



**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 2 of 19**

The PAP is comprised of the following documents:

- A. *Subpart 3 Minimal Impact Exploration Permit Application*, dated February 26, 2019 (“Application”), and received by MMD on February 28, 2019.
- B. *BLM Notice of Intent to Conduct Mineral Exploration, Grant County, NM*; dated January 30, 2019.
- C. *Minimal Impact Exploration Permit Application Determined Administratively Complete Permit Tracking No. GR082EM, Kennecott Exploration Company Steeplerock Exploration Project in Grant County, NM*, dated April 1, 2019.
- D. *Agency Review Comments and Request for Additional Information, Kennecott Steeplerock Exploration Project, Permit No. GR082EM – Grant County, New Mexico*, dated May 14, 2019.
- E. Kennecott Exploration’s response, dated June 7, 2019 to *Agency Review Comments and Request for Additional Information, Kennecott Steeplerock Exploration Project, Permit No. GR082EM – Grant County, New Mexico*, dated May 14, 2019
- F. *Technically Complete Letter, Minimal Impact Exploration Permit Application Determined Technically Complete Permit Tracking No. GR082EM, Kennecott Exploration Company (“Kennecott”), Kennecott Steeplerock Exploration Project in Grant County, NM*, dated June 26, 2019
- G. *BLM Decision and Determination of Required Financial Guarantee Amount*, dated July 2, 2019
- H. Financial Assurance, in the amount of (Three-hundred fifty-nine thousand and six hundred dollars) \$359,600.00, was received by MMD on 7/30/2019 in the form of a Surety Bond No. 016217640 issued from Liberty Mutual Insurance Company.

**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 PAP. The Permit Area is located approximately 14 miles north of Duncan, AZ in Grant County, NM on federal lands managed by the BLM on private surface/unpatented mining claim land within Sections 20, 21, 23 of Township 16 S, Range 21 W Grant County, New Mexico, and is designated as the permit area shown on the map within the PAP titled: *Exhibit A, Map*.
- B. The Permittee is authorized to only disturb up to 3.63 total acres within the Permit Area.

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 3 of 19**

pursuant to 19.10.3.302 A. NMAC.

**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 Subsection D, Paragraphs 1-6 of §19.10.3.302 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 reviewed the minimal impact designation pursuant to §19.10.3.302.G NMAC.
- 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.
- H. The BLM controls the surface and mineral estate within a portion the Permit Area (1 drill hole location) and has provided the appropriate decision that the Permittee's Notice to drill was found to be complete pursuant to 43 CFR 3809.301 and has provided its approval to

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 4 of 19**

conduct operations on BLM lands in a letter to the Permittee dated May 4, 2018, as required by §19.10.3.302.F NMAC, and has been assigned by the BLM, the Serial No. NMNM 139562 for Notice of Intent level operations approved by the BLM. The Permittee has satisfactorily demonstrated its right to access pursuant to §19.10.304.D(1) NMAC, through an active and executed Mining Claim provided to MMD.

- I. Eleven drill hole sites are located on Unpatented Mining Claim Numbers SR119, SR607, SR617, SR618, SR619, SR620, SR621, SR629, SR632, SR633 held by Kennecott Exploration Company.

*General Information Regarding the Permittee*

- J. 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.
- K. The Permittee has signed and certified a statement, provided within the PAP, 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*

- L. MMD provided the cooperating agencies (BLM, New Mexico Environment Department, Department of Game & Fish, State Forestry Division, State Historic Preservation Office, New Mexico State Land Office, and the Office of the State Engineer) with a copy of the PAP pursuant to §19.10.3.302.G NMAC, and requested comments from the agencies on April 1, 2019.
- M. MMD provided the PAP to the following tribal entities and requested review and comment: Acoma Pueblo, White Mountain Apache Tribe, Isleta Pueblo, Mescalero Apache, Navajo Nation, and the Hopi Tribe on April 1, 2019. Tribal comments were received White Mountain Apache Tribe.
- N. MMD provided the Permittee with comments provided by the cooperating agencies and tribal entities on May 14, 2019, via hard copy and electronic mail.
- O. Permittee provided MMD with sufficient responses to all agencies and tribal comments on June 7, 2019 via hard copy.

