

State of New Mexico  
Energy, Minerals and Natural Resources Department

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Michelle Lujan Grisham  
Governor

Sarah Cottrell Propst  
Cabinet Secretary

Todd E. Leahy, JD, PhD  
Deputy Secretary

Fernando Martinez, Acting Director  
Mining and Minerals Division



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**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

August 8, 2019

Mr. Erich Bower, General Manager  
Freeport-McMoRan Tyrone Inc.  
P.O. Box 571  
Tyrone, New Mexico 88065

**RE: Transmittal of Documents: Permit No. GR083EM, Emma-B Exploration Project**

Dear Mr. Bower:

The New Mexico Mining and Minerals Division (“MMD”) has approved Permit No. GR083EM, for the Emma-B Exploration Project. A copy of the permit document is enclosed with this letter. MMD will retain the original of this document on file.

If you have any questions in this matter, please feel free to contact me at 505-476-3432 or David.Ohori@state.nm.us.

Sincerely,

David R. Ohori, Permit Lead  
Mining Act Reclamation Program (“MARP”)  
Mining and Minerals Division

Enclosure

cc: Holland Shepherd, Program Manager, MARP  
Ty Bays, Senior Land and Water Resource Analyst, Tyrone  
Allyson Siwik, Executive Director, Gila Resources Information Project  
Mine File (GR083EM)

**COPY**

**PERMIT NO. GR083EM  
EMMA-B  
MINIMAL IMPACT EXPLORATION OPERATION**

**MINING AND MINERALS DIVISION  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT**

Permit No. GR083EM ("Permit") is issued by the Director of the Mining and Minerals Division ("MMD") of the New Mexico Energy, Minerals and Natural Resources Department to:

Freeport-McMoRan Tyrone Mining LLC ("Tyrone")  
Whose correct address is: P.O. Box 571  
Tyrone, NM 88065

("Permittee") for the Emma-B Exploration Project, located approximately 10 miles south of Silver City in Grant County, New Mexico, as described in Section 3 of this Permit document. The Permittee is authorized to drill 17 holes up to six inches in diameter and up to 1,300 feet deep on Freeport-McMoRan Tyrone Mining LLC land, utilizing no more than 17 drill pad surface disturbance areas to explore for copper. The drill pad disturbances will be no greater than 40 feet wide by 70 feet long (40'W x 70'L) at each site. Drill pad sites will include 17 pits for drilling fluids and cuttings. In addition to use of existing roads, the Permittee is authorized to travel on a total of, 6,325 feet of new constructed roads and a total of 485 feet of modified existing roads, 15 feet in width.

**Section 1.                    STATUTES AND REGULATIONS**

- A. This Permit is issued pursuant to the New Mexico Mining Act, NMSA 1978, §69-36-1, et seq. (1993, as amended).
- B. This Permit is subject to all applicable regulations of the New Mexico Mining Act ("Act"), New Mexico Mining Act Rules ("Rules" (Parts 19.10.1 through 19.10.14 New Mexico Administrative Code ("NMAC"))) and any other regulations which are now or hereafter in force under the Act; and all such regulations are made a part of this Permit by this reference.

**Section 2.                    PERMIT APPLICATION PACKAGE**

The minimal impact exploration Permit Application for GR083EM was received on May 9, 2019 and deemed administratively complete on May 20, 2019. Any correspondence subsequently submitted to MMD, by the Permittee or its representatives, can be found at MMD offices within the Division's files, and is titled *Emma-B Exploration Project, GR083EM* or similar.

The Permit Application Package ("PAP") is comprised of the following documents:

- A. Subpart 3 Minimal Impact Exploration Permit Application dated May 7, 2019,

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 2 of 16**

("Application"), received by MMD on May 9, 2019.

