

FINDING OF NO SIGNIFICANT IMPACT
Environmental Assessment
EA# DOI-BLM-NM-L000-2014-0001
Freeport-McMoRan Tyrone, Inc.
Amendment to Mine Plan of Operations for the Little Rock Mine
(NMNM091644)

INTRODUCTION

The Bureau of Land Management (BLM) has conducted an environmental assessment (EA# DOI-BLM-NM-L000-2014-0001) for the Freeport-McMoRan Tyrone Inc. (Tyrone) Amendment to the Mine Plan of Operations for the Little Rock Mine (NMNM091644) (MPO Amendment). Under the Proposed Action, the BLM would approve the MPO Amendment authorizing surface disturbance to BLM-managed land that is necessary for the expansion of the current open pit configuration and the continued construction, operation, and reclamation of the Little Rock Mine. Within the Proposed Action area, the MPO Amendment proposes:

- A limit of disturbance expanding the open pit, which includes:
 - Construction, operation, and reclamation of the expanded open pit
 - Construction, operation, and reclamation of the western haul road
 - Installation of instrumentation, utilities, and access for various operational, monitoring, closure, and post-closure activities
- Two alignments for linear facilities on BLM-managed land
 - Dewatering pipeline alignment #2
 - Power line alignment

The Proposed Action would authorize new surface disturbance to approximately 109 acres of land managed by the BLM and approximately 91 acres of private land under a connected non-Federal action, as delineated in Table 1.

Table 1 Approximate New Disturbance Areas within the Proposed Action Area

	Proposed New Disturbance Area (acres)		Total Proposed New Disturbance Area (acres)
	Proposed Action (BLM-managed land)	Connected Non-federal Action (private land)	
Proposed limit of disturbance	106	91	197
Linear facilities			
Dewatering pipeline alignment #2	< 1	--	< 1
Power line alignment	< 2	--	< 2
Total	109	91	200

The underlying need for the proposal would be met while accomplishing the following objective:

- That the BLM must respond to the Proposed Action pursuant to the General Mining Law and Federal Regulations found at 43 CFR 3809.

The Little Rock Mine project area consists of an existing mine, which entails approximately 320 acres of earlier, existing, and approved surface disturbance on public and private lands. The Little Rock Mine and its vicinity have been subject to previous mining activities, with the first record of mining in the area in the 1890s; the development of an open pit mine began in the 1970s. The mine includes already authorized facilities such as the open pit, haul road, and power and water systems. The primary change analyzed in the Proposed Action is the expansion of the open pit. EA# DOI-BLM-NM-L000-2014-0001 is attached. A No Action Alternative and a Proposed Action alternative were analyzed in the EA.

FINDING OF NO SIGNIFICANT IMPACT:

Based upon a review of the EA and the supporting documents, I have determined that the project is not a major Federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27 and do not exceed those effects described in the Mimbres Resource Management Plan/Final Environmental Impact Statement. Therefore, an environmental impact statement is not needed.

This finding is based on the context and intensity of the project as described:

Context: The project is a site-specific action directly involving approximately 109 acres of BLM-administered land not previously authorized for surface disturbing activities and approximately 189 acres previously authorized. This action by itself does not have international, national, regional or state-wide importance.

Intensity: The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27 and incorporated into resources and issues considered (includes supplemental authorities Appendix 1 H-1790-1) and supplemental Instruction Memorandum, Acts, regulations and Executive Orders.

The following have been considered in evaluating intensity for this proposal:

1. Impacts may be both beneficial and adverse.

The Proposed Action would impact resources as described in the EA. Design features to reduce impacts were incorporated into the Proposed Action, as described in Section 2.1 of the EA. Potential indirect effects of the destabilization and removal of soil include increased vulnerability to erosion by wind and water. Storm water from portions of the Proposed Action and connected non-Federal action (such as the western haul road and proposed linear facilities) would include Best Management Practices (BMPs) mandated by the continued adherence to the Tyrone Storm

Water Pollution Prevention Plan and the design features to minimize erosion, control sedimentation, and reduce pollutants in storm water discharges from new disturbance areas. Based on the existing level of activity at the site, continued implementation of the BMPs and the design features, the Proposed Action and connected non-Federal action would not result in substantial impacts to soil. Erosion and sediment transport may increase slightly in the short-term, down-gradient of the Deadman Canyon diversion. However, design features associated with the Deadman Canyon diversion channel would facilitate sediment deposition in the channel and minimize the potential for erosion through the engineered design of the channel outlet.

