



Tyrone Operations  
P.O. Box 571  
Tyrone, NM 88065

July 7, 2021

**Certified Mail #9171999991703579979486**  
**Return Receipt Requested**

Mr. Jerry Schoeppner  
Energy, Minerals and Natural Resources Department  
Mining and Minerals Division  
Mining Act Reclamation Program  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Dear Mr. Schoeppner:

**Re: Amendment to Revision Application to Permit**  
**No. GR007RE, Little Rock Mine Existing Mining Operation**

Freeport-McMoRan Tyrone Inc. (Tyrone) submitted a Revision Application dated June 11, 2020, updating the Little Rock Closure/Closeout Plan (CCP) and requesting certain expanded mining activities at the site. The application was deemed administratively complete on July 6, 2020 by the Mining and Minerals Division (MMD). Most other steps in the review process for this revision are complete or nearing completion; however, the Federal permitting process is lagging significantly. Tyrone had included/bundled some short-term and long-term changes into the revision, assuming that the Federal and State processes would be completed at about the same time. Tyrone hereby proposes an amendment to the June 11, 2020 revision application to request a partial revision/CCP approval for the Northern Haul Road in accordance with Rule 19.10.5.506 J. Tyrone has received the necessary federal approvals related to this portion of its application. Tyrone requests that this part of the revision be approved now and that the remaining portions of the revision be approved when the federal permitting process is completed for the remainder of the changes sought in the application. This amendment request summarizes the description of the portion of the closeout plan that Tyrone requests be approved while the remaining federal permitting process proceeds and summarizes how the approval criteria for this portion of the revision have or will be met in coordination with this request.

**Description of Portions of the Revision Requested for Partial Approval**

The adjustment referred to the haul road crossing of Deadman Canyon (referred to as the Northern Haul Road in the Updated CCP) is needed to continue mining activities associated with Little Rock

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Phase 6 mining (approved in previous permitting actions). The adjustment to the haul road is entirely within the area already approved (by Revision 14-1) for mining at Little Rock (see Figure 1-3; Section 2.1.3, page 6 of the Updated CCP; and Section 2.1.4.3 page 7 of the Updated CCP). The Little Rock Phase 6 mining activity has excavated into Deadman Canyon which now reports to the Little Rock Open Pit. In the near future, the current Little Rock Haul Road will be mined out and so it is essential that the adjustment to the Northern Haul Road be completed to continue Little Rock Phase 6 mining, which is critical to Tyrone's current mining schedule. This haul road alignment adjustment requires a fill of approximately one million cubic yards to be placed across Deadman Canyon. The fill will be constructed of inert/non-discharging material and follow the material characterization and handling procedures outlined in Tyrone's existing, New Mexico Environment Department (NMED) approved, Waste Rock Characterization and Handling Plan for the 9A and 9AX Waste Rock Stockpiles (Material Handling Plan) dated June 6, 2016. The fill will be removed at closure to build the Deadman Diversion and re-establish the Deadman Canyon drainage (see Appendix C of the Updated CCP, Reclamation Cost Basis Summary Report, page 17, and Appendix A Engineering Take-Offs/Quantities).

#### Explanation of How MMD Approval Criteria Have Been Provided/Completed

The following paragraphs indicate how Rule 19.10.5.506 J have been fulfilled (item numbers below correspond to the line items in the rule).

