

2023 Annual Report

New Mexico Mining Act Reclamation Program

Energy, Minerals & Natural Resources Department
Mining and Minerals Division

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Table of Contents

Table of Contents	i
List of Tables	ii
List of Figures	ii
1. Executive Summary	1
2. General Description of Mining Operations.....	2
3. General Description of Reclamation Practices	6
4. Financial Assurance Update	8
5. Amendments to the New Mexico Mining Act Rules.....	9
6. Mineral Production Statistics for New Mexico in 2023	10

On The Cover: Tarantula exploring the Georgetown Mine reclamation.

List of Tables

Table 1.	Mining Operations Approved from 1994 to 2023
Table 2.	Approved Permit Applications–2023
Table 3.	Approved Exploration Permits–2023
Table 4.	Approved Minimal Impact New Mining Permits–2023
Table 5.	Pending Regular Mine Permit Development–2023
Table 6.	Summary of Disturbed and Reclaimed Acres–2023
Table 7.	Summary of Financial Assurance Held by MARP–2023
Table 8.	Mineral Production Value, Rank, Employment, Payroll, and Revenue–2023

Appendix A:

Table A-1.	Number of Acres Disturbed and Reclaimed as of December 2023
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Appendix B:

Table B-1.	New Mexico Financial Assurance as of December 2023
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List of Figures

Figure 1.	Percentage of Production Value, Employment, Payroll, and Revenue by Commodity–2023
Figure 2.	Mineral Industry Employment, 1990–2023

1. Executive Summary

This annual report summarizes activities regulated by, and related to, the Mining Act Reclamation Program (“MARF”) of the New Mexico Mining and Minerals Division. 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 2023 calendar year. In this report, we also provide production and reclamation statistics for the 2023 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 2023 information submitted in this report was provided by our operators in April 2024.

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

This report includes:

- Production figures for New Mexico mines active during the 2023 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 2023 calendar year;
- Summary of reclaimed and disturbed acreage for 2023;
- Summary of any actions undertaken by the Mining Commission in 2023;
- 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 less than 40 acres in size for certain commodities such as 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. These mines 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 2023

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	7
Minimal Impact Exploration	<5 acres of disturbance	178
General (Recreational)	<200 cubic yards/yr of disturbance	409
Total Mining Operations Permitted		687

Permit Modifications and Revisions

Every year, MARP typically receives and processes several 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 closeout plans, updating reclamation acreage, permit transfers, operator name changes, as well as adjustments to financial assurance instruments and amounts. In 2023, MARP approved thirteen (13) modification applications and one (1) permit revision.

Table 2. Approved Permit Applications – 2023

Type of Operation	Description	Number of Approved Operations
		2023
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	3
General Permits	< 200 cubic yards/yr of disturbance	2
Revisions	Revision to an Existing Permit	1
Modifications	Modification to an Existing Permit	13

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 MARP resources over the last several years. The Questa Mine has been designated a federal U.S. Environmental Protection Agency (“EPA”) Superfund

Site and MARP 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. Reclamation of the former tailing impoundment commenced during 2019 and continued through 2023. Reclamation of the mill pond and Group 1 Waste Rock Stockpiles progressed throughout 2023. MARP performed monthly inspections of active reclamation at the Questa Mine throughout 2023.

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. Since 2015, MARP has spent a considerable amount of time working with the various partners on prioritization of projects, review of documents, assistance with development of closure alternatives and providing management services and technical assistance. MARP continued to provide technical assistance to EPA Region 6 and the Navajo Nation throughout calendar year 2023, focused largely on development of reclamation alternatives for the Quivira Mine and the Section 32/33 Mine.

Mt. Taylor Mine: The Mt. Taylor Mine announced it was permanently closing in December 2019 and began implementation of the Closure/Closeout Plan in 2020. The Mt. Taylor Mine continued reclamation activities throughout 2023 including tasks such as dismantling the treated water pipeline, excavation and shipment of low-grade ore to the White Mesa Mill, updating the Closeout Plan (Revision 21-1) in support of construction of a disposal cell in the South Waste Rock Pile, demolition of buildings, and other closeout activities. MARP performed monthly inspections of active reclamation throughout 2023.

Exploration Projects and General Permits

One regular exploration permit application was received by MARP in calendar year 2023, however this application has not yet been approved. MARP approved three (3) minimal impact exploration permits in calendar year 2023, which are summarized below in Table 3.

