

Attachment A
Cultural Resource Consultation

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Melanie Kenderdine
Cabinet Secretary Designate

Dylan Fuge
Deputy Secretary

Albert Chang,
Director,
Mining and Minerals Division



June 11, 2023

HPD Log 122702
Received 6/11/2024

Mrs. Michelle Ensey
State Historic Preservation Officer (Interim) and
State Archaeologist
Historic Preservation Division
407 Galisteo Street, Suite 236
Bataan Memorial Bldg.
Santa Fe, NM 87501
michelle.ensey@dca.nm.gov

RE: *Archeology of the New Mexico Abandoned Mine Land Program: Cultural Resources Inventory of Lone Eagle Mine, Eddy County, New Mexico (NMCRI 154823)*

Dear Mrs. Ensey,

The New Mexico Abandoned Mine Land Program (AML), in partnership with the U.S. Department of the Interior (USDI), Office of Surface Mining Reclamation and Enforcement (OSMRE), is conducting preliminary environmental studies within the Lone Eagle Mining District located approximately 6 miles northeast of Carlsbad in Eddy County, New Mexico, prior to planned mine closures (Attachment 1). The proposed closure project is designed to protect the public from dangers associated with historical hard-rock mining features such as adits, shafts, and other mine openings. As a federally funded program this proposed AML undertaking is subject to Section 106 (54 U.S.C. 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. 300101 et seq.) and its implementing regulations (36 CFR Part 800: Protection of Historic Properties, as revised August 2004).

In general, AML safeguards mine features that are eight (8) feet or more in depth or length, which intrude into the ground surface. AML safeguarding activities include a variety proposed methods such as mechanically or manually filling mine openings with surrounding waste material, imported materials, and/or polyurethane foam (PUF). Other alternatives include building structural barriers that restrict human access such as fences, locking gates, cupolas, or other wildlife compatible closures. These safeguarding measures minimize exposure of hazardous abandoned mine openings to the public, while also working to preserve the visual and informational integrity of cultural manifestations, and wildlife habitat, if present.

The project area includes the Lone Eagle Mining District (Figures 1 & 2.) where the earliest recorded hard-rock mining activities date to ~1890 and continued into the late 1950s. The mine's sedimentary sandstone was primarily mined for its copper deposits, but these sandstones also contained small fractions of lead and uranium. The Lone Eagle Mining District does not appear to have been economically viable as the value of the extracted minerals from 1905 to 1956 is estimated at \$8,000 (McLemore 2006). The mining activities can best be described as small-scale operations. The *Area of Potential Effect* (APE) for these activities is encompassed within a ~43-acre block (Attachment 1) that consists of ~10 acres of federal lands managed by the USDI-Bureau of Land Management's Carlsbad Field Office (BLM-CFO) and ~33 acres of State Trust Lands (STL) managed by the New Mexico State Land Office (SLO).

The AML is requesting SHPO review AML's identification and treatment of historic properties as documented in the above referenced report and associated LA Forms. Table 1 provides a summary of AML's National Register of Historic Places (NRHP) eligibility determinations based on our review of the accompanying cultural resources report and site forms. AML has assessed that the proposed undertaking will result in *no adverse effect to historic properties* or the mining landscape. The AML is seeking concurrence from the SHPO on our NRHP site eligibility determinations and effect assessment.

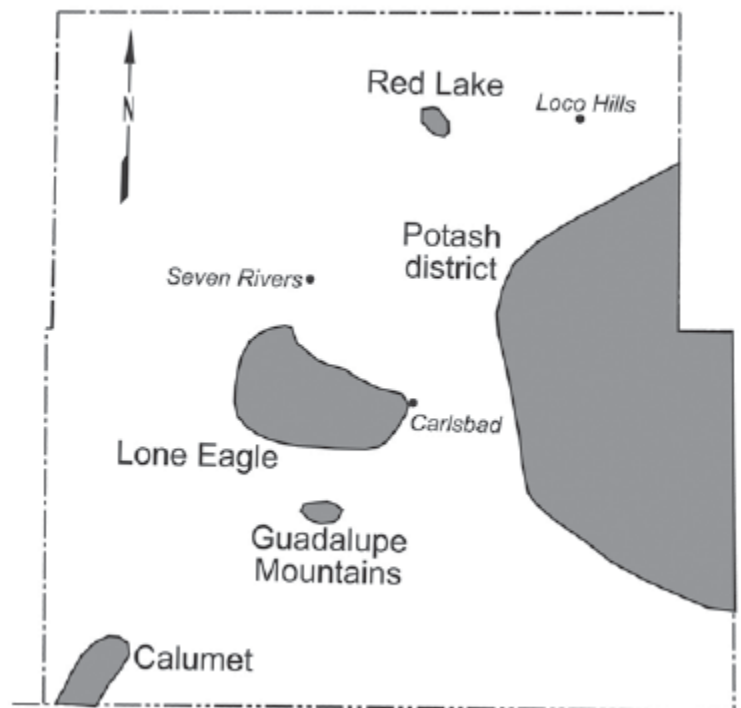


Figure 1.) Mining Districts in Eddy County, New Mexico (adapted from McLemore 2006)

