

2019 Annual Report

New Mexico Mining Act Reclamation Program

Energy, Minerals & Natural Resources Department
Mining and Minerals Division

Jerry Schoeppner, Director
Holland Shepherd, Program Manager
David Ennis, Senior Geoscientist



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On The Cover: The photograph on the cover is the Florida Mountians where the American Magnesium Foothills Dolomite Mine is being proposed.

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1. Executive Summary

This annual 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 annual report is to contain a general description of mining operations, reclamation practices, proposed rule changes, and production figures for the state.

This report identifies activities related to the permitting and regulation of mines and mineral exploration under the Mining Act for the 2019 calendar year. In this report, we also provide production and reclamation statistics for the 2019 calendar year, as required by the Rules. This information is provided to us by our mine operators in annual reports that are required to be submitted by April of the following year. The 2019 information submitted in this report was provided by our operators in April 2020.

This report also provides tables identifying all mining and exploration operations that have obtained a permit, or submitted a permit application, under MARP since its inception in 1994.

This report includes:

- Production figures for New Mexico mines active during the 2019 calendar year;
- A description of reclamation activities and practices related to specific mines in the State of New Mexico;
- A description and summary of exploration and mine permitting activities for the 2019 calendar year;
- Summary of reclaimed and disturbed acreage for 2019;
- Summary of any actions undertaken by the Mining Commission in 2019;
- Summary of financial assurance amounts and instruments for each approved mine site and exploration project.

2. General Description of Mining Operations

Permit Types

Mining operations in New Mexico are defined by the following terminology:

- Minimal Impact Mining Operations are small extractive operations that are less than 10 acres in size or are <40 acres in size for certain commodities. Dolomite, garnet, humate, perlite and zeolite operations that are located outside Bernalillo, Doña Ana and Santa Fe counties and are committed to performing concurrent reclamation can be up to 40 acres in size under a rule revision approved in 2016. Minimal impact mining operations can be designated as either existing or new operations. Existing operations are those that operated between January 1, 1970, and June 18, 1993, while new operations are those permitted after 1993.
- Regular Mining Operations are larger mining operations of unlimited acreage and can be designated as either existing or new operations. Existing regular mining operations are those that operated between January 1, 1970, and June 18, 1993, while new operations are those permitted after 1993.
- Minimal Impact Exploration Operations are those that create less than 5 acres of surface disturbance and meet the definition of “minimal impact mining operations” as defined by the Rules. These are typically small extractive operations that involve the sampling of ore bodies prior to full-scale mine development.
- Regular Exploration Operations are those that exceed 5 acres of surface disturbance or do not meet the definition of “minimal impact mining operations” as defined by the Rules.
- General Permit Operations cannot excavate materials greater than 200 cubic yards per year or disturb greater than 2 acres of surface at any one time. The General Permit category is typically used by hobby and recreational miners.

The Minimal Impact Exploration and General Permit categories make up the largest number of permitted operations. Table 1 shows the various types of mining and exploration operations, by category, that have received approved permits since the start of MARP in 1994.

Table 1. Mining Operations Approved from 1994 to 2019

Type of Operation	Description	Number of Operations
Regular Existing Mining	>10 acres of disturbance	31
Regular New Mining	>10 acres of disturbance	0
Minimal Impact Existing Mining	<10 or <40 acres of disturbance	24
Minimal Impact New Mining	<10 or <40 acres of disturbance	38
Regular Exploration	>5 acres of disturbance	6
Minimal Impact Exploration	<5 acres of disturbance	169
General (Recreational)	<200 cubic yards/yr of disturbance	385
Total Mining Operations Permitted		653

Permit Modifications and Revisions

Every year, MARP typically receives and processes a large number of permit modifications and revisions, which can be just as time-consuming in processing and approving as new permit applications. Modifications and revisions can involve updating reclamation acreage, permit transfers, operator name changes, as well as adjustments to financial assurance instruments and amounts.

In 2019, MMD approved ten (10) modification applications and one (1) revision application. The one revision request (Revision 18-1) was an updated Closure/Closeout Plan for the Tijeras Mine.

Table 2 identifies specific types of permit applications, including modifications and revisions, approved by MMD during the 2019 calendar year.

Table 2. Approved Permit Applications – 2019

Type of Operation	Description	Number of Approved Operations
		2019
Regular New Mining	> 10 acres of disturbance	0
Minimal Impact New Mining	< 10 or <40 acres of disturbance	0
Regular Exploration	> 5 acres of disturbance	0
Minimal Impact Exploration	< 5 acres of disturbance	4
General Permits	< 200 cubic yards/yr of disturbance	13
Revisions	Revision to an Existing Permit	1
Modifications	Modification to an Existing Permit	10

Additional On-Going Projects with Continued Permitting

Questa Mine: Chevron Mining Inc.'s ("CMI") Questa Mine has also involved a significant number of MARP staff and has required numerous MMD resources over the last several years. The Questa Mine has been designated a federal U.S. Environmental Protection Agency ("EPA") Superfund Site and MMD has been coordinating state reclamation plans with the EPA's prescription for remediation under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") process. After an extensive remediation investigation and feasibility study were conducted, a Record of Decision ("ROD") was signed December 2010. Further, CMI announced the permanent closure of the Questa Mine during calendar year 2014. A Partial Consent Decree/Settlement was agreed to with Chevron, EPA and the state agencies in August of 2016, for approximately 25% of the permitting area. Much work remains to be done to address further reclamation of the site under the CERCLA process and bring the remainder of the site under another Partial Consent Decree.

