

# **2008 ANNUAL REPORT MINING ACT RECLAMATION PROGRAM**

**TO THE NEW MEXICO MINING COMMISSION**



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## Cover Photo Information

The cover photos were taken at the U.S. Hill Mine in Taos County. They depict before- and after reclamation photos (August 2005 and October 2008) of the main pit and highwall that was backfilled, re-graded and reseeded during the spring and summer seasons of 2008. Soil and overburden materials salvaged during mining were placed to a depth of 1 to 2 feet over the re-graded areas. These covered areas were mulched with straw and seeded with a mixture of forbs, grasses and shrubs. The photos depict deep-contour furrowing parallel to the slope of material placed as backfill in the pit. The contour furrows are spaced about 1.5 to 2 feet apart with about 1/2 foot deep swales. This type of furrowing, in addition to the coarse nature of the cover material, helps to reduce surface erosion during heavy rainfall events or rapid snow melt. Mulch reduces soil erosion and protects emerging seedlings by protecting soil moisture from rapid evaporation and preventing dramatic fluctuations in soil temperature.

Since the mine was an existing mine, there was limited soil material available for reclamation. The operator used a combination of clean overburden materials and native soil as a reclamation cover. Often, with existing mines, the operator must use overburden material, or mine development rock, for cover. This type of material must often be amended with other materials, such as fertilizer, organic matter, or finer texture materials, to make the original substrate more suitable for plant rooting and healthy development.

The U.S. Hill Mine was a 60-acre open pit mica mine located very close to the summit of U.S. Hill just off Hwy 64 in Taos County and operated for a period of approximately 30 years. The Pueblo of Picuris acquired the mine from Oglebay Norton Specialty Minerals, Inc., in 2005, after a legal battle over aboriginal land claims. The area impacted by the mine is important to Pueblo members' cultural and religious practices. The mine is currently permitted as an existing mine according to the requirements of the New Mexico Mining Act. The permit was transferred to the Pueblo of Picuris in 2005.

The Pueblo of Picuris wanted to reclaim the site to its former pristine condition and has done an excellent job, to date, in accomplishing that goal. As funds have been made available, they have been able to perform incremental reclamation. Reclamation has been ongoing for the past three years and is nearly complete. Upon completion of reclamation, a minimum 12-year, post-reclamation monitoring phase will commence.

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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 2007 through December 2008. It 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 2007 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, 2007.

MARP continues to make adjustments 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. No Rule changes were made during calendar year 2008. MMD has proposed changes 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 Mexico Mining Commission will be hearing these rule changes on February 17, 2009.

## 2. New Mexico Mining Operations as of December 2008

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 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 one typically used by hobby and recreational miners. The Exploration and General Permit categories, totaling 290 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 8 through 14. Not all of these operations have received a permit application approval, so total numbers will be different from the numbers provided for permitted sites in Table 1. Although some of the applications have not been approved, the Program spends a significant amount of time evaluating and developing these permits and conducting inspection and enforcement actions related to the regulation of these operations.

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

<b>Type of Operation</b>	<b>Description</b>	<b>Number of Operations</b>
Regular Existing Mining	>10 acres of disturbance	28
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	21
Regular Exploration	> 5 acres of disturbance	2
Minimal Impact Exploration	<5 acres of disturbance	127
General (Recreational)	<200 cubic yards/yr of disturbance	170
<b>Total Mining Operations Permitted</b>		<b>367</b>

Table 1 provides numerical figures of all the mine operations, by category, which have received permits since 1994.

Table 2 identifies specific types of permit applications submitted to MMD during 2008 and identifies those applications that have been approved and those that are still pending. Table 2 also provides a condensed view of where most of the Program's time was spent during 2008. Modifications and revisions can be as time consuming in processing and approving as initial permit applications, and are often much more complicated than minimal impact permit applications. The Mining Act Reclamation Program had a larger than usual number of modifications this year. A number of these involved updating reclamation acreage, permit transfers, name changes and financial assurance instruments and amounts. One revision that falls into this category is the new Questa Mine Closeout Plan. The Questa 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. 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. 2008 Approved and Pending Permit Applications**

Type of Operation	Description	Number of Operations		
		Pending	Approved	Denied
Regular New Mining	> 10 acres of disturbance	0	0	0
Minimal Impact New Mining	< 10 acres of disturbance	5	1	0
Regular Exploration	> 5 acres of disturbance	3	0	0
Minimal Impact Exploration	< 5 acres of disturbance	6	9	1
General Permits	< 200 cubic yards/yr of disturbance	0	11	0
Revisions	Revision to an Existing Permit	6	0	0
Modifications	Modification to an Existing Permit	17	5	0

Table 3 identifies regular existing and minimal impact mining operations that have not yet received approval for their closeout plans. The three United Nuclear Corporation mines, the Northeast Church Rock, St. Anthony Mine and the Section 27 Mine, were involved in a lengthy court battle and are now working with MMD to develop permits. Another older uranium property, the JJ No. 1 Mine, initiated permitting in 2006, after it was determined that the property came under the Mining Act. 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. This year and last year the owner/operator of the Challenge property has been working with MMD and the United States Forest Service (USFS) to begin reclamation of the site. 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 is to be completed in 2009. 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 Bureau of Land Management's agreement with the Northstar Mine permit. MARP staff has also been working on the Northeast Church Rock Mine reclamation plan. 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 and 14 Mines are two old uranium mines that were added to the list last year, after they were determined to fall under the NM Mining Act. The Section 14 Mine has been reclaimed. 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 2008**

<b>Mine Name</b>	<b>Operator</b>	<b>Disturbed Acres</b>
Nacimiento Mine	Leaching Technology, Inc.	611
St. Anthony Mine	United Nuclear Corporation	430
Northeast Church Rock <sup>1</sup>	United Nuclear Corporation	40
Section 27 Mine	United Nuclear Corporation	15
Challenge Mine and Mill	Challenge Mining Company	17
Clodbuster Mine and Mill	Agronics, Inc.	27
General Pumice Mine	City of Espanola	10
JJ No. 1 / L Bar Mine	Rio Tinto Energy	11
North Star Mine	North American Metals LLC	2
Section 12 Mine	Southwest Resources Inc.	5
Section 14 Mine	Southwest Resources Inc.	1

<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-four sites, under permit with the Mining Act Reclamation Program, have now undergone some form of reclamation, four more sites than in calendar year 2006. 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 2008 was \$7,910,924. The majority of these funds were released back to Phelps Dodge Tyrone Inc. (now Freeport-McMoRan Tyrone Inc.), for approximately 645 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; Deming Jigging Mill; Old Stope Leach Mine; Velarde Mill; Lordsburg Mine; Mesa Verde Resources Mill; Georgetown Mine; U.S. Hill and the Pinos Altos Mine. Two of these mines have received a complete release for reclamation or achieving the post-mine land use under the New Mexico Mining Act: the Boston Hill Mine, in Grant County, and the Mesa Verde Resources Mill, in Sandoval 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. The Cunningham Hill Mine, owned by LAC Resources Inc., recently applied for complete release on a large portion of the mine that was reclaimed 12 years ago. However, the reclaimed area did not meet release criteria. LAC Resources Inc., will apply for full release at some time in the future, after reclamation improvements are complete.

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 out-slopes, 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 24,028 acres. The total number of acres reclaimed throughout the entire history of the Program (1994-2008) is 3,121 acres. Table 4 shows the approximate number of acres disturbed and reclaimed, as of December 2007, for each mine under permit with the Mining Act Reclamation Program. Based on information supplied by operators in their 2007 annual reports, a total of 741 acres were reclaimed in 2007.

The biggest contributor to this total, as in 2006, was the Tyrone Mine, where approximately 645 acres of reclamation took place in 2007. The operator, Freeport-McMoRan has reclaimed a total of approximately 2,175 acres since initiating reclamation in 2003.

During calendar year 2007, Freeport-McMoRan Tyrone Inc. continued several large-scale reclamation projects, addressing the cleanup and reclamation of tailings ponds and waste rock piles at their Tyrone Mine in Grant County. In 2007, Freeport-McMoRan began reclamation on approximately 300 acres associated with the No. 1A tailings pond, approximately 300 additional acres associated with the No. 1 tailings pond, and approximately 300 acres associated with the No. 1X tailings pond. In 2007, Freeport-McMoRan also completed the reclamation of approximately 400 acres associated with the No. 3 tailings pond, and 30 acres associated with the mill and concentrator unit, and completed most of the reclamation on 400 acres at the No. 2 tailings pond. In 2008, Freeport-McMoRan has been on schedule to substantially complete the reclamation of over 100 acres associated with the 1C outcrops, approximately 100 acres at the 7A stockpile, 150 acres at the No. 1 stockpile, and a majority of the reclamation at the Nos. 1, 1A, and 1X tailing impoundments. Since the inception of reclamation activities in 2003, Freeport-McMoRan has spent an estimated \$68 million on reclamation activities. During 2007, Freeport-McMoRan reported spending \$7,910,924 on reclamation activities. During 2008, Freeport-McMoRan reported spending \$23,135,364 on reclamation activities.