The portion of the Lone Eagle Mine safeguarding project involving STL (T:21S, R:25E, S:14) has been authorized by the New Mexico Commissioner of Public Lands (Commissioner) under a Natural Resource Authorization (NRA) agreement (#FOD-NR-329) between the State of New Mexico Energy, Minerals, and Natural Resources Department, Mining and Minerals Division and the Commissioner. Because the Area of Potential Effect (APE) involves STL, this AML undertaking is subject to review by the Commissioner under Rule 19.2.24 NMAC; *Cultural Properties Protection*, in accordance with the New Mexico Cultural Properties Protection Act Sections 18-6A-6 NMSA

1978. To encourage coordination, the AML requested input from the New Mexico State Land Office (SLO) regarding any concerns they might have had with the project regarding the identification and treatment of historic properties on STL as documented in the above referenced report and associated LA Forms. The Commissioner concurred with the AMLP's NRHP site eligibility determinations and effect assessment on June 10, 2024 (Attachment 2).



Figure 2.) Lone Eagle Mine Project Overview Photo, Looking North (Kibler and Kurota 2024, NMCRIS 154823)

The portion of BLM-CFO Land addressed in the Lone Eagle Mine safeguarding project (T;21S, R;25E, Sec 15) includes activities covered in the *Memorandum of Understanding between the State of New Mexico Energy, Minerals, and natural Resources Department (EMNRD) and the United States department of the Interior Bureau of Land Management, New Mexico State Office Concerning Abandoned Mine Land Reclamation* (BLM MOU NM- 920-2019-004/EMNRD No. 19-521-0620-0200). Attachment 3 is a copy of the BLM-CFO's signed concurrence with AMLP's assessment of project effects and NRHP eligibility determinations.

The Comanche Nation of Oklahoma, Kiowa Tribe, Mescalero Apache Tribe, Tesuque Pueblo, and the Ysleta del Sur Pueblo were sent consultation letters regarding the proposed undertaking and the impending cultural resource survey in December 2023. As of this letter, the AML program has not received any interest from the tribes.

As part of their preliminary studies, the EMNRD retained the University of New Mexico's Office of Contract Archaeology (OCA) to perform a cultural resource inventory of the proposed project's APE. A full-coverage pedestrian survey was performed between January 12, 2024, and January 13, 2024, under the supervision of OAC archaeologist Alexander Kurota.

During the current investigation, OCA documented three newly recorded sites (LA 204216 – LA 204218) and two previously recorded sites (LA 182556 and LA 182586). In total, five archaeological sites were documented, all historic hard-rock mining sites that were developed and in use sometime between 1890 and 1956. A total of nine Isolated Occurrences (IOs) were encountered

in the project area which are *not eligible* for listing in the Nation Register of Historic Places (NRHP).

Of the five recorded sites, OCA only recommended one site *eligible* and the remaining four sites *not eligible* for listing in the NRHP (Table 1.). Given certain integrity standards can be met, archaeological sites' eligibility evaluations are primarily evaluated for their information potential under NRHP eligibility Criterion D, but can also be eligible for listing under Criteria A, B, and C. As for these resources' contributions to an undefined historic/archaeological district, neither OCA nor the AML have pursued this level of NRHP eligibility evaluation.

In this instance, the primary factors influencing the AML's NRHP eligibility recommendations were whether a site contained loci with potential for intact subsurface archaeological deposits and whether a site contained intact or unique mine engineering features with the ability to visually convey an association with the period of historic mining in the Lone Eagle Historic Mining District. In the evaluation of historic mining resources and properties, our program relies on National Register Bulletin No. 42, *Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties* (Noble and Spude 1992). To summarize, the bulletin maintains that mining resources eligible for listing in the NRHP should possess historic significance in American history, architecture, archaeology, engineering, or culture, and they must exhibit the ability to convey their significance through the survival of their physical characteristics (historic integrity).

Table 1.) Site Summary Table: NRHP Eligibility

LA Number	Occupation Type	Land Status	OCA Eligibility Recommendations	Other Agency Eligibility Determinations (BLM-CFO & SLO)	AMLP Eligibility Determination	Past SHPO Eligibility Recommendations	Past Agency Eligibility Determinations
182556	Historic Mining	BLM-CFO	Not Eligible	Not Eligible	Not Eligible	Unevaluated (NMCRI 133384, HPD Log 102999 2/16/2016)	Not Eligible (NMCRI 133384 11/27/2015)
182586	Historic Mining	SLO	Eligible, D	Eligible, D	Eligible, D	Eligible, D (NMCRI 13334, HPD Log 102999 2/18/2026)	NA (Not Entered in NMCRI)
204216	Historic Mining	BLM-CFO	Not Eligible	Not Eligible	Not Eligible	NA	NA
204217	Historic Mining	BLM-CFO	Not Eligible	Not Eligible	Not Eligible	NA	NA
204218	Historic Mining	SLO	Not Eligible	Not Eligible	Not Eligible	NA	NA