- B. Amended Application received by electronic mail correspondence (e-mail), dated May 15, 2019.
- C. Information (New Mexico Office of the State Engineer well permits) in support of the Application received by e-mail, dated June 19, 2019.
- D. Tyrone Response to MMD and Agency Comments, dated June 24, 2019: Response to Comments on Emma-B Exploration Project Minimal Impact Exploration Application.
- E. Financial Assurance, in the amount of \$166,403.00 (one hundred sixty-six thousand four hundred three dollars), was received by MMD on August 2, 2019 in the form of Irrevocable Standby Letter of Credit No. HACH600691OS from BMO Harris Bank N.A.

**Section 3.**                    **PERMIT AREA**

- A. The Permittee is authorized to conduct mineral exploration and reclamation operations only on those lands that are specifically designated and authorized within the permitted area ("Permit Area") and exploration activities shall be limited to the locations identified in the Application. The Permit Area is located approximately ten (10) miles south of Silver City, New Mexico, on lands owned by Tyrone within Sections 25 and 36 of Township 19 South, Range 15 West in Grant County, New Mexico, and is designated as the permit area shown on the map within the Application titled: Figure 3: Emma-B Drill hole Locations.
- B. The Permittee is authorized to only disturb up to 3.43 total cumulative acres within the Permit Area. This amount includes all overland travel routes. Not including overland travel routes and pursuant to 19.10.3.302(A) NMAC permittee is authorized to only disturb up to 3.43 total cumulative acres within the Permit Area.

**Section 4.**                    **FINDINGS OF FACT**

*The Permit Application Package*

- A. The PAP is complete and demonstrates that the proposed operation will meet the performance and reclamation standards and requirements of Paragraphs 1-6 of 19.10.3.302.D NMAC.
- B. The PAP provides that the proposed operation meets the standards of a "Minimal impact mining operation," addressed in 19.10.1.7.M(2) NMAC, and in 19.10.3.302 NMAC, and does not fall within the exclusions in 19.10.1.7.M(2) NMAC. MMD and the other agencies, pursuant to 19.10.3.302.G, reviewed the minimal impact designation.

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 3 of 16**

- C. The Permittee has paid the initial permit application fee of \$500 as required by 19.10.2.201.F NMAC.
- D. The proposed operation and reclamation, as described in the PAP and this Permit, will meet the requirements of reclamation, as identified in 19.10.1.7.R(1) NMAC of the Rules. The reclamation plan, subject to the conditions in the Permit, demonstrates that the reclamation of the disturbed areas within the Permit Area will result in a condition that allows for the establishment of a self-sustaining ecosystem within the Permit Area that is appropriate for the life zone of the surrounding areas.
- E. The approved Post-Exploration Land Use is designated as livestock grazing and wildlife habitat.
- F. The term of the Permit is governed by Subsections A, C and D of 19.10.4.405 NMAC. The permit term shall be one year from the date of the Director's signature on this Permit.

*Right-To-Enter : Property Access Information*

- G. The Permit does not grant or create any property rights. Nor does MMD, by issuing this Permit or otherwise, make any comment on the surface or mineral rights that the Permittee may or may not have in the area covered by the Permit; only that the Permittee has provided a statement of the basis on which the Permittee has a right to enter the property to conduct mining, exploration and reclamation. Permittee is solely responsible to take whatever steps are necessary to ensure that Permittee has property rights sufficient to support the activities contemplated by the Permit.

*General Information Regarding the Permittee*

- H. The Permittee is not in violation of the terms of another permit issued by the Director or in violation of a substantial environmental law or substantive regulation at another mining operation, has not forfeited or had forfeited financial assurance in connection with another mining, reclamation or exploration permit, and has not demonstrated a pattern of willful violations of the Act, the Rules or other New Mexico environmental statutes.
- I. The Permittee has signed and certified a statement, provided within the Application, that the Permittee agrees to comply with the requirements of this Permit, the Rules, and the Act, and allows the Director to enter the Permit Area for the purpose of conducting inspections.

*MMD's Request for Comments to the Agencies and Tribes*

- J. MMD provided the cooperating agencies (the New Mexico Environment Department, the Department of Game & Fish, State Forestry Division, State Historic Preservation Office, and the Office of the State Engineer) with a copy of the Application pursuant to 19.10.3.302.G

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 4 of 16**

NMAC and requested comments from the agencies on May 20, 2019.

