



# 2020 Annual Report

## New Mexico Mining Act Reclamation Program

Energy, Minerals & Natural Resources Department  
Mining and Minerals Division

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*On The Cover: The photograph on the cover is the former El Cajete/Las Conchas pumice mine in Sandoval County, New Mexico.*

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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 2020 calendar year. In this report, we also provide production and reclamation statistics for the 2020 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 2020 information submitted in this report was provided by our operators in April 2021.

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 2020 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 2020 calendar year;
- Summary of reclaimed and disturbed acreage for 2020;
- Summary of any actions undertaken by the Mining Commission in 2020;
- 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 2020**

| <b>Type of Operation</b>                 | <b>Description</b>                 | <b>Number of Operations</b> |
|------------------------------------------|------------------------------------|-----------------------------|
| 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            | 173                         |
| General (Recreational)                   | <200 cubic yards/yr of disturbance | 396                         |
| <b>Total Mining Operations Permitted</b> |                                    | <b>668</b>                  |

*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 2020, MMD approved seventeen (17) modification applications and two (2) revision applications. The two approved revisions were an updated Closure/Closeout Plan for the Chino Mine and release of the Brockman Mine from future requirements of the Mining Act. Table 2 identifies specific types of permit applications, including modifications and revisions, approved by MMD during the 2020 calendar year.

**Table 2. Approved Permit Applications – 2020**

| <b>Type of Operation</b>   | <b>Description</b>                  | <b>Number of Approved Operations</b> |
|----------------------------|-------------------------------------|--------------------------------------|
|                            |                                     | 2020                                 |
| 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 | 11                                   |
| Revisions                  | Revision to an Existing Permit      | 2                                    |
| Modifications              | Modification to an Existing Permit  | 17                                   |

### *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. Reclamation of the former tailings impoundment commenced during 2019 and continued through 2020. MMD performed monthly inspections of active reclamation at the Questa Mine throughout 2020.

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, MMD 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. MMD continued to provide technical assistance to EPA Region 6 and the Navajo Nation throughout calendar year 2020, focused largely on development of reclamation alternatives for the Quivira Mine.

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 and was approved in early 2020. The updated Closure/Closeout Plan was a significant milestone for 2020.

### *Exploration Projects and General Permits*

Four (4) minimal impact exploration permit applications were approved by MMD during calendar year 2020. Table 3 identifies the specific exploration applications approved by MMD in 2020.

**Table 3: Approved Minimal Impact Exploration Permits – 2020**

| Permit Number | Permit Name                    | Permit Operator | Commodity   |
|---------------|--------------------------------|-----------------|-------------|
| DA004EM       | Palm Park Dona Ana             | Diamond Bar     | Barite      |
| GR084EM       | BHP Oak Grove                  | BHP             | Copper      |
| HI018EM       | Lordsburg Playa Lithium        | Frank Bain      | Lithium     |
| LU038EM       | Gila Mining Peru Mill Tailings | Gila Mining     | Base Metals |

*Approved Minimal Impact Mining Projects in 2020*

No minimal impact new mining permit applications were approved by MMD in calendar year 2020. Table 4 below identifies the specific mining applications approved in 2020.

**Table 4: Approved Minimal Impact New Mining Permits – 2020**

| Permit Number | Permit Name | Permit Operator | Commodity |
|---------------|-------------|-----------------|-----------|
| --            | --          | --              | --        |

*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 – 2020**

| Project Name                  | Operator                      | Surface Ownership      | Commodity | Proposed Permit Area (acres) |
|-------------------------------|-------------------------------|------------------------|-----------|------------------------------|
| <b>Permitting In-Progress</b> |                               |                        |           |                              |
| 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.

In March 2020, the MMD Director rescinded the Notice of Technical Approvability citing uncertainty about when, and if, NMCC can secure the necessary water rights for the project. Recission of the Notice of Technical Approvability reopened the permit review process for consideration of issues surrounding water rights as well as a dam safety permit from NMOSE for the tailings storage facility.

In June 2020, MMD withdrew the March 2020 order, thereby reinstating the Notice of Technical Approvability, and entered into a settlement agreement with NMCC outlining the conditions by which MMD will issue a Part 6 mining permit for the Copper Flat Mine.

As of the end of 2020, MMD continues to review financial assurance calculations and other submittals from NMCC.

