



Freeport-McMoRan Chino Mines Company  
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April 5, 2017

**Certified Mail #70153010000206574502**  
**Return Receipt Requested**

Fernando Martinez  
Energy, Minerals and Natural Resources Department  
Mining and Minerals Division  
Mining Act Reclamation Program  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505



Dear Mr. Martinez:

**Re: Freeport-McMoRan Chino Mines Company – Permit No. GR009RE:**  
**Design Limit Expansion and 9 Waste Rock Stockpile Closure Closeout Plan**

Freeport-McMoRan Chino Mines Company (Chino) submits the enclosed application to the Mining and Minerals Division (MMD) to revise the Santa Rita Beneficiation Design Limit (DL) and update the Closure Closeout Plan (CCP) in accordance with 19.10.5 NMMA. As part of this application, a Closure/Closeout Plan (CCP) for the 9WRS is also enclosed.

Chino is proposing to increase the existing DL by approximately 248 acres as illustrated in Figure 1-3 of the CCP. The increase in the DL will allow for the construction of the proposed 9 Waste Rock Stockpile (WRS) and associated infrastructure.

The footprint of the 9WRS is expected to cover approximately 159 acres. Approximately 99 acres will be located beyond the currently approved DL. Chino assumed for the purpose of this application that the portion of 9WRS that occurs beyond the current DL will be subject to Section 19.10.5.508 NMAC. The 9WRS CCP includes the reclamation plans and basis for the Financial Assurance (FA) third party cost estimate, but not the final cost estimate. The earthwork material takeoff was developed by Chino mine under the supervision of Telesto Solutions, Inc. in accordance with standard engineering practice. Supporting data from various references is fully documented in Appendix A of the CCP of this application. Upon approval of this scope of work by State agencies, Chino will submit a FA cost estimate for approval. This will allow Chino to develop a more timely FA cost estimate with a fully vetted scope of work.

A check in the amount of \$4,500 is enclosed to process this application.

I certify that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals responsible for obtaining this

Mr. Fernando Martinez  
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information. I believe the submitted information is true, accurate and complete. Chino looks forward to meeting with you in the near future to facilitate your review of this project.

Sincerely,



Thomas L. Shelley, Manager

TLS: rlm  
20170405-001

xc: David Ennis – MMD 7015 3010 0002 0657 4403  
Holland Shepherd – MMD 7015 3010 0002 0657 4397  
Brad Reid – NMED

**FREEPORT-MCMORAN CHINO MINES  
COMPANY:**

**APPLICATION TO REVISE**

**MINING PERMIT GR009RE**

**FOR**

**9 WASTE ROCK STOCKPILE**

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Date: April 5, 2017

Submitted To: **New Mexico Mining and Minerals Division**

Prepared by: **Freeport-McMoRan Chino Mines Company**

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**FIGURES:**

- **FIGURE 1-1 – Chino Mine Location Map**
- **FIGURE 2 – Proposed Design Limit Adjustments**
- **FIGURE 3 – Proposed Santa Rita Beneficiation Design Limit, Figure 2-4, Revision 8**

**ATTACHMENTS:**

- **ATTACHMENT 1: 9 Waste Rock Stockpile Closure/Closeout Plan**

**APPENDIXS:**

- **Appendix A: Earthwork Cost Estimate Process Report and Reclamation Design Drawings**

## APPLICATION REQUEST

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Freeport-McMoRan Chino Mines Company (Chino) owns and operates an existing mining operation located in southwestern New Mexico (Figure 1-1). This document constitutes Chino's application to the New Mexico Mining and Mineral Division (MMD) to revise Permit No. GR009RE (Permit) pursuant to 19.10.5 New Mexico Administrative Code (NMAC). Chino is requesting that its mining Permit be revised to:

- 1.) Expand the Santa Rita Beneficiation Design Limit boundary to include the proposed 9 Waste Rock Stockpile, as indicated in Figure 2 of this application; and
- 2.) Incorporate into the Permit a closeout plan and proposed financial assurance (FA) for the 9 Waste Rock Stockpile, pursuant to NMAC 19.10.5.506.J and 19.10.12.

