RA101WET	David Nielson	5/24/2006	6/5/2006	Placer Creek
RA102WET	Frank Mullally	5/30/2006	6/8/2006	Placer Creek
RA103WET	Earnest Clark	6/6/2006	6/27/2006	Placer Creek
RA104WET	Patrick Smith	12/18/2006	3/13/07	Placer Creek
RA105WET	Joe Whitley	2/8/2007	3/30/07	Placer Creek
RA106WET	Joseph Grayson	3/1/2007	3/30/07	Placer Creek
RA107WET	Frank Mullally	5/11/2007	6/11/2007	Hopewell Lake, Placer Creek; Sections 1 & 12, T28N, R6E
RA108WET	Bobby Morrow	4/30/2007	6/11/2007	Hopewell Lake, Placer Creek; Sections 1 & 12, T28 N, R6E
RA109WET	Ignacio Dennis Garcia	5/31/2007	6/11/2007	Hopewell Lake, Placer Creek, Carson National Forest; GPAA Claims Nos.1-3; Sections. 1 & 12, T28N, R6E
RA110WET	David Nielson	5/31/2007	7/6/2007	Hopewell Lake, Placer Creek; Sections 1 & 12, T28N, R6E
RA111WET	Daniel Curtis	6/27/2007	7/9/2007	Hopewell Lake, Placer Creek, Carson National Forest; GPAA Claims Nos. 1-3; Sections 1 & 12, T28N, R6E
RA112WET	Patrick Smith	12/17/2007	5/27/2008	Hopewell Lake, Placer Creek, Tres Piedras Ranger District, Carson National Forest; GPAA Claims 1-3; Sections 1 & 12, T28N, R6E
RA113WET	David Maxwell	2/20/2008	5/30/2008	Hopewell Lake, Placer Creek, Tres Piedras Ranger District, Carson National Forest; GPAA Claims 1-3; Sections 1 & 12, T28N, R6E
RA114WET	Joseph Hoffman	5/15/2008	5/29/2008	Placer Creek, Carson National Forest ; E2 & SW/4 Section 1 & NE/4 Section 12, T28N, R6E
RA115WET	Frank Mullally	5/28/2008	7/8/2008	Hopewell Lake, Placer Creek, Tres Piedras Ranger District, Carson National Forest; GPAA Claims 1-3; Sections 1 & 12, T28N, R6E
RA116WET	David Nielson	6/23/2008	7/8/2008	Hopewell Lake, Placer Creek, Tres Piedras Ranger District, Carson National Forest; GPAA Claims 1-3; Sections 1 & 12, T28N, R6E
RA117WET	Mark Barber	7/21/2008	7/23/2008	Hopewell Lake, Placer Creek, Tres Piedras Ranger District, Carson National Forest, GPAA Claims 1-3; Sections 1 & 12, T28N, R6E
RA118WET	Parham Turner	7/24/2008	8/5/2008	Hopewell Lake, Placer Creek, Tres Piedras Ranger District, Carson National Forest, GPAA Claims 1-3; Sections 1 & 12, T28N, R6E