- (1) The permit application was ruled administratively complete about one year ago. Tyrone sent out a public notice on June 12, 2020. Tyrone has responded to numerous comments by various agencies and community members and a public hearing was held on June 3, 2021.
- (2) The revision fee was submitted with the revision application dated June 11, 2020. The largest change associated with this permit approval is the financial assurance. Tyrone proposes to increase financial assurance (FA) for Little Rock by \$2,129,045 utilizing a surety bond to provide the financial assurance to excavate the Northern Haul Road from Deadman Canyon, construct the Deadman Canyon Diversion, and reclaim the associated disturbed areas to Wildlife Habitat. This cost includes the changes to FA resulting from comments received recently from MMD. Please see Attachment 1 with the revised cost estimate and summary tables related to only the Northern Haul Road and the Deadman Canyon Diversion.
- (3) The closeout plan was provided and provides sufficient information to determine that an SSE will be achieved.
- (4) The action is on a combination of BLM managed land and private land. Tyrone has requested that the BLM evaluate the request to approve the northern haul road separately. BLM has determined that the Northern Haul Road is a minor change and has approved the action. See BLM's approval letter found in Attachment 3.
- (5) Tyrone has requested an amendment to DP-1236 to ensure all of their requirements are met and approval will be obtained prior to construction (letter dated June 23, 2021). Tyrone also requested NMED to consider issuing a determination for either the partial revision or the entire revision if they can at this time.

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(6) The notarized statement is typically part of the permit revision associated with this request and Tyrone anticipates there will be a partial revision issued for this purpose for this amendment to the application.

(7) The Forest Service (FS) was notified of Tyrone's intent to seek separate approval of the Northern Haul Road in a meeting held June 17, 2021. The FS was also consulted during the BLM's evaluation of the Northern Haul Road. Additionally, the Northern Haul road does not impact FS lands.

(8) The Deadman Canyon Approved Jurisdictional Determination was completed January 25, 2021 for Tyrone from the Corp of Engineers (see attachment 3).

Please contact Ms. Mandy Lilla at (575) 912-5388 if you have questions.

Sincerely,

Handwritten signature of Thomas L. Shelley in cursive, followed by the word "for" written in a smaller, simpler script.

Thomas L. Shelley  
Environmental Manager  
Environmental Services

TLS:mjl  
20210707-100

- c. Holland Shepherd – MMD
- David Ohori – MMD
- Brad Reid – NMED
- Kurt Vollbrecht - NMED

**Attachment 1**  
**Little Rock Northern Haul Road**  
**Cost Estimate**

## **INTRODUCTION**

Freeport-McMoRan Tyrone Inc. (Tyrone) is proposing to construct the Northern Haul Road located at Little Rock Mine. The process and associated cost factors that were used in the earthwork reclamation cost estimate was originally prepared by Telesto Inc. (Telesto) and updated by Tyrone to reflect MMD's comments in an email dated May 6, 2021.

The attached cost estimate includes all the February 2021 proposed reclamation activities, assumptions, and designs, associated with the: Northern Haul Road (also listed as 'Haul Roads' within attached cost estimate) and the re-establishment of Deadman Canyon drainage.

## **RECLAMATION DESIGN**

See the Little Rock Mine Closure/Closeout Plan Earthwork Cost Estimate submitted in February 2021 for additional details.

Tyrone will remove fill located in Deadman Canyon during closure and utilize it to re-establish the Deadman Canyon drainage. The remaining haul road area will be revegetated.

Activities associated with the re-establishment of Deadman Canyon drainage include grading, compacting, installing ACB's, and constructing stormwater channels. Tyrone will reclaim the outsoles (outside ACB's and above the pit lake).

## **COST ESTIMATE**

The attached FA proposal only contains cost associated with the Northern Haul Road and re-establishment the Deadman Canyon drainage (referenced as 'Deadman Diversion' within the cost estimate spreadsheets).

Tyrone utilized the February 2021 submittal of the updated cost estimate and updated wages where applicable (per MMD's email dated May 6, 2021). Below is Table 1 summarizing these costs. See attachment 2 for the detailed cost estimate calculation.