*Financial Assurance*

- P. The Permittee has provided a joint BLM-MMD reclamation bond for surface and subsurface

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 5 of 19**

financial assurance ("FA"), in accordance with 43 CFR 3809 and §19.10.12.1201.A NMAC, in the amount of \$359,600 (three-hundred fifty-nine thousand and six-hundred dollars), for a total of 4 boreholes at a time. Financial Assurance has been provided by the Permittee in the form of Surety Bond No. 016217640 issued by Liberty Mutual Insurance Company of Massachusetts on July 22, 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. Since a portion of the permit area is on Federal Lands, the expiration, or termination, of the BLM's authorization to conduct operations on the property automatically suspends the permittee's authority to continue mining operations on the property. Such suspension does not include reclamation operations by the Permit issued under §19.10.3 NMAC.
- C. Since a portion of the Permit Area is on private land, the expiration or termination of the landowner's authorization to conduct mining operations on the property automatically suspends the Permittee's authority to continue mining operations on the property. Such suspension does not include reclamation operations by this permit issued under §19.10.3 NMAC.
- D. 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 with the permit requirements and conditions; and

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 6 of 19**

- 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.
- B. In the event that the BLM or the Private Landowner terminates, or otherwise prevents or impedes access to the Permit Area by the authorized representatives of the Director, the Director will notify the Permittee. The Permittee shall immediately cease all mining operations within the Permit Area and will not resume mining operations until such authorized representatives' access to the Permit Area has been restored.
- C. In the event that the Director's authorized representatives' access to the Permit Area is not restored by BLM, or the Private Land Owner within 60 days after the Director has given Permittee the notice provided for in subparagraph B of this Section 6, the Permittee shall immediately begin reclamation of the Permit Area.

**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 eleven (11) boreholes, using a track, buggy, or truck-mounted reverse-circulation mud rotary, or core drilling method, and/or an air rotary drilling method when necessary, each with a maximum of 4.8 inches in nominal

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 7 of 19**

outside diameter, each up to 6,000 feet deep. Reclamation of the disturbed areas shall be initiated as soon as possible and completed in accordance with the schedule in this Permit.

- B. The Permittee is only authorized to advance in four (4) drill hole increments due to Financial Assurance only being provided for four (4) holes at a time. Once Well Drilling and Plugging Records issued by New Mexico OSE are received by MMD from the operator, the operator will be authorized to move forward with the next four (4) drill hole locations. The table below describes the Financial Assurance associated with the 4-hole Floating Financial Assurance Option. Under this option **only four (4) drill holes** are authorized to be open at one time.

Subsurface Plugging and Abandonment Financial Assurance				4-hole Floating FA Option
\$ Cost/Ft.	Ft.	Number of Holes	Total	
14	6,000	11	924,000	336,000
<b>Surface Reclamation Financial Assurance</b>				
Category	\$Cost/Acre	Number of Acres	Total	
First acre or less	8,900	1	8,900	8,900
Additional acres	4,900	3	14,700	14,700
<b>Total FA (\$)</b>			947600	359,600

- C. The Permittee is authorized to create no more than eleven (11) drill pad surface disturbance areas, each no greater than one-hundred by one-hundred (100' X 100') to accommodate all support equipment, including the drill rig, pipe truck and any ancillary support vehicles, and containing no more than two (2) sump or mud pit sumps within each drill pad area. Each mud pit system shall be approximately twenty-five (25) feet wide, up to ten (10) feet long and up to four (4) feet deep (approx. 25'L x 10'W x 4'D) and connected by a shallow cross-over ditch. These mud or sump pits will also be used for cutting disposal purposes within the drill pad surface disturbance area. All mud and cutting disposal pits will be required to dry prior to final reclamation of those pits.
- D. The Permittee is authorized to site the location of each drill pad area identified within the PAP and in accordance with UTM coordinates and access routes as shown within the PAP, and directly upon existing ground surfaces, where possible, and without mechanically clearing, blading or otherwise constructing each drill pad area. Access to each drill site will be through two-track overland travel consisting of a maximum of 4,859 feet of new road construction, 10 feet wide, to each drill site from existing roads. The Permittee shall minimize any new surface disturbance (e.g., only minor drill pad surface leveling and pit excavation using mechanized earthwork equipment, such as a backhoe or dozer, is permitted) and shall also utilize any existing two-track trails and BLM roads requiring only minor improvements, wherever possible, for site and drill pad access during all site access, including, but not limited to, drilling and reclamation activities. To the extent possible,

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 8 of 19**

Permittee shall 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.