LA 182556 (Figure 3) was previously recorded by Lone Mountain Archaeological Services (LMAS) in 2015 (NMCRI 133384). At that time, the BLM-CFO determined the site *was not eligible* for listing in the NRHP while both the recorder and SHPO recommended leaving the site's NRHP eligibility *unevaluated* pending a review of mine claim records (HPD Log 102999). The site dates from ~1890 A.D. to ~1930 and is assigned an Anglo/Euro-American, US Territorial-New Mexico Statehood–WWII cultural affiliation. It is located approximately 150-m west of the updated site boundary of LA 182586 (Lone Eagle Mine). OCA recommends LA 182556 *not eligible* for listing to the NRHP, as, “*the mine shaft, is one of the many prospecting features found throughout the Lone Eagle Mine area and beyond. It does not seem to hold significant research potential.*” Unlike with fossil fuels or potash, mining for copper or other

hard-rock minerals was not a significant factor in the economic or cultural development of Eddy County or southeast New Mexico in general. The mineshaft and rock cairn are not unique and the timbers remaining visible within the mineshaft do not retain the integrity necessary to portray a typical timber collar let alone a unique design or work of a master. The site has surficial artifacts and there is little to no information potential as the site is in a hard-rock, non-depositional, environment. The site has some potential for intact subsurface material within the infill of Feature 1 (mineshaft); however, it is still unlikely that the site could yield additional significant information. The AML concurs with OCA's NRHP eligibility recommendation and has determined the site *not eligible* for listing in the NRHP. Even though the AML has determined LA 182556 *not eligible* as an individual resource, the site could be a contributing resource to what is currently an undefined historic archaeological mining district associated with the Early to Mid-Twentieth Century hard-rock mining of the Lone Eagle Mining District.



Figure 3.) Feature 1 at LA 182556, Mine Shaft Collar Timber Shoring 2015 vs. 2023 (Kibler and Kurota 2024, NMCRIS 154823)

Feature 1 at LA 182556 is scheduled to be backfilled using a PUF base which will then be covered using imported materials. An alternate method of safeguarding being considered is the placement of a steel grate over the adit entrance securing the grate to the bedrock with steel rods welded to the grate itself. In either scenario, the prominent limestone collar to the shaft will remain visible. If backfilled, a shallow depression will remain where the shaft entrance once existed. Both options will maintain the integrity of the site's visual setting and feel. The loose visible timbers will be removed and if possible, placed back into the shaft before being backfilled or covered. Otherwise, they will be set either back into the shallow depression or to the side of the feature.

LA 182586 (Figure 4), an Anglo/Euro-American, New Mexico Statehood–WWII to Recent historic archaeological site dating from ~1935 A.D. to ~1957 A.D., is located on State Trust Lands approximately 6 miles northwest of Carlsbad, New Mexico along the east escarpment of the Azotea Mesa. The site was previously recorded by LMAS in 2015 (NMCRIS 133384). There is no record on file reflecting a NRHP eligibility recommendation from the land managing agency, in this case, the SLO. Both the recorder and SHPO recommended the site *eligible* under Criterion D (HPD Log 102999). OCA recommends LA 182586 *eligible* for listing to the NRHP under Criterion D. They explain, “*that buried cultural deposits are very likely inside Features 5*

and 6 as these features may have functioned as temporary residences. It is also possible these structures may have been used to store explosives for the mining operations or as storage of dry foodstuffs. It is also likely that the buried floors with possible floor features are present under the modern sediments inside these structures. Therefore, features 5 and 6 can offer new information about the mining operations at the Lone Eagle Mine. We conclude the site has a great research potential and we recommend it as eligible for nomination to the NRHP under Criterion D.”

Because LA 182586 is situated in an accessible location it has been unable to avoid significant impacts from vandalism or the effects from scavenging and/or removal of the mining infrastructure such as building materials, water tanks, platforms, ore chutes, and many other structures and features that reflect hard-rock mining in southeastern New Mexico/Carlsbad area in the Early to Mid-Twentieth Century. Individually, the mining components at LA 182586 lack distinction as their superstructures have been removed leaving only foundational remnants. They have deteriorated due to exposure to the harsh desert environment as is expected when abandoned and neglected. Albeit many of the mining features at LA 182586 can be recognized as being in poor condition, taken collectively, the individual mining property components do retain some semblance of spatial integrity, potentially conveying to the investigator a portrait of a unique Early to Mid-Twentieth Century hard-rock mining operation in southeastern New Mexico, specifically, Carlsbad, New Mexico.