Tronox Mines: In 2014, the U.S. District Court approved a legal settlement of nearly \$1 billion for approximately 50 uranium mines that were operated by Kerr-McGee Corporation on or near the Navajo Nation. Collaborative work with EPA Region 9, EPA Region 6, Navajo Nation and State of NM partners commenced in 2015, during which MMD spent a considerable amount of time working with the various partners on prioritization of projects and providing management services and technical assistance. MMD continued to provide technical assistance to EPA Region 6 and the Navajo Nation throughout calendar year 2019.

Chino Mine and Mill: In 2018, Chino Mines Company submitted an updated Closure/Closeout Plan for the entire mine. The review of the plan continued throughout 2019 with approved anticipated in early 2020.

Exploration Projects and General Permits

Four (4) minimal impact exploration permit applications were approved by MMD during calendar year 2019. Table 3 identifies the specific exploration applications approved by MMD in 2019.

Table 3: Approved Minimal Impact Exploration Permits – 2019

Permit Number	Permit Name	Permit Operator	Commodity
GR082EM	Kennecott Steeplerock	Kennecott	Copper
GR083EM	Emma-B	Freeport McMoRan	Copper
SF038EM	Corelis Exploration	Corelis Brothers	Gold
SO022EM	Ramsey NM Spike Camp	Gary Ramsey	Gold, Silver

Approved Minimal Impact Mining Projects in 2019

No minimal impact new mining permit applications were approved by MMD in calendar year 2019. Table 4 below identifies the specific mining application approved in 2019.

Table 4: Approved Minimal Impact New Mining Permits – 2019

Permit Number	Permit Name	Permit Operator	Commodity
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Pending Regular Mine Applications

Two (2) new conventional mines are engaged in some phase of permit development in New Mexico, a summary of which is provided in Table 5:

Table 5: Pending Regular Mine Permit Development – 2019

Project Name	Operator	Surface Ownership	Commodity	Proposed Permit Area (acres)
Permitting In-Progress				
Copper Flat Mine	New Mexico Copper Corporation	BLM and Private Owners	Copper	2,190
Roca Honda Mine	Uranium Resources, Inc.	USFS and SLO	Uranium	183

Copper Flat Mine (Copper and Molybdenum): New Mexico Copper Corporation (“NMCC”) has proposed a new regular copper mine in Sierra County near Hillsboro, New Mexico. The mine is proposed to be an open-pit, truck and shovel operation with milling performed on-site. NMCC submitted the Permit Application Package to MMD in July 2012 and has been working with the BLM to address the federal National Environmental Policy Act

("NEPA") requirements. In November 2015, the BLM released the Draft Environmental Impact Statement ("DEIS"). The Final EIS was issued in April 2019, and the Record of Decision was issued in August 2019.

In 2018, NMCC addressed technical issues on the Mining Operation and Reclamation Plan and Probable Hydrologic Consequences documents. NMCC also submitted a financial assurance cost estimate for agency review in August 2018, then addressed technical comments on the cost estimate in a revised submittal dated December 2018. In December 2018, NMED issued Discharge Permit DP-1840 for the Copper Flat Mine. A second revised cost estimate was submitted to the agencies in August 2019. As of the end of 2019, MMD had not approved or denied the Copper Flat application.

Roca Honda Mine (Uranium): The proposed Roca Honda Mine by Energy Fuels, Inc. is located in McKinley County on a combination of Cibola National Forest land, private land, and state trust lands. Energy Fuels, Inc. has submitted both the Sampling and Analysis Plan and several iterations of the Permit Application Package to MMD.

The U.S. Forest Service released the DEIS in 2013. However, several additions and changes to the mine plan of operations submitted by Energy Fuels, Inc. in 2015 and 2016 had to undergo public scoping by the Forest Service as a Supplement to the DEIS. The U.S. Forest Service continued to work on the Supplement to the DEIS in calendar year 2019, and MMD continues to collaborate with the U.S. Forest Service and the operator on this mine. Energy Fuels, Inc. submitted several technical documents to MMD throughout 2019 including addendums to the Baseline Data Report and responses to technical comments.