Permit No.	Name	Date Submitted	Date Issued	Location
RA119WET	Jimmy Newlon	2/24/2009	5/21/2009	Placer Creek Tres Piedras Ranger District, Carson National Forest, GPAA Claims 1-3, Sections 1 & 2, T28N, R6E, vicinity Hopewell Lake
RA120WET	Michael Brandenberger	4/9/2009	5/29/2009	Placer Creek
RA121WET	Frank Mullally	4/17/2009	5/28/09	Placer Creek
RA122WET	Stephens Storey	4/24/2009	6/1/2009	Placer Creek, Tres Piedras Ranger District, Carson National Forest, GPAA Claims 1-3, Sections 1 & 12, T28N, R6E, vicinity Hopewell Lake
RA123WET	Bernardo Archuleta	4/29/2009	6/1/2009	Placer Creek, Tres Piedras Ranger District, Carson National Forest, GPAA Claims 1-3, Sections 1 & 12, T28N, R6E, vicinity Hopewell Lake
RA124WET	Kari Staggs	4/29/2009	6/1/2009	Placer Creek Tres Piedras Ranger District, Carson National Forest. GPAA Claims 1-3, Sections 1 & 12, T28N, R6E, vicinity Hopewell Lake
RA125WET	Patrick Smith	5/14/2009	5/28/2009	Placer Creek
RA126WET	Chris Romero	6/29/2009	7/2/2009	Placer Creek Tres Piedras Ranger District, Carson National Forest, GPAA Claims 1-3, Sections 1 & 12, T28N, R6E, vicinity Hopewell Lake
RA127WET	James Phelps	7/14/2009	7/23/2009	Placer Creek
RA128WET	Albert Lopez	7/15/2009	7/22/2009	Placer Creek, Tres Piedras Ranger District, Carson National Forest, GPAA Claims 1-3, Sections 1, 3 & 12, T28N, R6E, vicinity Hopewell Lake
RA129WET	David Nielson	7/23/2009	7/31/2009	Placer Creek Tres Piedras Ranger District, Carson National Forest. GPAA Claims 1-3, Sections 1 & 12, T28N, R6E, vicinity Hopewell Lake
SA021DRY	David Barnhill	3/13/1998	3/30/1998	Insanity No. 1 Claim
SA022DRY	Craig Muma	11/23/2004	12/2/2004	Section 19, T17N, R2W
SF001DRY	Michael Bailey	1/24/2003	2/17/2003	Cerrillos Area
SF002DRY	Tim Haller	2/10/2004	2/11/2004	Golden
SF003DRY	Paul Plunkett	6/12/2004	6/16/2004	San Pedro
SF004DRY	Philip Chambless	6/17/2005	6/27/2005	Turquoise
SF005DRY	Paul Plunkett	7/12/2005	8/1/2005	
SF009DRY	Paul Plunkett	6/28/2006	7/19/2006	Section 28, T12N, R7E
SF010DRY	Paul Plunkett	7/9/2007	7/17/2007	East of Golden; NW/4 Section 28, T12N, R7E
SF011DRY	Philip Chambless	8/8/2007	10/11/2007	Cerrillos Hills; Verde Claim - NMMC 170406; NW/4 Section 5, T14N, R8E
SF012DRY	Paul Plunkett	6/23/2008	7/31/2008	East of Golden; NW/4 Section 28, T12N; R7E
SF013DRY	Philip Chambless	9/19/2008	12/22/2008	Verde Claim NMMC 170406, Cerrillos Hills Mining District; NW/4 Section 5, T14N, R8E
SI028DRY	Paul Plunkett	4/21/1998	4/28/1998	Animas Gulch; Section 25, T15S, R7W

Permit No.	Name	Date Submitted	Date Issued	Location
SI029DRY	Amos Black III	6/7/1999	7/7/1998	Kingston; Sunrise Claim Nos. 1-4
SI029WET	John Williams, Jr.	3/3/2003	5/12/2003	Elephant Butte
SI030DRY	Wayne Rutland	11/19/2007	1/8/2008	Pittsburg Mining District; NE/4 Section 4, T16S, R4W
SI031DRY	Sonny Riggs	10/14/2009	PENDING	Granite Canyon #1 Placer Claim, SW/4 Section 4, T16S, R4W
SM050WET	Robert Staffel	7/2/2001	7/2/2001	Willow Creek
SO001DRY	Paul Plunkett	1/26/1999	3/1/1999	Crestone Lode Mine, Magdalena
SO002DRY	Ramon De Mark	1/24/2000	2/9/2000	South of Bingham
SO003DRY	Michael Sanders	2/7/2000	2/9/2000	South of Bingham
SO004DRY	Tom Nelson	3/9/2000	3/10/2000	South of Bingham
SO005DRY	Thomas Massis	5/15/2000	5/18/2000	South of Bingham
SO006DRY	John Scully	12/3/2003	12/17/2003	
SO007DRY	Jo Drake	2/27/2004	3/5/2004	
SO008DRY	Jo Drake	2/17/2005	3/10/2005	Section 29, T6S, R8E
SO009DRY	Michael Tune	4/8/2005	4/21/2005	South of Magdalena, Cibola National Forest
SO011DRY	Jo Drake	1/25/2006	2/1/2006	T6S, R8E, Sections 20 & 29
SO012WET	Dean Brubaker	2/26/2007	4/11/07	
TA010DRY	Vaughn Sowards	5/20/1997	5/22/1997	Cerrito Dormilon, Petaca Peak
TA013DRY	S. Glassmire	2/25/1999	3/1/1999	Latir Peak
TA014WET	Robert Lipinski	6/29/2004	7/6/2004	
TA015WET	Jeff Jaramillo	8/16/2004	8/18/2004	Rio Hondo
TA016WET	Patrick Smith	4/29/2009	5/28/09	
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## **Total Number of General Permits Submitted** 187