Figure 4.) Feature 4 at LA 182586, Overview and Contents of Pit (Kibler and Kurota 2024, NMCRIS 154823)

In AML’s assessment, LA 182586 is a loci within the Lone Eagle Mining District with numerous feature types including but not limited to potential habitations, structure foundations, waste rock and tailing piles, and trash dumps with potential for intact subsurface archaeological deposits (Criterion D) but the structures and mining features, though potentially unique (in style or methods of construction), lack integrity outside of their spatial relation to each other (location) and struggle to visually convey an association with the Early to Mid-Twentieth Century hard-rock mining in the Carlsbad area. The AML concurs with OCA’s NRHP eligibility recommendation and has determined the site *eligible* for listing in the NRHP under Criterion D but fails to see LA 182586 meeting the integrity requirements to be eligible under any of the remaining three Criteria: A, B, or C. This site could be a contributing resource to what is currently an undefined historic mining district associated with the Early to Mid-Twentieth Century hard-rock mining of the Lone Eagle Mining District.

The backfilling of Feature 4, the open pit at LA 182586, will avoid all non-treated structural features. The proposal is for the open pit to be filled using existing waste rock from spoil piles at the site and imported caliche materials from a nearby quarry. There is potential for PUF to be used as a base material. The pit will remain visible as shallow depression with a 4 ft. lip along the western highwall of the pit left visible. Only a select few spoil piles (n=3) located in the southern portion of the site away from the main feature loci and pit feature will be sourced for their waste rock during the backfill. This will minimize impacts to the integrity of the site's visual setting and feel.

To minimize and discourage access to this site by the public, the AML is also considering mechanically reclaiming the two-track road that accesses the site starting from the site's southeastern boundary back to the two-track (pipeline) road south of the site. The road will also have large boulders, sourced from the spoil piles, placed across the road at the site boundary.

Table 2.) Safeguard Methods by Site & Feature

LA Number	OCA Feature No.	Safeguard Method	Feature Type
182556	Feature 1	Backfill mine shaft - fill with imported materials and potentially PUF... Mine shaft (Feature 1) will remain visible as shallow depression to maintain the integrity of the site's visual setting and feel. Alternative method includes a steel grate closure over adit opening. The loose visible timbers will be removed and if possible, placed back into the shaft before backfilled	Mine Shaft
182586	Feature 4	Avoid all non-treated features - Backfill open pit (Feature 4) - fill with existing waste rock and potentially PUF - pit will remain visible as shallow depression and residual waste rock material will be recontoured in place to minimize impacts to the integrity of the site's visual setting and feel.	Open Pit

The three newly recorded sites, LA 204216, 204217, and 204218 are historic sites with an Unknown-Unspecific Historic (A.D. 1550 to Present) cultural affiliation. All three were recommended as *not eligible* for listing in the NRHP by the recorders. There is a potential for one or more of these three sites to contribute to what is currently an undefined historic/archaeological mining district, but to this point, neither OCA nor the AML have pursued this level of NRHP eligibility evaluation. Not one of these three sites possess the integrity necessary to convey their historic associations as the mining and engineering features remaining at these sites, if present, lack any distinctive design or engineering characteristics. There is little to no information potential as each site is in a hard-rock, non-depositional, environment and the features are primarily abandoned shallow prospect pits, cairn remnants, or artifact scatters. It is AML's determination that LA 204216, 204217, and 204218 are *not eligible* for listing in the NRHP under any of the four National Register Criteria (A, B, C, or D).

The Lone Eagle Mine project is designed to help protect the public from the hazards associated with abandoned mines by safeguarding shafts, adits, open pits, subsidence areas, and other physical openings associated with the mining landscape. The two features being targeted by the AML for the current undertaking include a mine shaft (Feature 1) at LA 182556 and a large open pit with a highwall (Feature 4) at 182585. Project activities will not include the razing or destruction of structural foundations such as Features 1 through 3 at LA 182586 shown in Figure 5. Typical AML projects have a suite of standard procedures for reclaiming and safeguarding mining features as described on page one. For this undertaking, the AML has chosen to backfill both features (potential steel grate at F 1, LA 182556) using existing waste rock and/or imported

AMLIS Key: NM935066

fill materials from a nearby active materials (caliche) quarry and potentially in combination with PUF (Table 2). Structural closures are typically built on site to BLM Visual Resource Management specifications, (<https://www.blm.gov/programs/recreation/recreation-programs/visual-resource-management>).