3. General Description of Reclamation Practices

Throughout 2019, the MMD worked in conjunction with Chevron Corporation, the Village of Questa, private landowners, the New Mexico Environment Department, New Mexico Department of Transportation, the Army Corps of Engineers, and the United States Forest Service to complete the removal and reclamation of the tailing pipeline that ran from the old Questa mill site east of Questa, NM to the tailing facility west of Questa, NM. The 11-mile span of this pipeline crossed many land designations including private land owned by Questa residents, private land owned by Chevron Corporation, USFS Land, and DOT right-of way lands associated with Highway 38. Removal and reclamation of crossings over the Red River were coordinated and permitted through the Army Corps of Engineers. Through working closely with Chevron Corporation and the various agencies involved, MMD was able to complete the removal and reclamation of the tailing pipeline according to MMD permit number TA001RE. The various Post Mining Land Use designations in this reclamation project includes wildlife habitat/recreation, farmland, DOT ROW, and industrial use. In addition to the permitting requirements for the reclamation of the tailing pipeline project, Chevron Corporation is working with Enchanted Circle Trails and the Village of Questa on the Questa to Red River Trail Project. When completed, this recreational trail will run from Questa to Red River, NM and provide quality outdoor recreation opportunities for tourists and residents of northern New Mexico.

In 2019, reclamation and remediation also continued at the permanently closed Questa Mine in Taos County, a Superfund site. Three agencies (MMD, New Mexico Environment Department and U.S. Environmental Protection Agency) are working with Chevron Mining to develop reclamation plans and agreements that follow the federal CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) process. As part of the settlement between the U.S. Department of Justice, EPA, and the State of New Mexico, Chevron Mining will finance \$143 million in cleanup work at the site. Reclamation and remediation work will continue for a number of years and include demolition of the mill area, construction of a water treatment plant, removal and disposal of old mine waste, or “tailings,” along the tailings pipeline corridor (most of that work is completed), and remediation of Eagle Rock Lake.

A number of pilot projects are underway at the Questa Superfund site to help identify best available reclamation technologies. A demonstration project to place about a million cubic yards of cover material over 275 acres of a 1,000-acre tailings facility will inform the development of a methodology to convert run-of-mine rock into viable cover material that results in a functional store and release cover. In another area of the mine, Chevron Mining is operating a water treatment plant, and installed new or upgraded existing groundwater extraction systems, and is nearing completion of the pre-final engineering design of a pilot plot on two large waste rock piles, the Capulin and Goathill North, totaling approximately 109 acres. From this study will evolve best practices to reclaim waste rock piles.



Preliminary work on tailings pond reclamation at the Questa Mine, Taos County (2019)

Permitting of revised closeout plans and expansions at the state's four largest copper mines in Grant County continued in 2019. Freeport-McMoRan Inc. (FMI), is expanding at four of its New Mexico operations; all permitting actions at the Little Rock, Tyrone, Chino, and Continental mines concern expanding the mining operations. As these existing mines expand, they must comply with new regulatory standards designed to address new mining impacts. They have also conducted extensive reclamation on existing tailings ponds. The Continental Mine ended standby status through a revision to the permit thereby allowing the mine to return to active mining status. The Continental Mine Revised Closeout Plan was approved in October 2018. Mining at the Continental Mine continues in 2019 with much of the top of Hanover Mountain reduced to about 30 percent of its original size. Overburden mined from Hanover Mountain will be stockpiled and used for cover material when the mine is eventually reclaimed. Test plots are to be constructed using Hanover Mountain cover material.



Mining of Hanover Mountain at Continental Mine showing a size reduction of about 30 percent, Grant County (2019)



Tailings pond reclamation at the Tyrone Mine, Grant County (2018)

Permitting actions related to earlier uranium mine applications have waned as has the interest in uranium mining overall. However, the Mt. Taylor Mine, an existing uranium mine in Cibola County on standby status since the inception of the Mining Act in 1993, applied to end standby status. In December 2017, the mine received MMD approval to come off standby status and restart mining and has performed construction activities throughout 2018. Some local non-governmental organizations oppose any permitting action for the mine, other than reclamation, and appealed the MMD permit approval to the New Mexico Mining Commission in 2018, which upheld the permit approval in July 2018. Upon appeal, the Mining Commission's approval was upheld by the First Judicial

District Court in July 2019. That ruling was under appeal to the New Mexico Court of Appeals but has since been dropped. In 2019, the operator, Rio Grande Resources, conducted a substantial amount of work toward reopening the mine including cleaning sediments from two large storm water ponds; adding to, expanding, and beginning reclamation of a large waste rock pile; and reducing and hauling a large ore pile to a mill in Utah. (note: the Mt. Taylor mine was reopening in 2019, but has reversed course, and is now undergoing full reclamation in 2020).



Reclamation of South Waste Rock Pile and South Stormwater Pond at Mt. Taylor Mine, Cibola County (2019)

Mines Fully Released from The Mining Act

Sixteen (16) mines have received a complete and final release for reclamation or for achieving the post-mine land use under the New Mexico Mining Act:

- Alley Gypsum Mine, Doña Ana County
- Black Hawk Tailings Impoundment, Grant County
- Boston Hill Mine, Grant County
- Chaco Limestone Quarry, San Juan County
- Chino Limestone Mine, Grant County
- CR Minerals Mill, Santa Fe County
- Cullum Claims Mine, Rio Arriba County
- Double Tree I Mine, McKinley County
- KB Mine, Grant County
- Malone Mine, Grant County
- Mesa Verde Resources Mill, Sandoval County
- Pinos Altos Mine, Grant County
- Section 14 Mine, McKinley County
- Shamrock Leach Site, Doña Ana County
- Toro Mine, Grant County
- Velarde Mill, Rio Arriba County

Total Disturbance and Reclamation

Total disturbance and reclamation across the state are reported by the mine operators. Overall disturbed and reclaimed acreage under permit with MARP for the 2019 calendar year is summarized in Table 6.