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. During 2020, Energy Fuels provided some responses to technical comments as well as a report for characterization of the Rio San Jose.

### 3. General Description of Reclamation Practices

The use of stable rock materials, referred to as riprap, is a common reclamation practice used at mine sites. Riprap was used to reclaim a surface water erosion channel that developed at a former pumice mine in Sandoval County. This erosional feature was the final reclamation issue before release of the site could be contemplated. The erosion feature was concentrating surface water and creating a long gully eventually discharging to a forest meadow. Revegetation alone was not sufficient to control the development of the gully. As such, the operator imported and placed riprap strategically within the channel to slow water runoff and line the channel. The operator also constructed several Zuni bowls to significantly reduce the amount of erosion occurring at the site.



*Erosion channel lined with riprap (left) and Zuni bowl created with riprap (right)*

Another use of riprap on a larger scale occurred during 2020 at the Questa Mine tailings impoundment in Taos County. Reclamation of the tailings impoundment consisted of covering the tailings with suitable reclamation growth material and creation of numerous riprap lined diversion channels. In this instance, the diversion channels were engineered structures constructed using heavy equipment to precise design specifications.



*Diversion channel (left) and top surface tailing reclamation (right) at the Questa Mine tailings facility*

### *Mines Fully Released from The Mining Act*

Nineteen (19) 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
- Brockman Mine, Hidalgo County
- Chaco Limestone Quarry, San Juan County
- Chino Limestone Mine, Grant County
- CR Minerals Mill, Santa Fe County
- Cullum Claims Mine, Rio Arriba County
- Deming Jigging, Luna County
- Double Tree I Mine, McKinley County
- KB Mine, Grant County
- Malone Mine, Grant County
- Mathis Limestone Quarry 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 2020 calendar year is summarized in Table 6.

**Table 6: Summary of Disturbed and Reclaimed Acres – 2020**

| <b>Calendar Year</b> | <b>Disturbed Acres<br/>To Date</b> | <b>Reclaimed Acres<br/>To Date</b> |
|----------------------|------------------------------------|------------------------------------|
| 2020                 | 26,847.8                           | 7,530.2                            |

Appendix A contains summary tables of operator reports on disturbed and reclaimed acres for the 2020 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 2020 calendar year is in Table 7 below.

**Table 7: Summary of Financial Assurance Held by MMD – 2020**

| <b>Calendar Year</b> | <b>Financial Assurance Amount<br/>Held By MMD</b> |
|----------------------|---------------------------------------------------|
| 2020                 | \$1,053,982,820.33                                |

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 2020.

## 6. Mineral Production Statistics for New Mexico in 2020

New Mexico remains a leading United States mineral producer in the 2020 commodity rankings provided by reports from the U.S. Geological Survey (USGS) and U.S. Energy Information Administration (coal):

- Potash – 1<sup>st</sup> (50 percent of total U.S. production, used primarily in fertilizer)
- Perlite – 1<sup>st</sup> (used in building construction products, horticultural aggregate, and fillers)
- Zeolite – 1<sup>st</sup> (used in animal feed, odor control, and water purification applications)
- Copper – 2<sup>nd</sup> (up from 3<sup>rd</sup> in 2019; used primarily in building construction, transportation equipment, and electrical and electronic products)
- Coal – 10<sup>th</sup> (in 2019, latest data available)

Total federal and state revenues generated by 2020 mineral production in New Mexico decreased 8.5 percent from 2019 levels to \$29.6 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 sand and gravel operations and coal (Table 8). Reported industry payroll (excluding benefits) decreased 4 percent from 2019 to \$291 million (Figure 1). Overall, reported employment decreased in 2020, from 4,715 employees in 2019 to 4,500 employees (excluding reclamation employees). By category, compared to 2019, direct employment decreased 3.6 percent from 4,120 to 3,971 employees; contract employment decreased 11 percent from 595 to 529 employees; and reclamation employment decreased 1 percent from 217 to 214 employees (Figure 2).