<b>Table 1</b>		
<b>Facility</b>	<b><sup>1</sup>Northern Haul Road</b>	<b>Deadman Diversion</b>
Reclaimed Acres	9.68	12.75
Earthwork		
Capital Costs	\$ 2,408	\$ 1,631,175
Indirect Costs	\$ 722	\$ 489,353
<b>Total Costs</b>	<b>\$ 3,130</b>	<b>\$ 2,120,528</b>
O&M		
Capital Costs	\$ 1,979	\$ 2,606
Indirect Costs	\$ 346	\$ 456
<b>Total Costs</b>	<b>\$ 2,325</b>	<b>\$ 3,063</b>
<sup>1</sup> Extraction of costs pertaining to Northern Haul Road ('Haul Roads') only.		

**Attachment 2**  
**Little Rock Northern Haul Road**  
**Cost Estimate Spreadsheets**  
**(CD w/electronic copy)**

**Attachment 3**  
**BLM's Approval Letter and**  
**Deadman Canyon Approved Jurisdictional**  
**Determination (AJD)**





## United States Department of the Interior



BUREAU OF LAND MANAGEMENT  
Las Cruces District Office  
1800 Marquess Street  
Las Cruces, New Mexico 88005  
<https://www.blm.gov/new-mexico>

IN REPLY REFER TO:  
NMNM-091644  
3809 (L03100)

**JUN 30 2021**

CERTIFIED—RETURN RECEIPT REQUESTED  
7019 0160 0000 8345 8895

Mr. Lee Nix, Chief Environmental Engineer  
Freeport-McMoran Tyrone Inc.  
P.O. Box 571  
Tyrone, New Mexico 88065

Surface Management

Dear Mr Nix:

The Las Cruces District Office (LCDO) of Bureau of Land Management (BLM) has approved your request for a minor modification pursuant to 43 CFR 3809.432(b) to the approved Little Rock Mine Plan of Operations (NMNM-091644). This request, which was received in our office on May 28, 2021, is for construction of a haul road crossing in Deadman Canyon north of and adjacent to the existing Little Rock pit limits.

This proposed haul road construction will be conducted in accordance with measures to prevent unnecessary and undue degradation to public land. This includes adherence to performance standards described in the previously approved 2014 Limit of Disturbance associated with the Little Rock Mine PoO, as defined in 43 CFR 3809.420.

If you have any questions or require additional assistance, you may contact Joseph Navarro, Environmental Protection Specialist at (575) 525-4363

Sincerely,

David Wallace  
Assistant District Manager  
Division of Multi-Resources

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Cc:

Thomas M. Klimas, Senior Environmental Specialist  
Westland Resources, Inc.  
1750 S. Woodlands Village Blvd.  
Flagstaff, AZ 86001

Mandy J. Lilla, Senior Engineer  
Freeport Mc-Moran Tyrone Inc.  
P.O. Box 571  
Tyrone, NM 88065

Jenna Padilla, Forest Geologist  
Cibola National Forest and National Grasslands  
2113 Osuna Road NE.  
Albuquerque, NM 87113

Beth Ihle, District Ranger  
USDA-Forest Service  
Gila National Forest, Silver City Ranger District  
3005 E. Camino del Bosque  
Silver City, NM 88061

David Ohori  
Supervisor, Senior Reclamation Specialist  
New Mexico Mining and Minerals Division  
1220 So. St. Francis Dr.  
Santa Fe, NM 87050

**Determination of NEPA Adequacy (DNA)**  
**U.S. Department of the Interior**  
**Bureau of Land Management**  
**Las Cruces District Office**