- K. MMD provided a map and a first notice of the Application to the following tribal entities and requested for consultation: The Isleta Pueblo, the Fort Sill Apache Tribe, the White Mountain Apache Tribe, the Mescalero Apache Tribe, and the Navajo Tribe on May 24, 2019 and a Notice of Intent to Approve the application on July 10, 2019. There were no tribal consultation requests received by MMD.
- L. MMD provided the Permittee with comments provided by the cooperating agencies on June 11, 2019, via e-mail.

*Financial Assurance*

- M. The Permittee has provided an irrevocable standby letter of credit (“ILOC”) for financial assurance (“FA”), in accordance with 43 CFR 3809 and 19.10.12.1201.A NMAC, in the amount of \$166,403.00 (one hundred sixty-six thousand four hundred three dollars), for the reclamation of eight (8) boreholes and 17 associated drill pads and access roads of the exploration project. FA has been provided by the Permittee in the form of ILOC No. HACH600691OS issued by BMO Harris Bank N.A. on July 31, 2019.

**Section 5.**                      **COMPLIANCE REQUIREMENTS**

- A. This Permit is issued pursuant to NMSA 1978, Section 69-36-1 et. seq. and Title 19, Chapter 10 NMAC. Permittee may be required to comply with other Federal, State, County or Local laws or ordinances before or while undertaking the activity that is the subject of this Permit. MMD does not, by issuing this Permit or otherwise, make any comment on Permittee’s compliance with such other laws. It is Permittee’s sole responsibility to investigate and comply with the requirements of such other laws.
- B. The Permit does not grant or create any water rights. Nor does MMD, by issuing this Permit or otherwise, make any comment on the water rights that the Permittee may or may not have available for use in the area covered by the Permit. Permittee is solely responsible and obligated to comply with all state and federal laws related to water rights sufficient to support the activities contemplated by the Permit.

**Section 6.**                      **AGENCY RIGHT OF ENTRY**

- A. The Permittee shall allow the authorized representatives of the Director, without advanced notice, upon presentation of appropriate credentials, and without delay:
  - 1) To enter upon, or through, any mineral exploration or reclamation operation at any time, as provided for in 19.10.3.302.I(3) NMAC, for the purpose of conducting inspections during exploration, and reclamation, and to determine if the Permittee is in compliance

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 5 of 16**

with the permit requirements and conditions; and

- 2) at reasonable times, and without delay, have access to and copies of any records associated with permitting and compliance required by the Act, 19.10 NMAC or the Permit.

**Section 7.**                    **PERMIT COVERAGE**

- A. This permit shall be binding on any person or persons conducting mining, exploration and reclamation operations under this Permit.

**Section 8.**                    **ENVIRONMENTAL COVERAGE**

- A. The Permittee shall take all necessary steps to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of the Permit, the Rules or the Act.

**Section 9.**                    **COMPLIANCE WITH THE PERMIT APPLICATION PACKAGE**

- A. The Permittee shall conduct mining, exploration drilling and reclamation operations only as described in the approved PAP and any other modifications approved by the Director, pursuant to 19.10.4.406 NMAC. The Permittee shall comply with any and all conditions that are incorporated in the PAP and this Permit.
- B. Where the PAP is ambiguous or in apparent conflict with the provisions outlined in this Permit, the language of this Permit will supersede the PAP.

**Section 10.**                    **GENERAL OBLIGATIONS AND CONDITIONS**

*Description of Project/Authorized Disturbances*

- A. The Permittee is authorized to vertically drill up to seventeen (17) boreholes, using a track mounted, reverse-circulation air rotary method, each with a maximum of six (6) inches in nominal outside diameter, each up to 1,300 feet deep. Reclamation of the disturbed areas shall be initiated as soon as possible and completed in accordance with the schedule in the permit.
- B. The Permittee is authorized to create no more than seventeen (17) drill pad surface disturbance areas, each no greater than forty feet by seventy feet (40' X 70') to accommodate all support equipment, including the drill rig and any ancillary support vehicles, and containing no more than one (1) connected drilling fluids/cuttings pit sumps within each drill pad area. Each drilling fluids/cuttings pit system shall be approximately ten (10) feet wide, up to ten (10) feet long and up to five (5) feet deep (approx. 10'L x 10'W x 5'D).



