

RED HILL MINE SAFEGUARDING PROJECT

PUBLIC MEETING FEBRUARY 29, 2024



AGENDA

-
- ❖ Welcome/Introduction
 - ❖ Red Hill Mine Safeguarding Environmental Assessment Presentation
 - ❖ Question and Answer Session
 - ❖ Submit Your Comments
-



PROJECT PARTNERS



New Mexico abandoned mine Land (AML) program – Project Lead; project development, coordination, management, & construction oversight



OFFICE of SURFACE MINING RECLAMATION & ENFORCEMENT (OSMRE) – co-federal project funding source



BUREAU of LAND MANAGEMENT (BLM), LAS CRUCES DISTRICT OFFICE – land management agency for majority of project area, co-federal project funding source, and project review



NEW MEXICO STATE LAND OFFICE (SLO) – land management and project review

PROJECT PARTNERS



Bat conservation international (bci) – Conducting bat surveys & habitat assessments of mine features; prepared reports



BRIC, LLC | Subsidiary of Diné Development Corporation – Conducting public outreach, conducting biological surveys and preparing Biological Evaluation, & will be preparing the Environmental Assessment (EA)



Chronicle Heritage (formerly know as PaleoWest) – Conducting cultural resource survey

TEAM MEMBERS



AML Team Members:

- ❖ Mike Tompson, P.E. : Program Manager
- ❖ Meghan McDonald, P.E. : Engineering Manager
- ❖ Lloyd Moiola: Environmental Manager
- ❖ James Hollen: NEPA Coordinator
- ❖ Matthew Peralta: Project Manager
- ❖ Andrew Zink: Cultural Resource



BLM:

- ❖ Christopher Teske

BRIC, LLC | Subsidiary of Diné Development Corporation Team Members:



- ❖ Stephanie Lee: Project Manager and NEPA Planner
 - ❖ Gina Gesting: NEPA Planner
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NM AML PROGRAM MISSION

- ❖ “To safeguard the general public from hazards associated with historical mining features, including adits, shafts, subsidence features, & other mine openings, while protecting cultural resources & preserving wildlife habitat”



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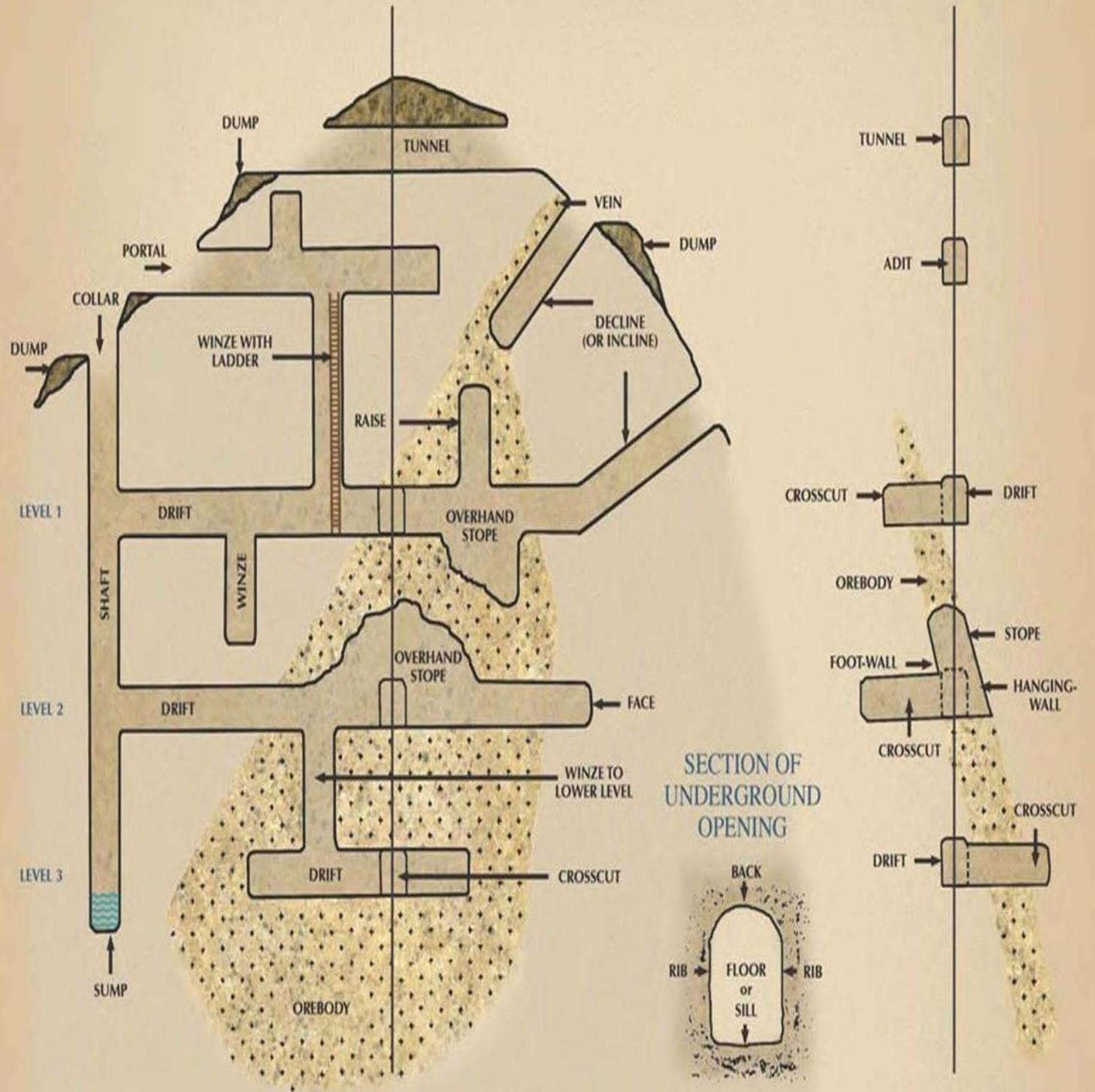




Mine Schematic

LONGITUDINAL SECTION

CROSS SECTION



DANGERS OF ABANDONED MINES

ABANDONED MINES:

- Are Not Playgrounds
- Are Not Safe
- ~~Can~~ Will Kill You

**DON'T BECOME A PART OF
NEW MEXICO'S
MINING HISTORY!**

STAY OUT!.....



STAY ALIVE!.....