Table 6: Summary of Disturbed and Reclaimed Acres – 2019

Calendar Year	Disturbed Acres To Date	Reclaimed Acres To Date
2019	26,768.8	7,145.7

Appendix A contains summary tables of operator reports on disturbed and reclaimed acres for the 2019 calendar year.

4. Financial Assurance Update

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

A summary of the amount of financial assurance held by MMD for the 2019 calendar year is in Table 7 below.

Table 7: Summary of Financial Assurance Held by MMD – 2019

Calendar Year	Financial Assurance Amount Held By MMD
2019	706,465,246.71

Appendix B lists financial assurance amounts for individual permits.

5. Amendments to the New Mexico Mining Act Rules

No amendments to the rules were taken by the New Mexico Mining Commission during calendar year 2019.

6. Mineral Production Statistics for New Mexico in 2019

New Mexico remains a leading United States mineral producer in the 2019 commodity rankings provided by reports from the U.S. Geological Survey and U.S. Energy Information Administration:

- Potash – 1st (50 percent of total U.S. production, used primarily in fertilizer)
- Perlite – 1st (used in building construction products, horticultural aggregate, and fillers)
- Zeolite – 1st (used in animal feed, odor control, and water purification applications)
- Copper – 3rd
- Coal – 10th (up from 14th in 2018)

Total federal and state revenues generated by 2019 mineral production in New Mexico increased 5 percent from 2018 levels to \$32.3 million. State revenue information is provided by the Taxation and Revenue Department and the State Land Office and includes state trust land mineral lease royalties, rentals and bonuses, and associated taxes. Federal revenue information is provided by the Department of Interior's Office of Natural Resources Revenue and includes a 50 percent state share of federal royalties. In any production year, these revenues only accrue if the lessee is mining and producing commodities on federal or state land.

Copper was the largest employer in New Mexico's mining industry, followed by coal, and sand and gravel operations (Table 8). Reported industry payroll (excluding benefits) decreased 3 percent from 2018 to \$304 million (Figure 1). Overall, reported employment decreased in 2019, from 5,000 employees in 2018 to 4,715 employees (excluding reclamation employees). By category, compared to 2018, direct employment decreased 4 percent from 4,299 to 4,120 employees; contract employment decreased 15 percent from 701 to 595 employees; and reclamation employment decreased 14 percent from 253 to 217 employees (Figure 2).

Table 8: Mineral Production Value, Rank, Employment, Payroll, and Revenue – 2019

TABLE 1 New Mexico Summary of Commodity Production, Production Value, Employment, Payroll, Revenue and Ranking: 2019

Mineral	Production ¹	Production Rank ²	Production Value \$	Employment ³	Reclamation Employment	Payroll \$ ⁴	Revenue Generated \$ ⁵	
							State	Federal
Coal	14,535,660	14	\$ 514,046,745	1,089	150	\$ 93,934,523	\$ 10,758,905	\$ 3,751,723
Copper	180,326,518	3	\$ 606,694,358	1,345	6	\$ 85,435,348	\$ 5,052,285	\$ -
Gold ⁶	14,524	-	\$ 20,225,792	-	-	-	\$ 181,709	\$ -
Industrial Minerals ⁷	2,050,738	-	\$ 261,946,198	584	16	\$ 30,802,477	\$ 201,032	\$ 382,667
Aggregates ⁸	12,183,823	-	\$ 114,456,076	992	24	\$ 33,403,683	\$ 4,635,202	\$ -
Other Metals	-	-	-	-	-	-	\$ -	\$ -
Molybdenum	-	-	-	-	-	-	\$ -	\$ -
Potash	407,905	1	\$ 292,254,849	680	21	\$ 59,977,488	\$ 3,234,937	\$ 4,084,674
Silver ⁶	332,346	-	\$ 5,227,855	-	-	\$ -	\$ 44,799	\$ -
Uranium ⁹	-	-	\$ -	22	0	\$ 978,682	\$ -	\$ -
TOTAL			\$ 1,814,851,873	4,712	217	\$ 304,532,201	\$ 24,108,869	\$8,219,064

Source: Operator reports submitted to the Mining and Minerals Division, unless otherwise noted

¹ Production is in short tons for coal, industrial minerals, aggregates, other metals, and potash; in pounds for copper; and in troy ounces for gold and silver.

² Production rank, where available, is based on 2019 production in relation to other states. (Coal is 2018 - latest available information)

Sources: Copper and potash: Mineral Resources Program, United States Geological Survey

Coal: Energy Information Administration, United States Department of Energy

³ Employment category includes direct and contract employees.