The area of the currently approved Santa Rita Beneficiation Design Limit Unit is approximately 6350 acres. The current Santa Rita Unit was approved by MMD on September 17, 2012 as "*Santa Rita Beneficiation Design Limit, Figure 2-4, Rev 6, August 1, 2012*" under Permit Modification 12-1. Chino proposes to expand the approved Santa Rita Design Limit to the south and northeast of Reservoir 9 by 248 acres. This increase will allow for the construction of the proposed 9 Waste Rock Stockpile and associated infrastructure (WRS). Figure 2 delineates the proposed change to the currently approved Santa Rita Beneficiation Design Limit boundary. Chino proposes that Figure 3 of this application, titled "*Santa Rita Beneficiation Design Limit, Figure 2-4, Rev 8, dated 11/16/2016*", replace "Figure 2-4, Rev 6" as the currently approved Santa Rita Beneficiation Design Limit.

The proposed 9 WRS will be contiguous to Chino's existing mining operations. The footprint of the 9 will cover approximately 159 acres and partially lies within the currently approved Santa Rita Beneficiation Design Limit Unit. Approximately 134 acres of the 9WRS will result in new disturbances within Chino's approved mining permit boundary. The 9 WRS is designed to contain approximately 76 million tons of mine waste rock. The stockpile will be placed over Reservoir 9 to an elevation of approximately 7000 ft. The stockpile will be buttressed by hillsides with the exception of the north side which will be buttressed by an existing haul road. The operational design of the 9WRS includes benches that create an approximate overall 3.5V:1H slope to facilitate final closure Pursuant to MMD's regulations at 19.10.5.506 A. and B. NMAC, a closeout plan for the 9 WRS is attached (Attachment 1). This application has also been prepared to comply with the New Mexico Environment Department (NMED) Ground Water Quality Bureau's

applicable requirements for closure of copper mine facilities, 20.6.7.33 NMAC. The Closure/Closeout Plan (CCP) describes how the 9 WRS will be reclaimed to achieve a post mining land use of wildlife habitat and to comply with 20.6.7.33 NMAC. Reclamation means the employment during and after a mining operation of measures designed to mitigate the disturbance of affected areas and permit areas and, to the extent practicable, providing for the stabilization of a permit area following closure that will minimize future impacts to the environment from the mining operation and protect air and water resources (19.10.1.7.R.1). The Mining Act requires reclamation to meet certain requirements and to reach a certain point of stability, after which the mining Act Permit is released, and the reclaimed land is not treated any differently than property used for a non-mining purpose.

## APPLICANT INFORMATION

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### 19.10.5.502.D NMAC

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Applicant Name: Freeport-McMoRan Chino Mines Company

Mailing Address: PO Box 10, Bayard, New Mexico, 88023

Physical Address: 99 Santa Rita Mine Road, Vanadium, NM

Ownership: The Bureau of Land Management owns all property associated with the 9 WRS and supporting infrastructure.

## SITE SPECIFIC CHARACTERISTICS

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Pursuant to 19.10.5.506.A and 19.10.5.508 NMAC, Chino here describes the relevant site specific characteristics of the area to be covered by the proposed 9 WRS. These site specific characteristics support the proposed CCP and substantiate how the 9 WRS will comply with the applicable portions of 10.10.5.508 NMAC.

*The 9 Reservoir is* authorized by NMED under Discharge Permit 526 (DP-526) and also occur within permit GR009RE design limit boundary. The proposed 9 WRS is a waste rock stockpile and leaching is not

intended to occur on this facility. Chino is separately submitting an application to NMED to authorize the construction of the 9 WRS and to move the 9WRS from DP-526 to DP- 459.

*Geology:* Section 3.3.2 of the attached CCP describes the geology underlying the proposed WRS.

*Climate:* The climate at Chino is warm and dry, with a mean annual precipitation of about 400 mm (16 inches) and a mean annual temperature near 10 C (50 F). Precipitation falls mainly as rain, but snow may occur from November to March.