**Table 8: Mineral Production Value, Rank, Employment, Payroll, and Revenue – 2020**

| Mineral                          | Production <sup>1</sup> | Production Rank <sup>2</sup> | Production Value \$     | Employment <sup>3</sup> | Reclamation Employment | Payroll \$ <sup>4</sup> | Revenue Generated \$ <sup>5</sup> |                    |
|----------------------------------|-------------------------|------------------------------|-------------------------|-------------------------|------------------------|-------------------------|-----------------------------------|--------------------|
|                                  |                         |                              |                         |                         |                        |                         | State                             | Federal            |
| Coal                             | 10,249,124              | 10                           | \$ 453,218,459          | 705                     | 123                    | \$ 91,348,321           | \$ 10,390,190                     | \$ 5,748,892       |
| Copper                           | 137,096,867             | 2                            | \$ 383,799,937          | 1,348                   | 8                      | \$ 73,149,480           | \$ 3,221,390                      | \$ -               |
| Gold <sup>6</sup>                | 2,495                   | -                            | \$ 4,416,096            | -                       | -                      | -                       | \$ 47,297                         | \$ -               |
| Industrial Minerals <sup>7</sup> | 2,523,871               | -                            | \$ 197,466,323          | 607                     | 8                      | \$ 33,109,020           | \$ 120,015                        | \$ 363,253         |
| Aggregates <sup>8</sup>          | 13,293,701              | -                            | \$ 145,804,489          | 1,111                   | 37                     | \$ 31,826,126           | \$ 5,202,347                      | \$ -               |
| Other Metals                     | -                       | -                            | -                       | -                       | -                      | -                       | \$ -                              | \$ -               |
| Molybdenum                       | -                       | -                            | -                       | -                       | -                      | -                       | \$ -                              | \$ -               |
| Potash                           | 409,277                 | 1                            | \$ 376,673,452          | 712                     | 21                     | \$ 60,581,794           | \$ 3,384,612                      | \$ 1,080,141       |
| Silver <sup>6</sup>              | 52,077                  | -                            | \$ 1,069,687            | -                       | -                      | \$ -                    | \$ 10,629                         | \$ -               |
| Uranium <sup>9</sup>             | -                       | -                            | \$ -                    | 17                      | 17                     | \$ 888,123              | \$ -                              | \$ -               |
| <b>TOTAL</b>                     |                         |                              | <b>\$ 1,562,448,443</b> | <b>4,500</b>            | <b>214</b>             | <b>\$ 290,902,864</b>   | <b>\$ 22,376,480</b>              | <b>\$7,192,286</b> |

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

<sup>1</sup> 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.

<sup>2</sup> Production rank, where available, is based on 2020 production in relation to other states; coal ranking is for 2019, latest data available.

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

Coal: Energy Information Administration, United States Department of Energy

<sup>3</sup> Employment category includes direct and contract employees.

<sup>4</sup> Payroll does not include benefits.

<sup>5</sup> 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

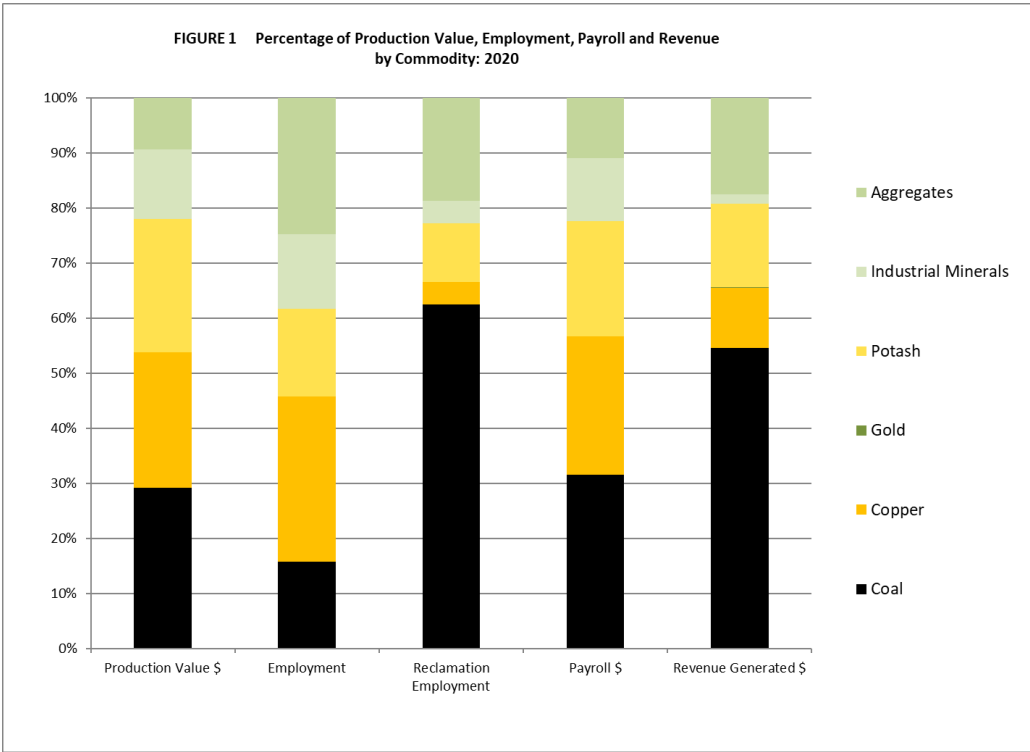
<sup>6</sup> Gold and silver are by-products of copper production. Employment/payroll for gold/silver included in copper.