⁴ Payroll does not include benefits.

⁵ NM State Land Office revenue: mineral lease royalties, rentals, bonuses; NM Taxation and Revenue Department revenue: severance, resource excise, and conservation taxes. Federal revenue includes 50% state share of federal royalties.

Sources: State data: New Mexico State Land Office, New Mexico Taxation and Revenue Department

Federal data: Office of Natural Resources Revenue

⁶ Gold and silver are by-products of copper production. Employment/payroll for gold/silver included in copper.

⁷ Category includes brick clay, calcite, dimension stone, gypsum, humate, perlite, Portland cement, pumice, salt, silica, and zeolite; USGS ranks NM first in perlite and zeolite.

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

⁹ Employment/payroll numbers are for licensing/permitting at proposed uranium mines, and reclamation activities/maintenance at closed mines and mills.

Figure 1. Percentage of Production Value, Employment, Payroll, and Revenue by Commodity - 2019

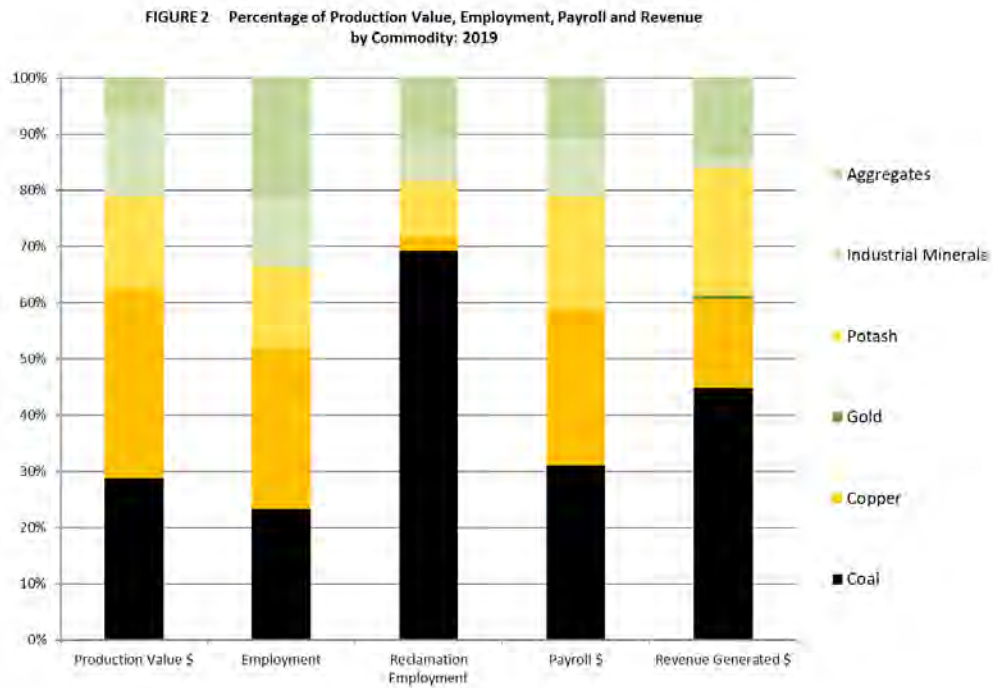
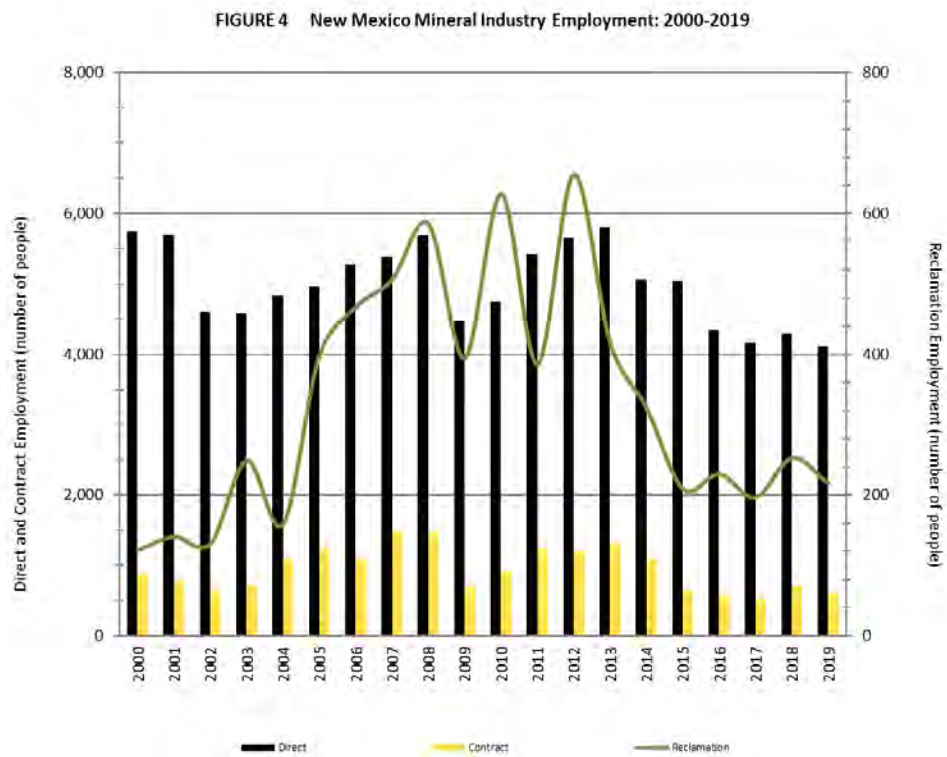