Number of General Permits Approved 184 Number of General Permits Pending 2 Number of General Permits Withdrawn 1 \*\*\*\*\*\* This page intentionally left blank. \*\*\*\*\*\*

Appendix 2.	New Mexico F	Financial Assur	ance as of Decer	nber 2009

Table 16. Financial Assurance as of December 2009

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
					3 <sup>rd</sup> Party Guarantee	\$2,812,500		
BE001RE	Tiloroo Mino and Mill	GCC Rio Grande, Inc.,	Limestone	Regular Mine	Letter of Credit	\$867,500		504
DEUUIKE	Tijeras Mine and Mill	Tijeras, NM	Limestone	Regular Mille	Surety Bond	\$70,000	USFS	304
					Subtotal:	\$3,750,000		
CA003ME	Hiawatha And Little	Volcanic Stone Company,	Tin	Minimal Impact	Certificate of Deposit	\$736	USFS	7.5
CAUUSIVIE	Jim Mine	Albuquerque, NM	1111	Mine	Subtotal:	\$736	86	7.5
CA018EM	Mogollon Project	Columbus Silver (U.S.) Corporation,	Gold Silver	old, Silver Minimal Impact Exploration	Certificate of Deposit	\$42,540		2.8
OAO TOLIVI	Wogonom r roject	Reno, NV	Ex		Subtotal:	\$42,540		2.0
CI002RE	Mt. Taylor Mine	Rio Grande Resources Corporation,	Uranium	Regular Mine	Surety Bond	\$725,056		66
OIOOZIKE	int. Taylor milic	Grants, NM			Subtotal:	\$725,056		00
CI004MN	Haskani Mine	Denali Enterprises,	Travertine	Minimal Impact	Certificate of Deposit	\$32,743		10
CIOCHIVII	Tiaskatti Willie	Albuquerque, NM		Mine	Subtotal:	\$32,743		10
CI005RE	Tinaja Pit Mine	C & E Concrete, Inc.,	Limestone	Regular Mine	Letter of Credit	\$161,514	4	40
CIOOSINE	Tiliaja Fit Willie	Milan, NM			Subtotal:	\$161,514		
CI006MN	Ray Claims No. 4 and	International Stone Company,	Travertine	Minimal Impact Mine	Certificate of Deposit	\$20,405		10
CIOOOIVIIN	No. 6 Mine	Scottsdale, AZ			Subtotal:	\$20,405		
CI007RE	J.J. No.1 Mine	Kennecott Energy Company	Uranium	Regular Mine	Surety Bond	\$642,299		11.8
CIOUTRE	J.J. NO.1 WITTE	Gillette, WY	Oranium	Regular Mille	Subtotal:	\$642,299		11.0
CI012EM	Armijo Project	Grants Ridge Joint Venture	Uranium	Minimal Impact	Certificate of Deposit	\$38,000	BLM	0.1
CIUTZEIVI	Armijo Project	Albuquerque, NM		Exploration	Subtotal:	\$38,000		0.1
CI013EM	E 22 Droinet	Grants Ridge Joint Venture	Uranium	Minimal Impact	Certificate of Deposit	\$66,000	BLM	2.0
CIUTSEIVI	F-33 Project	Albuquerque, NM		Exploration	Subtotal:	\$66,000		2.9
DAGOSMAN	Allay Cynaum Mina	Alley Gypsum Mining,	Cynoum	Minimal Impact	Letter of Credit	\$5,000	BLM	1.9
DAUUSIVIIN	Alley Gypsum Mine	Las Cruces, NM	Gypsum	Mine	Subtotal:	\$5,000		
CB001BE	Pinos Altos Mine	Freeport-McMoRan Chino,	Copper, Gold,	J. Dogulor Mir.	Letter of Credit	\$343,600		40
GROUIRE	FINOS AITOS WIITIE	Hurley, NM	Silver, Zinc	Regular Mine	Subtotal:	\$343,600		12