Mining and Minerals Division
Energy, Minerals and
Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
(505) 476-3400

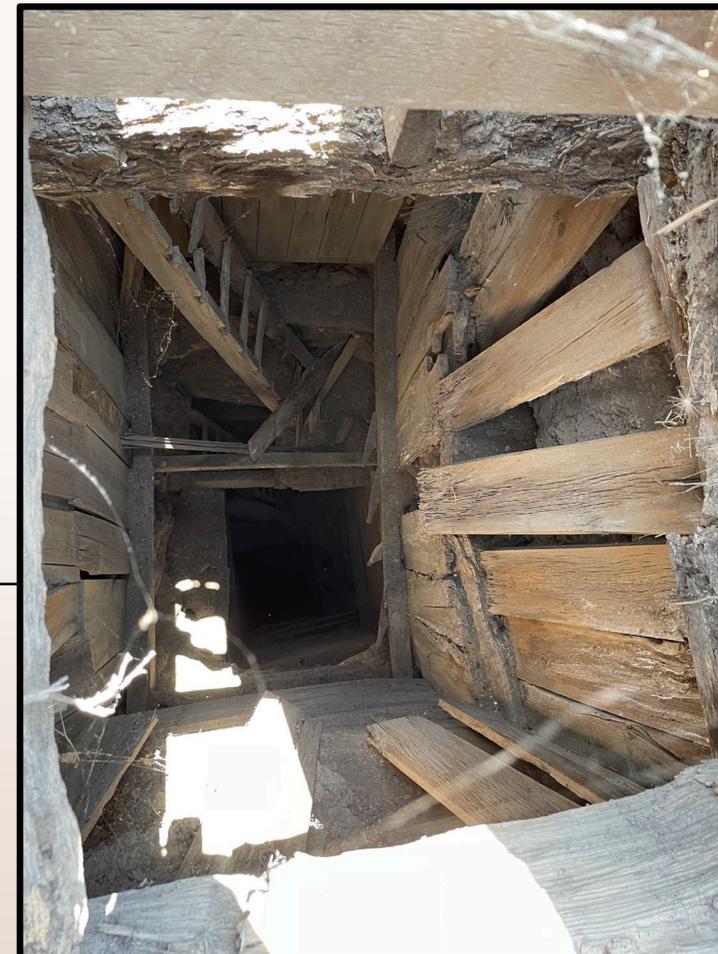
www.emrd.nm.gov

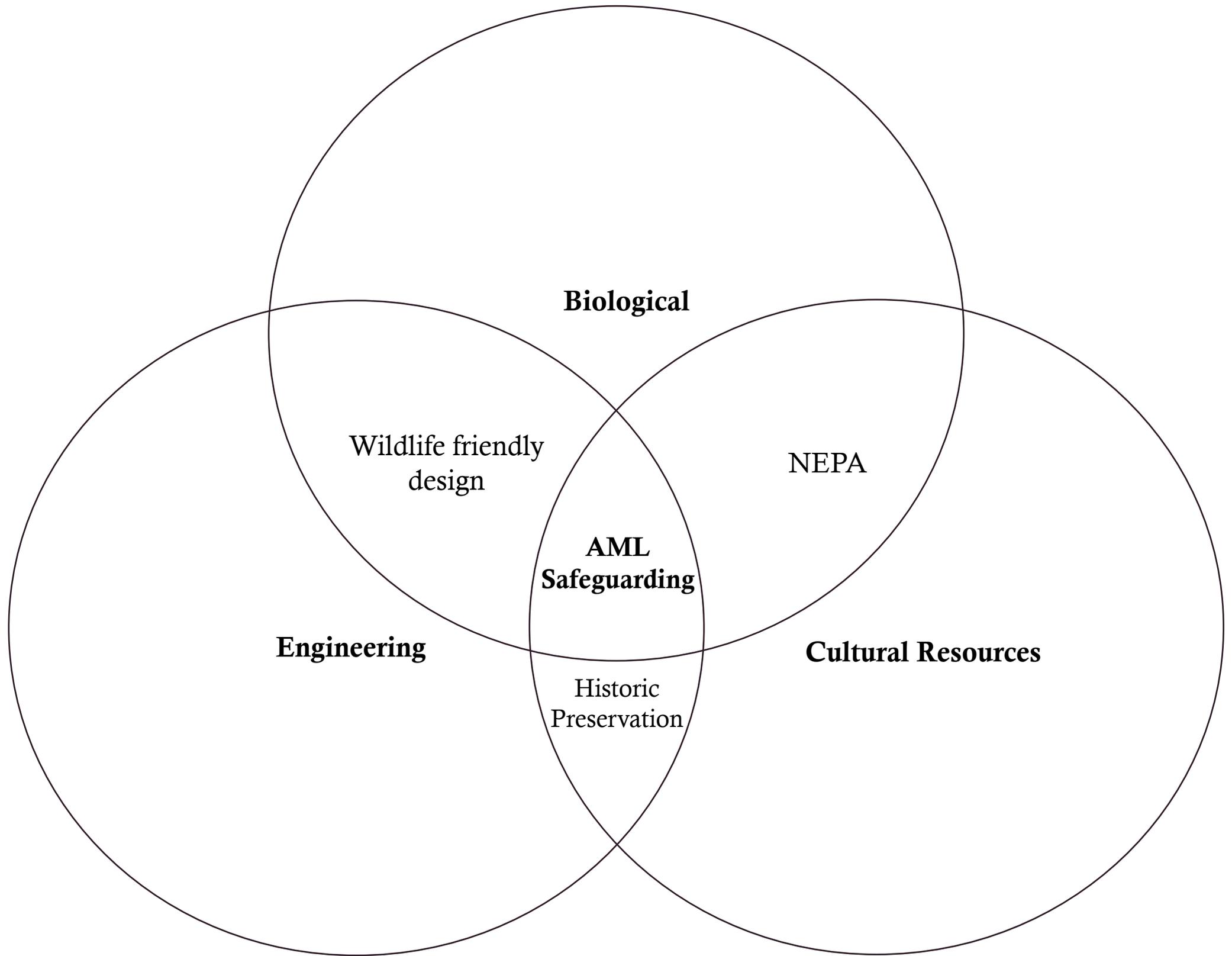
- **Hazards are not always obvious!**

- Unstable ground, loose rock, decayed timbers, & potential for collapse
- Serious fall &/or entrapment hazards in open or inadequately sealed features such as shafts, highwalls, adits/portals, and deteriorated structures
- Within mines: falls into winzes & water bodies, collapses, cave-ins, poor air circulation, poisonous gases, insufficient oxygen, deteriorated explosives, wildlife, & potential to become disoriented or lost within mine workings