<sup>7</sup> 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.

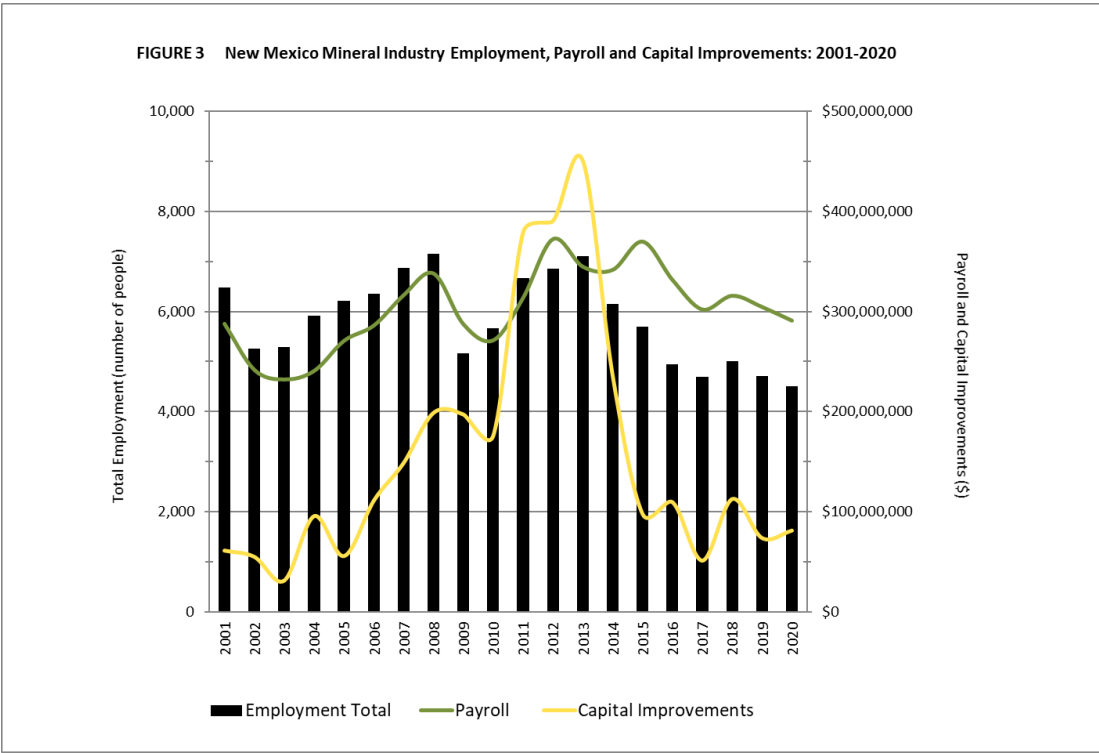
<sup>8</sup> Category includes base course, caliche, clay and shale, crushed rock, flagstone, fill dirt, gravel, limestone, red dog, rip-rap, sand, scoria and topsoil.