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
					3 <sup>rd</sup> Party Guarantee	\$18,398,673	NMED	
ODOODE	Continental Mine and	Freeport-McMoRan Cobre,	Copper, Gold,	Dec le Miss	Collateral Bond	\$6,173,600	NMED	000
GR002RE	Mill	Hurley, NM	Molybdenum, Silver	Regular Mine	Trust	\$3,000,000	NMED	928
			Ciivei		Subtotal:	\$27,572,273		
CDOOCDE	Ohima Limaatana Mina	Freeport-McMoRan Chino,	Limontono	Decider Mine	Letter of Credit	\$18,400		50
GRUUGRE	Chino Limestone Mine	Hurley, NM	Limestone	Regular Mine	Subtotal:	\$18,400		50
CDOOZDE	Little Deels Mine	Freeport-McMoRan Tyrone,	Conner	Dogular Mina	Letter of Credit	\$1,355,400	NMED	0.5
GR007RE	Little Rock Mine	Tyrone, NM	Copper	Regular Mine	Subtotal:	\$1,355,400		85
GR008RE	Jersey Lily, Snowflake	Freeport-McMoRan Tyrone,	Silica flux	Dogular Mina	Letter of Credit	\$46,600		22
GRUUORE	and Virtue Mines	Tyrone, NM	Silica liux	Regular Mine	Subtotal:	\$46,600		22
		Face of Manager Olive			3 <sup>rd</sup> Party Guarantee	\$121,136,201	NMED	
GR009RE	Chino Mine and Mill	Freeport-McMoRan Chino, Hurley, NM	Copper	Regular Mine	Trust	\$64,042,304	NMED	9,416
		Tidiley, INIVI			Subtotal:	\$185,178,505		
					Collateral Bond	\$27,951,986	NMED	
		Freeport-McMoRan Tyrone, Tyrone, NM			Surety Bond	\$25,000,000	NMED	
			Copper	Regular Mine	Surety Bond	\$6,780,518	NMED	
GR010RE	Tyrone Mine and Mill				Letter of Credit	\$170,874	BLM	7,440
		Tyrono, raw			3 <sup>rd</sup> Party Guarantee	\$124,774,693	NMED	
					Trust	\$25,500,000	NMED	
					Subtotal:	\$210,178,071		
GR012MN	KR Mine	Southwest Silica Flux Company,	Silica flux	Minimal Impact	Certificate of Deposit	\$24,182	USFS	15
GINUTZIVIIN	KD MIIIIE	Hanover, NM	Silica IIux	Mine	Subtotal:	\$24,182		13
CDUSUDE	Georgetown Mine	Sierra Corporation,	Silver	Regular Mine	Certificate of Deposit	\$21,500	NMED	3
GINUZUINL	Georgetown wille	Fort Worth, TX	Silvei		Subtotal:	\$21,500		3
	Farmers Backbreaker	Jack Sills,	Gold		Certificate of Deposit	\$15,000	USFS	10
OTTOZZIVIIV	Mine	Glenwood Spring, CO	Oolu	Mine	Subtotal:	\$15,000		10
GR024MN	Toro Mine	Toro Mining & Minerals, Inc.,	Perlite		Certificate of Deposit	\$9,300	BLM	10
SINUZTIVIIN	I OI O MIIIIG	Mill Creek, OK	Torino	Mine	Subtotal:	\$9,300		10
1(=12(1)/51/11-1	Mathis Limestone	Mathis Rocks,	Limestone		Certificate of Deposit	\$3,000	USFS	16.6
JINOZJIVIL	Quarry Mine	Idyllwild, CA	Limestone	Mine	Subtotal:	\$3,000		10.0