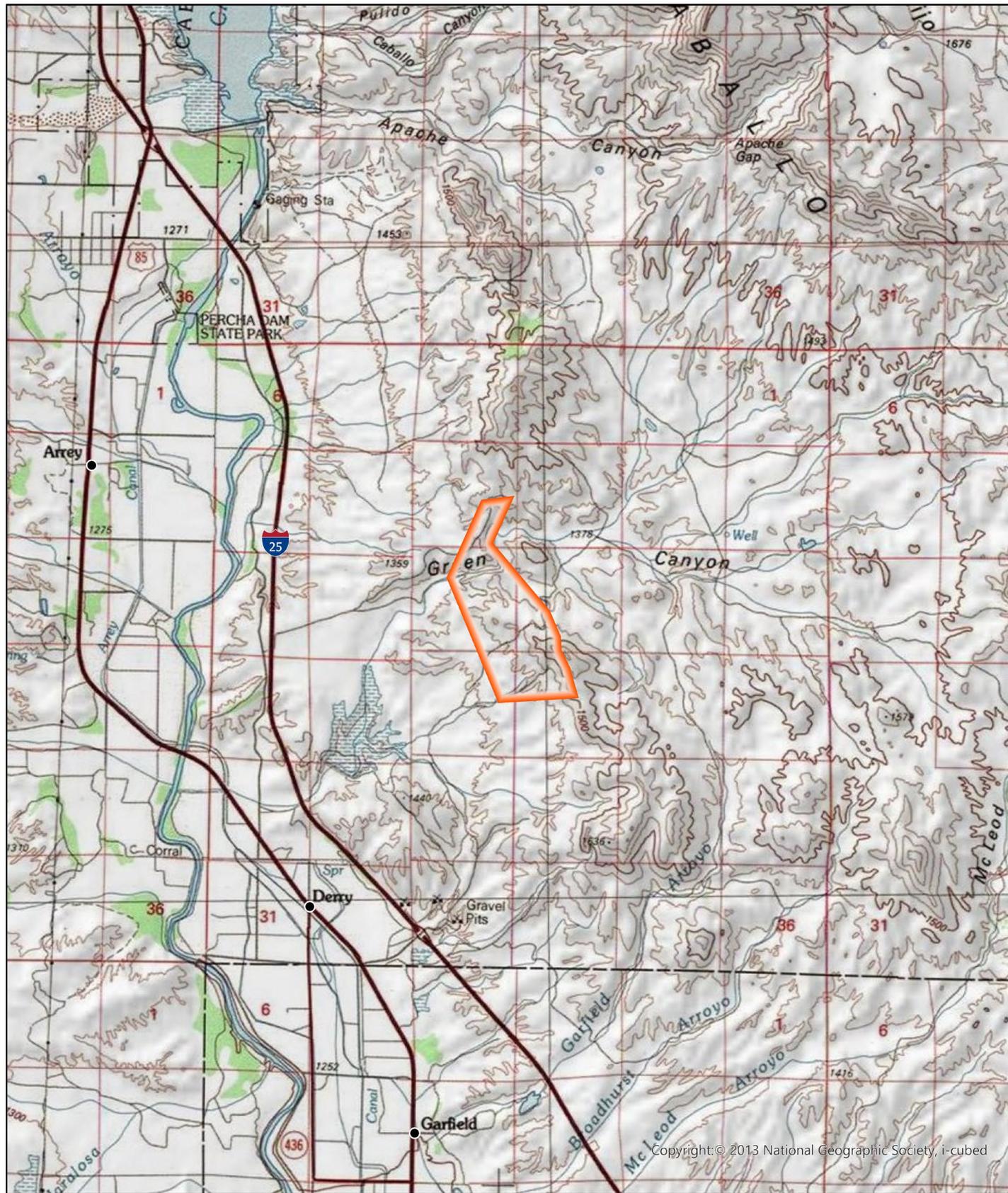


Photo Credit: Ron Kellermueller





PROJECT LOCATION



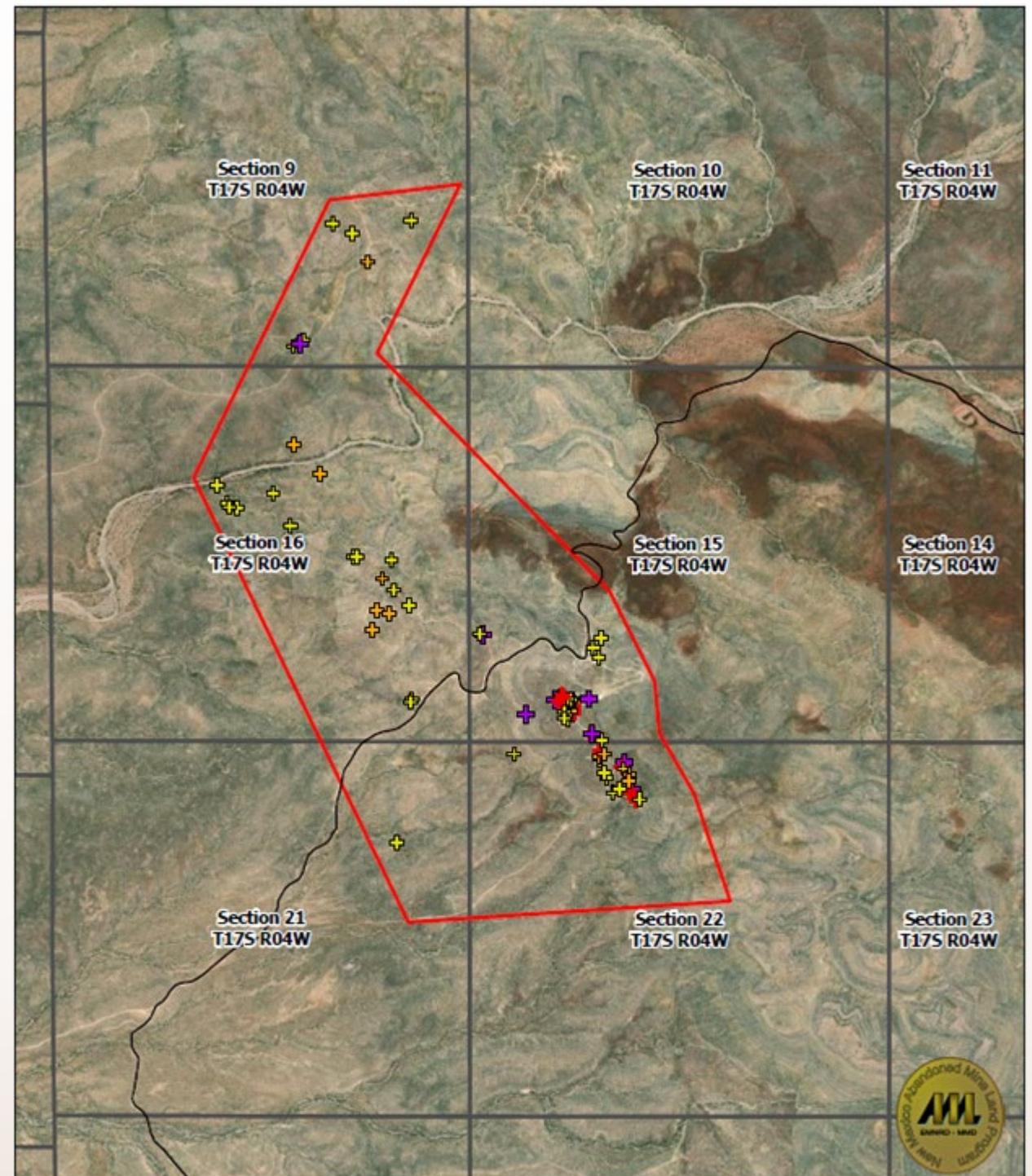
The project area is located approximately three miles northeast of Derry in Sierra County, New Mexico.