**NEPA Log Number:**

**Project Name:** Deadman Canyon Haul Road Crossing-Minor Modification Request

**Case or Serial Number (if applicable):** NMNM-091644

**Applicant:** Freeport-McMoran (Tyrone Little Rock Mine)

**BLM Preparer:** Joseph Navarro

**Original EA Internally or Externally Generated:** Internally

**Project Location/Legal Description:** T. 19 S. R. 15 W. section 16

**Date Project Initiated:** June 8, 2021

**Possible Concerns and Issues:** Cultural, Paleontology, WSA

**Primary Program(s):** Locatable Minerals

**Affected Counties:** Grant

## **1 Description of the Proposed Action**

Freeport McMoran (FMI) at Tyrone Little Rock Mine proposes to construct a haul road crossing in Deadman Canyon starting in Summer of 2021. This project is proposed in a portion of Section 16 of Township 19 South, Range 15 West of New Mexico Principal Meridian in Grant County, New Mexico. This modification entails construction of a haul road crossing in Deadman Canyon north and adjacent to existing Little Rock pit limits. This proposal is a culverted earthen crossing with a 12-acre footprint for hauling materials from the Littler Rock Pit to an existing haul road entirely on BLM managed land. In section 6 of this document below are attached Stipulations to this proposed action.

## **2 Land Use Plan (LUP) Conformance**

**The proposed action is in conformance with the applicable RMP because it is specifically provided for in the following RMP decisions, or is clearly consistent with the following RMP decisions (objectives, terms, and conditions):**

Mimbres Resource Management Plan-ROD  
December 1993: (Locatables on Page 2-5)  
describes how the Mining Law of 1872 allows  
for location of mining claims for purposes of  
exploration, development and production of  
minerals.

Surface Management Handbook (3809)  
September 2012: 4.6.3.1 Minor Modification  
Procedures Pages 4-52 & G-6.

43 CFR 3809.432(b)-BLM will accept a minor  
modification without formal approval.

_____	_____
_____	_____
_____	_____

### **3 List and Attach Other Documents**

DOI-BLM-NM-L000-2014-0001-EA signed July 10, 2015 (Finding of No Significant Impact and Decision Record, signed December 30, 2015).

### **4 NEPA Adequacy Criteria**

- a) **Is the new proposed action a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document(s)?** Yes, the proposed action is in support of FMI's mining operations and analyzed in the existing environmental assessment. This proposed haul road would result in approximately 12 acres of total disturbance on an already previously analyzed mine area.

- b) Is the project within the same analysis area?** Yes, this proposed project is within the same geographic area of Little Rock Mine that was previously analyzed. An impacts analysis on vegetation and soil is discussed in detail in this environmental assessment. This existing NEPA document was approved within the previous 10 years, thus resource conditions have not changed significantly.
- c) Is the *range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the new proposed action, given current environmental concerns, interests, and resource values?***

Yes, the range of alternatives analyzed in this EA is appropriate with respect to authorizing additional exploration in support of mining operations. Those alternatives considered were:

1. Proposed Action: Authorize pit expansion to include an additional 109 acres of BLM surface.
2. No Action: New surface disturbing activities proposed in this MPO Amendment would not be authorized on BLM-managed land.

- d) Is the existing analysis valid in light of any new information or circumstances (such as, rangeland health standard assessment, recent endangered species listings, and updated lists of BLM-sensitive species)? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new proposed action?** Yes, this existing analysis is still valid. There have not been any changes to rangeland health, endangered species, or BLM-sensitive species, since the existing NEPA document was approved.

**Migratory Birds:**

Executive Order 13186 directs Federal agencies to take action to implement the Migratory Bird Treaty Act and contribute to conservation and management of migratory birds and their habitats.

The analysis in the wildlife section of Environmental Assessment DOI-BLM-NM-L000-2014-0001 adequately describes impacts to wildlife including migratory birds on page 3-51.

- e) Are the direct, indirect, and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document?** Yes, direct and indirect impacts associated with this haul road crossing are similar in support of mining operations to what has been analyzed previously. Cumulatively, clearing of vegetation for access would result in a temporary disturbance and vegetation is likely to

grow back within a few growing seasons, nearly eliminating potential impacts from this haul road construction.