**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 6 of 16**

- C. The Permittee is authorized to site the location of each drill pad area identified within the PAP and in accordance with UTM coordinates, as amended, and access routes as shown on: Emma-B-Project Area Figures 3 and 4, within the PAP. The Permittee is authorized to disturb up to a total of, 6,810 feet of modified existing roads (485 feet) and new constructed roads (6,325 feet), 15 feet in width as described in the PAP. The Permittee must minimize any new surface disturbance (e.g., minimizing drill pad surface leveling and pit excavation using mechanized earthwork equipment, such as a backhoe or dozer), is permitted. To the extent possible, avoid removing or damaging standing live or dead trees and woody vegetation during drill pad set-up and construction, as well as during mobilization of equipment into and out of the project area.
- D. The Permittee is authorized to disturb no more than 3.43 acres of total cumulative disturbance within the Permit Area as defined in 19.10.3.302 A. NMAC. This amount includes seventeen (17) proposed drill pad disturbance areas (1.09 acres), and four thousand seven hundred seven (6,810) feet of new constructed roads and modifying existing roads (2.34 acres).

*Best Management Practices to be Performed*

- E. Use of the existing two-track roads and overland travel is prohibited within the Permit Area during wet, muddy conditions. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of six (6) inches deep, the soil shall be deemed too wet to adequately support construction equipment. Also, permittee will use extreme caution when driving hot vehicles over dry vegetated areas to decrease the risk of a grass or brush fire.
- F. As necessary throughout the Permit Area, and during the use of overland travel and site selection, design, and construction of drill pads, drilling fluids/cuttings pits or sumps, and roads, the Permittee shall leave all disturbances in a manner that is stable, both long-term and short-term, and non-hazardous to humans and wildlife. The preliminary reclamation plan for the site is generally described in Section 4 of the PAP for GR083EM and within this Permit.
- G. The Permittee shall implement erosion-control measures, or Best Management Practices ("BMP's"), in a manner that prevents direct impacts to surface water and ephemeral watercourses that are designed, constructed and maintained using professionally recognized standards (e.g., Natural Resource Conservation Service Standards, or the BLM *Gold Book*) for surface disturbances during the exploration project and reclamation activities as needed for erosion control, spill prevention and the avoidance or damage to ephemeral watercourses in the area. Placement of water bar structures or other appropriate measures should be taken to reduce head-cutting adjacent to roads and to prevent roadways from channelizing surface flow.

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 7 of 16**

- H. Erosion control measures or any other BMP's that are damaged or ineffective shall be repaired, replaced or redesigned, as necessary, within 24 hours, or as soon as reasonably possible, following discovery of damages. The Permittee shall commit to using a variety of erosion-control measures, as needed, if erosion control problems develop.
- I. A minimum setback of 100 feet away from any watercourse within the Permit Area is required. *(Watercourse means any channel having definable beds and banks capable of conducting generally confined runoff from adjacent lands. During floods water may leave the confining beds and banks but under normal flows water is confined within the channel. A watercourse may be perennial, intermittent, or ephemeral.)*
- J. No drilling and no storage of fuels or chemicals shall take place within any watercourse that is in the Permit Area. No excavation or filling shall take place within any watercourse until the required permits or consultations are obtained from the U.S. Army Corps of Engineers. A copy of such approval shall be provided to MMD when obtained.
- K. Appropriate spill clean-up materials, such as absorbent pads, must be available on-site at all times during road construction, site preparations, and drilling activities to address potential spills. Drop cloths or plastic tarps will be placed and secured under rigs while drilling, in addition to any other immobilized, staged, or temporarily stored equipment parked for durations extending longer than 48 hours, to contain any spill or leakage from the drill rig and any other related equipment.
- L. The Permittee shall report all spills immediately to the New Mexico Environment Department ("NMED") as required by the New Mexico Water Quality Control Commission regulations 20.6.2.1203 NMAC. For non-emergencies during normal business hours, call (505) 428-6000. For non-emergencies after hours, call (866) 428-6535 or (505) 428-6535 (voicemail, 24 hrs. /day). For emergencies only, call (505) 827-9329 (24 hrs. /day) to contact the New Mexico Department of Public Safety.
- M. The Permittee must comply with all requirements of federal and state laws pertaining to air quality pursuant to 20.2.72 NMAC.
- N. Any water, drill cuttings, drilling additives, and/or fluids produced from the exploration boreholes, shall be contained entirely within the excavated drilling fluids/cuttings pits at all times. Drilling fluids/cuttings pits, sumps, or above ground tanks shall be sized to contain the calculated volume of drill cuttings and all drilling fluids and any produced water, while still providing a substantial freeboard or emergency storage capacity.
- O. Any overburden material generated during initial excavation of drilling fluids/cuttings pits will be utilized to create an earthen berm partially surrounding each drilling fluids/cuttings pit or sump area, to prevent any run-on or run-off from precipitation events flooding onto or escaping the mud pits or the drill pad site. The Permittee should utilize BMP's, which may