During the summer of 2007, Copar Pumice Company reclaimed approximately 20 acres at the El Cajete Mine site. Copar Pumice Company also reclaimed approximately 9 acres at the Copar South Pit Mine. This acreage is not included in Table 4; Table 4 only shows reclamation completed in 2007. The El Cajete Mine will continue to undergo reclamation during 2008 and 2009. The operation's U.S. Forest Service permit expired in November 2007, and consequently, its Mining Act permit was suspended, and the operator has been asked to reclaim the site.

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 affected area were reclaimed. Because of the need to stabilize and contain an old tailings facility containing acid metal tailings, this particular facility had been a high priority reclamation project for many years. The operator and MARP agreed on a reclamation plan for the site early in 2007. The reclamation plan includes the removal and relocation of a

large quantity of wind and water blown tailings that escaped from the facility during the early years of operation. The original tailings facility, along with tailings removed from the affected area, has been re-contoured, covered, and seeded. Additionally, financial assurance has been provided to cover maintenance and monitoring for the 12-year post-reclamation monitoring period.

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

**Table 4. Number of Acres Disturbed and Reclaimed as of December 2007**

<b>Permit Number</b>	<b>Name</b>	<b>Permit Type</b>	<b>Disturbed Acres To Date</b>	<b>Reclaimed Acres To Date</b>
BE001RE	Tijeras Mine and Mill	Regular Existing	573	27.2
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	.5
CI005RE	Tinaja Pit Mine	Regular Existing	40	0
CI006MN	Ray Claims No. 4 and No. 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 and Virtue Mines	Regular Existing	22	17
GR009RE	Chino Mine and Mill	Regular Existing	9,426	0
GR010RE	Tyrone Mine and Mill	Regular Existing	8,327	2,175
GR011ME	Summit Mine	Minimal Impact Existing	3	0
GR012MN	KB Mine	Minimal Impact New	41	41
GR018ME	Banks Mine (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

<b>Permit Number</b>	<b>Name</b>	<b>Permit Type</b>	<b>Disturbed Acres To Date</b>	<b>Reclaimed Acres To Date</b>
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 Mine - Menefee	Minimal Impact Existing	3	2
MK005RE	Section 27 Mine	Regular Existing	15	0
MK006RE	St. Anthony Mine	Regular Existing	430	0
MK007ME	Star Lake Mine – Mesa Verde	Minimal Impact Existing	24.5	14.1
MK008ME	Pueblo Alto Mine	Minimal Impact Existing	10	7
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	16.1	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	9	0
SA011MN	San Luis Mine	Minimal Impact New	5	0
SF001ME	San Pedro Mine and Mill	Minimal Impact Existing	12	12
SF002RE	Cunningham Hill Mine	Regular Existing	307	289

<b>Permit Number</b>	<b>Name</b>	<b>Permit Type</b>	<b>Disturbed Acres To Date</b>	<b>Reclaimed Acres To Date</b>
SF003ME	Silver Silica Mine	Minimal Impact Existing	4	0
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	43	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:**

**24,028.7**

**3,121.6**

#### **4. Mineral Production Statistics for New Mexico in 2007**

Over \$2.2 billion worth of minerals were extracted in New Mexico during 2007, exceeding the \$2.1 billion production record value of 2006 (Table 5). Higher commodity prices and increased production quantities have driven a 77.7 percent increase in mineral production values from 2000.

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; ninth in gold; tenth in silver, and thirteenth in coal production. According to the U.S. Geological Survey, New Mexico ranked fifteenth in 2007, when ranking states by the production value of non-energy minerals. Our state produces 2.23 percent of the U.S. total non-energy minerals production value. The principal minerals, in descending order of value, are: copper, coal, potash, aggregates and molybdenum.

In 2007, copper overtook coal as New Mexico's leading commodity for production value, and continued its recent trend of increased employment numbers and payroll. Coal remained the leading commodity for revenue generation and payroll. Copper, molybdenum and aggregates all set record production value records. Industrial mineral production, and production value, decreased as a result of falling demand for construction-related products. Figure 1 provides summary information on the mineral commodities produced in New Mexico in 2007.

Mineral industry payroll exceeded \$316.3 million in 2007, a 10.6 percent increase over 2006; and copper remained the largest employer in New Mexico's mining industry, followed by coal and aggregates. The total number of employees in the mining industry topped 6,800, up 7.9 percent from 2006. Reclamation and contract employment continued their upwards trend in 2007. Reclamation employment increased 8.4 percent, to 506, the highest reported reclamation employment on record. Direct employment rose 2.0 percent, to 5,384 workers, and contract employment increased 36.4 percent, to 1,483 workers (Figure 1).

New Mexico has averaged 225 registered active mining operations in recent years. In 2007, New Mexico had 242 active registered mining operations. These operations included five coal mines; three potash mines and five potash refineries; 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 18 industrial

mineral mills; and 184 stone and aggregate operations. New Mexico mining companies spent \$148.9 million on capital improvements and equipment in 2007, a third more than 2006 spending.

**Table 5. Mineral Production, Production Value, Rank, Employment, Payroll & Revenues, 2007**

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>	Revenue Generated \$ <sup>6</sup>
Coal	24,407,731	13	\$ 670,316,349	1,645	96	\$112,129,038	\$ 30,734,849
Copper	239,915,912	3	\$ 775,386,528	1,809	182	\$ 79,086,713	\$ 6,549,747
Gold	8,638	9	\$ 6,019,468	4	4	\$ 128,500	\$ 55,482
Industrial Minerals <sup>7</sup>	2,110,308	-	\$ 192,398,110	512	19	\$ 20,651,710	\$ 1,174,890
Aggregates <sup>8</sup>	15,864,974	-	\$ 140,214,362	1,200	84	\$ 19,727,955	\$ 1,639,118
Other Metals	60,845	-	\$ 722,000	19	17	\$ 30,000	\$ -
Molybdenum	5,127,236	6	\$ 138,161,179	412	25	\$ 20,590,128	\$ -
Potash <sup>9</sup>	922,628	1	\$ 273,946,696	1,163	2	\$ 60,912,709	\$ 6,512,018
Silver	230,453	10	\$ 3,091,449	0	0	\$ -	\$ 25,376
Uranium <sup>10</sup>	-	-	\$ -	102	77	\$ 3,126,543	\$ 102,169
<b>TOTAL</b>			<b>\$2,200,256,141</b>	<b>6,866</b>	<b>506</b>	<b>\$316,383,296</b>	<b>\$ 46,793,649</b>

Source: Mining and Minerals Division, unless otherwise noted.

<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>2</sup> Production rank is based on 2007 production value in relation to other U.S. states. Sources: Non-coal, Mineral Resources Program, U.S. Geological Survey ([minerals.er.usgs.gov](http://minerals.er.usgs.gov)); Coal, Energy Information Administration, U.S. Department of Energy ([www.eia.doe.gov](http://www.eia.doe.gov))