- f) **Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?** Yes, appropriate levels of review by management and resource specialists occurred as part of the NEPA process in approving this amendment to the MPO. Opportunities for public involvement were sufficient for the existing EA. In addition, the public has had the opportunity to contact the LCDO and provide input on this project. This project has been listed on the New Mexico BLM Website NEPA Log:  
[http://www.blm.gov/nm/st/en/prog/planning/nepa\\_logs.html](http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html)

## 5 Persons/Agencies /BLM Staff Consulted

Name	Title	Resource Represented
Joseph Navarro	Project Manager	Environmental Protection
Bill Auby	Geologist	Geology
Jack Barnitz	Biologist	Vegetation/Wildlife/T&E
Steven Torrez	Planning & Environmental Coordinator	NEPA
Kendrah Penn	Realty Specialist	Lands & Realty
Corey Durr	Hydrologist	Water Resources

**Note:** Refer to the EA/EIS for a complete list of the team members who participated in the preparation of the original environmental analysis or planning documents.

## 6 Stipulations/Mitigation Measures

Total disturbance area for this haul road would be approximately 12 acres (4.8 ha). No new or previously unauthorized disturbances would result from construction and operation of this proposed haul road crossing.

This proposed haul road would be constructed and utilized in accordance with measures to prevent Unnecessary or Undue Degradation (UUD), including adherence to performance standards (as applicable) described in the 2013 MPO. Section 8 of this 2013 MPO lists performance standards defined in 43 CFR 3809.420 and identifies relevant sections of the document (47).

Any disturbance and construction associated with this haul road crossing would be revegetated and reclaimed to a self-sustaining ecosystem in accordance with the 2013 MPO Amendment and New Mexico Mining Act Permit GR007RE.



**7 Conclusion** (If one or more of the above criteria is not met, a new EA or EIS must be prepared.)

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the existing NEPA documentation cited herein fully covers the proposed action and constitutes BLM's compliance with the requirements of NEPA.

*Joseph M. Navarro*

6/30/2021

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Project Lead

Date

*STEVEN TORREZ*

Digitally signed by STEVEN TORREZ

Date: 2021.06.30 10:15:00 -06'00'

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Planning & Environmental Coordinator

Date

**DAVID WALLACE** Digitally signed by DAVID WALLACE

Date: 2021.06.30 11:28:55 -06'00'

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Authorizing Official

Date

**Note:** The signed Conclusion on this Worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision. However, the lease, permit, or other authorization based on this DNA is subject to protest or appeal under 43 CFR Part 4 and the program-specific regulations.



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REGULATORY PROGRAM  
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)  
NAVIGABLE WATERS PROTECTION RULE**

**I. ADMINISTRATIVE INFORMATION**

Completion Date of Approved Jurisdictional Determination (AJD): 1/25/2021

ORM Number: SPA-2017-00017-LCO

Associated JDs:

<http://www.spa.usace.army.mil/Portals/16/docs/civilworks/regulatory/Jurisdiction/Approved%20JDs/New%20Mexico/SPA-2017-00017%20AJD%20form%20final.pdf?ver=2017-11-22-180426-260>

Review Area Location<sup>1</sup>: State/Territory: New Mexico City: Tyrone County/Parish/Borough: Grant

Center Coordinates of Review Area: Latitude 32.654733° Longitude -108.102183°

**II. FINDINGS**

**A. Summary:** Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A
- There are “navigable waters of the United States” within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- There are “waters of the United States” within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

**B. Rivers and Harbors Act of 1899 Section 10 (§ 10)<sup>2</sup>**

§ 10 Name	§ 10 Size	§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A.	N/A.

**C. Clean Water Act Section 404**

Territorial Seas and Traditional Navigable Waters ((a)(1) waters): <sup>3</sup>			
(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):			
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):			
(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.

<sup>1</sup> Map(s)/figure(s) are attached to the AJD provided to the requestor.

<sup>2</sup> If the navigable water is not subject to the ebb and flow of the tide or included on the District’s list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

<sup>3</sup> A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.





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Adjacent wetlands ((a)(4) waters):			
(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.