*Surface and Ground Water:* This proposal does little to change the existing surface and ground water conditions in this area of the mine. The proposed 9WRS lies within the former upper reaches of the Whitewater Creek watershed. Surface water discharge in this small basin is presently collected in Reservoir 9. No permanent streams are present in the proposed 9 WRS area. Two small ephemeral drainages run roughly from south to north through the valley and terminate in Reservoir 9. Ground water system within the proposed 9 WRS area is in the open pit capture zone. Seepage flows north toward the Santa Rita open pit where it is contained. Additional groundwater information in this area will be supplied under DP-376.

#### 19.10.5.508.A NMAC MOST APPROPRIATE TECHNOLOGY AND BEST MANAGEMENT PRACTICES

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Sections 4.0, 5.0, 6.0 and 7.0 in the attached CCP describes the most appropriate technology and best management practices Chino is utilizing during the construction and reclamation of the 9WRS.

#### 19.10.5.508.B(1) NMAC SIGNS, MARKERS, AND SAFEGUARDING

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Chino will use existing procedures and practices to safeguard the public from “unauthorized entry into shafts, adits, and tunnels and falls from highwalls or pit edges”. Activities at Chino are regulated, and regularly inspected, by the Mine Safety and Health Administration. Ingress and egress by the public is limited by manned security gates. Perimeter gates are locked except during entry and exit by approved personnel and contractors.

### 19.10.5.508.B(2) NMAC WILDLIFE PROTECTION

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Chino contracted Golder Associates to conduct a pedestrian wildlife survey in July 2016 for the 9WRS area. No special-status (Threatened or Endangered) species of wildlife were observed in the project areas during the survey. The wildlife and vegetation communities in the 9 WRS are typical of the greater region and are non-descript. Golder confirmed that two USNVC alliances were present in the study areas: the alligator juniper-oak woodland alliance and alligator juniper-oak/grama woodland alliance.

The 9 WRS is not expected to markedly change the fauna and flora populations in the area due to the fact that similar habitat is common on undisturbed mine property and in other nearby areas.

### 19.10.5.508.B(3) NMAC CULTURAL RESOURCES

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Chino contracted Dos Rios consultants to conduct an archeology survey in the proposed 9WRS area in September 2016. Five archeological sites were observed in the 9 WRS footprint. Chino is working with the Bureau of Land Management on the observations. Chino will adhere to all applicable New Mexico Cultural Properties Act (CPA 08-6-1 0 through 18-6-17) rules as they relate to project construction on private property. The archeology survey does not indicate a human burial site in the footprint of the 9WRS but in the event one is encountered, work in that area will cease and local law enforcement will be notified by a Chino Mine representative.

### 19.10.5.508.B(4) NMAC HYDROLOGIC BALANCE

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Table 1 describes how Chino will comply with 10.10.5.508.B(4) as applicable.

<b>Table 1</b>	
<b>MMD Regulation</b>	<b>Description of Compliance</b>
<i>19.10.5.508.B(4) Hydrologic Balance Operations shall be planned and conducted to minimize negative impact to the hydrologic balance in both the permit and potentially affected areas.</i>	Chino will minimize impacts to the hydrologic balance by complying with the applicable portions of 19.10.5.508.(B)(4)(a)-(d).



<p><i>(a) Operations shall be designed so that non-point source surface releases of acid or other toxic substances shall be contained within the permit area, and that all other surface flows from the disturbed area are treated to meet all applicable state and federal regulations.</i></p>	<p>The 9WRS is located in the OPSDA. Impacted stormwater and possible seepage from the stockpile will be captured in the open pit. An application to modify DP-376 to include the construction of this stockpile has been submitted to NMED for review and approval.</p>
<p><i>(b) The disturbed areas shall not contribute suspended solids above background levels, or where applicable the Water Quality Control Commission's standards, to intermittent and perennial streams.</i></p>	<p>Not applicable. There are no intermittent or perennial stream in the 9WRS area. Currently, stormwater in the 9 WRS basin flows into the open pit. There will be no change to stormwater flow direction during the construction of the stockpile.</p>
<p><i>(c) To provide data to determine background levels for surface water entering the permit area, appropriate monitoring shall be conducted on drainages leading into the permit area.</i></p>	<p>Not applicable.</p>
<p><i>(d) All diversions of overland flow shall be designed, constructed and maintained to minimize adverse impacts to the hydrologic balance and to assure the safety of the public</i></p>	<p>Not applicable.</p>

**19.10.5.508.B(5) NMAC STREAM DIVERSIONS**

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No stream or drainage will be diverted as a result of 9WRS and associated facilities

**19.10.5.508.B(6) NMAC IMPOUNDMENTS**

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Chino is not proposing to construct any impoundments with earthen embankments as part of the 9WRS facility.