None of the environmental effects discussed in detail in the EA are considered significant.

The continued extraction and processing of copper ore from the Little Rock Mine would extend ongoing mining operations. The potential extension of operations at the Little Rock Mine would sustain employment at the mine site and continue to provide economic benefits to the surrounding communities, Grant County, and the state. The Proposed Action would also generate additional revenues for the state and county through continuing indirect employment and tax generation.

2. The degree to which the selected alternative will affect public health or safety.

The Proposed Action will have minimal effect to public health or safety. Activities at the Little Rock Mine are regulated by the Mine Safety and Health Administration, and Tyrone maintains security plans to prevent unauthorized access to the project area. This is further discussed in Section 2.1.3.2 of the EA.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas.

The following resources are not present in the project area and will not be impacted: wetlands, wilderness, land with wilderness characteristics, wild and scenic rivers, or other ecologically critical areas. There are no eligible or listed cultural resource sites. As a result, the Proposed Action would have no effect on cultural resources.

The following components of resource issues identified in scoping, although present, would not be affected by the Proposed Action for the reasons listed in Chapter 4 of the EA. The following is a brief summary of the impact conclusions:

Surface Water: The additional area encompassed by the open pit (west of the Deadman Canyon diversion) would no longer contribute storm water runoff to down-gradient drainages. The loss of 131 acres represents less than a 0.1 percent change to the cumulative watershed of Mangas Creek at its confluence with the Gila River. As a result of construction activities, erosion and sediment transport may increase slightly in the short-term, down-gradient of the Deadman Canyon diversion. The diversion would be constructed with grade control structures to facilitate sediment deposition in the channel. An outlet structure would be designed to transition

the hydraulic properties of the flow from the constructed channel to the existing location and flow condition in the natural channel.

Groundwater: The surface elevation of the pit lake is predicted to reach 5,700 feet once pit lake water levels stabilize, roughly 80 years after closure. Under the Proposed Action and connected non-Federal action, the pit lake would cover approximately 42 acres and hold an estimated 5,300 acre-feet of water. Due to the predicted area of the long-term pit lake surface, a substantial portion of the water flowing into the lake would evaporate; approximately 76 percent of the total inflow would be lost to evaporation at the 5,700-foot level.

During operations, the dewatering of the open pit would cause a groundwater cone of depression. At the maximum depth of pit dewatering, the 1-foot drawdown (drop in groundwater elevation) is approximately 4,000 feet up-gradient of the edge of the open pit in the direction of the Tarulli Well and Red Rock Subdivision. Given that the Tarulli Well and Red Rock Subdivision are more than approximately 9,000 and 16,000 feet from the edge of the pit, respectively, no measurable drawdown is anticipated at these locations.

Table 10 of the EA shows an increase in concentration for some constituents between the 30- and 100-year predictions (*e.g.*, chloride). This is a result of the ongoing evaporative loss of water from the pit lake surface. The effect of this evapo-concentration does not change constituents that are in chemical equilibrium with the minerals in the pit walls and lake (*e.g.*, copper), and the effect of evapo-concentration would be similar to those predicted to occur under the no action alternative.

Groundwater sampling would continue through mining and reclamation, and then for 30 years following completion of final reclamation.

Vegetation: The Proposed Action and connected non-Federal action would result in direct impacts to approximately 109 acres of previously undisturbed BLM-managed land and approximately 91 acres of previously undisturbed private land. The amount of disturbance is only a small fraction of the same vegetation and habitat types found in the region and surrounding the project area. Further, disturbed areas would be reclaimed following mining.