**D. Excluded Waters or Features**

Excluded waters ((b)(1) – (b)(12)): <sup>4</sup>			
Exclusion Name	Exclusion Size	Exclusion <sup>5</sup>	Rationale for Exclusion Determination
Deadman Canyon	5360	linear feet	See Section III.C below
California Gulch	1011	linear feet	
Unnamed Tributary	264	linear feet	

**III. SUPPORTING INFORMATION**

**A. Select/enter all resources** that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- Information submitted by, or on behalf of, the applicant/consultant: [HILGART WILSON, LLC](#)  
This information is sufficient for purposes of this AJD.  
Rationale: *N/A*
- Data sheets prepared by the Corps: *Title(s) and/or date(s).*
- Photographs: *Aerial and Other: Google Earth Imagery 2016 through 2020 (latitude 32.654733, longitude -108.402183, Grant County, New Mexico)*
- Corps site visit(s) conducted on: *Date(s).*
- Previous Jurisdictional Determinations (AJDs or PJDs): *SPA-2017-00017-LCO, 28-Feb-2018*
- Antecedent Precipitation Tool: *provide detailed discussion in Section III.B.*
- USDA NRCS Soil Survey: *Title(s) and/or date(s).*
- USFWS NWI maps: *Title(s) and/or date(s).*
- USGS topographic maps: *Title(s) and/or date(s).*

**Other data sources used to aid in this determination:**

Data Source (select)	Name and/or date and other relevant information
<a href="#">USGS Sources</a>	<i>N/A.</i>
<a href="#">USDA Sources</a>	<i>N/A.</i>
<a href="#">NOAA Sources</a>	<i>N/A.</i>
<a href="#">USACE Sources</a>	<i>N/A.</i>
<a href="#">State/Local/Tribal Sources</a>	<i>N/A.</i>
<a href="#">Other Sources</a>	<a href="#">Hilgart Wilson LLC, 2017. Little Rock Mine Approved Jurisdictional Determination Report</a>  <a href="#">A. Park Williams, Edward R. Cook, Jason E. Smerdon, Benjamin I. Cook, John</a>

<sup>4</sup> Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

<sup>5</sup> Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.





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Data Source (select)	Name and/or date and other relevant information
	T. Abatzoglou, Kasey Bolles, Seung H. Baek, Andrew M. Badger, Ben Livneh. 2018. Large Contribution from Anthropogenic Warming to an Emerging North American Megadrought. Science. Vol. 368 Issue 6488. Pp. 314-318.

**B. Typical year assessment(s):** The Antecedent Precipitation Tool (APT) was run across five dates: August 10, 2020, as well as the same date in 2019, 2018, 2017, and 2016, which corresponds to available dates of the aerial imagery. The APT results indicated that from 2016 thru 2019 the site was experiencing normal conditions, with precipitation falling between the 30th and 70th percentile of the 30-year rolling period. However, the APT results showed that during 2020 the site was experiencing a drier than normal year, with two out of the three data points falling below the 30th percentile. Subsequently, the drought index for 2020 indicated moderate drought conditions for the review area, with the 2019 data indicating mild drought. The 2017 data shows incipient wetness and 2018 as experiencing severe drought conditions.

The APT indicates that the drought levels seem to be going from wet to dry and back to wet conditions over the last 5 years, with the precipitation conditions staying relatively the same. The 2020 data indicates that the review area is in drier than normal conditions; although it just falls out of the 30th percentile with the following days returning to normal conditions. The August 10, 2020 APT reading seems to be an outlier from the other data indicating normal conditions.

It is worth noting that a study by Columbia University concludes that the American Southwest is experiencing a historic "megadrought" not seen in centuries. In fact, for several western states, including New Mexico and Texas, the last twenty years ranks as the second-driest period in the past 1,200 years (A. Park. Williams, 2018).