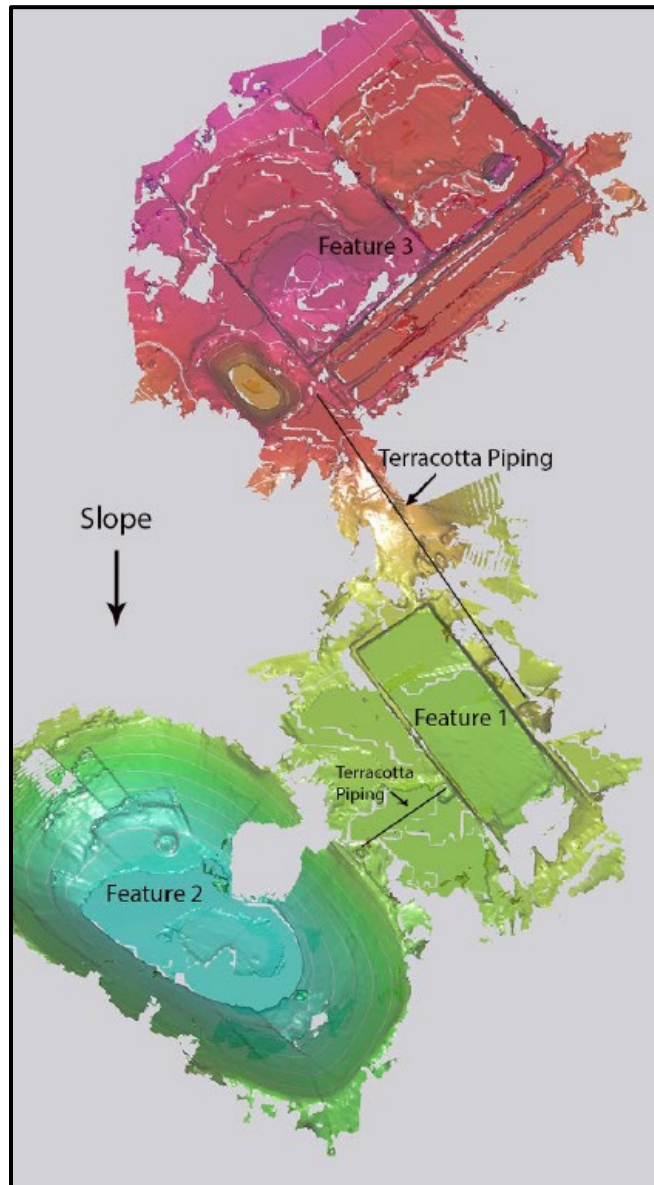


Figure 5.) Lidar Image for Features 1-3 at LA 182585 ((Kibler and Kurota 2024, NMCRIS 154823)

During the construction phase AML will treat all archaeological sites, regardless of their NRHP determination, as *eligible* for listing in the NRHP. As with the NRHP *eligible* sites, the AML will institute safeguarding methods that protect the visual and informational integrity of the sites. Whenever possible, AML will use existing roads to access the features scheduled for closure. The AML proposes to avoid any remaining mine related features (structural foundations, prospect pits, cairns, etc...) outside the treatment areas with all equipment, vehicles, foot traffic, and any other ground surface disturbing activities during construction. Designated avoidance areas that extend up to 50 feet (15 meters) from cultural resources will be established prior to construction. When working near designated avoidance areas and where construction access

routes pass next to these locations, high visibility barrier/indicators will be installed around the avoidance perimeter. The Contractor, AML Cultural Resource Manager/Archaeologist, and AML Project Manager shall cooperate fully with prescribed practices to preserve archaeological and historic artifacts/features present within the project area. Moving, removal, or collecting of archaeological or historic materials from the project area or vicinity is prohibited.

Lastly, if previously unidentified archaeological sites, deposits, or in situ artifacts are encountered, all operation in that immediate area shall be terminated (100-ft. radius, 30 meters) until the proper preservation agencies and Native American groups have been notified and offered the opportunity to assess the discovery site.

The Comanche Nation of Oklahoma, Kiowa Tribe, Mescalero Apache Tribe, Tesuque Pueblo, and the Ysleta del Sur Pueblo were sent consultation letters regarding the proposed undertaking and the impending cultural resource survey in December 2023. As of this letter, the AML program has not received any interest from the tribes.

Table 1 provides a summary of AML's NRHP eligibility determinations based on our review of the accompanying cultural resources report and site forms provided by OCA and input from the land managing agencies. Further, following the above protocol, AML has assessed that the proposed undertaking will result in *no adverse effect to historic properties* or the mining landscape. The AML is seeking concurrence from the SHPO on site our eligibility determinations and the Program's effect assessment. Accordingly, please review the OCA report and LA Forms, and provide AML with any comments, recommendations, or corrections. The report and cultural resource documentation have been uploaded to the NMCRIS database and can be downloaded for you to view.

If the SHPO has no objections, please return a signed copy of this correspondence to concur with the AML determinations as presented. The AML will forward any project related correspondence it receives from the SHPO to the BLM-CFO and the Commissioner for their project files.

If you would like additional information or have any questions, please feel free to contact me by email at andrew.zink@emnrd.nm.gov or by phone at 505-490-7379.

Thank you for your coordination on this project.

Sincerely,



Andrew Zink
AML Cultural Resources Manager
EMNRD-MMD



Concurrence: _____ Date:

6/25/2024 _____ For: New Mexico SHPO

Comments: _____

LA20218-Artifact Assemblage size needs completed.

LA182586. Features should be fully described on site form as in the report, not just summarized.