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

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

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

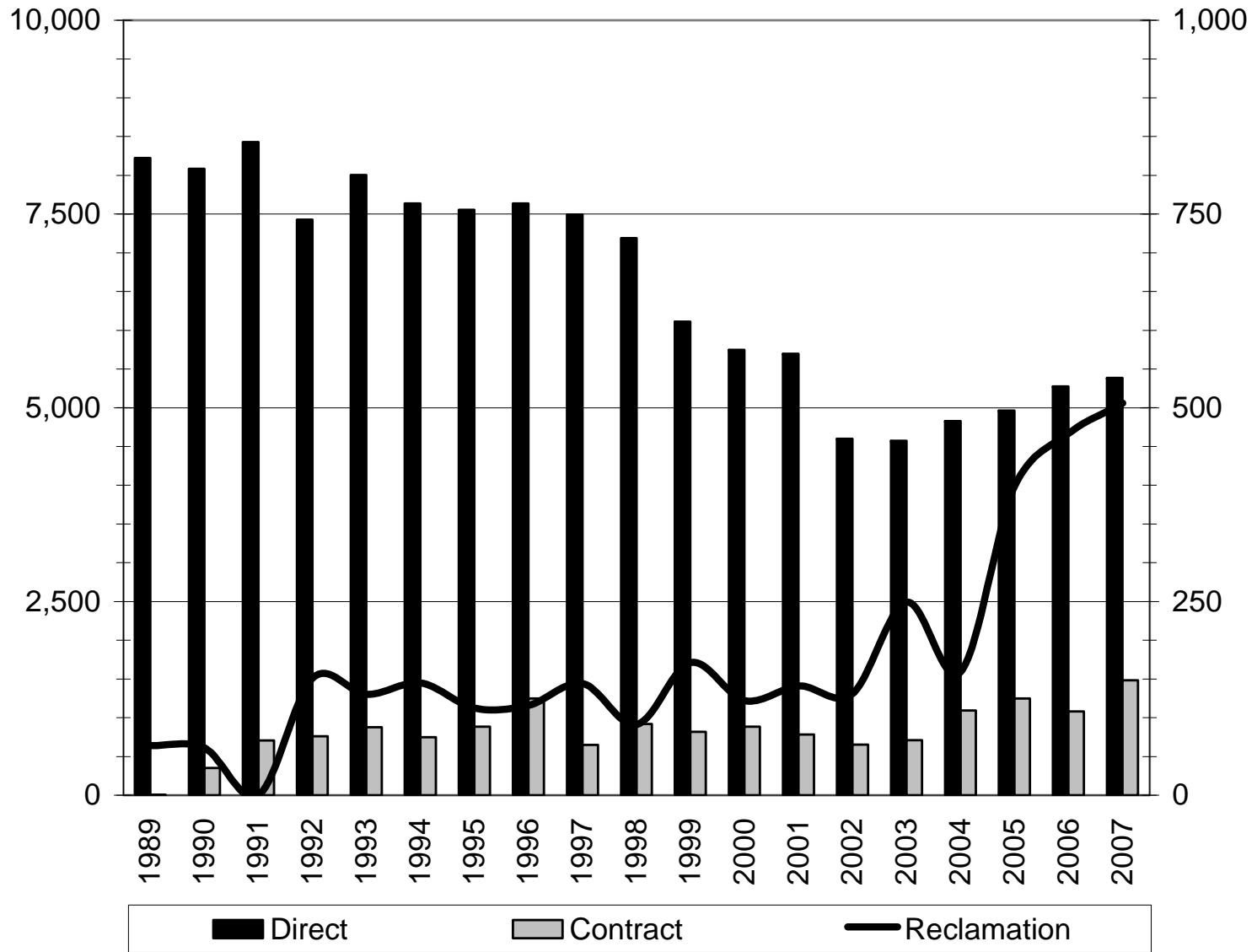
<sup>8</sup> Category includes base course, caliche, clay and shale, crushed rock, dimension flagstone, fill dirt, gravel, limestone, red dog, rip-rap, sand, scoria, topsoil and travertine.

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

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



Figure 1. Mineral Industry Employment, 1989 - 2007



\* Reclamation employment is a subset of direct and contract employment.

## **5. Financial Assurance Update**

Appendix 2 (Table 15) 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, letters of credit, collateral (real estate), and third-party guarantees. Financial assurance posted with the Mining and Minerals Division, to date, totals over \$594 million.

## **6. Amendments to the New Mexico Mining Act Rules**

The Mining and Minerals Division has released a draft set of rule changes for the Mining Act Reclamation Program and received comment on the changes at a stakeholder meeting (Director's Advisory Committee meeting) in July. The proposed changes focus on exploration permits and, in particular, minimal impact exploration permits. The proposals include requiring financial assurance for all exploration permits (including minimal impact permits), establishing a maximum of 20 drill holes for minimal impact exploration permits and providing greater detail on the requirements for closing drill holes. Additionally, the proposed changes include an extension of the sunset date for fee collection, increases of certain fees related to exploration permit applications and new mines.

The New Mexico Mining Commission will hold a regular meeting at 9:00 a.m., on Tuesday, February 17, 2009, at 1220 South Saint Francis Drive in Santa Fe, New Mexico. During the meeting, the Mining Commission will conduct a public hearing on a petition for rulemaking submitted by the Mining and Minerals Division on November 14, 2008 (Petition 08-02). The petition proposes to revise the following Mining Act Rules: fees, 19.10.2 NMAC; minimal impact operations, 19.10.3 NMAC; exploration, 19.10.4 NMAC; and financial assurance requirements, 19.10.12 NMAC.

## **7. Geographical Information System Initiative**

The Mining Act Reclamation Program (MARP) implemented a Geographical Information System (GIS) initiative directly related to its regulatory activities. The Program is now requesting and integrating geospatial information from mine operators into the permitting process. The GIS initiative also involves the active collection of geospatial data by program staff. The goals of this initiative 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 actions. Where appropriate, the information will be available to the public to increase public access and understanding of state permitting activity.

Permit leads (MARP technical staff) are currently using global positioning systems (GPS) to gather mine location data during inspections, creating a complete system of permitting details over time throughout the state. Permit leads will utilize GPS technology in the field for navigational purposes, to identify specific sampling sites and to track acreage. During the course of inspections, program staff trace the perimeter of both mine disturbances and reclamation areas and then download and manipulate this information to create geospatial polygons and maps. When overlaid on permit boundary maps, aerial photographs, topographic maps, land-use maps and other datasets, this information aids the permit leads with visual assessments of a mine and helps determine compliance with permit requirements.

Point locations of permit sites and geospatial information are currently viewed through several web maps as Autodesk MapGuide intranet applications, providing program staff with easy access to the resulting maps and to the most current information. 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. These data will be viewed as web maps through an enterprise GIS that the department is implementing using ESRI ArcGIS Server. The Energy, Minerals and Natural Resources Department Information Technology Office application developers are working with the Mining Act Program to create a database that will also link to the GIS components. The development plan envisions a system that will relate all permits to corresponding geospatial components.

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 is now requesting that these maps be submitted in a digital format compatible with the Mining and Minerals Division GIS structure. Maps created as AutoCAD or ESRI shape files are the most compatible with the MARP GIS. The Program advocates direct communication with the mapping specialists of interacting groups to facilitate the appropriate exchange of data in a compatible datum and coordinate system. Maps overlaid by date, within a GIS, make it easier to see the progression of reclamation and the relationships of features, such as hydrology, topography and mine structures. The GIS approach to sharing information will make the exchange of information more efficient between the regulating agencies and operators.

MARP is developing an interactive, web-based map for public viewing and use through ArcGIS Server. The map will feature mine locations, general permit information, linked photographs, and web-page hyperlinks.

## 8. Uranium Mining and Exploration in 2008

The Mining Act Reclamation Program (MARF) 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.

Rising market prices, in 2008, led to renewed interest in uranium recovery and production. The spot price of yellow cake ( $U_3O_8$ ) rose from a low of \$6.50 per pound in fall 2000, to \$60.00 per pound in fall 2006, and peaked at \$138 per pound in July 2007. However, the price of yellow cake has declined, and as of November 2008, the spot price of yellow cake was \$55 per pound. According to the Energy Information Administration, New Mexico ranks second, behind Wyoming, in domestic uranium reserves, with 341 million tons of  $U_3O_8$  at \$50 per pound.

Uranium recovery in New Mexico ceased in December 2002. There are only two uranium mine operations permitted by the Mining Act Reclamation Program in the state: Rio Grande Resources' Mt. Taylor 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 amend its permit before mining can commence. The Old Stope mines are undergoing reclamation. United Nuclear Corporation continues work towards approval of closeout and reclamation plans, as required by the New Mexico Mining Act, for its North East Church Rock, Section 27 and St. Anthony Mines. Kennecott Energy Company is also working towards closeout and reclamation plan approval for the JJ No. 1 Mine. Recently Roca Honda Resources (RHR) and MARF have been discussing the development of a sampling and analysis plan (SAP) to start collecting baseline data at a proposed new mine site, in the San Mateo Mesa area. Another mining company, Laramide Resources, has started discussions with MARF and the U.S. Forest Service to develop a regular new mining operation on La Jara Mesa in McKinley County.

New Mexico has experienced a significant increase in uranium exploration activity in the past three years. In January 2006, the Mining and Minerals Division received the first uranium exploration application since 1998. Twenty-one uranium exploration applications have been submitted, and one unpermitted operation was identified, between 2006 and 2008. As of December 2008, eight applications have been approved, one is pending; twelve have been withdrawn or denied; and three are under enforcement actions for failure to obtain earlier permits (Table 6 and Figure 4).

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 uranium deposits in New Mexico, declared a moratorium on uranium production on Navajo lands in April 2005. Third, the All Indian Pueblo Council passed a resolution in June 2007 calling for the protection of Mount Taylor and the cultural properties of the Pueblos of Acoma and Laguna.