Proposed safeguarding of 35 high priority abandoned mine openings and features at Red Hill.

PROJECT AREA

Red Hill Mine Project Area includes 796 acres in the Caballo Mountains Mining District and Rincon Mining District.

Land Status	Acres
BLM Las Cruces District Office	470
NM State Land Office	326



Red Hill Proposed Project Area

BLM Danger Rating

- + Extreme
- + High
- + Medium
- + Low

Layer3

- Project APE
- PLSS
- Existing Access

0 0.25 0.5 Miles

Spatial Reference
 Name: GCS North American 1983
 GCS: GCS North American 1983
 Datum: North American 1983
 Map Units: Degree



HAZARD RATING DEFINED BLM

BLM inventory of the project area documented 100+ number Extreme, High, Moderate, and Low hazardous features. And out of that count, we are safeguarding 35 *high* priority features.

- ❖ Extreme
- ❖ High
- ❖ Moderate
- ❖ Low

BLM Danger Level Definitions

Extreme: 20' -> 100' deep; Extreme danger to public health, safety and property due to but not limited to: easily accessible unguarded open mines; occupied structures, public use facilities, improved public roads, or public use parks or recreational areas located within the vicinity of the feature; and/or evidence of frequent visitation or easy access roads capable of carrying vehicles within the vicinity of the feature.

High: 8' - 20' deep; High danger to public health, safety and property.

Moderate: 5' - 8' deep, Limited danger to public health, safety and property.

Low: Less than 5' deep; Low danger to public health, safety and property.

HISTORY

- ❖ Prospecting in the nearby Caballo Mountains began in 1883
- ❖ Gold being discovered in 1901 in Apache Canyon
- ❖ Resulting in several mines opening between 1900–1910
- ❖ Up to 100 unpatented claims existed
- ❖ Manganese first being produced in 1918
- ❖ Best known for fluorspar and manganese in the 1940's–1950's
- ❖ With the main claim being the Nakaye-Alamo Claim which began in 1920, ending in 1952
- ❖ With additional small claims in the 1970's