CC: Lloyd Moiola (NM AML Program Environmental Manager)
Chuck Dentino (NM AMLP Project Manager)
Geoff Cunnar, PhD (HPD Archaeological Review)

Attachments:

1.) Lone Eagle Project Area and Cultural Resource Map

Uploaded in NMCRIS:

- Report: Activity No. 154823
- NIAF: Activity No. 154823
- LA 182556, LA 182586, & LA 204216 – LA 204218, Site Forms and Supporting Documentation

References Cited:

Kibler, Robin and Alexander Kurota

2024 *Archeology of the New Mexico Abandoned Mine Land Program: Cultural Resources Inventory of Lone Eagle Mine, Eddy County, New Mexico (NMCRIS 154823)*, Office of Contract Archaeology, University of New Mexico.

McLemore, Virginia T.

2006 Mineral Deposits in Eddy County, New Mexico, and their Relationship to Karst Processes. In *Caves and karst of Southeastern New Mexico.*, edited by Land, L., Lueth, V.W., Raatz, W., Boston, P., and Love, D.L., New Mexico Geological Society 57th Field Conference Guidebook, p.337-344.

Noble, Bruce J., and Robert Spruce

1992 *National Register Bulletin 42; Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties*, National Park Service.

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May 17, 2023

Evelyn Rodriquez
Deputy Field Manager
USDI-Bureau of Land Management
Carlsbad Field Office
620 E. Greene St.
Carlsbad, NM 88220
(575)234-5972

RE: *Archeology of the New Mexico Abandoned Mine Land Program: Cultural Resources Inventory of Lone Eagle Mine, Eddy County, New Mexico (NMCRIS 154823)*

Dear Ms. Rodriquez,

The New Mexico Abandoned Mine Land Program (AML), in partnership with the U.S. Department of the Interior (USDI), Office of Surface Mining Reclamation and Enforcement (OSMRE), is conducting preliminary environmental studies prior to planned mine safeguarding activities that involves lands managed by the USDI-Bureau of Land Management, Carlsbad Field Office (BLM-CFO) (Attachment 1). The portion of the project that will occur on BLM-CFO managed land is approximately 6 miles northeast of Carlsbad in Eddy County, New Mexico. The Lone Eagle Mine Safeguarding Project (Lone Eagle) (T;21S, R;25E, Sec 15) will include activities covered in *Memorandum of Understanding between the State of New Mexico Energy, Minerals, and natural Resources Department (EMNRD) and the United States department of the Interior Bureau of Land management, New Mexico State Office Concerning Abandoned Mine Land Reclamation (BLM MOU NM- 920-2019-004/EMNRD No. 19-521-0620-0200)*.

As a federally funded program the proposed AML undertaking is subject to Section 106 (54 U.S.C. 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. 300101 et seq.) and its implementing regulations (36 CFR Part 800: Protection of Historic Properties, as revised August 2004). The *Area of Potential Effect (APE)* for these activities is encompassed within a ~43-acre block (Attachment 1) that consists of ~10 acres of federal lands managed by the BLM-CFO and ~33 acres of State Trust Lands (STL) managed by the New Mexico State Land Office (SLO). To encourage coordination, the AML is requesting input from the BLM-CFO regarding any concerns you might have with the project as proposed in this letter regarding the identification and treatment of historic properties on BLM-CFO lands as documented in the above referenced report and associated LA Forms.

Because the Area of Potential Effect (APE) involves STL, this AML undertaking is also subject to review by the Commissioner of Public Lands under Rule 19.2.24 NMAC; *Cultural Properties*

Protection, in accordance with the New Mexico Cultural Properties Protection Act Sections 18-6A-6 NMSA 1978. The AML has also requested input from the SLO regarding any concerns they might have with the proposed undertaking.

In general, AML safeguards mine features that are eight (8) feet or more in depth or length, which intrude into the ground surface. AML safeguarding activities include a variety proposed methods such as mechanically or manually filling mine openings with surrounding waste material, imported materials, and/or polyurethane foam (PUF). Other alternatives include building structural barriers that restrict human access such as fences, locking gates, cupolas, or other wildlife compatible closures. These safeguarding measures minimize exposure of hazardous abandoned mine openings to the public, while also working to preserve the visual and informational integrity of cultural manifestations, and wildlife habitat, if present.