- E. The Permittee is authorized to disturb no more than 3.63 acres of total cumulative disturbance within the Permit Area as defined in 19.10.3.302 A. NMAC. This amount includes all eleven (11) proposed drill pad disturbance areas (3.63 acres); which includes the twenty-two (22) 25'L x 10'W x 4'D Mud/Sump/Disposal Pits, and four-thousand eight-hundred and fifty-nine (4,859) feet of new constructed roads (1.11 acres). Additionally, any areas of overland travel shall be scarified and seeded after all travel to the site has ceased.

*Best Management Practices to be Performed*

- F. 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 shall use extreme caution when driving hot vehicles over dry vegetated areas to prevent the ignition of a grass or brush fire.
- G. As necessary throughout the Permit Area, and during the use of overland travel and site selection, design, and construction of drill pads, mud 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 GR082EM and within this Permit.
- H. 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.
- I. 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.



**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 9 of 19**

- J. A minimum setback of 100 feet away from any watercourse within the Permit Area is required with the exception of drill hot sites 19PDS-Mr, 19PDS-Ar, and 19PDS-Br. Those specific sites shall be set back the maximum distance practical given the site conditions. *(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.)*
- K. 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.
- L. Appropriate spill clean-up materials, such as absorbent pads, shall 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.
- M. 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.
- N. The Permittee must comply with all requirements of federal and state laws pertaining to air quality requirements pursuant to §20.2.72 NMAC.
- O. Any water, drill cuttings, mud and drilling additives, and/or fluids produced from the exploration boreholes, shall be contained entirely within the excavated mud and disposal pits at all times. Mud pits, disposal 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.
- P. Any overburden material generated during initial excavation of mud and disposal pits shall be utilized to create an earthen berm partially surrounding each mud 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 shall utilize BMP's, which may include above-ground tanks, to contain any water produced from the exploration holes at the drill site.
- Q. Any drilling locations that are situated directly upon bedrock, or otherwise lacking sufficient soil depths necessary for adequate mud pit construction, shall discharge into

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 10 of 19**

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.

- R. All heavy equipment to be used within the Permit Area shall 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.
  
- S. Any drilling mud pits, disposal 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 expanded metal grates or fenced and netted in accordance with New Mexico Department of Game and Fish wildlife fencing guidelines. The drilling mud pits and disposal pits shall be covered with expanded metal grates, fenced and netted 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 mud pits shall be allowed to dry and then backfilled with native cover.
  
- T. Any netting used for the preclusion of wildlife shall 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 shall not be used, as it can entangle birds and reptiles causing mortalities. Any plastic or metal netting shall be anchored to the ground and maintained taut, and if the mesh size is greater than one inch, it shall be wrapped with an additional finer mesh material around the bottom (up to approximately 12 inches) to exclude reptiles and small mammals.
  
- U. Any clearing of vegetation shall 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 shall be left undisturbed until the young have fledged.
  
- V. The Permittee shall 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.