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
CDASODE	Center Mine	Royal Minerals, Inc.,	Silica flux,	Regular Mine	Certificate of Deposit	\$12,000		6
GRUZORE	Center withe	Duncan, AZ	Gold, Silver	Regular Mille	Subtotal:	\$12,000		0
GR030ME	Chemical Lime Mine &	Chemical Lime Company,	Silica flux	Minimal Impact	Surety Bond	\$40,243	USFS	19
CITOSOIVIE	Mill	Fort Worth, TX	Ollica IIux	Mine	Subtotal:	\$40,243		13
HI001RE	_	Lordsburg Mining Company,	Gold	Gold Regular Mine Cer	Certificate of Deposit	\$3,830		15
THOOTICE	Mill	Truth or Consequences, NM	Oolu		Subtotal:	\$3,830		10
HI002RE		Huriey, NM	Silica flux	Regular Mine	Letter of Credit	\$276,900		40
IIIOOZIKE	Diockinali Millic		Ollica IIux	Regular Wille	Subtotal:	\$276,900		70
HI004MN		Southwest Silica Flux Company,	Silica flux		Certificate of Deposit	\$8,124		4
I IIOO-IVII V		Hanover, NM	Cilida IIdx	Mine	Subtotal:	\$8,124		7
HI008ME	Volcano Mine	Dane Mining & Exploration, Ltd.,	Other		Collateral Bond	\$28,652		9
IIIOOOIVIL	Voicario Millic	Tucson, AZ	Otrici	Mine	Subtotal:	\$28,652		J
11 1001IVIE		American Eagle Mining Company,	Gold	Minimal Impact Mine	Letter of Credit	\$10,000	)	10
LIGOTIVIE	Mine	Carlsbad, NM	Cola		Subtotal:	\$10,000		10
11 1003ER 1		David Dunn,	Gold	Regular	Cash	\$200		0.2
LIGOOLIX	Project	Vancouver, BC, Canada	Cold	Exploration	Subtotal:	\$200		0.2
LI005ME		El Capitan Ltd.,	Iron	Minimal Impact	Certificate of Deposit	\$15,000		6
2.000.012		Capitan, NM		Mine	Subtotal:	\$15,000		Ŭ
LU001RE		American Minerals, Inc.,	Manganese	Regular Mine	Surety Bond	\$100,000		13
		El Paso, TX	irianganeee	rtogalar milio	Subtotal:	\$100,000		.0
		Freeport-McMoRan Chino,	Copper, Zinc,	Regular Mine	Letter of Credit	\$132,588	4	13
	Impoundment	Hurley, NM	Lead	rtogaiai iiiiio	Subtotal:	\$132,588	3	
		Asarco, Inc.,	Copper, Zinc,		Surety Bond	\$850,000	4	
LU009RE	Acarco Hamina Willi	Phoenix, AZ	Lead	Regular Mine	Letter of Credit	\$120,000		56
		, 			Subtotal:	\$970,000		
MK003ME	Star Lake Menefee Mine	Dallas, TX	Humate	Minimal Impact		\$21,193	-	9.4
	Star Lake Welleree Wille			Mine	Subtotal:	\$21,193		
MK005RE		United Nuclear Corporation,		Regular Mine	Surety Bond	\$377,000	-	
		Gallup, NM	Uranium	2 9	Subtotal:	\$377,000		