**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 8 of 16**

include above-ground tanks, to contain any water produced from the exploration holes at the drill site.

- P. Any drilling locations that are situated directly upon bedrock, or otherwise lacking sufficient soil depths necessary for adequate drilling fluids/cuttings pit construction, shall discharge into portable, above-ground tanks that are sized to fully contain all drilling-related fluids. Discharge of this water, or any drilling fluids, to the ground surface or to an ephemeral watercourse (Waters of the U.S.), may be a violation of the Clean Water Act and is prohibited. All drilling cores and any excess drill cuttings shall be collected and disposed of properly.
- Q. All heavy equipment to be used within the Permit Area must be thoroughly pressure washed and/or steam cleaned prior to introducing any equipment into the Permit area in order to help prevent the introduction of non-native species to the Permit Area. This cleaning shall remove all soil, seed, vegetative matter or other debris that could contain or hold seed or plant parts. Any heavy equipment that subsequently operates outside this Permit Area shall be treated the same as during the initial mobilization onto the Permit Area. Equipment shall be considered free of soil, seed and plant debris when a visual inspection does not detect such material.
- R. Any drilling fluids/cuttings pits or sumps shall have at least one side constructed at a 3:1 (horizontal: vertical ratio) slope to allow for wildlife egress and shall also be covered with a barrier to exclude wildlife. The drilling fluids/cuttings pits shall be covered with a barrier whenever workers are not present on site, or otherwise modified to exclude both flying and terrestrial animals from any materials present within the mud pits, sumps, or any above-ground tanks that are potentially harmful to wildlife. When drilling is completed, the drilling fluids/cuttings pits shall be allowed to dry and then backfilled with native cover.
- S. Any netting used for the preclusion of wildlife should be constructed of a sturdy plastic or metal material and adequately supported so that it will not contact the liquid surface if sagging occurs. Monofilament mesh should not be used, as it can entangle birds and reptiles causing mortalities. Any plastic or metal netting should be anchored to the ground and maintained taut, and if the mesh size is greater than one inch, it should be wrapped with an additional finer mesh material around the bottom (up to approximately 12 inches) to exclude reptiles and small mammals.
- T. Any clearing of vegetation should take place from September 1 through March 31, thus minimizing the possibility of nest destruction or abandonment. If it becomes necessary to remove vegetation during the breeding season, active nests should be left undisturbed until the young have fledged.

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 9 of 16**

- U. The Permittee must maintain current MSDS documentation for drilling additives, and any other chemicals to be used throughout the duration of the operation including exploration and reclamation activities and made available for review upon request.