**NMAC 19.10.5.508.B(7) MINIMIZATION OF MASS MOVEMENT**

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The operational 9WRS will be constructed to allow for efficient closure of the facility and to ensure that the slope stability requirements listed in the Copper Rules (20.6.7.33.B NMAC) are met. The stockpile is abutted by natural hillside with the exception of the north side which is abutted by an existing haul

road. Section 4.0 (Structural Stability) of the attached CCP provides additional supporting references that the proposed stockpile will meet the slope stability criteria of 20.6.7.33.B NMAC.

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#### NMAC 19.10.5.508.B(8) RIPARIAN AND WETLAND AREAS

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Not applicable: No riparian areas, as defined by MMD regulation, 19.10.1.7(R) NMAC, have been identified within or adjacent to perennial or intermittent water bodies at the proposed 9WRS area. Water flow in the area of the proposed 9WRS occurs as a direct result of precipitation events. Likewise, no springs or wetland areas have been identified.

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#### NMAC 19.10.5.508.B(9) ROADS

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Not applicable: No new haulage roads are being constructed for the 9WRS.

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#### NMAC.19.10.5.508.B(10) SUBSIDENCE CONTROL

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Not applicable: The 9WRS will not have any underground or in situ solution mining activities associated with it.

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#### NMAC 19.10.5.508.B(11) EXPLOSIVES

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Not applicable: No blasting is required to build the 9WRS.

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### NMAC 19.5.508.C SITE STABILIZATION AND SURFACE CONFIGURATION

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Sections 4.0 and 5.0 of the 9WRS CCP (Attachment 1) describes the surface configuration and measures to stabilize the site.