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
					Letter of Credit	\$24,794		
MK007ME	Star Lake Mesa Verde	Mesa Verde Resources,	Humate	Minimal Impact	Letter of Credit	\$21,193		9.9
IVIKUU7 IVIE	Mine	Placitas, NM	пиппаце	Mine	Certificate of Deposit	\$1,577		9.9
					Subtotal:	\$47,564		
MKUUSME	Pueblo Alto Mine	Mesa Verde Resources,	Humate Minimal Imp	Minimal Impact	Surety Bond	\$21,051		9.9
IVINOUOIVIE	Pueblo Alto Wille	Placitas, NM		Mine	Subtotal:	\$21,051		9.9
MKUUODE	Old Stope Leach Mine	Rio Algom Mining LLC,	Uranium	ranium Regular Mine Lett	Letter of Credit	\$577,616		230
MINOUSINE	Old Stope Leach wille	Grants, NM	Oranium		Subtotal:	\$577,616		230
MKO10MNI	U-Mate Mine	U-Mate International, Inc.,	Humate	Minimal Impact	Certificate of Deposit	\$8,844		5.5
IVIIVO I OIVIIN	U-wate wine	Scottsdale, AZ	riumate	Mine	Subtotal:	\$8,844		5.5
	Marquez Canyon	Novitron Francis		Demiler	Letter of Credit	\$81,250		
	Confirmation Drill	Neutron Energy Phoenix, AZ	Uranium	Regular Exploration	Letter of Credit	\$33,780		9.8
	Project	THOUTIN, 712		Exploration	Subtotal:	\$115,030		
	Flimals of the Olaisse	Novince France		Minimal Income	Certificate of Deposit	\$52,000		
M/MK/M/MK/M	Elizabeth Claims Project	Neutron Energy Phoenix, AZ	Uranium	Minimal Impact Exploration	Certificate of Deposit	\$18,270		4.9
	110,000	THOUTIN, 712		Exploration	Subtotal:	\$70,270		
OTOOMN	B.O.W. Mine	B.O.W. Corporation,	Garnet	Minimal Impact	Letter of Credit	\$15,932		10
OTOOZIVIIN	D.O.W. Mille	El Paso, TX	Carriet	Mine	Subtotal:	\$15,932		10
RACCIME	Northstar Mine	North American Metal,	Gold	Minimal Impact	Letter of Credit	\$10,000		2
TAOU TIVIL	Mortiistai milie	Santa Fe, NM	Oolu	Mine	Subtotal:	\$10,000		
RANNSME	Cullum Claims Mine	Pueblo of Santa Clara,	Pumice		Letter of Credit	\$161,500		20
TO TOOONIL	Odiram Olamis Mine	Espanola, NM	Tarrioc	Mine	Subtotal:	\$161,500		20
RANNARE	Rocky Mountain Mine	CR Minerals Company, LLC,	Pumice	Regular Mine	Surety Bond	\$289,810		60
TOTAL	Nocky Mountain Mille	Santa Fe, NM	Tarrico	regular wiffe	Subtotal:	\$289,810		00
RANNSRE	Velarde Mill	Ogelbay Norton Specialty Minerals,	Mica	Regular Mine	Surety Bond	\$287,821	NMED	35
TOTOGOTAL	Velal de IIIII	Velarde, NM	IVIIOG	rtegular milite	Subtotal:	\$287,821		00
		Copar Pumico Company			Letter of Credit	\$78,747		70
SA001RE	El Cajete Mine	Copar Pumice Company, Espanola, NM	Pumice	Regular Mine	Letter of Credit	\$12,103	USFS	18.5
		,,			Subtotal:	\$90,850		