Figure 2. New Mexico Mineral Industry Employment from 2000-2019



Appendix A:

Summary of Operator Reports
for
Disturbed and Reclaimed Acreage
2019

Table A-1. Number of Acres Disturbed and Reclaimed as of December 2019

Permit No.	Permit Name	Total Acres Disturbed To Date	Total Acres Reclaimed To Date
BE001RE	Tijeras Mine and Mill	647.1	103.5
CA002MN	Deadwood / Last Chance Mine	1	0
CA003ME	Hiawatha And Little Jim Mine	2	0
CA005RE	Challenge Mine and Mill	0	0
CA010MN	Apache Camp No. 1 Mine	0	0
CI002RE	Mt. Taylor Mine	147.7	0
CI003MN	ANP No. 2 Mine	2	0
CI004MN	Haskani Mine	13.3	0.5
CI005RE	Tinaja Pit Mine	40	0
CI006MN	Ray Claims No. 4 and No. 6 Mine	0.2	0.5
CI007RE	JJ No. 1 Mine	0	20
DA001MN	Shamrock Leach Site	2	2
DA003MN	Alley Gypsum Mine	1.2	1.5
GR001RE	Pinos Altos Mine	9	9
GR002RE	Continental Mine and Mill	1,145	19
GR006RE	Chino Limestone Mine	55	55
GR007RE	Little Rock Mine	261	32
GR008RE	Jersey Lily, Snowflake and Virtue Mines	22	22
GR009RE	Chino Mine and Mill	10,867.7	889
GR010RE	Tyrone Mine and Mill	8,559.1	4,611
GR011ME	Summit Mine	7.6	4.5
GR012MN	KB Mine	41	42
GR016ME	Malone Mine	0	0
GR018ME	Banks Mine (Lost New Summit No. 1 Mine)	0	0
GR019ME	Boston Hill Mine	0	0
GR020RE	Georgetown Mine	0	0.8
GR024MN	Toro Mine	0	0
GR025ME	Mathis Limestone Quarry Mine	0	0
GR028RE	Center Mine	3.3	3.3
GR029ME	Mount Royal Mine and Mill	1	0
GR030ME	Chemical Lime Mine & Mill	0	4.4
GR036MN	Grooms Placer Mine	0	0
GR056MN	McCauley Perlite Mine	0	0
GR058MN	Billali Mine	1.2	0
GR065MN	Jim Crow Mine	2.2	0.5
GR077MN	Pine Canyon/Spar Hill	0.5	0.5

HI001RE	Lordsburg Banner Mill	15	5
HI002RE	Brockman Mine	40	40
HI004MN	KM Mine	9	11.5
HI008ME	Volcano Mine	8	0
LI001ME	Warner Gulch Placer Mine	2	2
LI002ME	Smokey Mine	0	0
LI005ME	Capitan Iron Mine	12	0.5
LU001RE	Deming Jigging Mill	16	16
LU008RE	Cyprus Deming Tailings Impoundment	20	23.9
LU009RE	Asarco Deming Mill	56.5	44
LU012MN	Herb Bailey No. 2 Mine	0	0
LU026MN	Little Lode #3 Mine	1	1
MK002RE	Section 35 Mine	40	30
MK003ME	Star Lake Mine - Menefee	19	19
MK004RE	Northeast Church Rock Mine	0	17
MK005RE	Section 27 Mine	17	15
MK006RE	St. Anthony Mine	435	0
MK007ME	Star Lake Mine - Mesa Verde	80.4	62.8
MK008ME	Pueblo Alto Mine	51.3	49.3
MK009RE	Old Stope Leach Mine	81	78
MK010MN	U-Mate Mine	5.4	0
MK011MN	Morningstar Mine	14	19
MK012MN	Jaramillo Humate Mine	2	0
MK026MN	Black Spring Mine	29.5	26
MK037MN	Section 2 Mine	25.5	25.5
MK038MN	Double Tree I	0	0
MK039MN	Brie I Mine	45.1	23.3
MK043MN	Ojo Encino Humate Mine	17	15.7
MK052MN	Fruitland Mine	0	0
OT001RN	Wind Mountain Quarry Mine	0	0
OT002MN	B.O.W. Mine	1.6	1
OT005MN	Orogrande Placer Gold Mine	1.8	0
OT006MN	Iron Duke Mine	0	0
RA001ME	Northstar Mine	1.3	0
RA003ME	Cullum Claims Mine	60	0
RA004RE	Rocky Mountain Mine	208.3	48.3
RA005RE	Velarde Mill	28	27.4
RA006ME	General Pumice Mine	17	120
SA001RE	El Cajete Mine	68	54.5
SA002RE	Clod Buster Mine and Mill	0	0
SA004MN	Copar South Pit Mine	9	18.5