Fourth, in June 2008, the New Mexico Cultural Properties Review Committee approved the emergency listing of Mount Taylor on the State Historic Registry as a Traditional Cultural Property (TCP). A final Register nomination must be approved within a year of the temporary emergency listing. The TCP designation has factored into a number of uranium exploration applications which have been located either in, or close to, the Mount Taylor TCP. The designation has made it more difficult to obtain a minimal impact permit and imposes a higher level of scrutiny when reviewing applications related to the Mount Taylor TCP.

Currently, uranium mining activity in New Mexico focuses on the reclamation of the mines and mills left over from the boom years. New Mexico uranium employment is at a 12-year high due to reclamation activities at Rio Algom's Ambrosia Lake/Old Stope Mine properties. Both the United Nuclear Corporation mill in Church Rock and the Homestake mill in Milan are also undergoing reclamation.

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

**Table 6. Uranium Exploration Applications, 2006 - 2008**

**Approved Applications**

Project Name	Operator	Surface Ownership	Number of Holes	Drilling Completion
Ambrosia Lake	Neutron Energy	State	6	summer 2007
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
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
Marquez Canyon Confirmation Drill	Neutron Energy	Private	44

**Denied, Withdrawn and Enforcement 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
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
West Ranch	REECO Uranium LP	Private



**Table 7. Mining Act Reclamation Program Staff**

<b>Employee Name &amp; Title</b>	<b>Telephone</b>	<b>E-Mail Address</b>
Holland Shepherd Program Manager, Reclamation Scientist	(505) 476-3437	holland.shepherd@state.nm.us
Diana Sainz Records Manager & Public Records Officer	(505) 476-3433	diana.m.sainz@state.nm.us
David Ohori Senior Reclamation Specialist, Soil Scientist	(505) 476-3432	david.ohori@state.nm.us
Joe Vinson Senior Reclamation Specialist, Soil Scientist	(505) 476-3414	joe.vinson@state.nm.us
James Hollen Senior Reclamation Specialist, Geologist/Hydrologist	(505) 476-3436	james.hollen@state.nm.us
Chris Eustice Senior Environmental Engineer	(505)476-3438	chris.eustice@state.nm.us
Paul Lyons Reclamation Specialist, Plant Scientist	(505) 476-3439	paul.lyons@state.nm.us
Kathleen Economy Senior Reclamation Specialist, Hydrologist	(505) 476-3434	kathleen.economy.state.nm.us



**Appendix 1. Mining Operations in New Mexico as of December 2008**

**Table 8. Regular Existing Mines as of December 2008**

<b>Permit No.</b>	<b>Mine Name</b>	<b>Operator</b>	<b>Permit Status</b>	<b>Mining Status</b>	<b>Commodity</b>
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 Co.	Pending	Permanent Closure, Reclamation Pending	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, Active Reclamation	Silica Flux
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	Magnesium
LU008RE	Cyprus Deming Tailings Impoundment	Freeport-McMoRan Chino	Approved	Permanent Closure, Reclaimed Awaiting Release	Copper, Zinc

Permit No.	Mine Name	Operator	Permit Status	Mining Status	Commodity
LU009RE	Asarco Deming Mill	Asarco, Inc.	Approved	Permanent Closure, Active Reclamation	Copper, Zinc
MK004RE	Northeast Church Rock Mine	United Nuclear Corporation	Pending	Permanent Closure, Reclamation Pending	Uranium
MK005RE	Section 27 Mine	United Nuclear Corporation	Pending	Permanent Closure, Reclamation Pending	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, Active Reclamation	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

<b>Total Regular Existing Mine Permit Applications</b>	<b>35</b>
Total Regular Existing Mine Permits Approved	28
Total Regular Existing Mine Permits Pending	6
Total Regular Existing Mine Permits Denied	1

**Table 9. Regular New Mines as of December 2008**

<b>Permit No.</b>	<b>Mine Name</b>	<b>Operator</b>	<b>Permit Status</b>	<b>Mining Status</b>	<b>Commodity</b>
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

<b>Total Regular New Mine Permit Applications</b>	<b>2</b>
Total Regular New Mine Permits Approved	0
Total Regular New Mine Permits Pending	0
Total Regular New Mine Permits Withdrawn	2

**Table 10. Minimal Impact Existing Mines as of December 2008**

<b>Permit No.</b>	<b>Mine Name</b>	<b>Operator</b>	<b>Permit Status</b>	<b>Mine Status</b>	<b>Commodity</b>
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	Permanent Closure, Reclaimed Awaiting Release	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
MK023ME	Section 14 Mine	Southwest Resources Inc.	Pending	Permanent Closure, Active Reclamation	Uranium
MK024ME	Section 12 Mine	Southwest Resources Inc.	Pending	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



Permit No.	Mine Name	Operator	Permit Status	Mine Status	Commodity
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
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

<b>Total Number of Minimal Impact Existing Mine Permit Applications</b>	<b>27</b>
Total Number of Minimal Impact Existing Mines Approved	19
Total Number of Minimal Impact Existing Mines Released	4
Total Number of Minimal Impact Existing Mines Pending	4

**Table 11. Minimal Impact New Mines as of December 2008**

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	Active Mining	Travertine
CI004MN	Haskani Mine	Denali Enterprises	Approved	Active Mining	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, Active Reclamation	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	No Response	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	Groom Mine	Steven Grooms	Pending	Under Development	Gold
GR056MN	McCauley Perlite Mine	St. Cloud Mining Company	Approved	Under Development	Perlite
GR058MN	Billali Mine	Richard and Leslie Billingsley	Pending	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	No Response	Enforcement, No Reclamation	Turquoise
LU012MN	Herb Bailey No. 2 Mine	Boot Heel Minerals	No Response	Enforcement, No Reclamation	Turquoise
MK010MN	U-Mate Mine	U-Mate International, Inc.	Approved	Active Mining	Humate
MK011MN	Morningstar Mine	Morningstar Corporation	Approved	Permanent Closure, Active 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

Permit No.	Mine Name	Operator	Permit Status	Mine Status	Commodity
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
SA011MN	San Luis Mine	Horizon Ag-Products	Approved	Active Mining	Humate
SI005MN	Burbank Canyon Mine	The Beenah Group, Inc.	Approved	Permanent Closure, No Reclamation	Precious Metals
SI020MN	Coyote No. 1 Mine	Greg Richards	Approved	Active Mining	Zeolites
SI021MN	Coyote No. 1 Mine	Greg Richards	Approved	Active Mining	Zeolites
SJ001MN	Morningstar Mill	Morningstar Corporation	Pending	Active Mining	Humate
SJ002MN	Chaco Limestone Quarry	John Freidline	Pending	Under Development	Limestone
SO002MN	Sais Quarry Mine	New Mexico Travertine	Approved	Active Mining	Schist
SO004MN	Alamosa Mine	Tognoni & Lufkin	Pending	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

<b>Total Number of Minimal Impact New Mine Permit Applications</b>	<b>34</b>
Total Number of Minimal Impact New Mine Permits Approved	21
Total Number of Minimal Impact New Mine Permits Released	1
Total Number of Minimal Impact New Mine Permits Pending	6
Total Number of Minimal Impact New Mine Permits Denied	1
Total Number of Minimal Impact New Mine Permits Withdrawn/No Operator Response	5

**Table 12. Regular Exploration Projects as of December 2008**

<b>Permit No.</b>	<b>Exploration Project Name</b>	<b>Operator</b>	<b>Commodity</b>	<b>Status</b>	<b>Approval Date</b>
LI009ER	El Capitan Exploration Drilling Project	El Capitan Precious Metals, Inc	Precious Metals	Pending	
LU016ER	Victorio Project	Galway Resources US, Inc.	Metals	Withdrawn	
MK023ER	Marquez Canyon Confirmation Drill Project	Neutron Energy	Uranium	Pending	
SA003ER	Georgia Claims Project	Centex American Gypsum	Gypsum	Approved	7/31/1996
SF005ER	Carache Canyon 4 Project	LAC Minerals (USA) Inc.	Gold	Approved	9/12/1994
SO014ER	Sullivan Ranch Exploration Part 4 Project	Be Resources Inc.	Bertrandite	Pending	
TA001ER	Pilar Project	Golden Rod Mining	Gold	Withdrawn	

<b>Total Number of Regular Exploration Permit Applications</b>	<b>7</b>
Total Number of Regular Exploration Permits Approved	2
Total Number of Regular Exploration Permits Pending	3
Total Number of Regular Exploration Permits Withdrawn/No Operator Response	2