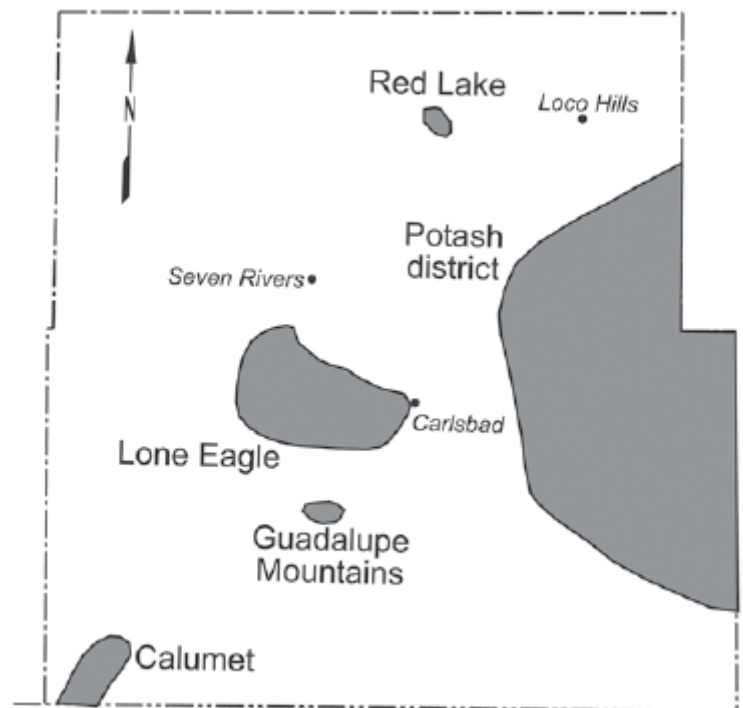


Figure 1.) Mining Districts in Eddy County, New Mexico (adapted from McLemore 2006)

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Figure 2.) Lone Eagle Mine Project Overview Photo, Looking North (Kibler and Kurota 2024, NMCRIS 154823)

Of the five recorded sites, OCA only recommended one site *eligible* and the remaining four sites *not eligible* for listing in the NRHP (Table 1.). Given certain integrity standards can be met, archaeological sites’ eligibility evaluations are primarily evaluated for their information potential under NRHP eligibility Criterion D, but can also be eligible for listing under Criteria A, B, and C. As for these resources’ contributions to an undefined historic/archaeological district, neither OCA nor the AML have pursued this level of NRHP eligibility evaluation.

Table 1.) Site Summary Table: NRHP Eligibility

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evaluation of historic mining resources and properties, our program relies on National Register Bulletin No. 42, *Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties* (Noble and Spude 1992). To summarize, the bulletin maintains that mining resources eligible for listing in the NRHP should possess historic significance in American history, architecture, archaeology, engineering, or culture, and they must exhibit the ability to convey their significance through the survival of their physical characteristics (historic integrity).

LA 182556 (Figure 3) was previously recorded by Lone Mountain Archaeological Services (LMAS) in 2015 (NMCRIS 133384). At that time, the BLM-CFO determined the site *was not eligible* for listing in the NRHP while both the recorder and SHPO recommended leaving the site's NRHP eligibility *unevaluated* pending a review of mine claim records (HPD Log 102999). The site dates from ~1890 A.D. to ~1930 and is assigned an Anglo/Euro-American, US Territorial-New Mexico Statehood–WWII cultural affiliation. It is located approximately 150-m west of the updated site boundary of LA 182586 (Lone Eagle Mine). OCA recommends LA 182556 *not eligible* for listing to the NRHP, as, “*the mine shaft, is one of the many prospecting features found throughout the Lone Eagle Mine area and beyond. It does not seem to hold significant research potential.*” Unlike with fossil fuels or potash, mining for copper or other hard-rock minerals was not a significant factor in the economic or cultural development of Eddy County or southeast New Mexico in general. The mineshaft and rock cairn are not unique and the timbers remaining visible within the mineshaft do not retain the integrity necessary to portray a typical timber collar let alone a unique design or work of a master. The site has surficial artifacts and there is little to no information potential as the site is in a hard-rock, non-depositional, environment. The site has some potential for intact subsurface material within the infill of Feature 1 (mineshaft); however, it is still unlikely that the site could yield additional significant information. The AML concurs with OCA's NRHP eligibility recommendation and has determined the site *not eligible* for listing in the NRHP. Even though the AML has determined LA 182556 *not eligible* as an individual resource, the site could be a contributing resource to what is currently an undefined historic archaeological mining district associated with the Early to Mid-Twentieth Century hard-rock mining of the Lone Eagle Mining District.



Figure 3.) Feature 1 at LA 182556, Mine Shaft Collar Timber Shoring 2015 vs. 2023 (Kibler and Kurota 2024, NMCRIS 154823)

Feature 1 at LA 182556 is scheduled to be backfilled using a PUF base which will then be covered using imported materials. An alternate method of safeguarding being considered is the placement of a steel grate over the adit entrance securing the grate to the bedrock with steel rods welded to the

grate itself. In either scenario, the prominent limestone collar to the shaft will remain visible. If backfilled, a shallow depression will remain where the shaft entrance once existed. Both options will maintain the integrity of the site's visual setting and feel. The loose visible timbers will be removed and if possible, placed back into the shaft before being backfilled or covered. Otherwise, they will be set either back into the shallow depression or to the side of the feature.