Table 3: Approved Exploration Permits – 2023

Permit Number	Permit Name	Permit Operator	Commodity
LU047EM	American Magnesium Little Mountain	American Magnesium	Magnesium
HI022EM	Lordsburg PCD	American Copper NMX	Copper
CI018EM	Cebolleta Uranium Exploration	Cibola Resources	Uranium

Approved Minimal Impact Mining Projects in 2023

No minimal impact new mining permit applications were received or approved by MARP in calendar year 2023.

Table 4: Approved Minimal Impact Mining Permits – 2023

Permit Number	Permit Name	Permit Operator	Commodity
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Pending Regular Mine Applications

One (1) new conventional mine was 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 – 2023

Project Name	Operator	Surface Ownership	Commodity	Proposed Permit Area (acres)
Permitting In-Progress				
La Jara Mesa Mine	Laramide Resources	USFS	Uranium	17

La Jara Mesa Mine (Uranium): The La Jara Mesa Mine proposed by Laramide Resources LTD is a conventional underground uranium mining and surface operation located in Cibola County. The proposed mine is located within the Mt. Taylor Traditional Cultural Property. The La Jara Mesa Mine application details an underground mine accessed from an incline portal with approximately 17 acres of surface disturbance within the proposed 77 acre permit area. Laramide Resources restarted both the federal and state permitting processes in 2023.

3. General Description of Reclamation Practices

Hydromulching is a process often used in reclamation that involves the spraying of a mixture of water, fiber mulch, and tackifier on a newly reclaimed area to limit soil erosion and promote revegetation. In 2023, the Tijeras Mine implemented a geomorphic reclamation design and reclaimed approximately 22 acres of Quarry 1. After the earthwork was completed, the mine hydroseeded the area.



Hydroseeding at Tijeras Mine

Mines Fully Released from The Mining Act

Twenty-seven (27) 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
- Arroyo Solar Pueblo Alto, McKinley County
- Black Hawk Tailings Impoundment, Grant County
- Boston Hill Mine, Grant County
- Brockman Mine, Hidalgo County
- Chaco Limestone Quarry, San Juan County
- Chino Limestone Mine, Grant County
- Copar South Pit Mine, Sandoval County

- CR Minerals Mill, Santa Fe County
- Cullum Claims Mine, Rio Arriba County
- Deming Jigging, Luna County
- Double Tree I Mine, McKinley County
- Georgetown Mine, Grant County
- KB Mine, Grant County
- Little Lode #3 Mine, Luna County
- Malone Mine, Grant County
- Mathis Limestone Quarry Mine, Grant County
- Mesa Verde Resources Mill, Sandoval County
- Pine Canyon/Spar Hill, Grant County
- Pinos Altos Mine, Grant County
- Sais Quarry Mine, Socorro County
- Section 14 Mine, McKinley County
- Section 2 Mine, McKinley County
- Shamrock Leach Site, Doña Ana County
- Toro Mine, Grant County
- U.S. Hill Mine, Taos 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 2023 calendar year is summarized in Table 6.

Table 6: Summary of Disturbed and Reclaimed Acres – 2023

Calendar Year	Disturbed Acres To Date	Reclaimed Acres To Date
2023	27,089.4	7,674.7

4. Financial Assurance Update

A summary of the amount of financial assurance held by MARP for hard rock mining projects for the 2023 calendar year is in Table 7 below. Financial assurance is 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.

Table 7: Summary of Financial Assurance Held by MARP – 2023

Calendar Year	Financial Assurance Amount Held By MARP
2023	\$1,078,635,870.89

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 2023.

6. Mineral Production Statistics for New Mexico in 2023

New Mexico remains a leading United States mineral producer in the 2023 commodity rankings provided by reports from the U.S. Geological Survey (USGS) and U.S. Energy Information Administration (coal):

- Potash: 1st (used primarily in fertilizer, and in lesser amounts for chemical and industrial applications)
- Perlite: 1st (used in building construction products, horticultural aggregate, and fillers)
- Zeolite: top 6 (used primarily in animal feed, odor control, and water purification applications)
- Copper: top 7 (used primarily in building construction, transportation equipment, and electrical and electronic products)
- Coal: 13th
- Nonfuel Mineral Production: New Mexico ranks 24th among the states, producing 1.38 percent of the U.S. total

Total federal and state revenues generated by 2023 mineral production in New Mexico decreased 7.5 percent from 2022 levels, to \$31. 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 are only accrued 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 sand and gravel operations, and coal operations. Reported industry payroll (excluding benefits) decreased almost 2 percent from 2022 to \$280.9 million (Figure 1). Overall, reported employment increased or was maintained in 2022. By category, compared to 2022, direct employment increased 3.5 percent from 3,440 to 3,562 employees; contract employment decreased 5.1 percent from 764 to 725 employees; and reclamation employment increased 56 percent from 182 to 284 employees. (Figure 2).