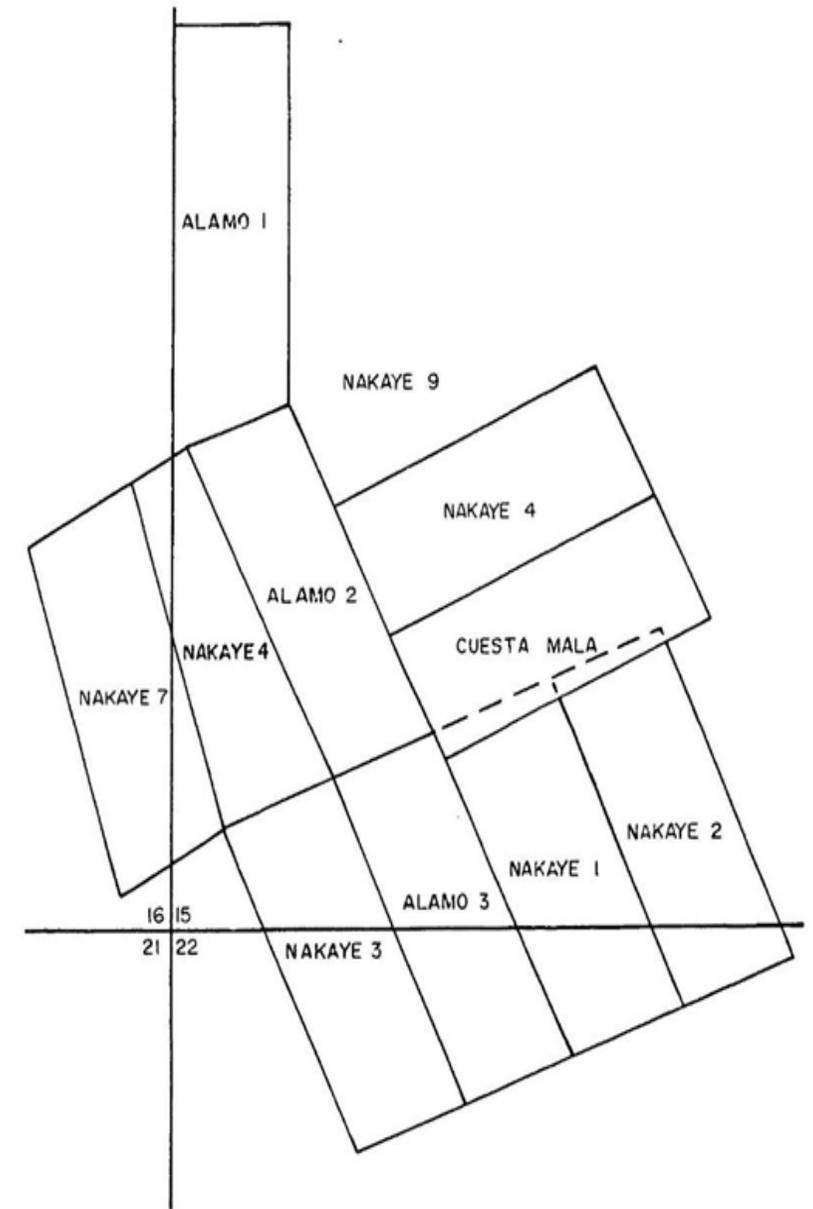


FIGURE 4.- NAKAYE GROUP CLAIM MAP
600' / inch

PROJECT PURPOSE AND NEED

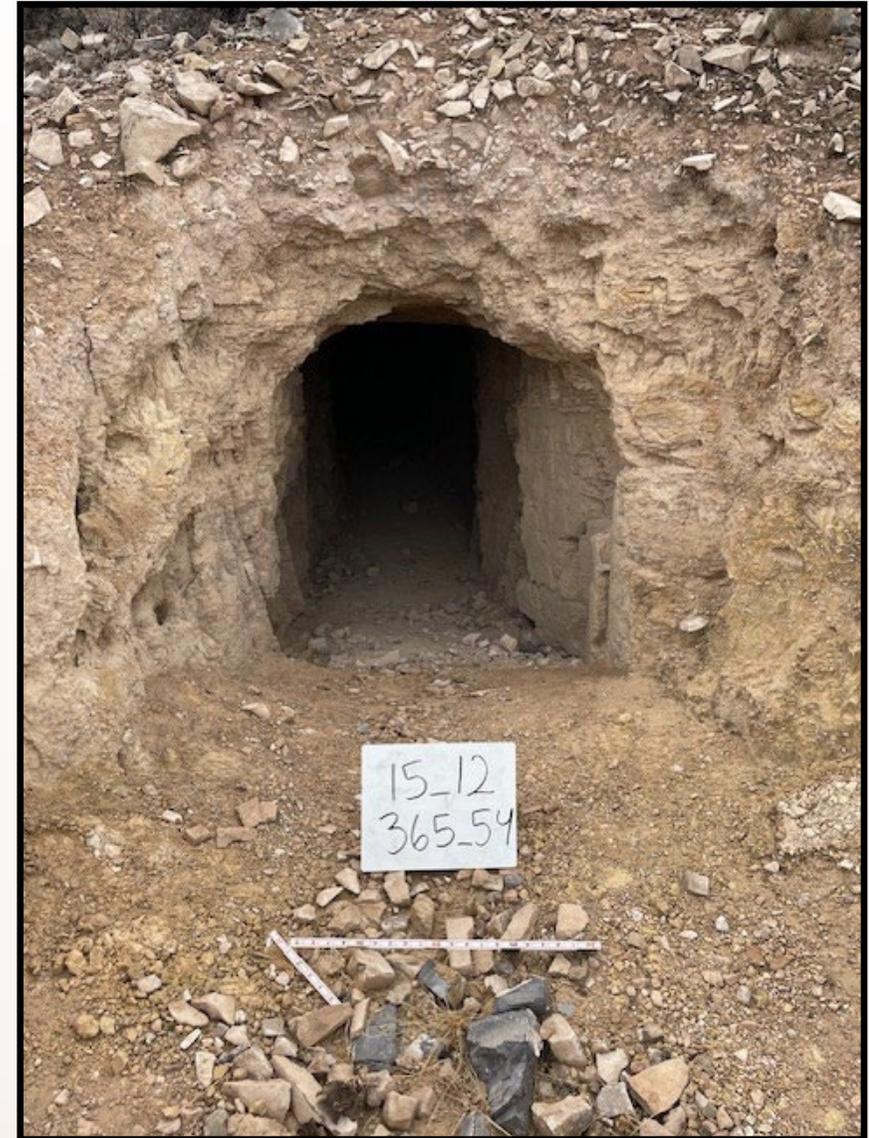
Purpose

The purpose of the project is to safeguard the public from hazardous openings, while preserving cultural resources, the historic mining landscape character, and wildlife habitat within the Red Hill Mine project area.

Need

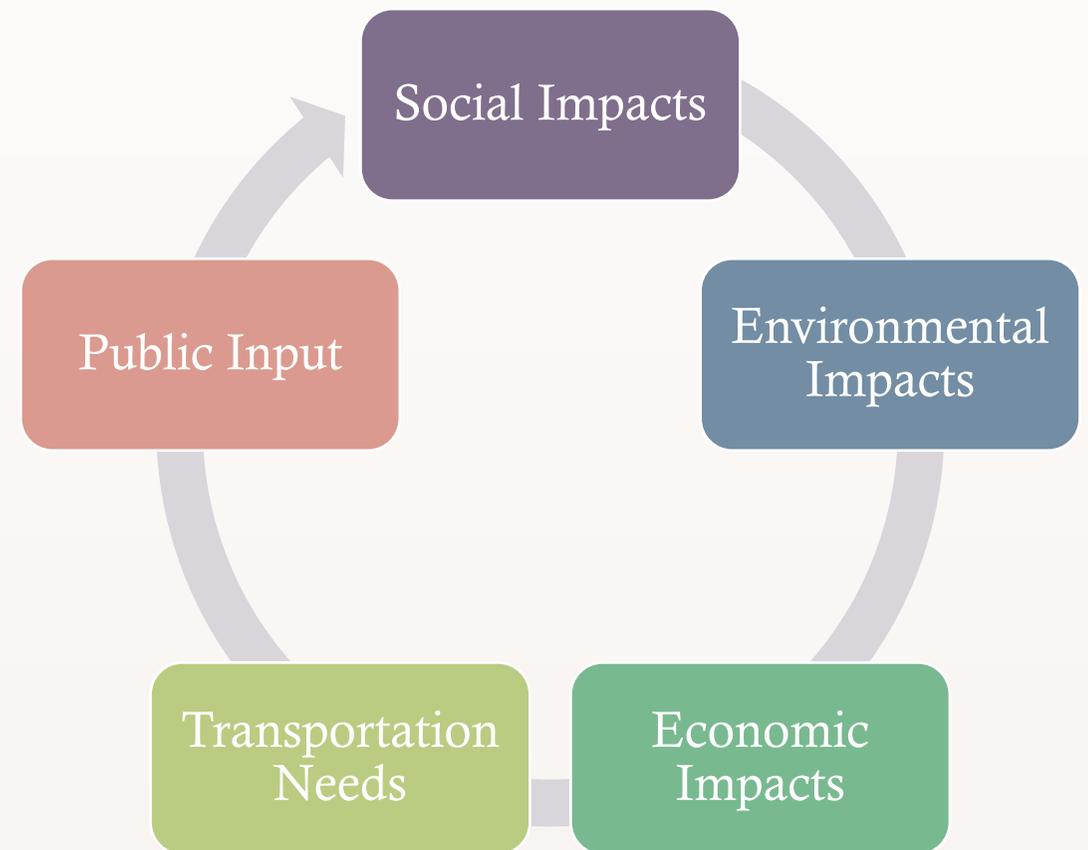
The Red Hill Mine project area needs unprotected mine features safeguarded to protect the public against hazards.

The Red Hill Mine project area is currently used by the public for recreational opportunities where hazardous mine areas are currently open and accessible to the public throughout the proposed project area.