*Cultural and Paleontological Resource Preservation Requirements*

- V. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the Permittee, or by any personnel working on the Permittee's behalf, shall immediately report any such findings to the Department of Cultural Affairs within 24 hours. The Permittee shall suspend all operations in the immediate area of such discovery until authorization to proceed is issued.
- W. The Permittee is obligated to comply with procedures established in NMSA 1978, Section §18-6-11.2 of the Cultural Properties Act and 4.10.11 NMAC to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the Permittee shall immediately halt the disturbance and contact the Office of the Medical Investigator and the local law enforcement agency pursuant to Section 18-6-11.2 of the Cultural Properties Act and the Department of Cultural Affairs within 24 hours for instructions. The Permittee shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the Department of Cultural Affairs in consultation with Indian Tribes.

*Reclamation and Revegetation Requirements*

- X. Reclamation of disturbed areas shall occur concurrently or following the completion of drilling operations as weather and field conditions allow. Pursuant to 19.10.3.302.K NMAC, all lands, including overland access routes or terrain damaged in gaining access to or clearing the drill sites, or lands where vegetation is substantially disturbed or whose natural state has been substantially disturbed as a result of the exploration drilling, shall be restored to approximate their original condition and reseeded utilizing an appropriately certified weed-free, pure live seed mixture as approved by MMD. The MMD approved seed mixture and application rate are incorporated into this Permit and have been attached hereto as Appendix I.
- Y. Any salvaged topsoil material that is suitable as a plant growth medium, will be spread over the surface of each drill site, including and any other heavily compacted areas, then raked, disked or deep-scarified prior to seeding, to prepare a suitable seedbed for seed germination and root growth. The MMD approved seed mixture will be broadcast sown immediately after site re-contouring and seedbed preparation has been completed and while the soil surface is still friable. After the seed mix has been sown, the soil will be dragged with a chain or harrow or raked into the surface using hand tools, to cover the seed. Reclaimed areas not

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 10 of 16**

seeded before or during the summer, will be seeded in the fall to maximize the probability of successful revegetation.

- Z. Following the revegetation and reclamation activities, monitoring shall be conducted by the Permittee to assure successful establishment of vegetation and stabilization of the site. Revegetated areas have not become established by the end of the growing season will be mitigated by reseeding, mulching, grading, and/or application of waterbars, or other BMP's, to prevent erosion and site degradation.
- AA. The Permittee shall notify MMD at least 30-days prior to initiating any reclamation approved pursuant to this Permit. The site will be considered reclaimed and eligible for release of FA, once the following criteria have been met:
- 1) The Permittee has established a uniform, self-sustaining vegetative cover on disturbed areas, similar in life form to the pre-disturbance vegetation.
  - 2) No significant erosion is evident on reclaimed areas.
  - 3) All drill holes have been plugged and abandoned, as described in this Permit.

Release of FA addressing plugging and abandonment costs may occur before expiration of the permit term, once the criteria above have been met. Final release of FA addressing surface reclamation may occur after the permit term, if all the release criteria have not previously been met.

- BB. All lands to be disturbed shall be addressed under the performance and reclamation standards and requirements of 19.10.3.302 NMAC and in accordance with the reclamation plan provided in the PAP and this Permit. The Permittee is obligated to complete reclamation of all disturbed areas upon completion of exploration activities.
- CC. Where salvageable topsoil is present upon areas to be disturbed, all soil and overburden material will be stripped, stockpiled and protected for later use during reclamation. Prior to obtaining or excavating any borrow material, or "clean native fill," for use as a backfilling material and/or for use in surface reclamation activity, the Permittee must first provide MMD with the source location and estimated quantity of this borrow material, including a reclamation plan for the proposed borrow area, for review and approval prior to its excavation or use during surface reclamation. Any borrow source excavation areas approved by MMD, shall be reclaimed, upon completion of excavation materials within the borrow area, then graded and re-contoured for positive drainage, and reseeded, as prescribed in this Permit.