**Table 13. Minimal Impact Exploration Projects as of December 2008**

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval Date
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	No Response	
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	Silver, Gold, Copper	Approved	8/14/2007
CA011EM R1	Sunburst/Deadwood Exploration Project Renewal	Micrex Development	Copper, Gold, Silver	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	
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	
DA001EM	Alivio Exploration Project	Louis Gonzales	Gold	Approved	4/21/2003
DA002EM	Golden Link Exploration Project	Don Snodgrass	Gold, Silver	Approved	5/5/2005
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

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval Date
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 M1	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
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

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval Date
GR034EM	Malone Exploration Project No. 2	Evolving Gold Corporation	Gold	Approved	1/22/2009
GR035EM	Gunsight Exploration Project	Philip Chambless	Turquoise	Pending	
GR036EM	Oro Project	Addwest Minerals, Inc.	Gold, Silver, Copper, Zinc, Lead, Metals	Pending	
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
HI005EM	Comstock Project	Bush Mining and Ranching	Gold, Silver	Exempt	
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
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
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	C.A. Kling	Agate	Approved	12/11/2006
LU014EM	Galway Exploration	Galway Resources US, Inc.	Silver, Gold, Etc	Approved	8/23/2006
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
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

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval Date
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	Rico Uranium LP	Uranium	Enforcement	
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
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
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
SF005EM	Carache Canyon 4 Project	LAC Minerals (USA) Inc.	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	Silver, Gold, Copper,	Approved	4/19/1999
SI001EM	Hillsboro Project	Placer Dome, Inc.	Copper, Gold, Silver	Approved	11/23/1994



Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval Date
SI002EM	Hackberry Draw Project	Grubstake Mining & Exploration, Inc.	Gold	Approved	2/9/1995
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	Drolte 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, Lead, Zinc	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
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	Rifleshoot Project	Geoinformatics Alaska Exploration	Silver, Copper, Lead, Zinc	Approved	9/9/2008
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
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	

Permit No.	Exploration Project Name	Operator	Commodity	Status	Approval Date
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	George Ramirez	Copper	Approved	7/31/1996
TO002EM	3 in 1 Project	Ciro Ramirez	Copper	Approved	6/22/1998

<b>Total Number of Minimal Impact Exploration Project Applications</b>	<b>151</b>
Total Number of Minimal Impact Exploration Projects Approved	127
Total Number of Minimal Impact Exploration Projects Pending	6
Total Number of Minimal Impact Exploration Projects Denied	11
Total Number of Minimal Impact Exploration Projects Enforcement	2
Total Number of Minimal Impact Exploration Projects Withdrawn	4
Total Number of Exploration Projects Exempt	1

**Table 14. General Permits as of December 2008**

<b>Permit No.</b>	<b>Name</b>	<b>Date Submitted</b>	<b>Date Issued</b>	<b>Location</b>
BE001WET	Robert Lipinski	8/11/2004	8/17/2004	Rio Grande
CI001DRY	International Stone Company	7/9/2002	7/15/2002	Cerro Verde
ED001DRY	Mark Hooper	5/1/2008	5/27/2008	Selenite deposit/Crystalline Phoenix Mine; approximately 10 miles south of White's City in the Yeso Hills; NE/4 Section 14, T26S, R24E
GR020DRY	Ener G. Corp., Inc.	7/31/1997	8/7/1997	Near Chocolate Peak
GR022DRY	Cathy Heslet	3/23/1998	3/30/1998	Golden Duck
GR023WET	Weston Wolff	2/4/1998	3/11/1998	Black Sand Claim Nos. 1-6; Pa Chal Ma Claim
GR025DRY	John Bernal	5/4/1998	5/12/1998	Golden Eagle No. 1 Claim
GR029DRY	Paul Plunkett	4/21/1998	4/28/1998	Gold Gulch; T20S, R16W, Section 26
GR030DRY	John Huntress	4/6/1999	5/1/1999	American Turquoise; Section 35, T27S, R16W
GR031DRY	Samuel Munoz	7/15/1999	7/21/1999	Twin Sisters Creek
GR032DRY	Dana Bates	7/5/2000	7/8/2000	Near Pinos Altos
GR033WET	Weston Wolff	7/10/2000	7/24/2000	Gold Gulch
GR034WET	Weston Wolff	8/15/2001	8/21/2001	Gold Gulch
GR035WET	Weston Wolff	9/3/2002	9/4/2002	Gold Gulch
GR050WET	Robert Batchler	2/23/1998	2/26/1998	Black Sand No. 1 Claim
GR051DRY	Mark Welch	1/24/2003	2/17/2003	Steeple Rock Area
GR052WET	Weston Wolff	8/4/2003	8/4/2003	Gold Gulch
GR053DRY	John Scully	12/5/2003	12/17/2003	Grant County
GR054WET	Weston Wolff	8/2/2004	8/3/2004	Gold Gulch
GR055WET	Weston Wolff	9/15/2005	9/21/2005	Gold Gulch
GR056WET	Weston Wolff	8/15/2006	8/30/2006	Gold Gulch
GR057WET	Weston Wolff	8/9/2007	9/26/2007	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
GR058WET	Weston Wolff	8/29/2008	PENDING	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 Sand Nos. 1-6, Pa Chal Ma, and Wolf Clan Nos. 1-2 Claims
LI027DRY	Paul Plunkett	4/21/1998	4/28/1998	Ancho Gulch; Section 4, T5S, R12E
LI028DRY	Amos Black III	6/7/1999	7/7/1998	Against the Wind, Ancho

<b>Permit No.</b>	<b>Name</b>	<b>Date Submitted</b>	<b>Date Issued</b>	<b>Location</b>
LI029DRY	Vincent Sanders	8/31/2007	10/1/2007	Section 4, T5S, R12E
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 (40 acre GPAA Claim); 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	Negrato 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

<b>Permit No.</b>	<b>Name</b>	<b>Date Submitted</b>	<b>Date Issued</b>	<b>Location</b>
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 Tantulium
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

<b>Permit No.</b>	<b>Name</b>	<b>Date Submitted</b>	<b>Date Issued</b>	<b>Location</b>
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	PENDING	Placer Creek
RA105WET	Joe Whitley	2/8/2007	PENDING	Placer Creek
RA106WET	Joseph Grayson	3/1/2007	PENDING	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

Permit No.	Name	Date Submitted	Date Issued	Location
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
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 Mining District; 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	PENDING	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
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
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



Permit No.	Name	Date Submitted	Date Issued	Location
SO012WET	Dean Brubaker	2/26/2007	PENDING	
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
<b>Total Number of General Permits Submitted</b>			<b>170</b>	
Total Number of General Permits Approved			163	
Total Number of General Permits Pending			6	
Total Number of General Permits Withdrawn			1	



## **Appendix 2. New Mexico Financial Assurance as of December 2008**

**Table 15. Financial Assurance as of December 2008**

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
BE001RE	Tijeras Mine and Mill	GCC Rio Grande, Inc., Tijeras, NM	Limestone	Regular	3 <sup>rd</sup> Party Guarantee	\$2,812,500	USFS	504
					Letter of Credit	\$867,500		
					Surety Bond	\$70,000		
					<b>Subtotal:</b>	<b>\$3,750,000</b>		
CA003ME	Hiawatha And Little Jim Mine	Volcanic Stone Company, Albuquerque, NM	Tin	Minimal Impact	Certificate of Deposit	\$736	USFS	7.5
					<b>Subtotal:</b>	<b>\$736</b>		
CI002RE	Mt. Taylor Mine	Rio Grande Resources Corporation, Grants, NM	Uranium	Regular	Surety Bond	\$725,056		66
					<b>Subtotal:</b>	<b>\$725,056</b>		
CI004MN	Haskani Mine	Denali Enterprises, Albuquerque, NM	Travertine	Minimal Impact	Certificate of Deposit	\$32,743		10
					<b>Subtotal:</b>	<b>\$32,743</b>		
CI005RE	Tinaja Pit Mine	C & E Concrete, Inc., Milan, NM	Limestone	Regular	Letter of Credit	\$161,514		40
					<b>Subtotal:</b>	<b>\$161,514</b>		
CI006MN	Ray Claims No. 4 and No. 6 Mine	International Stone Company, Scottsdale, AZ	Travertine	Minimal Impact	Certificate of Deposit	\$20,405	BLM	10
					<b>Subtotal:</b>	<b>\$20,405</b>		
GR001RE	Pinos Altos Mine	Freeport-McMoRan Chino, Hurley, NM	Copper, Gold, Silver, Zinc	Regular	Letter of Credit	\$343,600		12
					<b>Subtotal:</b>	<b>\$343,600</b>		
GR002RE	Continental Mine and Mill	Freeport-McMoRan Cobre, Hurley, NM	Copper, Gold, Molybdenum, Silver	Regular	3 <sup>rd</sup> Party Guarantee	\$18,398,673	NMED	928
					Collateral Bond	\$6,173,600		
					Trust	\$3,000,000		
					<b>Subtotal:</b>	<b>\$27,572,273</b>		
GR006RE	Chino Limestone Mine	Freeport-McMoRan Chino, Hurley, NM	Limestone	Regular	Letter of Credit	\$18,400		50
					<b>Subtotal:</b>	<b>\$18,400</b>		
GR007RE	Little Rock Mine	Freeport-McMoRan Tyrone, Tyrone, NM	Copper	Regular	Letter of Credit	\$1,355,400	NMED	85
					<b>Subtotal:</b>	<b>\$1,355,400</b>		
GR008RE	Jersey Lily, Snowflake and Virtue Mines	Freeport-McMoRan Tyrone, Tyrone, NM	Silica flux	Regular	Letter of Credit	\$46,600		22
					<b>Subtotal:</b>	<b>\$46,600</b>		
GR009RE	Chino Mine and Mill	Freeport-McMoRan Chino, Hurley, NM	Copper	Regular	3 <sup>rd</sup> Party Guarantee	\$121,136,201	NMED	9,416
					Trust	\$64,042,304		
					<b>Subtotal:</b>	<b>\$185,178,505</b>		