NATIONAL ENVIRONMENTAL POLICY ACT

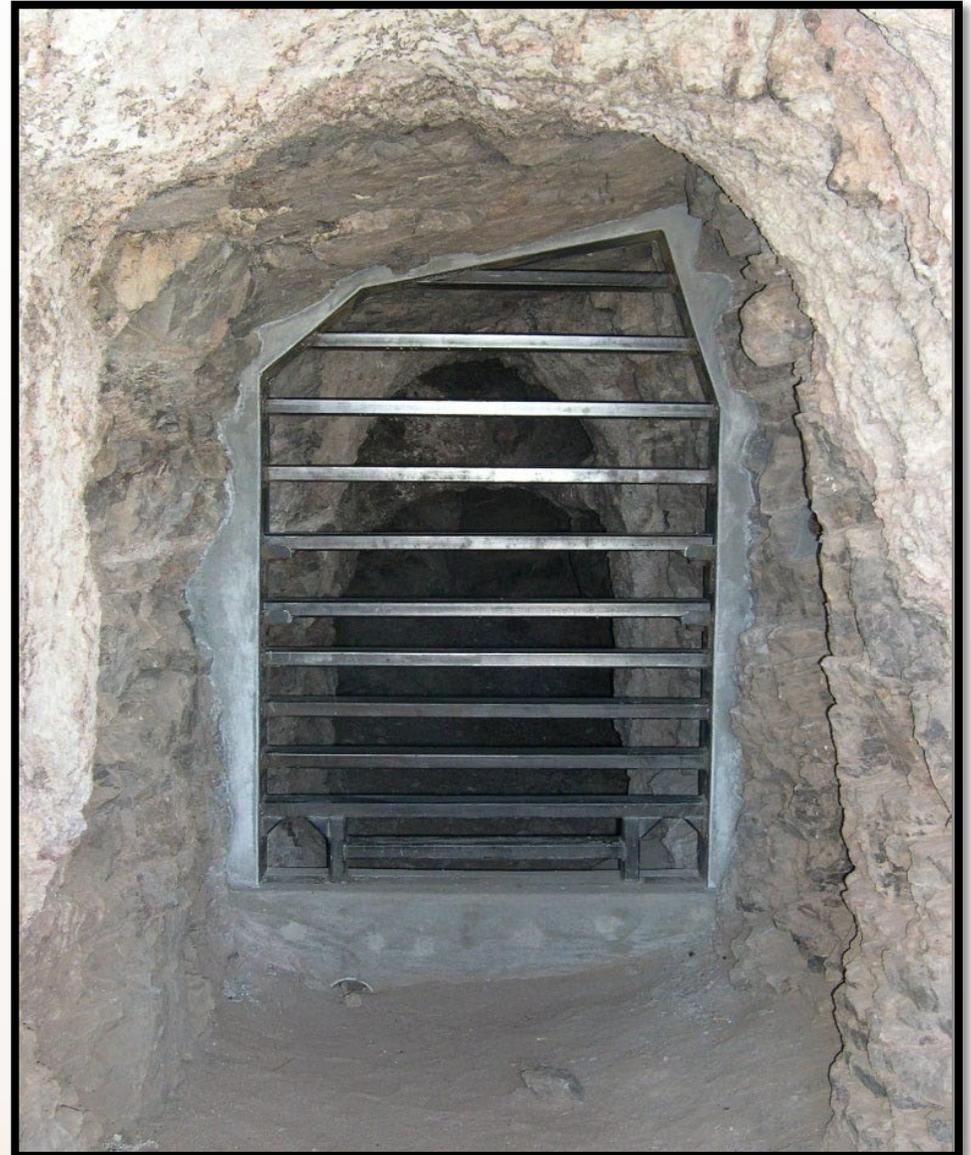
- ❖ An Environmental Assessment (EA) is being completed to comply with the National Environmental Policy Act (NEPA)
- ❖ NEPA provides for public input into the planning process. The public often has valuable information about places and resources.
- ❖ NEPA requires federal agencies to consider environmental effects to natural and human environments



PROPOSED ACTION ALTERNATIVE

Safeguarding Mine Features

- Safeguard approximately 35 abandoned mine features throughout the Caballo Mountains and Rincon mining districts at Red Hill.
- Safeguarding actions could include a variety of methods, including mechanically or manually filling of mine openings with surrounding waste material or polyurethane foam (PUF), and construction of access barriers to prevent human ingress while allowing small animal access.



TYPICAL AML RECLAMATION/CLOSURES



Polyurethane foam plug with drainpipe



Culvert with bat and wildlife friendly gate

TYPICAL AML RECLAMATION/CLOSURES



Steel fence enclosure around a partially filled shallow shaft



Bat cupola – stepped installation into hillside (less visually obtrusive feature)

NO ACTION ALTERNATIVE

- **No** safeguarding to protect the public from the danger of abandoned mine features at Red Hill Mine.
- Safety hazards at mine features, including adits, shafts, subsidence features, and other mine openings, would remain on the landscape.



AFFECTED ENVIRONMENT

Resource Topics Considered in the Environmental Assessment

- Cultural Resources
- Water Resources
- Vegetation
- Livestock
- Wildlife
- Special Status Species
- Geology/Soils
- Air Quality
- Human Health and Safety



IMPACTS FROM THE PROPOSED ACTION

- All elements of the affected environment are evaluated and included in full in draft EA
- Supporting studies are included or referenced in the draft EA



CULTURAL RESOURCES

A cultural resources inventory of the Red Hill Mine Project Area was completed from September 2022 to February 2023 to document historic mining features and to comply with Section 106 of the National Historic Preservation Act.

Survey Results:

- Eight (8) previously recorded sites were revisited
- Twenty-four (24) new sites were identified
- Seven (7) sites are recommended as eligible for listing in the NRHP and 13 are recommended not eligible
- 156 mining features and over 70 artifacts

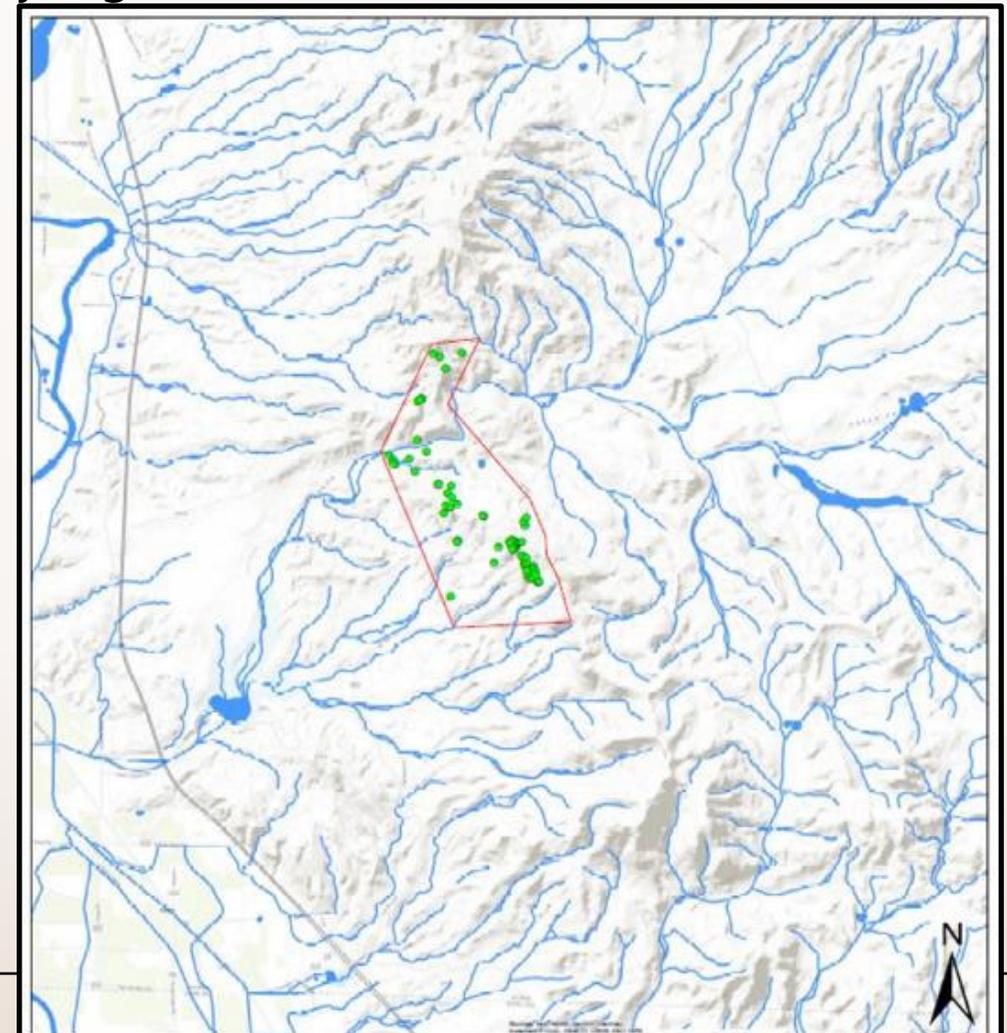
Feature Type	Count
Prospecting Pit	28
Modified Terrace	10
Road	5
Cairn	33
Foundation	1
Mining Complex	7
Rock Wall	1
Trench	19
Adit	22
Shaft	5
Rock Pile	5
Structural Pad	1
Sluice	1
Platform	6
Rail Grade	1
Check Dam	4
Footer	1
Excavation	3
Wooden Posts	2
Linear Depression	1