SA005ME	Menefee Mill	9.7	0
SA006MN	Copper City Mine	1	0
SA009MN	Eagle Mesa Mine	32.4	25.5
SA010ME	Mesa Verde Resources Mill	0	0
SA011MN	San Luis Mine	15	10
SA012MN	Horizon Ag-Products Cuba Facility	0	0
SA015MN	H2 Screen Facility	4.2	2.6
SF001ME	San Pedro Mine and Mill	12	12
SF002RE	Cunningham Hill Mine	307	289
SF003ME	Silver Silica Mine	4	0.5
SF006ME	CR Minerals Mill	8	8
SI001ME	St. Cloud U.S. Treasury Mine	10	3
SI005MN	Burbank Canyon Mine	0	0
SI006RE	Zeolite Mine and Mill	51	36.5
SI007ME	Midnight Mine	4	0
SI020MN	Coyote Cliff No. 1 Mine	0.6	0
SI021MN	Coyote Cliff No. 2 Mine	1	0
SI025MN	Harding Mine	0	0
SJ001MN	Morningstar Humate Plant	7.7	0
SJ002MN	Chaco Limestone Quarry	2	3.5
SO001RE	Socorro Mine and Mill	160	43.4
SO002MN	Sais Quarry Mine	3.7	0
SO005MN	San Lorenzo Claim Mine	0	0
TA001RE	Questa Mine and Mill	2,300	21
TA002RE	El Grande Mine and Mill	170	14
TA003RE	U. S. Hill Mine	60	61.5
TA005RE	No Agua Mine and Mill	327.4	0
VA001ME	Lucero Quarry Mine	9.3	0
TOTAL:		26,768.8	7,145.7

Appendix B:

Table of Financial Assurance Amounts

Table B-1. Financial Assurance as of December 2019

Permit No.	Permit Name	Type of FA	Amount of FA (\$)
BE001RE	Tijeras Mine and Mill	Surety Bond	1,833,198.00
		Third Party Guarantee	6,933,699.75
		Surety Bond	70,000.00
CA003ME	Hiawatha And Little Jim Mine	Certificate of Deposit	736.00
CI002RE	Mt. Taylor Mine	Letter of Credit	7,606,477.00
CI004MN	Haskani Mine	Certificate of Deposit	32,743.00
CI005RE	Tinaja Pit Mine	Letter of Credit	161,514.00
CI006MN	Ray Claims No. 4 and No. 6 Mine	Certificate of Deposit	20,405.00
CI007RE	JJ No. 1 Mine	Surety Bond	642,298.90
GR002RE	Continental Mine and Mill	Trust	5,300,000.00
		Collateral Bond	13,908,900.00
		Third Party Guarantee	8,146,372.00
		Surety Bond	632,612.00
GR007RE	Little Rock Mine	Surety Bond	1,520,113.00
		Surety Bond	1,424,470.00
GR008RE	Jersey Lily, Snowflake and Virtue Mines	Letter of Credit	46,600.00
GR009RE	Chino Mine and Mill	Third Party Guarantee	45,336,545.00
		Trust	121,000,000.00
		Surety Bond	3,581,931.00
		Surety Bond	5,048,702.00
		Surety Bond	254,800.00
GR010RE	Tyrone Mine and Mill	Third Party Guarantee	50,804,400.00
		Letter of Credit	170,874.00
		Trust	48,200,000.00
		Collateral Bond	48,549,200.00
		Surety Bond	6,780,518.00
		Surety Bond	25,000,000.00
GR011ME	Summit Mine	Surety Bond	95,175.00
GR020RE	Georgetown Mine	Certificate of Deposit	5,200.00
GR025ME	Mathis Limestone Quarry Mine	Certificate of Deposit	3,000.00
GR028RE	Center Mine	Certificate of Deposit	1,560.00
GR030ME	Chemical Lime Mine & Mill	Surety Bond	62,287.00
GR037EM	Codebreaker Enterprises, Inc. Santo Nino Claim	Certificate of Deposit	17,940.00
GR079EM	Emma Exploration Project	Letter of Credit	166,113.00
GR080EM	West Little Rock Expl. Project	Letter of Credit	81,396.00
GR082EM	Kennecott Steeplerock Explor.	Surety Bond	359,600.00