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

**Figure 1. Percentage of Production Value, Employment, Payroll, and Revenue by Commodity - 2020**



**Figure 2. New Mexico Mineral Industry Employment from 2000-2020**



Appendix A:

Summary of Operator Reports  
for  
Disturbed and Reclaimed Acreage  
2020



**Table A-1. Number of Acres Disturbed and Reclaimed as of December 2020**

| Permit No. | Permit Name                             | Total Acres Disturbed To Date | Total Acres Reclaimed To Date |
|------------|-----------------------------------------|-------------------------------|-------------------------------|
| BE001RE    | Tijeras Mine and Mill                   | 656.2                         | 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               | 1,173                         | 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                           | 9                             |
| 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                            | 1.7                           | 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        | 88.2  | 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                  | 45.5  | 40   |
| MK037MN | Section 2 Mine                     | 25.5  | 25.5 |
| MK038MN | Double Tree I                      | 0     | 0    |
| MK039MN | Brie I Mine                        | 48.6  | 23.3 |
| MK043MN | Ojo Encino Humate Mine             | 23.6  | 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                | 215.8 | 48.3 |
| RA005RE | Velarde Mill                       | 28    | 27.4 |
| RA006ME | General Pumice Mine                | 17    | 135  |
| 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           | 372            |
| 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              |
| <b>TOTAL:</b> |                                   | <b>26,847.8</b> | <b>7,530.2</b> |

Appendix B:

Table of Financial Assurance Amounts

**Table B-1. Financial Assurance as of December 2020**

| <b>Permit No.</b> | <b>Permit Name</b>                             | <b>Type of FA</b>      | <b>Amount of FA (\$)</b> |
|-------------------|------------------------------------------------|------------------------|--------------------------|
| BE001RE           | Tijeras Mine and Mill                          | Surety Bond            | 2,326,694.00             |
|                   |                                                | 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               |
| DA0045EM          | Palm Park Dona Ana 2019                        | Certificate of Deposit | 24,909.66                |
| GR002RE           | Continental Mine and Mill                      | Trust                  | 5,760,000.00             |
|                   |                                                | Collateral Bond        | 15,250,400.00            |
|                   |                                                | Third Party Guarantee  | 1,143,389.00             |
|                   |                                                | 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       | 1,228.00                 |
| GR009RE           | Chino Mine and Mill                            | Third Party Guarantee  | 89,582,363.00            |
|                   |                                                | Trust                  | 138,811,000.00           |
|                   |                                                | 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  | 40,396,711.00            |
|                   |                                                | Letter of Credit       | 170,874.00               |
|                   |                                                | Trust                  | 57,537,878.41            |
|                   |                                                | 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                 |
| 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               |

|         |                                    |                        |               |
|---------|------------------------------------|------------------------|---------------|
| GR084EM | BHP Oak Grove Exploration          | Surety Bond            | 91,237.74     |
| HI001RE | Lordsburg Banner Mill              | Surety Bond            | 206,471.00    |
|         |                                    | Surety Bond            | 25,244.87     |
|         |                                    | Surety Bond            | 145,989.00    |
| 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    |
| HI018EM | Lordsburg Playa Lithium            | Cash                   | 17,400.00     |
| 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     |
| LU008RE | Cyprus Deming Tailings Impoundment | Letter of Credit       | 132,588.00    |
| LU009RE | Asarco Deming Mill                 | Collateral Property    | 254,056.21    |
| LU038EM | Gila Mill Peru Mill Tailings       | Surety Bond            | 22,550.00     |
| 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 |
|         |                                    | Letter of Credit       | 71,892,417.00 |
| 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        |
|         |                                    | Certificate of Deposit | 75,000.00     |
| 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      |
|         |                                    | Certificate of Deposit | 74,933.17     |
| MK009RE | Old Stope Leach Mine               | Letter of Credit       | 578,000.00    |
|         |                                    | Third Party Guarantee  | 67,005,000.00 |
|         |                                    | Letter of Credit       | 22,335,000.00 |



|         |                                |                        |              |
|---------|--------------------------------|------------------------|--------------|
| 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    |
|         |                                | Certificate of Deposit | 2,500.00     |
| MK039MN | Brie I Mine                    | Letter of Credit       | 136,863.44   |
|         |                                | Letter of Credit       | 45,600.00    |
|         |                                | Letter of Credit       | 59,965.00    |
| 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       | 365,279.00   |
|         |                                | Letter of Credit       | 267,703.00   |
| RA006ME | General Pumice Mine            | Required               | 15,439.36    |
| 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       | 126,041.21   |
| 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            | 2,132,500.89 |

|               |                         |                        |                         |
|---------------|-------------------------|------------------------|-------------------------|
| 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       | 113,998,805.00          |
|               |                         | Third Party Guarantee  | 280,696,632.00          |
|               |                         | Letter of Credit       | 1,355,634.00            |
| 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               |
| <b>TOTAL:</b> |                         |                        | <b>1,053,982,820.33</b> |