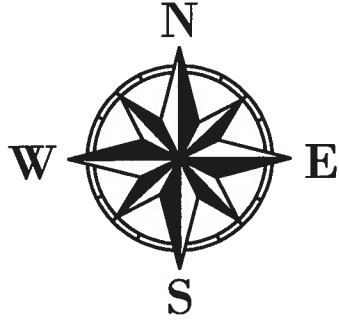
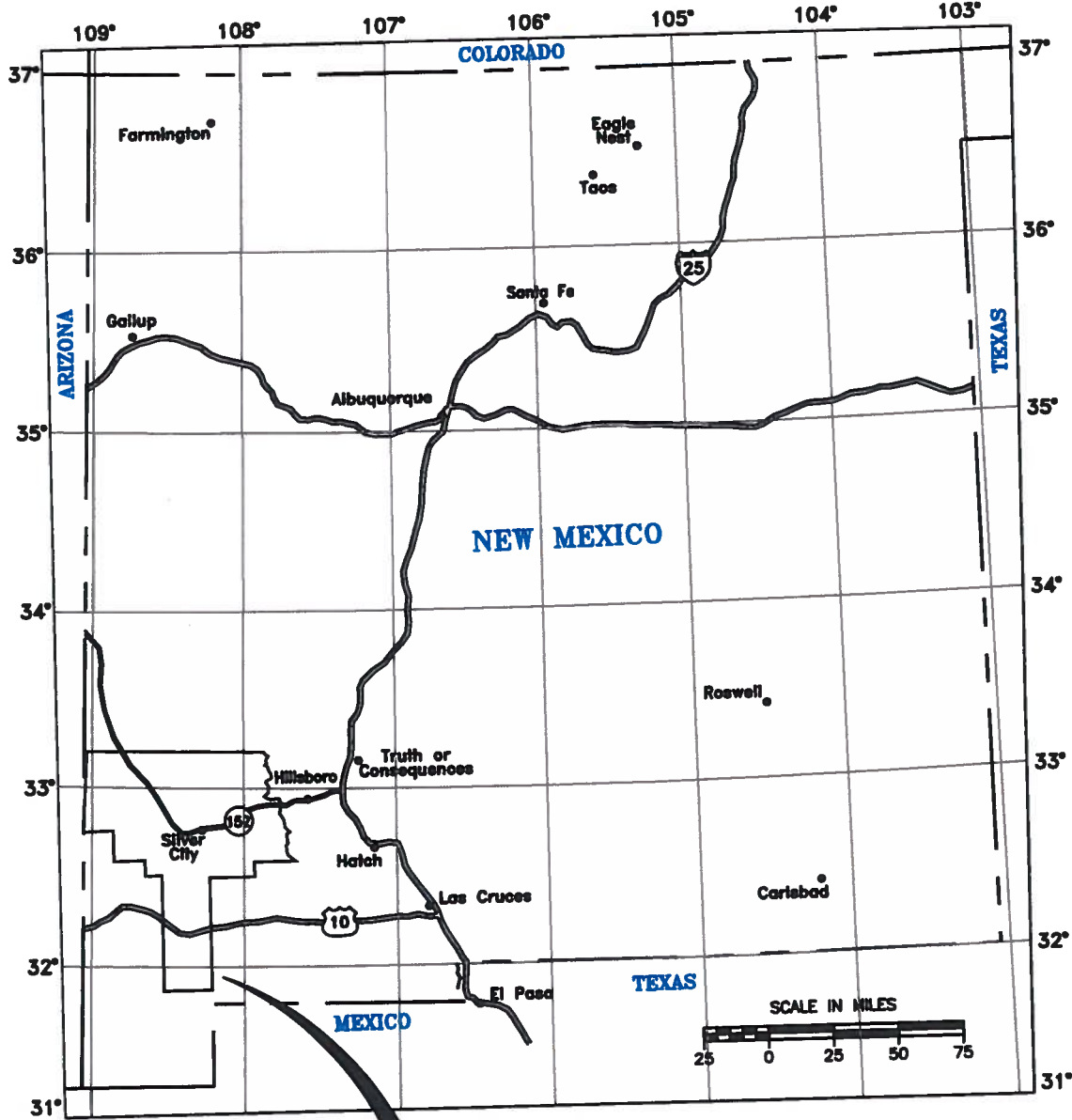
## NMAC 19.5.508.D EROSION CONTROL FOR RECLAMATION

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Sections 6.1 of the CCP attached describes the measures to control erosion after reclamation. Reclamation activities will be consistent with current practice although general practices may change in the future. Prior to reclamation of the 9WRS, a CQA/CQC plan will be submitted for department review as part of the final cover design. The plan shall identify a licensed New Mexico professional engineer as the designated CQA officer and include his or her supervision of the CQA plan and shall identify the methods proposed to ensure that the closure construction will be completed in accordance with the design and specifications. BMP's will be utilized during construction and operation of the stockpile to limit sediment transport. Long-term erosion control measures may include the installation of berms, designed channels, and sediment traps, as necessary. Short-term erosion control measures may include, but not limited to: silt fences, hay bales, water bars, and mulching. Final shaping is design to stabilize all disturbed areas. Erosion inspections will be conducted monthly for the first year and thereafter quarterly.

*Figure 1*

*Chino Mine Location Map*



<b>FIGURE 1-1</b> <b>Chino Mines Co. Location Map</b>		
Scale: NTS	Date: 9-7-2016	Notes:
Dept. Environmental Services		
Drawn By: [initials]	Checked By: [initials]	