WATER RESOURCES

- The Clean Water Act of 1972 regulates activities that have the potential to impact Waters of the United States (WOTUS).
- Intermittent and ephemeral drainages are present that carry stormwater runoff from the hills within the project area to the surrounding areas, particularly the Rio Grande.
- No surface waters or wetlands were located within the project area and no safeguarding activities would occur within the limits of ordinary high-water marks.

Impacts from the Proposed Action:

- The project area has various ephemeral drainages that could be crossed with construction equipment; however, access would be confined within existing roadways and would not result in further disturbance to arroyos/drainages.
- No adverse effects to the hydrology of drainages within the project area or WOTUS.



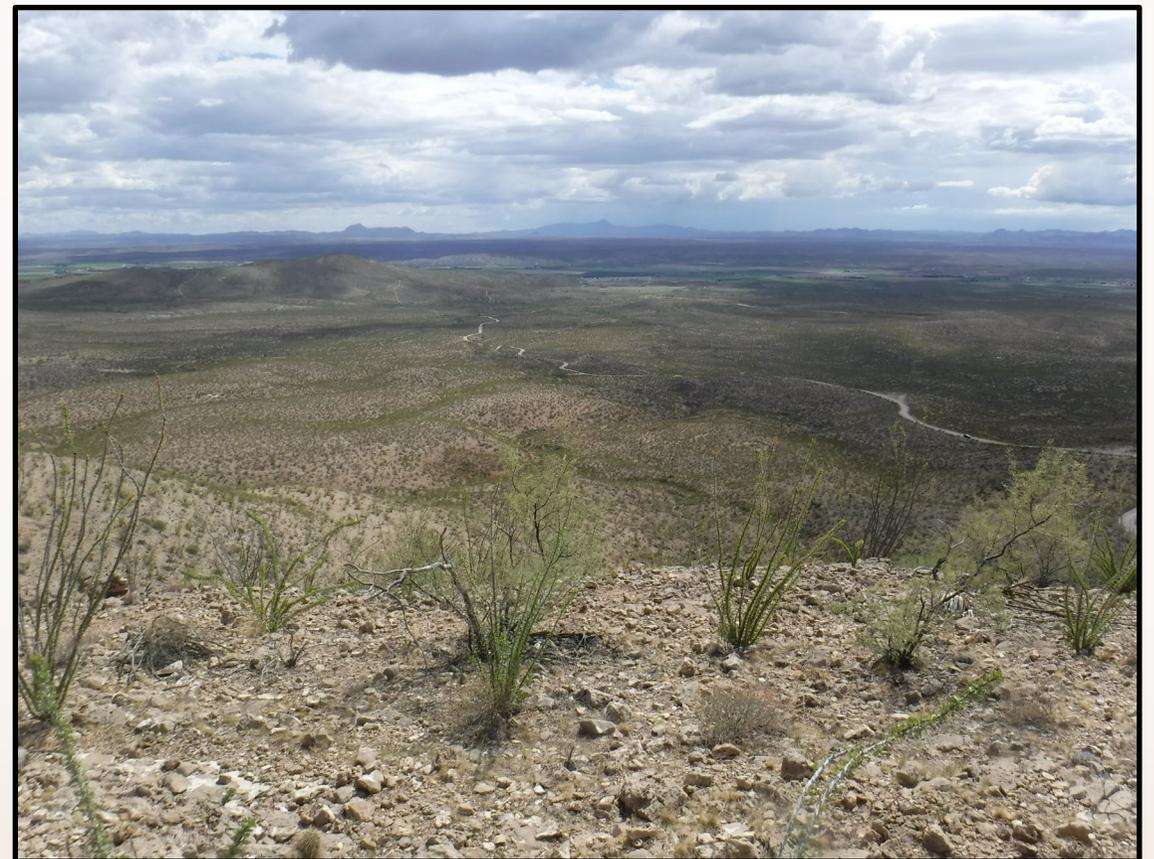
Drainages (blue lines) within the Project Area

VEGETATION RESOURCES

- Chihuahuan desert scrub and semidesert grassland vegetation communities occur within the project area.
- Dominant vegetation includes creosote bush, whitethorn acacia, and ocotillo.
- The areas surrounding the mine features are relatively barren compared to other portions of the project area due to historic mining disturbance.

Impacts from the Proposed Action:

- Safeguarding activities would have minimal impacts to vegetation because existing roads would be used as much as possible to avoid ground disturbance, most of the mine features have sparse vegetation, and the small project footprint (i.e., 30-foot disturbance buffer around mine features).
- Disturbed areas would be seeded with a native seed mix followed by mulching to reduce the potential for noxious weed colonization and reduce the erosion potential of soils in the project area.



LIVESTOCK

- The project area falls within two adjacent grazing allotment areas—Green Canyon and Apache Canyon.

Impacts from the Proposed Action:

- Minimal impacts to livestock grazing due to temporary displacement of livestock during the project construction phase, but no changes to Animal Use Months (AUMs) would be expected.
- Safeguarding efforts to fill in the mine hazards or prevent access, would reduce potential hazards that could impact livestock.
- All grazing permittees on both federal and state lands would be notified prior to safeguarding activities.



WILDLIFE RESOURCES (INCLUDES THREATENED AND ENDANGERED (T&E) SPECIES)

A biological survey of the Red Hill Mine Project Area was completed in July 2022 to document wildlife habitat and wildlife observed and to comply with Section 7 of the Endangered Species Act. A bat surveys were completed in 2014 and 2023 to provide closure recommendations.