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
SA003ER	Georgia Claims Project	Centex American Gypsum,	Gypsum	Regular	Surety Bond	\$5,000	BLM	0.2
OAUUSLIN	Georgia Ciairiis Project	Albuquerque, NM	Сурзин	Exploration	Subtotal:	\$5,000		0.2
SAOOAMN	Copar South Pit Mine	Copar Pumice Company,	Pumice		Letter of Credit	\$33,516	USFS	6
O/100-IVII V	Copar Country It Willic	Espanola, NM	Mine	Subtotal:	\$33,516		U	
SA005MF	05ME Menefee Mill	Menefee Mining Corporation,	Humate	•	Certificate of Deposit	\$16,000		9.6
C/ 10001112	monored min	Dallas, TX	ramato	Mine	Subtotal:	\$16,000		0.0
SA006MN	Copper City Mine	Crystal Mining Corporation,	Humate	Minimal Impact		\$800	<u> </u>	3.4
	обррогону пине	Albuquerque, NM		Mine	Subtotal:	\$800		
SA009MN	Eagle Mesa Mine	Rammsco, Inc.,	Humate		Letter of Credit	\$7,270	-	3.5
		Katy, TX		Mine	Subtotal:	\$7,270		
SA010ME	A010ME Mesa Verde Resources	Mesa Verde Resources,	Humate	Minimal Impact		\$18,856	-	5.3
	Mill	Placitas, NM, NM		Mine	Subtotal:	\$18,856		
SA011MN	1MN San Luis Mine	Horizon Ag-Products, Modesto, CA	Humate	Minimal Impact Mine	Letter of Credit	\$35,100	-	10
		,	Copper,		Subtotal:	\$35,100		
SF001ME	San Pedro Mine and Mill	St. Cloud Mining Company, Truth or Consequences, NM	Gold, Silver,	Mine	Certificate of Deposit  Subtotal:	\$8,288	-	9
	IVIIII	•	Carnot	IVIIIIE	Trust	<b>\$8,288</b> \$378,766		
SF002RE	Cunningham Hill Mine	LAC Minerals (USA) LLC, Cerrillos, NM	Gold	Regular Mine	Subtotal:	\$378,766	_	307
	St. Cloud U.S. Treasury	·	Silica flux,	Minimal Impact	Certificate of Deposit	\$1,857	NMED	
SI001ME	Mine	Truth or Consequences, NM	Gold, Silver	Mine	Subtotal:	\$1,857	125	6
		Cornerstone Investment Circle, LLC,	Precious	Minimal Impact	Certificate of Deposit	\$30,000		
SI005MN	Burbank Canyon Mine	Woodside, CA	metals	Mine	Subtotal:	\$30,000		9.9
OLOGODE	7 114 841 1 84111	St. Cloud Mining Company,	7	Dec le Miss	Collateral Bond	\$157,719	NMED	<b>5</b> 4
SI006RE	Zeolite Mine and Mill	Truth or Consequences, NM	Zeolite	Regular Mine	Subtotal:	\$157,719		51
CIOCOEM	Common Flot Broinet	New Mexico Copper Corporation,	0	Minimal Impact	Certificate of Deposit	\$39,540		0.4
SI022EM	Copper Flat Project	Santa Fe, NM	Copper	Exploration	Subtotal:	\$39,540		0.1
		Diseased Minerale Company tier	Perlite	Regular Mine	Letter of Credit	\$688,166		
SO001RE	Socorro Mine and Mill	Dicaperl Minerals Corporation, Socorro, NM			Letter of Credit	\$106,237		162
					Subtotal:	\$794,403		

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
SOOOSMAI	Sais Quarry	New Mexico Travertine.	Schist	Minimal Impact	Certificate of Deposit	\$2,661		3.7
3000ZIVIIN	Sais Quarry	Belen, NM	Scriist	Mine	Subtotal:	\$2,661		3.1
					Letter of Credit	\$1,355,634	NMED	
		Oliver Minimum			Letter of Credit	\$23,027,393	NMED	1,200
TA001RE	Questa Mine and Mill	Chevron Mining Inc., Questa, NM	Molybdenum	Regular Mine	3 <sup>rd</sup> Party Guarantee	\$117,752,599	NMED	800
					Letter of Credit	\$16,223,474	NMED	
					Subtotal:	\$158,359,100		
TA002RE	El Grande Mine and	Dicaperl Minerals Corporation	Dorlito	Dogular Mino	Letter of Credit	\$711,497		204
TAUUZKE	Mill	Taos, NM and Antonito, CO	Perlite	Regular Mine	Subtotal:	\$711,497		
TA003RE	U. S. Hill Mine	Pueblo of Picuris,	Mica	Regular Mine	Letter of Credit	\$613,849	USFS	65
TAUUSKE	U. S. mili wilne	Peñasco, NM	IVIICa	Regular Mille	Subtotal:	\$613,849		
TA005RE	No Agua Mina and Mill	Harborlite Corporation,	Dorlito	Dogular Mina	Surety Bond	\$1,029,790		275
TAUUSKE	No Agua Mine and Mill	Antonito, CO	Periile	rlite Regular Mine	Subtotal:	\$1,029,790		2/3
\/A004N/E	Lucara Quarry Mina	New Mexico Travertine,	Travertine	Minimal	Certificate of Deposit	\$24,515		9.9
VAUUTIVIE	Lucero Quarry Mine	Belen, NM		Impact	Subtotal:	\$24,515		9.9