**C. Additional comments to support AJD:** The following discussion includes background information on the review area and previous requests for an AJD, which encompasses the location of the Little Rock Mine. The request for this AJD was made by Freeport McMoRan Tyrone Inc. (FMTI) and the report "Little Rock Mine Approved Jurisdictional Determination, Grant County, NM" was prepared by HilgartWilson on behalf of FTMI in August 2017 (herein referred to as the HilgartWilson report).

**BACKGROUND**

Turquoise, copper, and fluorspar were mined in the area from the late 1870s through the early 1900s. Open-pit copper mining began in 1967. Since 1992, the Little Rock Mine has been solely a copper leaching operation. In 2004 the open pit complex at Tyrone encompassed approximately 1,250 acres, including the Main, West Main, Valencia, Gettysburg, Copper Mountain, South Rim, Savanna, and San Salvador Hill pits. The mine also contains a mill and concentrator, a solution extraction electrowinning plant (SX/EW), and other ancillary facilities. The principal features at the Little Rock Mine include the open pit, the North and West Canyon overburden stockpiles, historic Ohio Mine and dam, the reclaimed Copper Leach Stockpile and Precipitation Plant (Tyrone Mine Closure/Closeout Plan Update, Phelps Dodge Tyrone, Inc., Prepared by Golder and Associates and Submitted by Freeport McMoRan Tyrone, Inc, October 2007).

Freeport-McMoRan Tyrone Inc. (FMTI) previously requested an AJD for the review area under the Rapanos guidance in 2017. An AJD was provided by the Regulatory Division (RD) on October 31, 2017. In accordance with 33 CFR Section 33.69(c), FMTI provided additional information and requests for reconsideration on December 28, 2017 and again on April 23, 2018. As a result, the RD issued revised





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AJDs on February 23, 2018 and July 7, 2018, which incorporated the new information provided by FMTI. A third reconsideration request was submitted by FTMI on September 7, 2018. However, no new information was provided. On February 12, 2019, FMTI submitted a request for appeal of the AJD. On April 25, 2019, a meeting and site visit was scheduled with FMTI and RD staff to discuss the appeal process and way-ahead. On June 24, 2020, the appeal was found to be without merit. On October 26, 2020, FMTI requested an AJD under the Navigable Waters Protection Rule (NWPR), which was implemented on June 22, 2020.

#### REVIEW AREA

The review area addressed in this AJD contains three aquatic resources: Deadman Canyon, California Gulch, and an unnamed tributary that flows to Whitewater Creek. Figure 4 of the HilgartWilson report shows the three waters that comprise the review area for this AJD. These three waters will be referred to as “review area waters” for the purposes of this AJD. As described in the HilgartWilson report, the review area waters are located within the Willow Creek-Mangas Creek Watershed (HUC12 150400020301) within the Upper Gila-Mangas Subbasin. Temperatures in this area range from 4.5 to 41° Celcius (C) (40 to 105° Fahrenheit [F]); and the average annual temperature is 21° C (69° F). The mean annual precipitation is 407 millimeters (mm) (16.02 inches [in]) with a range of approximately 172 to 634 mm (6.77 to 25 in), The mean annual snowfall is 37 centimeters (cm) (14.5 inches [in]) . Soils are well drained and the water table exceeds 80 inches in depth. See Figure 8 of the HilgartWilson report for a map of the review area in the vicinity of the Little Rock and Tyrone mines.

#### SETTING

The review area is located within a hard-rock mining district that includes two primary mines, the Tyrone Copper Mine and the adjacent Little Rock Copper Mine, both owned by FTMI. Information provided by FTMI describe the Little Rock Mine as a unit of the larger Tyrone Mine. The Little Rock and Tyrone mines are located approximately 10 miles southwest of Silver City, New Mexico. The Tyrone Mine straddles the Continental Divide and the Mimbres and Gila River basins.

The following paragraphs describe the flow path between Deadman Canyon and the Gila River; and maps are provided in the HilgartWilson report. Deadman Canyon flows from south to north through the Little Rock Mine project area.