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
GR010RE	Tyrone Mine and Mill	Freeport-McMoRan Tyrone, Tyrone, NM	Copper	Regular	Collateral Bond	\$27,951,986	NMED	7,440
					Letter of Credit	\$31,780,518	NMED	
					Letter of Credit	\$170,874	BLM	
					3 <sup>rd</sup> Party Guarantee	\$124,774,693	NMED	
					Trust	\$25,500,000	NMED	
	<b>Subtotal</b>	<b>\$210,178,071</b>						
GR012MN	KB Mine	Southwest Silica Flux Company, Hanover, NM	Silica flux	Minimal Impact	Certificate of Deposit	\$24,182	USFS	15
					<b>Subtotal</b>	<b>\$24,182</b>		
GR020RE	Georgetown Mine	Sierra Corporation, Fort Worth, TX	Silver	Regular	Certificate of Deposit	\$21,500	NMED	3
					<b>Subtotal</b>	<b>\$21,500</b>		
GR022MN	Farmers Backbreaker Mine	Jack Sills, Glenwood Spring, CO	Gold	Minimal Impact	Certificate of Deposit	\$15,000	USFS	10
					<b>Subtotal</b>	<b>\$15,000</b>		
GR024MN	Toro Mine	Toro Mining & Minerals, Inc., Mill Creek, OK	Perlite	Minimal Impact	Certificate of Deposit	\$9,300	BLM	10
					<b>Subtotal</b>	<b>\$9,300</b>		
GR025ME	Mathis Limestone Quarry Mine	Mathis Rocks, Idyllwild, CA	Limestone	Minimal Impact	Certificate of Deposit	\$3,000	USFS	16.6
					<b>Subtotal</b>	<b>\$3,000</b>		
GR028RE	Center Mine	Royal Minerals, Inc., Duncan, AZ	Silica flux, Gold, Silver	Regular	Surety Bond	\$12,500		6
					<b>Subtotal:</b>	<b>\$12,500</b>		
GR030ME	Chemical Lime Mine & Mill	Chemical Lime Company, Fort Worth, TX	Silica flux	Minimal Impact	Surety Bond	\$40,243	USFS	19
					<b>Subtotal:</b>	<b>\$40,243</b>		
HI001RE	Lordsburg Mine and Mill	Lordsburg Mining Company, Truth or Consequences, NM	Silica flux	Regular	Certificate of Deposit	\$3,830		15
					<b>Subtotal:</b>	<b>\$3,830</b>		
HI002RE	Brockman Mine	Freeport-McMoRan Chino, Hurley, NM	Silica flux	Regular	Letter of Credit	\$276,900		40
					<b>Subtotal:</b>	<b>\$276,900</b>		
HI004MN	KM Mine	Southwest Silica Flux Company, Hanover, NM	Silica flux	Minimal Impact	Certificate of Deposit	\$8,124		4
					<b>Subtotal:</b>	<b>\$8,124</b>		
HI008ME	Volcano Mine	Dane Mining & Exploration, Ltd., Tucson, AZ	Other	Minimal Impact	Collateral Bond	\$28,652		9
					<b>Subtotal:</b>	<b>\$28,652</b>		
LI001ME	Warner Gulch Placer Mine	American Eagle Mining Company, Carlsbad, NM	Gold	Minimal Impact	Letter of Credit	\$10,000	USFS	10
					<b>Subtotal:</b>	<b>\$10,000</b>		
LI003ER	Bonito Gold Silver Project	David Dunn, Vancouver, BC, Canada	Gold	Exploration	Cash	\$200		0.2
					<b>Subtotal:</b>	<b>\$200</b>		

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
LI005ME	Capitan Iron Mine	El Capitan Ltd., Capitan, NM	Iron	Minimal Impact	Certificate of Deposit	\$15,000	USFS	6
					<b>Subtotal:</b>	<b>\$15,000</b>		
LU001RE	Deming Jigging Mill	American Minerals, Inc., El Paso, TX	Manganese	Regular	Surety Bond	\$100,000	NMED	13
					<b>Subtotal:</b>	<b>\$100,000</b>		
LU008RE	Cyprus Deming Tailings Impoundment	Freeport-McMoRan Chino, Hurley, NM	Copper	Regular	Letter of Credit	\$132,588	NMED	13
					<b>Subtotal:</b>	<b>\$132,588</b>		
LU009RE	Asarco Deming Mill	Asarco, Inc., Phoenix, AZ	Copper, Zinc	Regular	Surety Bond	\$850,000		56
					Letter of Credit	\$120,000		
					<b>Subtotal:</b>	<b>\$970,000</b>		
MK003ME	Star Lake Menefee Mine	Menefee Mining Corporation, Dallas, TX	Humate	Minimal Impact	Surety Bond	\$21,193		9.4
					<b>Subtotal:</b>	<b>\$21,193</b>		
MK007ME	Star Lake Mesa Verde Mine	Mesa Verde Resources, Placitas, NM	Humate	Minimal Impact	Surety Bond	\$13,277		9.9
					<b>Subtotal:</b>	<b>\$13,277</b>		
MK008ME	Pueblo Alto Mine	Mesa Verde Resources, Placitas, NM	Humate	Minimal Impact	Surety Bond	\$21,051		9.9
					<b>Subtotal:</b>	<b>\$21,051</b>		
MK009RE	Old Stope Leach Mine	Rio Algom Mining LLC, Grants, NM	Uranium	Regular	Letter of Credit	\$577,616		230
					<b>Subtotal:</b>	<b>\$577,616</b>		
MK010MN	U-Mate Mine	U-Mate International, Inc., Scottsdale, AZ	Humate	Minimal Impact	Certificate of Deposit	\$8,844		5.5
					<b>Subtotal:</b>	<b>\$8,844</b>		
OT002MN	B.O.W. Mine	B.O.W. Corporation, El Paso, TX	Garnet	Minimal Impact	Letter of Credit	\$15,932		10
					<b>Subtotal:</b>	<b>\$15,932</b>		
RA001ME	Northstar Mine	North American Metal, Santa Fe, NM	Gold	Minimal Impact	Letter of Credit	\$10,000		2
					<b>Subtotal:</b>	<b>\$10,000</b>		
RA003ME	Cullum Claims Mine	Pueblo of Santa Clara, Española, NM	Pumice	Minimal Impact	Letter of Credit	\$161,500		20
					<b>Subtotal:</b>	<b>\$161,500</b>		
RA004RE	Rocky Mountain Mine	CR Minerals Company, LLC, Santa Fe, NM	Pumice	Regular	Surety Bond	\$289,810		60
					<b>Subtotal:</b>	<b>\$289,810</b>		
RA005RE	Velarde Mill	Oglebay Norton Specialty Minerals, Velarde, NM	Mica	Regular	Surety Bond	\$287,821	NMED	35
					<b>Subtotal:</b>	<b>\$287,821</b>		
SA001RE	El Cajete Mine	Copar Pumice Company, Española, NM	Pumice	Regular	Letter of Credit	\$78,747	USFS	70
					Letter of Credit	\$12,103		USFS
					<b>Subtotal:</b>	<b>\$90,850</b>		

Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
SA003ER	<b>Georgia Claims</b>	Centex American Gypsum, Albuquerque, NM	Gypsum	Exploration	Surety Bond	\$5,000	BLM	0.2
					<b>Subtotal:</b>	<b>\$5,000</b>		
SA004MN	<b>Copar South Pit Mine</b>	Copar Pumice Company, Espanola, NM	Pumice	Minimal Impact	Letter of Credit	\$33,516	USFS	6
					<b>Subtotal:</b>	<b>\$33,516</b>		
SA005ME	<b>Menefee Mill</b>	Menefee Mining Corporation, Dallas, TX	Humate	Minimal Impact	Certificate of Deposit	\$16,000		9.6
					<b>Subtotal:</b>	<b>\$16,000</b>		
SA006MN	<b>Copper City Mine</b>	Crystal Mining Corporation, Albuquerque, NM	Humate	Minimal Impact	Cash	\$800		3.4
					<b>Subtotal:</b>	<b>\$800</b>		
SA009MN	<b>Eagle Mesa Mine</b>	Rammsco, Inc., Katy, TX	Humate	Minimal Impact	Letter of Credit	\$7,270		3.5
					<b>Subtotal:</b>	<b>\$7,270</b>		
SA010ME	<b>Mesa Verde Resources Mill</b>	Mesa Verde Resources, Placitas, NM, NM	Humate	Minimal Impact	Surety Bond	\$18,856		5.3
					<b>Subtotal:</b>	<b>\$18,856</b>		
SA011MN	<b>San Luis Mine</b>	Horizon Ag-Products, Modesto, CA	Humate	Minimal Impact	Letter of Credit	\$25,000		10
					<b>Subtotal:</b>	<b>\$25,000</b>		
SF001ME	<b>San Pedro Mine and Mill</b>	St. Cloud Mining Company, Truth or Consequences, NM	Copper, Gold, Silver, Garnet	Minimal Impact	Certificate of Deposit	\$8,288		9
					<b>Subtotal:</b>	<b>\$8,288</b>		
SF002RE	<b>Cunningham Hill Mine</b>	LAC Minerals (USA) LLC, Cerrillos, NM	Gold	Regular	Trust	\$378,766		307
					<b>Subtotal:</b>	<b>\$378,766</b>		
SI001ME	<b>St. Cloud U.S. Treasury Mine</b>	St. Cloud Mining Co., Truth or Consequences, NM	Silica flux, Gold, Silver	Minimal Impact	Certificate of Deposit	\$1,857	NMED	6
					<b>Subtotal:</b>	<b>\$1,857</b>		
SI005MN	<b>Burbank Canyon Mine</b>	The Beenah Group/Titan Mining, Englewood, CO	Precious metals	Minimal Impact	Certificate of Deposit	\$30,000		9.9
					<b>Subtotal:</b>	<b>\$30,000</b>		
SI006RE	<b>Zeolite Mine and Mill</b>	St. Cloud Mining Company, Truth or Consequences, NM	Zeolite	Regular	Collateral Bond	\$157,719	NMED	51
					<b>Subtotal:</b>	<b>\$157,719</b>		
SO001RE	<b>Socorro Mine and Mill</b>	Dicaperl Minerals Corporation, Socorro, NM	Perlite	Regular	Letter of Credit	\$688,166		162
					Letter of Credit	\$106,237		
					<b>Subtotal:</b>	<b>\$794,403</b>		
SO002MN	<b>Sais Quarry</b>	New Mexico Travertine. Belen, NM	Schist	Minimal Impact	Certificate of Deposit	\$2,661		3.7
					<b>Subtotal:</b>	<b>\$2,661</b>		

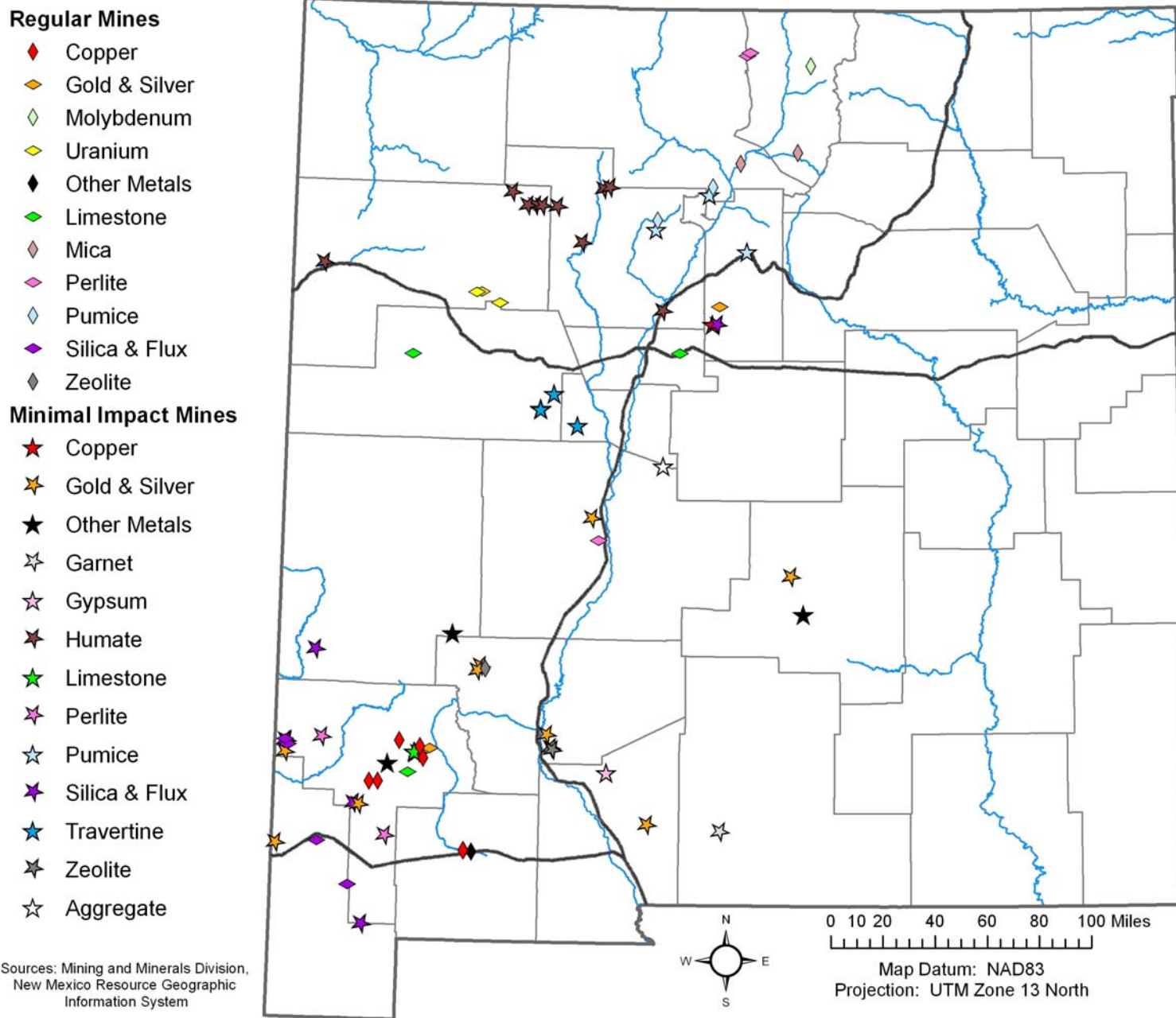
Permit Number	Permit Name	Operator	Commodity	Permit Type	Instrument	Amount	Joint Agency	Disturbed Acreage
TA001RE	Questa Mine and Mill	Chevron Mining Inc., Questa, NM	Molybdenum	Regular	Letter of Credit	\$1,355,634	NMED	
					Letter of Credit	\$23,027,393	NMED	1,200
					3 <sup>rd</sup> Party Guarantee	\$117,752,599	NMED	800
					Letter of Credit	\$16,223,474	NMED	
					<b>Subtotal:</b>	<b>\$158,359,100</b>		
TA002RE	El Grande Mine and Mill	Dicaperl Minerals Corporation Taos, NM and Antonito, CO	Perlite	Regular	Letter of Credit	\$711,497		204
					<b>Subtotal</b>	<b>\$711,497</b>		
TA003RE	U. S. Hill Mine	Pueblo of Picuris, Penasco, NM	Mica	Regular	Letter of Credit	\$613,849	USFS	65
					<b>Subtotal:</b>	<b>\$613,849</b>		
TA005RE	No Agua Mine and Mill	Harborlite Corporation, Antonito, CO	Perlite	Regular	Surety Bond	\$1,029,790		275
					<b>Subtotal:</b>	<b>\$1,029,790</b>		
VA001ME	Lucero Quarry Mine	New Mexico Travertine, Belen, NM	Travertine, Dimension stone	Minimal Impact	Certificate of Deposit	\$24,515		9.9
					<b>Subtotal:</b>	<b>\$24,515</b>		