*Borehole and/or Well Abandonment*



**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 11 of 16**

DD. Pursuant to 19.10.3.302.L NMAC, each dry borehole shall be plugged from total depth with a column of high-density bentonite clay of sufficient composition, density, weight and viscosity to form an impermeable plug, unless another material is approved by the New Mexico Office of the State Engineer ("NMOSE"). The neat cement slurry shall be prepared according to the manufacturer's requirements, and emplaced from the bottom upwards, to approximately 2 feet of the original ground surface. The remaining hole shall be backfilled with topdressing from above the cement to the original ground surface. The hole shall be permanently plugged and abandoned as soon as is practical after drilling is complete. If a water-bearing stratum is encountered, the borehole shall be plugged before the drill rig is removed from the site and must satisfy the requirements of the NMOSE and the NMED for proper plugging of such holes.

- 1) If groundwater is encountered, the boreholes shall be considered wells and shall be permitted and sealed pursuant to the NMOSE's *Rules and Regulations Governing Well Driller Licensing, Construction, Repair, and Plugging of Wells*, 19.27.4 NMAC (see 19.27.4.36 NMAC, *Requirements for Mine Drill Holes that Encounter Water*). An NMOSE-approved *Well Plugging Plan of Operations* shall be provided to MMD following the approval of this Permit or within 30 days after groundwater was inadvertently or unexpectedly encountered during drilling activities. The approved sealant shall comply with all applicable specifications of ASTM D5299-99. Because of the anticipated hard water conditions concerning the permit area, the permittee is required to use the proper plugging material appropriate for the hardness of water encountered. The Permittee shall ensure that the correct ratio of solids to water is used during the preparation of the approved sealant. Well plugging records shall be sufficiently detailed to document plugging methodology, the proper constitution of approved sealant, and an adequate volume of sealant was used to meet theoretical volumes of plugged intervals shall be provided to NMOSE and copied to MMD. Additionally, the Permittee is required to consult with NMOSE personnel prior to plugging wet boreholes.
- 2) For each phase of borehole reclamation, the Permittee shall submit copies of the drill hole abandonment records for MMD approval, to include an affidavit signed by a licensed, bonded driller, engineer, or the project geologist, attesting to the fact that the drill holes have been plugged and abandoned according to the requirements of this Permit. The Permittee shall not initiate the next phase of drilling until the MMD has approved-and at the discretion of MMD-inspected the plugging of drill holes.

*Changes, Modifications, or Revisions to the Permit*

EE. Any changes, modifications or amendments to the approved Permit must be approved prior to implementation pursuant to 19.10.3.302.J and 19.10.4.406 NMAC.

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 12 of 16**

- FF. The Permittee shall provide a schedule of exploration drilling activities prior to commencing to facilitate effective inspection and monitoring of drilling and reclamation activities.

*Financial Assurance*

- GG. The Permittee shall maintain FA, after approval of this Permit, in the approved amount of \$166,403.00 (one hundred sixty-six thousand four hundred three dollars), using one or more approved FA instruments, pursuant to Part 12 of the Rules and sufficient to cover third-party costs of sealing, subsurface plugging and surface reclamation of eight (8) boreholes, and twenty one (17) drill pad areas, and access roads. No un-abandoned boreholes shall be present at any given time.

*Project Completion Timeline/Termination Report Requirements*

- HH. Notwithstanding any other provision of this Permit, the Permittee shall close and abandon all exploratory boreholes, including all wells, within one (1) year of date of permit issuance, unless documentation is provided from the landowner that:
- 1) The landowner wants the wells left in place, and MMD approves.
  - 2) The Permittee has submitted a mining permit application to MMD that includes the wells.
  - 3) The Permittee has received a renewal for an exploration operation, pursuant to 19.10.4.405 of the New Mexico Mining Act Rules.
- II. The Permittee shall submit a termination report, pursuant to 19.10.4.407 NMAC, at the conclusion of the exploration operation, unless the Permittee has applied for renewal of the exploration permit or applied for a mining operation permit. The termination report shall contain, at a minimum:
- 1) A description of the reclamation measures utilized by the Permittee.
  - 2) Evidence of the seed mix (seed tags from bags) and its application rate utilized by the Permittee.
  - 3) Photographs of the reclaimed areas, including any BMP's utilized by the Permittee during exploration.
  - 4) Global positioning system ("GPS") coordinates for the drill holes and/or well locations actually drilled under this Permit.