Table 8: Mineral Production Value, Rank, Employment, Payroll, and Revenue – 2023

Mineral	Production ¹	Production Rank ²	Production Value \$	Employment ³	Reclamation Employment	Payroll \$ ⁴	Revenue Generated \$ ⁵	
							State	Federal
Coal	7,987,232	13	\$ 226,590,974	736	168	\$ 65,943,771	\$ 6,981,779	\$ 1,222,326
Copper	192,131,219	3 *	\$ 741,134,649	1,455	8	\$ 106,239,349	\$ 6,162,712	\$ -
Gold ⁶	8,677	-	\$ 16,854,876	-	-	-	\$ 144,216	\$ -
Industrial Minerals ⁷	2,214,946	-	\$ 198,056,823	197	11	\$ 8,292,018	\$ 212,575	\$ 661,207
Aggregates ⁸	20,902,520	-	\$ 149,839,248	1,194	83	\$ 34,180,034	\$ 6,587,280	\$ -
Other Metals	-	-	-	-	-	-	\$ -	\$ -
Molybdenum	-	-	-	-	-	-	\$ -	\$ -
Potash	506,533	1	\$ 300,586,193	683	10	\$ 65,434,546	\$ 2,619,038	\$ 6,544,009
Silver ⁶	157,022	-	\$ 3,675,263	-	-	\$ -	\$ 30,206	\$ -
Uranium ⁹	-	-	\$ -	22	4	\$ 816,878	\$ -	\$ -
TOTAL			\$ 1,636,738,026	4,287	284	\$ 280,906,596	\$ 22,737,806	\$8,427,541

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 2023 production in relation to other states.

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

Coal: Energy Information Administration, United States Department of Energy

* NM Bureau of Geology and Mineral Resources; Economic Impact of the Mineral Industry in New Mexico, 2024

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 reclamation activities/maintenance at closed mines and mills.

Figure 1. Percentage of Production Value, Employment, Payroll, and Revenue by Commodity - 2023

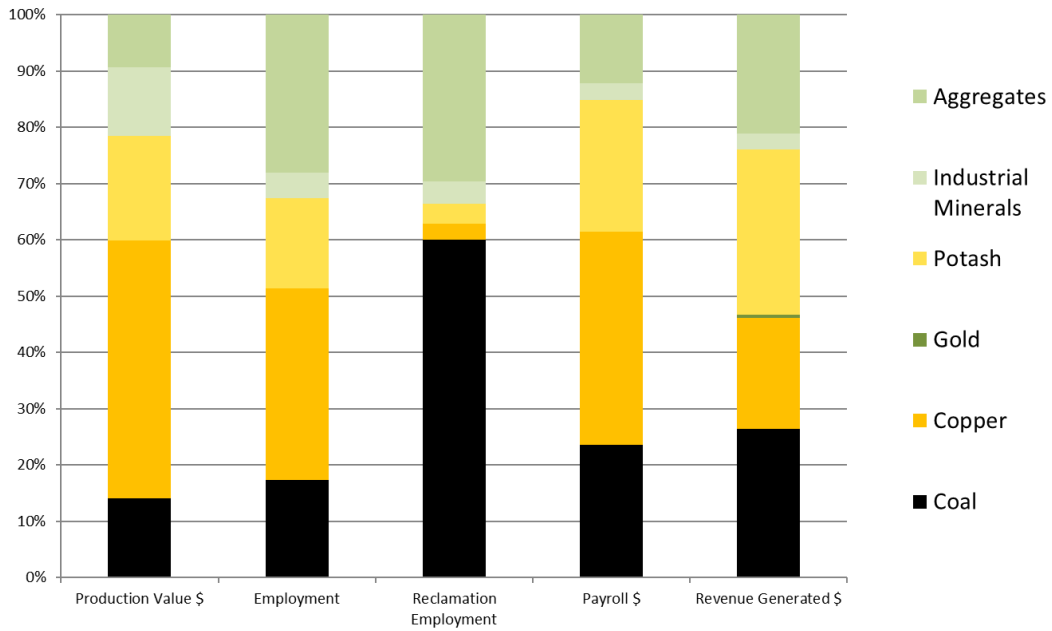


Figure 2. New Mexico Mineral Industry Employment from 2000-2023