**Total Financial Assurance** 

\$596,210,669

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Appendix 3. Maps of Mines and Exploration Projects Regulated by MARP in 2009

Figure 5. Approved Regular and Minimal Impact Mines as of December 2009

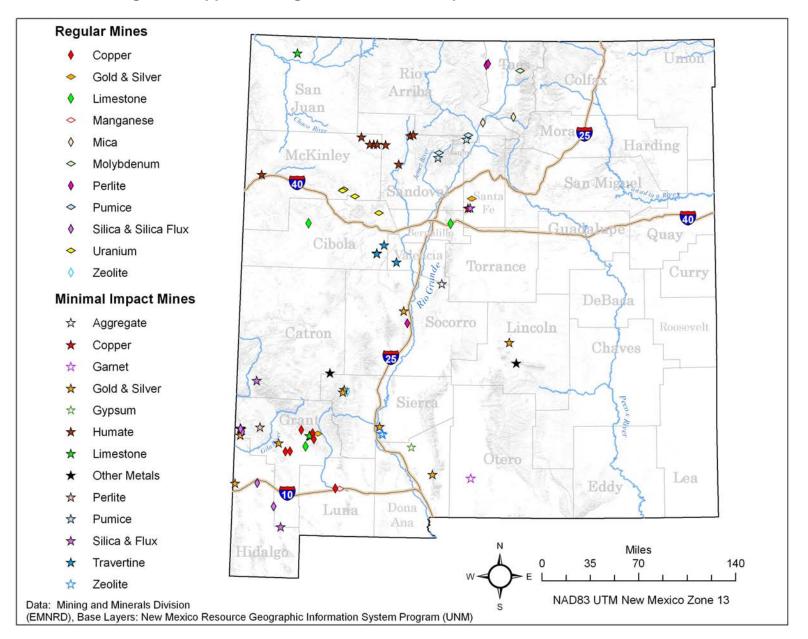


Figure 6. Exploration Permits Active in Calendar Year 2009

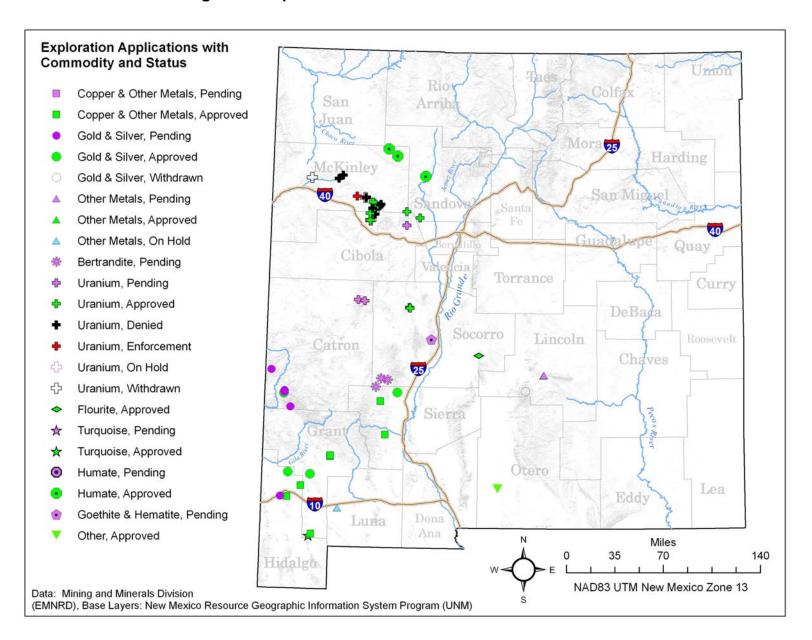


Figure 7. Uranium Exploration Permits and Status as of December 2009