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 13 of 16**

- 5) Copies of the drill hole abandonment and plugging records and forms that includes an affidavit signed by a certified driller, engineer, or the project geologist, attesting to the fact that the holes have been plugged and abandoned according to the requirements of this permit.

**Section 11.**                    **CONCLUSIONS OF LAW**

- A. The Director concludes the project meets the requirements of a "Minimal Impact Mining Operation" addressed in 19.10.1.7.M(2) NMAC. The operation authorized by this Permit is eligible as a minimal impact operation, and the Permittee is authorized to operate a minimal impact exploration operation, pursuant to 19.10.1.7.M(2) NMAC and 19.10.3.302.A NMAC.
- B. The PAP is complete, accurate and complies with the requirements of the Act and 19.10.3.302 NMAC.
- C. The Director has jurisdiction over the Permittee and the subject matter of this Permit and process.
- D. The Permittee is permitted to conduct exploration and reclamation operations within the Permit Area upon the condition that the Permittee complies with the requirements of the Rules, Act, and this Permit, and upon the submission of such termination reports and fees as may be required under 19.10.3 NMAC and 19.10.2 NMAC.



Permit No. GR083EM  
Emma-B Exploration Project  
Minimal Impact Exploration Operation  
Page 14 of 16

CERTIFICATION

I certify that I have read, understand and will comply with the requirements of the Permit. I further certify that I am not in violation of the Act or 19.10 NMAC. I also agree to comply with the performance and reclamation standards and requirements of the Permit, the Rules, and the Act, and allow the Director to enter the Permit Area without delay for the purpose of conducting inspections during exploration and reclamation.

Bethany Vaula  
Authorized Representative of the Permittee

Operations Manager  
Title

Freeport-McMoran Tyrene Mining LLC  
Company Name

Subscribed and sworn to before me this 17<sup>th</sup> day of August, 2019

Sandra L. Martin  
Notary Public

My Commission Expires  
August 24, 2020



OFFICIAL SEAL  
SANDRA L. MARTIN  
NOTARY PUBLIC - STATE OF NEW MEXICO  
MY COMMISSION EXPIRES

August 24, 2020

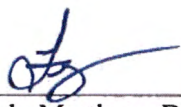
**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 15 of 16**

**ORDER**

NOW THEREFORE, IT IS HEREBY ORDERED that Permit No. GR083EM, for Freeport-McMoRan Tyrone Mining LLC to conduct exploration drilling and reclamation operations at the Emma-B Project in Grant County, New Mexico, is approved. The Permit may not be transferred without approval by the Director. The Permit is subject to all conditions set out in the Director's Findings of Fact, Conditions and Conclusions of Law.

By Order of the Director, Mining and Minerals Division, Energy, Minerals and Natural Resources Department, of the State of New Mexico.

By: \_\_\_\_\_

  
Fernando Martinez, Director  
Mining and Minerals Division  
Energy, Minerals and Natural Resources Department

Date: \_\_\_\_\_

*8/8/2019*

**Permit No. GR083EM**  
**Emma-B Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 16 of 16**

**Appendix 1 – Approved Seed Mix**

**Seed Mix: Pure Live Seed: Broadcast Mix**  
Percent Purity X Percent Germination = Pure Live Seed

	lbs./acre	seeds/lb.	seeds/sq.ft.
Blue Grama, <i>Bouteloua gracilis</i>	1	825000	18
Sideoats Grama, <i>Bouteloua curtipendula</i>	2	191000	8
Sand Dropseed, <i>Sporobolus cryptandrus</i>	0.25	5298000	30
Indian Ricegrass, <i>Achnatherum hymenoides</i>	2	141000	6
Purple Prairie Clover, <i>Dalea purpurea</i>	2	210000	9
Scarlet Globemallow, <i>Sphaeralcea coccinea</i>	1	500000	11
Winter Cover Crop of Triticale	10	13000	
<b>Total Native</b>	<b>8.25</b>		<b>82</b>
<b>Total Cover Crop</b>	<b>10</b>		