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 11 of 19**

*Cultural and Paleontological Resource Preservation Requirements*

- W. 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 BLM or NMSLO for those portions of the project area. The Permittee shall suspend all operations in the immediate area of such discovery until authorization to proceed is issued by the BLM or NMSLO. An evaluation of the discovery will be made by the BLM or NMSLO to determine appropriate actions to prevent the loss of significant cultural or scientific values. The Permittee shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures to be made by the BLM or State Lands Office after consulting with the Permittee.
- X. The Permittee is obligated to comply with procedures established in Section 18-6-11.2 of the Cultural Properties Act, NMSA 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*

- Y. Reclamation of disturbed areas shall occur concurrently, or directly after 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 as nearly as possible to their original condition and reseeded and mulched utilizing an appropriately certified weed-free, pure live seed mixture of native cool- and warm-season grasses and shrubs beneficial to livestock and wildlife, as approved by the BLM. The BLM approved seed mixture and application rate are incorporated into this Permit and have been attached hereto as *Appendix 1*.
- Z. Any salvaged topsoil material that is suitable as a plant growth medium, shall be spread over the surface of each drill site, including 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 BLM approved seed mixture shall 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 shall be dragged with a chain or harrow or raked into the surface using hand tools, to cover the seed. Each

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 12 of 19**

reclaimed site shall be mulched with certified weed-free straw, or other mulching materials approved by the BLM, and then crimped or tacked in place. Reclaimed areas not seeded before or during the summer, shall be seeded in late fall to maximize the probability of successful revegetation. Within any areas prohibitive to ripping or scarification, the seed shall be hand- or broadcast sown immediately after site re-contouring and seedbed preparation at an application rate double that of the rate prescribed by the BLM, and then raked into the soil and mulched.

- AA. 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 that have not become established by the end of the growing season shall be mitigated by reseeding, mulching, grading, and/or application of waterbars, or other BMP's, to prevent erosion and site degradation.
- BB. 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.

- CC. 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.
- DD. Where salvageable topsoil is present upon areas to be disturbed, all soil and overburden material shall 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

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 13 of 19**

prescribed in this Permit.

*Borehole and/or Well Abandonment*

- EE. 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 high-density bentonite shall be hydrated according to the manufacturer's requirements, and emplaced from the bottom upwards, to approximately 12 feet of the original ground surface. A 10-foot column of cement shall then be added to within approximately 2 feet of the ground surface. The cement shall be hydrated according to the manufacturer's requirements. The remaining hole shall be backfilled with topdressing from above the cement plug 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.

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, *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 OSE personnel prior to plugging wet boreholes.

All required NMOSE Permits for this project shall be obtained prior to starting the exploration project.

*Changes, Modifications, or Revisions to the Permit*

- FF. Any changes, modifications or amendments to the approved Permit shall be approved prior to implementation pursuant to §19.10.3.302.J and §19.10.4.406 NMAC.

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 14 of 19**

- GG. The Permittee shall provide a schedule of exploration drilling activities prior to commencing to facilitate effective inspection and monitoring of drilling and reclamation activities and must include any exploration drilling activities or phases anticipated by the Permittee.

*Financial Assurance*

- HH. The Permittee shall maintain FA, after approval of this Permit, in the approved amount of \$359,600 (three-hundred fifty-nine thousand and six-hundred dollars), using one or more approved FA instruments and until released, pursuant to Part 12 of the Rules and sufficient to cover third-party costs of sealing, subsurface plugging and surface reclamation of one (1) borehole and drill pad areas to be completed and reclaimed.

*Project Completion Timeline/Termination Report Requirements*

- II. 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.
- JJ. 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 drilled under this Permit.

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 15 of 19**

- 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. GR082EM  
Kennecott Steeplerock Exploration Project  
Minimal Impact Exploration Operation  
Page 16 of 19

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.

E. Best

Authorized Representative of the Permittee

ERIK BEST, OPERATING OFFICER

Title

KENNECOTT EXPLORATION COMPANY

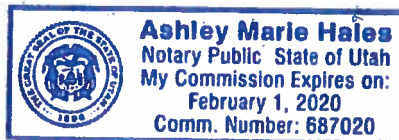
Company Name

Subscribed and sworn to before me this 5<sup>th</sup> day of AUGUST, 2019

Ashley Marie Hales  
Notary Public

My Commission Expires

February 1, 2020





**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 17 of 19**

**ORDER**

NOW THEREFORE, IT IS HEREBY ORDERED that Permit No. GR082EM is approved. Kennecott Exploration Company is authorized to conduct mining, exploration drilling and reclamation operations at the Kennecott Steeplerock Exploration Project in Grant County, New Mexico. 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:

8/8/2018

**Appendix 1 - Recommended BLM Seed Mix & Planting Methodology-**

**Permit No. GR082EM**  
**Kennecott Steeplerock Exploration Project**  
**Minimal Impact Exploration Operation**  
**Page 18 of 19**

**Kennecott Steeplerock Minimal Impact Exploration Project**

Recommend seeding to be conducted between June 15 and July 15, to coincide with onset of rainy season and well after spring winds have subsided. This gives optimal chances of successful seeding/vegetation establishment. If seeding is to be watered regularly (2-3 times per week), planting can be done as early as May 1<sup>st</sup>. Recommend consulting with Authorized Officer if see application is done any other time of year.

This area should remain un-disturbed until mid-June, to reduce wind erosion. At that time, soil in these areas to be reclaimed should be treated to reduce compaction. Even very minimal use of roads greatly increases compaction. Soil structure compaction reduces available soil air and water; this reduction kills soil organisms and decreases success rate of re-vegetation.

Seed-bed preparation needs to be done to provide a hospitable environment for germinating seed by breaking up impermeable soil layers that have formed and increasing void spaces for air and water. Ground shall be roughed-up prior to planting, by raking, harrowing or other methods.

Seed shall be broadcast with a "cyclone" hand seeder or similar broadcast seeder to facilitate an even spread of seed. Hydro-mulching/seeding can also be performed just as long as the soil is prepared prior to application.

After seed is broadcast, ground shall be raked or dragged, to help bury seed and improve soil contact and provide texture. Next, mulch should be placed to prevent loss of moisture and seed to wind.

Mulching is **required** on all seeding projects. Mulch shall be free of weeds and weed seed. Mulching shall be done using one of these following methods:

- A. weed-free straw (2 tons/Ac)
- B. wood residues (sawdust, wood chips, bark (2 tons/Ac)
- C. hydro-mulching (1,500 lb./Ac)
- D. composted manure (5 tons/Ac)
- E. excelsior blanket
- F. straw jute

Straw mulch is not recommended if livestock potentially have access to the area. Livestock should be temporarily fenced-out of any seeded area if at all possible, as they will otherwise greatly reduce possibility of successful re-vegetation. Probability of successful seeding will be considerably increased if fencing remains until reclamation is stable, and plants have grown well enough to withstand grazing. Stabilization would occur after a minimum of two full summer growing seasons after planting. Mulch shall be applied on the surface within one day following seeding. Mulch must be free of noxious weeds and other diseased plant residues. Rotten or molded hay is not acceptable as mulch. A soil-stabilizer or tackifier may be applied as an overspray after seed and mulch are in place. This tack should be at a sufficient rate to prevent

Permit No. GR082EM  
Kennecott Steeplerock Exploration Project  
Minimal Impact Exploration Operation  
Page 19 of 19

mulch moving due to wind or rain. The following is the link to certified weed-free mulch providers:

<http://aces.nmsu.edu/ces/seedcert/certified-weed-free-fora.html>

If cattle or other livestock have access to this area, straw mulch is not recommended. If livestock can be kept off this seeded area during the growing season those first two summers after seeding, successful seeding probability can be greatly increased.

The seeding rate is given for Pure Live Seed (PLS).  
Percent purity X percent germination = Pure Live Seed.

<u>Species</u>	<u>LBS/AC PLS</u>
Blue grama ( <i>Bouteloua gracilis</i> )	3.0
Sand Dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Purple Three-Awn ( <i>Artistida purpurea</i> )	2.0
Bush Muhly ( <i>Muhlenbergia porteri</i> )	1.0
Winter Fat ( <i>Krascheninnikovia lanata</i> )	4.0
Desert Globemallow ( <i>Sphaeralcea ambigua</i> )	0.25
Desert marigold ( <i>Baileya multiradiata</i> )	.025
<b><u>Total</u></b>	<b><u>11.5</u></b>

If you have difficulty in obtaining any of these species or substitutes are necessary due to lack of seed availability, please contact Leighandra Keeven, BLM Geologist at (575) 525-4337.