**Total Financial Assurance \$594,771,103**



**Appendix 3. Maps of Mines and Exploration Projects Regulated by MARP in  
2008**

**Figure 2. Approved Regular and Minimal Impact Mines as of December 2008**



**Figure 3. Exploration Permits Active in Calendar Year 2008**

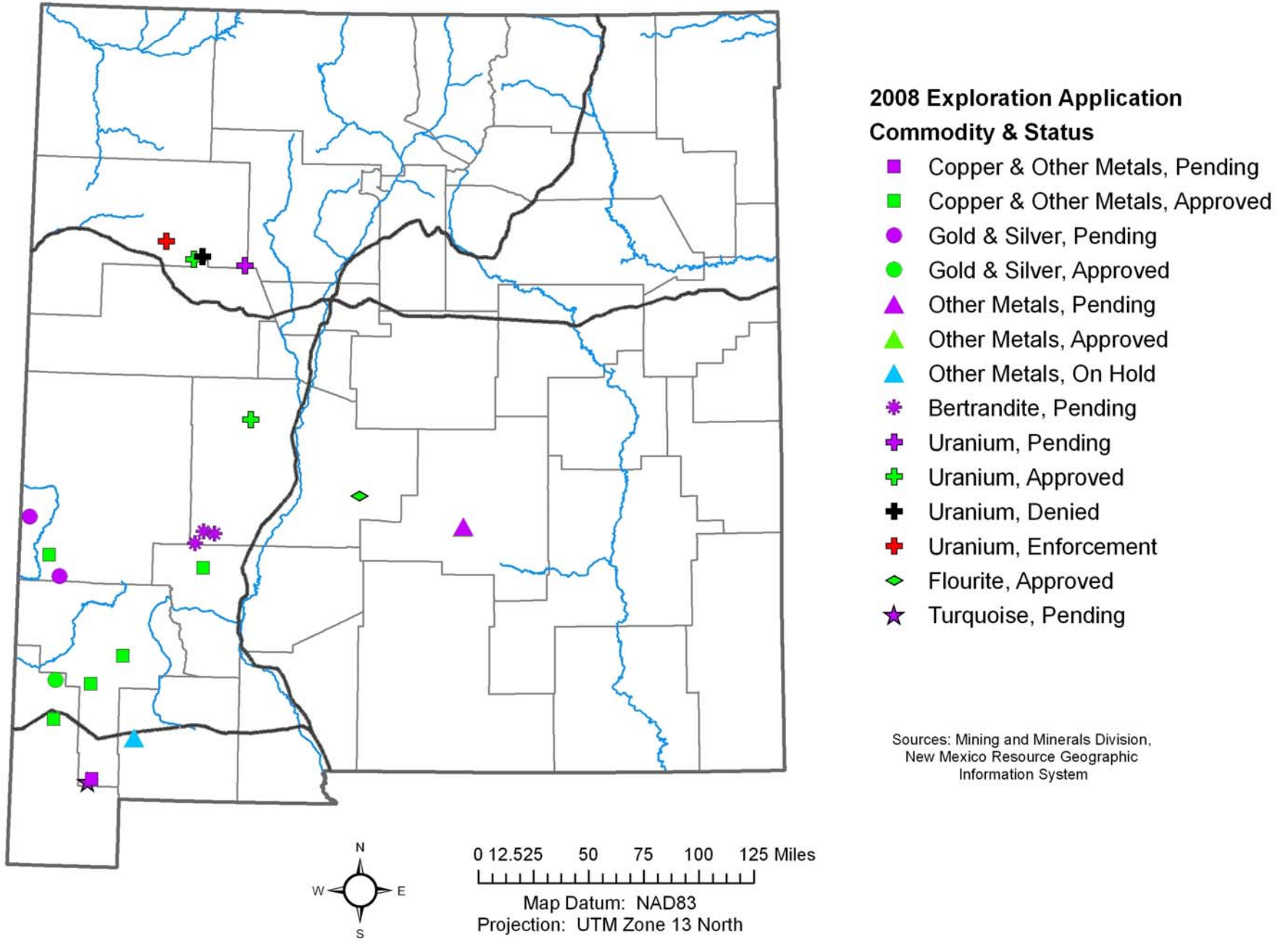
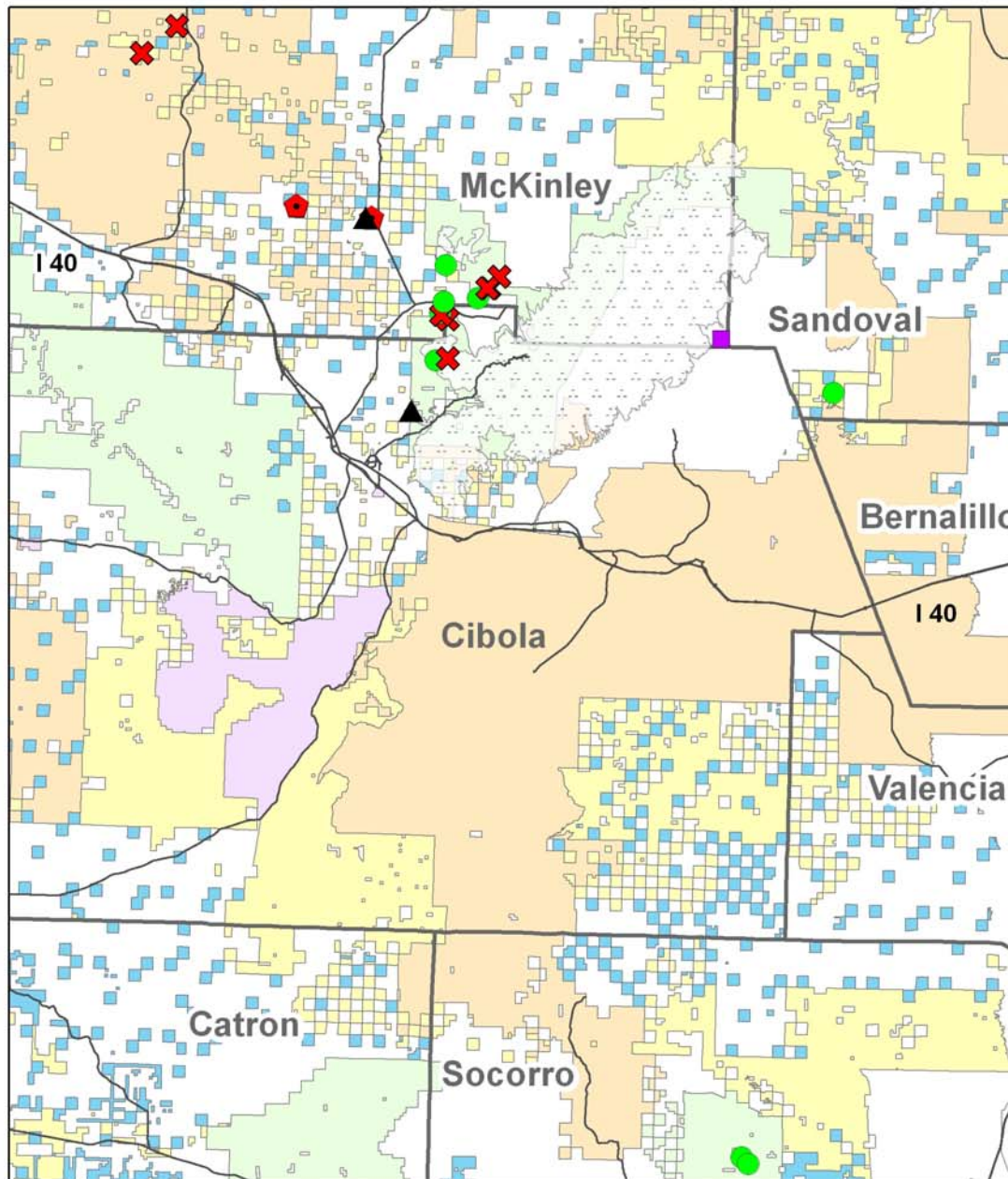


Figure 4. Uranium Exploration Permit Locations & Status



### Uranium Exploration Permits Location & Status

#### Uranium Exploration Applications

- Pending
- Approved
- ✕ Denied
- ◆ Enforcement
- ▲ Withdrawn

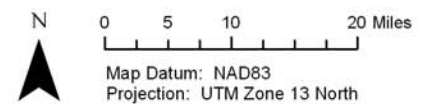
— Highways and Roads

  Mt. Taylor Traditional Cultural Property

#### Surface Ownership

- U.S. Bureau of Land Management
- U.S. Department of Defense
- U.S. Forest Service
- Tribal
- National Park Service
- Private
- State

Permit status accurate as of December 1, 2008.



Source: Mining and Minerals Division  
New Mexico Energy, Minerals and  
Natural Resources Department