**Figure 2**

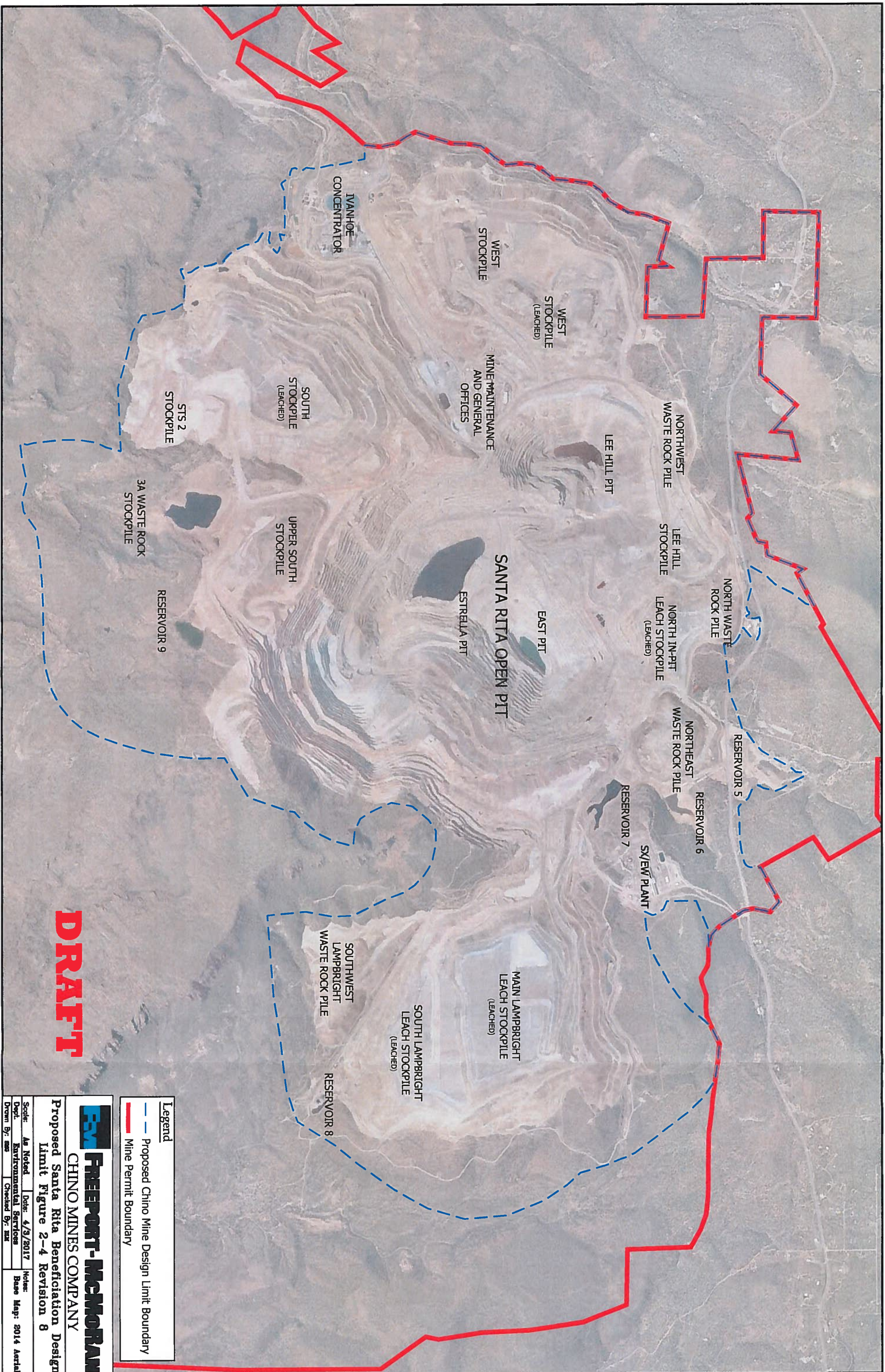
**Proposed Design Limit Adjustments**

**( See Figure 1-3 of the "9 Waste Rock Stockpile , Closure/Closeout  
Plan" Attached)**

*Figure 3*

*Proposed Santa Rita Beneficiation Design Limit, Figure 2-4,  
Revision 8*

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**DRAFT**

Legend	
	Proposed Chino Mine Design Limit Boundary
	Mine Permit Boundary

**FREEMPORT-MCMORAN**  
**CHINO MINES COMPANY**

Proposed Santa Rita Beneficiation Design  
 Limit Figure 2-4 Revision 8

Scale: As Noted	Date: 4/3/2017	Notes:
Dept: Environmental Services	Drawn By: maw	Base Map: 2014 Aerial
Checked By: tux		