At the north side of the mine area, during a sufficiently sized storm event flows from Deadman Canyon are joined by California Gulch; and would continue north for a short distance to an earthen dike (Earthen Dike 1) where the dike blocks the natural flow path of Deadman Canyon. At Earthen Dike 1, a delta-like ponded area has formed where water is slowed and sediment drops out. During a major storm event, flows from the ponded area could be conveyed west and cross-gradient through a constructed cross-cut channel. The cross-cut channel was constructed in uplands to replace the natural flow path of the Deadman Canyon/California Gulch tributary system in order to provide a flow path around the Tyrone Mine tailings facilities. Further west, Whitewater Canyon, which is itself not part of the review area, connects to the cross-cut channel.

The alignment of Deadman Canyon, California Gulch, Whitewater Canyon, and the unnamed tributary continue west to a second earthen dike (Earthen Dike 2); which exhibits a second delta-like area where





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storm flows can collect. During major storm events, the combined flows are conveyed northward in the Deadman Diversion Channel (DDC), which is a constructed channel that parallels Ride Out Road. The DDC was also constructed in uplands to replace the natural flow path of the tributary system in order to provide conveyance around the Tyrone Mine tailings facilities. The DDC continues northward until it crosses Ride Out Road and joins an unnamed tributary to Mangas Creek. At this point the channel steepens and continues through an incised reach to Mangas Creek. Mangas Creek conveys flows northwest to the Gila River.

#### REVIEW AREA WATERS

Review area waters are located within a significantly disturbed mining district that has undergone decades of water contaminant control intervention. Segments of review area waters still occur in their natural channel; however, large stretches have been rerouted into man made diversion channels as the footprint of mine area increased. According to the HilgartWilson report, site observations and anecdotal evidence from long term Tyrone personnel indicate that surface flows in the constructed DDC downgradient of the Whitewater Canyon delta area occur roughly every three to five years. The report also indicates that both of the earthen dikes are expected to convey flow in a 10 year 24-hour storm event (i.e. surface water is expected to flow past the earthen berms, on average, once every 10 years).

Based on aerial imagery of the review area from August 1996 to August 2019, the stream channels did not exhibit any evidence of flow. Additionally, there is no evidence of connecting springs that contribute flow to the waterways; and the watershed receives no snowpack during the year. Based on soils data, the water table is greater than 50 feet below the surface and does not rise up during the wet season and come in contact with the stream channels; and no consistent riparian corridors are present. Also, the flow path north of the earthen dike 1 and earthen dike 2 do not contain grass or shrub vegetation due to the mining activities in the area, and the dominate vegetation is Pinon Pine (*Pinus cembroides*) with sparse One Seed Juniper (*Juniperus monosperma*).

At the delta areas behind both earthen dike 1 and earthen dike 2, the vegetation is riparian in nature due to the ponding effect of the dikes, but the dominate surrounding vegetation includes (*Distichlis spicata*) Desert Saltgrass, with some individuals of (*Tamarix*) salt cedar. However, the presence of some riparian vegetation is a result of the earthen dikes forcing storm event flows to pond for a short time, increasing the amount of available water temporarily. Downstream of the earthen dike1 and earthen dike 2 the channel becomes all but void of vegetation, with a few individuals of upland species that include Broom Snakeweed (*Gutierrezia sarothrae*), Honey Mesquite (*Prosopis glandulosa*), and Creosote Bush (*Larrea tridentata*).

#### JURISDICTIONAL DETERMINATION

Based on the review of aerial imagery, soil and water table data, the information provided in the HilgartWilson report, and site observations, the only flows that these waterways experience are from storm events. As a result, the waterways evaluated as part of this AJD are determined to be ephemeral stream channels. As such, and in accordance with 33 CFR 328.3 and the June 22, 2020 implementation of the NWPR, these waterways do not meet the definition of "Waters of the United States" and, therefore, are not currently subject to regulation under Section 404 of the Clean Water Act.