Wildlife and Special Status Species: The previously undisturbed land serves as potential wildlife habitat for wildlife species, although these areas are situated adjacent to existing and ongoing mining facilities and features that would continue under the No Action Alternative. The Proposed Action and connected non-Federal action would represent an approximate 0.15 percent loss of the available habitat in the Mangas Creek Watershed. Undisturbed land is available beyond this watershed, including areas within the Burro Mountain Region of the Gila National Forest, which includes a total of approximately 165,000 acres of the same or similar habitat types.

Under the Proposed Action and connected non-Federal action, direct impacts to the northern goshawk and piñon jay would not be anticipated. Potential indirect impacts may include a loss of nesting, foraging, and breeding habitat as a result of vegetation removal and development of the Proposed Action and connected non-Federal action; however, because of similar habitat

surrounding the Proposed Action area, these species would likely continue to nest, forage, and breed outside of the area.

The mining activities of the Proposed Action would not be expected to adversely affect migratory birds. Further, Tyrone would continue to implement the 2012 Migratory Bird Conservation Plan (Appendix C in the EA), which provides for hazing and engineering methods, in addition to monitoring and reporting, as conservation measures to protect migratory birds. The conservation plan utilizes multiple preventative strategies to minimize bird contact with mine operations. These strategies include both passive methods (e.g., construction and maintenance of offsite water bodies) and active methods (e.g., bird hazing, barriers, bird balls, and radar systems with alarms) to manage and minimize potential impacts to migratory birds.

Air: The geometry, locations, and magnitude of potential air emission sources associated with the Proposed Action were simulated within the AERMOD air dispersion model and superimposed on other emissions from the Tyrone Mine and background air quality. Specific elements of the Proposed Action and connected non-Federal action considered in the model include expansion of the open pit and the western haul road. The AERMOD model demonstrates that compliance with the ambient air quality standards would be maintained up to a maximum mining rate of 300,000 tons per day, with a maximum of 250,000 tons per day being derived from haulage of waste rock. However, an increase in the mining rate at the Little Rock Mine is not planned due to physical size and space constraints within the open pit. The expansion of the open pit and addition of the western haul road would not cause an exceedance of applicable ambient air quality standards.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The effects on the quality of the human environment are not likely to be highly controversial. There is no scientific controversy over the nature of the impacts identified during the analysis.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The project is not unique or unusual. The BLM has experience implementing similar actions in similar areas. Also, there were no highly uncertain or unknown risks identified during the analysis of the Proposed Action.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Proposed Action does not establish a precedent for future actions with significant effects and does not represent a decision in principle about a future consideration. Significant effects are not predicted and a complete analysis is described in Chapter 3 of the EA. A complete analysis of the direct, indirect, and cumulative effects of the selected alternative and all other alternatives is described in Chapter 4 of the EA.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts – which include connected actions regardless of land ownership.

Significant cumulative effects are not predicted. A complete disclosure of the effects of the project is contained in Chapters 3 and 4 of the EA.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

The Proposed Action will not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural, or historical resources. A cultural inventory has been completed for the project area, and no sites were found to be eligible or potentially eligible for listing on the National Register.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973, or the degree to which the action may adversely affect: 1) a proposed to be listed endangered or threatened species or its habitat, or 2) a species on BLM's sensitive species list.

The Proposed Action will have no effect on endangered or threatened species or their habitat, as none are known to occur in the project area or are unlikely. This is further outlined in Table 13 of the EA.

There are some known BLM sensitive status species that occur in the project area, and they are listed in Table 14 of the EA. Impacts to the sensitive status species are not predicted to be significant; the impacts are discussed in Section 3.3.3 of the EA.

10. Whether the action threatens a violation of a Federal, State, local, or Tribal law, regulation or policy imposed for the protection of the environment, where non-Federal requirements are consistent with Federal requirements.

The project does not violate any known Federal, State, local, or Tribal laws and regulations imposed for the protection of the environment. The Little Rock Mine Project is being concurrently reviewed by the State of New Mexico regulatory agencies.

Shirley Williamson (Acting)
Authorized Officer

12/30/15
Date