HI001RE	Lordsburg Banner Mill	Surety Bond	206,471.00
		Surety Bond	25,244.87
		Surety Bond	145,989.00
HI002RE	Brockman Mine	Letter of Credit	276,900.00
HI004MN	KM Mine	Certificate of Deposit	1,824.00
HI008ME	Volcano Mine	Collateral Bond	28,652.00
		Letter of Credit	20,225.00
HI013ER	Lordsburg Exploration Project II	Certificate of Deposit	126,100.00
HI019EM	Lordsburg West	Surety Bond	304,020.00
LI001ME	Warner Gulch Placer Mine	Letter of Credit	10,000.00
LI005ME	Capitan Iron Mine	Certificate of Deposit	15,000.00
LU001RE	Deming Jigging Mill	Surety Bond	100,000.00
LU008RE	Cyprus Deming Tailings Impoundment	Letter of Credit	132,588.00
LU009RE	Asarco Deming Mill	Collateral Property	254,056.21
MK003ME	Star Lake Mine - Menefee	Surety Bond	9,120.00
MK005RE	Section 27 Mine	Surety Bond	377,000.00
MK006RE	St. Anthony Mine	Surety Bond	25,867,200.00
MK007ME	Star Lake Mine - Mesa Verde	Certificate of Deposit	2,832.00
		Certificate of Deposit	4,408.00
		Certificate of Deposit	5,000.00
		Certificate of Deposit	21,193.00
		Certificate of Deposit	5,000.00
		Certificate of Deposit	24,794.00
		Certificate of Deposit	817.00
MK008ME	Pueblo Alto Mine	Certificate of Deposit	2,160.00
		Certificate of Deposit	2,500.00
		Certificate of Deposit	22,000.00
		Certificate of Deposit	2,677.00
		Certificate of Deposit	21,051.00
		Certificate of Deposit	2,800.00
		Certificate of Deposit	27,825.00
Certificate of Deposit	1,440.00		
MK009RE	Old Stope Leach Mine	Letter of Credit	578,000.00
MK010MN	U-Mate Mine	Certificate of Deposit	8,844.00
		Surety Bond	29,000.00
MK011MN	Morningstar Mine	Certificate of Deposit	2,880.00
MK026MN	Black Spring Mine	Certificate of Deposit	25,000.00
		Certificate of Deposit	11,000.00
		Certificate of Deposit	29,628.64
MK037MN	Section 2 Mine	Certificate of Deposit	9,080.82

		Certificate of Deposit	5,000.00
MK039MN	Brie I Mine	Letter of Credit	136,863.44
		Letter of Credit	45,600.00
MK043MN	Ojo Encino Humate Mine	Certificate of Deposit	62,964.64
OT002MN	B.O.W. Mine	Letter of Credit	15,932.00
OT006MN	Iron Duke Mine	Certificate of Deposit	15,597.00
		Certificate of Deposit	25,466.52
OT040EM	Cornudas Wind Mountain Project	Certificate of Deposit	58,826.12
RA001ME	Northstar Mine	Certificate of Deposit	11,099.07
RA003ME	Cullum Claims Mine	Letter of Credit	161,500.00
RA004RE	Rocky Mountain Mine	Letter of Credit	97,354.00
		Letter of Credit	250,930.00
RA006ME	General Pumice Mine	Required	15,000.00
SA001RE	El Cajete Mine	Surety Bond	78,747.00
		Surety Bond	12,103.00
SA004MN	Copar South Pit Mine	Surety Bond	33,516.00
SA005ME	Menefee Mill	Certificate of Deposit	16,000.00
		Certificate of Deposit	35,529.00
SA009MN	Eagle Mesa Mine	Letter of Credit	50,813.00
SA011MN	San Luis Mine	Letter of Credit	20,000.00
SA012MN	Horizon Ag-Products Cuba Mill	Letter of Credit	34,603.00
SA015MN	H2 Screen Facility	Letter of Credit	28,170.00
SF001ME	San Pedro Mine and Mill	Certificate of Deposit	8,288.00
SF002RE	Cunningham Hill Mine	Surety Bond	401,741.00
SF003ME	Silver Silica Mine	Certificate of Deposit	9,404.78
SF038EM	Corelis Explor.	Certificate of Deposit	10,409.00
SI001ME	St. Cloud U.S. Treasury Mine	Certificate of Deposit	1,857.00
SI005MN	Burbank Canyon Mine	Certificate of Deposit	30,000.00
SI006RE	Zeolite Mine and Mill	Collateral Bond	190,000.00
		Collateral Bond	337,000.00
SI039EM	Little Hermosa Exploration	Certificate of Deposit	51,600.00
SJ001MN	Morningstar Humate Plant	Certificate of Deposit	51,257.06
SO001RE	Socorro Mine and Mill	Surety Bond	794,403.00
SO002MN	Sais Quarry Mine	Certificate of Deposit	2,661.89
SO022EM	Ramsey NM Spike Camp	Certificate of Deposit	11,980.00
TA001RE	Questa Mine and Mill	Letter of Credit	66,918,125.00
		Third Party Guarantee	139,454,593.00
		Corporate Guarantee	4,274,905.00
		Corporate Guarantee	57,024,878.00
TA002RE	El Grande Mine and Mill	Surety Bond	1,246,703.00

TA003RE	U.S. Hill Mine	Certificate of Deposit	6,300.00
TA005RE	No Agua Mine and Mill	Surety Bond	1,863,272.00
VA001ME	Lucero Quarry Mine	Certificate of Deposit	24,515.00
TOTAL:			706,465,246.71