Survey Results:

- Signs for mountain lion, black bear, and desert bighorn sheep were observed
- Ten sites contained bats and an additional eight sites contained other bat signs
- Eleven sites contained no bats or any sign of bat use
- Townsend's big-eared bats (special status species), big brown bat canyon bat, and genus *Myotis* (species unknown) were observed

Impacts from the Proposed Action:

- Wildlife could be displaced during the construction phase of the Proposed Action; however, impacts would be minimal due to the temporary nature and limited scope of the project
- Safeguarding of hazardous features with wildlife-compatible closures would reduce the potential entrapment, injury, or mortality hazard these features could pose to wildlife



WILDLIFE RESOURCES (INCLUDES T&E SPECIES)

Impacts from the Proposed Action:

- The Proposed Action would have *no effect* on the federally endangered, threatened, and proposed species due to the lack of suitable habitat, which makes occurrence in the project area unlikely.
- The Proposed Action would have no impacts on state threatened or endangered or BLM sensitive species, with the exception of the Townsend's big-eared bat.
- The Proposed Action may affect individuals of the BLM sensitive Townsend's big-eared bat species but is not likely to lead towards federal listing or a loss of viability for the following reasons : 1) individual mine closure stipulations developed by BCI would be followed and would minimize impacts to Townsend's big-eared bats (see wildlife section for more detail); 2) disturbance would be temporary and localized; and 3) disrupted individuals could relocate to adjacent, undisturbed habitat.



GEOLOGY/SOILS

- Soils within the project area are primarily comprised of Rock outcrop-Torriorthents association, extremely steep
- There are 10 geologic units within the project area and several unnamed post-Palomas Quaternary sediments
- All sites proposed for closure are located on previously disturbed ground surface

Impacts from the Proposed Action:

- Temporary ground disturbance limited to the immediate mine site within the project area; 30-foot buffer around the mine feature.
- Limited overland travel by construction equipment would cause localized and minor impacts, such as soil compaction and increased potential for surface runoff and soil erosion.



AIR QUALITY

- The project area is within the New Mexico portion of the El Paso-Las Cruces-Alamogordo Interstate Air Quality Control Region (ACQR) 153.
- ACQR 153 has attainment status to National Ambient Air Quality Standards (NAAQS) for all criteria pollutants: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide.

Impacts from the Proposed Action:

- Temporary and localized impacts to visibility and air quality possible during the construction phase from increased emissions; impacts would end once safeguarding activities are complete.
- No impacts to Class I Air Sheds are anticipated due to the temporary nature and limited scope of the Proposed Action.



HUMAN HEALTH AND SAFETY

- Approximately 35 mine features (adits and shafts) in the project area are Priority 1 hazards for the AML Program.
- Mine dangers include falls into vertical shafts, collapses or cave-ins, poor air circulation, poisonous gases, insufficient oxygen, deteriorated explosives, wildlife, and the potential to become disoriented or lost in the mine workings.

Impacts from the Proposed Action:

- Positive long-term impacts to human health and safety due to the increased safety measures from safeguarding the general public from hazards associated with historical mining features throughout the project area.
- The project would install safeguard measures that would limit access to dangerous and hazardous mine features.



SCIOECONOMICS AND ENVIRONMENTAL JUSTICE

- Low-income populations are located within the project area
- The project area is identified as disadvantaged in Climate, Health, and Legacy Pollution, with low income being 72 percent

Impacts from the Proposed Action:

- Proposed safeguarding of hazards associated with historical mining features throughout the project area would not change the community structure or lands for other uses
- Positive long-term impacts to human health and safety due to the increased safety measures implemented
- Proposed actions at Red Hill site would not result in disproportionate negative impacts to low-income or minority individuals or populations



IMPACTS FROM THE NO ACTION

- No impacts to all other resources.
- Negative, long-term impact with potentially severe and significant consequences to human health and safety concerns

THURSDAY, SEPTEMBER 3, 2009

Missing Man Found In Old Abandoned Mine



By John Larson

SOCORRO – The body of a Magdalena man was recovered Friday night from an 65 foot mine shaft after being missing for over a month.

David Heiss, 53, was last seen July 22 by Deputy Marshal Ed Sweeney following a report of Heiss threatening two men with a firearm at his campsite above Patterson Canyon.

Magdalena Marshal Larry Cearley's police report stated that on Wednesday, Aug. 26, Nester Martinez told him he found a makeshift cover built over the abandoned Mask Mine, and also spotted Heiss' pickup high centered in an arroyo near the mine. Martinez said he went to the mine and found personal items including a rifle owned by Heiss.

Heiss had renamed the mine the "Iron Mask Mine."

The report said that Cearley investigated Martinez' statements, arriving at the mine, a quarter-mile from the dead end road at Patterson Canyon, at about 3:30 p.m.

Cearley found Heiss' orange pickup truck stuck in an arroyo next to a tree, and noticed spider webs around the tires, indicating the truck had been there some time.

The pickup's door was also open.

The report said that there was a campsite at the mine, which was a vertical shaft covered by several wooden planks making a frame. A bedroll was on the frame. Food was thrown about the area from animals.



Danger!
¡ Peligro!



Abandoned Mine Hazards
 Peligros de Minas Abandonadas



Unsafe Mine Shafts & Highwalls
Pozos de Minas Peligrosos



Deadly Gas & Lack of Oxygen
Gases Mortales y Falta de Oxigeno



Unsafe Ladders
Escaleras Peligrosas



Unstable Explosives
Explosivos Inestables



Deep Pools of Water
Charcos de Agua Profundos

You are located here:
Ud. está aquí:

In an emergency call:
En la emergencia llame:

Stay Out Stay Alive
No Entre Proteja Su Vida

United States Department of Agriculture Forest Service Issued March 1993

MITIGATION/AVOIDANCE MEASURES

- Mitigation measures will be implemented to avoid potential adverse impacts of the Proposed Action.

Mitigation Measures (does not include all listed in the draft EA)

- Prior to construction and safeguarding activities, avoidance buffers would be established and would extend up to 50 feet (15 meters) from edge of documented cultural resources.
 - Bat compatible closures will occur either during the warm season, cold season, or at any time to protect the bat habitat within and allow for continued bat use. Closure recommendations are unique to each opening.
 - Project construction phase would occur outside of the principal avian breeding and nesting season (1 March to 1 September).
 - Equipment would be refueled at least 100 feet from drainages. Leaking equipment would be removed from the project site until repaired and cleaned.
 - Staging areas would be limited to existing roads, designated pullouts and parking areas, and already disturbed areas
-

QUESTIONS?

How to Comment

 Please submit your comments online to RedHillMineSafeguardingProject@ddc-dine.com.

 Submit written comments at the public meeting on the comment cards

 Submit written comments by mail to the address below

*Attention: Red Hill Mine Safeguarding Project PM
8901 Adams Street, Suite B
Albuquerque, New Mexico 87113*

In the subject line of your letter or email, please include "Comments on the Red Hill Mine Safeguarding Project EA".

All comments must be received by **March 29, 2024**.

Draft Environmental Assessment are posted on the AML website at:
<https://www.emnrd.nm.gov/mmd/public-notices/>



THANK YOU!