LA 182586, an Anglo/Euro-American, New Mexico Statehood–WWII to Recent historic archaeological site dating from ~1935 A.D. to ~1957 A.D., is located on State Trust lands approximately 6 miles northwest of Carlsbad, New Mexico along the east escarpment of the Azotea Mesa. The site was previously recorded by LMAS in 2015 (NMCRI 133384). There is no record on file reflecting a NRHP eligibility recommendation from the land managing agency, in this case, the SLO. Both the recorder and SHPO recommended the site *eligible* under Criterion D (HPD Log 102999). OCA recommends LA 182586 *eligible* for listing to the NRHP under Criterion D. They explain, “*that buried cultural deposits are very likely inside Features 5 and 6 as these features may have functioned as temporary residences. It is also possible these structures may have been used to store explosives for the mining operations or as storage of dry foodstuffs. It is also likely that the buried floors with possible floor features are present under the modern sediments inside these structures. Therefore, features 5 and 6 can offer new information about the mining operations at the Lone Eagle Mine. We conclude the site has a great research potential and we recommend it as eligible for nomination to the NRHP under Criterion D.*”

Because LA 182586 is situated in an accessible location it has been unable to avoid significant impacts from vandalism or the effects from scavenging and/or removal of the mining infrastructure such as building materials, water tanks, platforms, ore chutes, and many other structures and features that reflect hard-rock mining in southeastern New Mexico/Carlsbad area in the Early to Mid-Twentieth Century. Individually, the mining components at LA 182586 lack distinction as their superstructures have been removed leaving only foundational remnants. They have deteriorated due to exposure to the harsh desert environment as is expected when abandoned and neglected. Albeit many of the mining features at LA 182586 can be recognized as being in poor condition, taken collectively, the individual mining property components do retain some semblance of spatial integrity, potentially conveying to the investigator a portrait of a unique Early to Mid-Twentieth Century hard-rock mining operation in southeastern New Mexico, specifically, Carlsbad, New Mexico.

In AML's assessment, LA 182586 is a loci within the Lone Eagle Mining District with numerous feature types including but not limited to potential habitations, structure foundations, waste rock and tailing piles, and trash dumps with potential for intact subsurface archaeological deposits (Criterion D) but the structures and mining features, though potentially unique (in style or methods of construction), lack integrity outside of their spatial relation to each other (location) and struggle to visually convey an association with the Early to Mid-Twentieth Century hard-rock mining in the Carlsbad area. The AML concurs with OCA's NRHP eligibility recommendation and has determined the site *eligible* for listing in the NRHP under Criterion D but fails to see LA 182586 meeting the integrity requirements to be eligible under any of the remaining three Criteria: A, B, or C. This site could be a contributing resource to what is currently an undefined historic archaeological mining district associated with the Early to Mid-Twentieth Century hard-rock mining of the Lone Eagle Mining District.



Figure 4.) Feature 4 at LA 182586, Overview and Contents of Pit (Kibler and Kurota 2024, NMCRIS 154823)

The backfilling of Feature 4 (Figure 4), the open pit at LA 182586, will avoid all non-treated structural features. The proposal is for the open pit to be filled using existing waste rock from spoil piles at the site and imported caliche materials from a nearby quarry. There is potential for PUF to be used as a base material. The pit will remain visible as shallow depression with a 4 ft. lip along the western highwall of the pit left visible. Only a select few spoil piles (n=3) located in the southern portion of the site away from the main feature loci and pit feature will be sourced for their waste rock during the backfill. This will minimize impacts to the integrity of the site's visual setting and feel.

To minimize and discourage access to this site by the public, the AML is also considering mechanically reclaiming the two-track road that accesses the site starting from the site's southeastern boundary back to the two-track (pipeline) road south of the site. The road will also have large boulders, sourced from the spoil piles, placed across the road at the site boundary.

Table 2.) Safeguard Methods by Site & Feature

LA Number	OCA Feature No.	Safeguard Method	Feature Type
182556	Feature 1	Backfill mine shaft - fill with imported materials and potentially PUF... Mine shaft (Feature 1) will remain visible as shallow depression to maintain the integrity of the site's visual setting and feel. Alternative method includes a steel grate closure over adit opening. The loose visible timbers will be removed and if possible, placed back into the shaft before backfilled	Mine Shaft
182586	Feature 4	Avoid all non-treated features - Backfill open pit (Feature 4) - fill with existing waste rock and potentially PUF - pit will remain visible as shallow depression and residual waste rock material will be recontoured in place to minimize impacts to the integrity of the site's visual setting and feel.	Open Pit

The three newly recorded sites, LA 204216, 204217, and 204218 are historic sites with an Unknown-Unspecific Historic (A.D. 1550 to Present) cultural affiliation. All three were recommended as *not eligible* for listing in the NRHP by the recorders. There is a potential for one or more of these three sites to contribute to what is currently an undefined historic/archaeological mining district, but to this point, neither OCA nor the AML have pursued this avenue of NRHP eligibility evaluation. Not one of these three sites possess the integrity necessary to convey their historic associations as the mining and engineering features remaining at these sites, if present, lack any distinctive design or engineering characteristics. There is little to no information potential as each site is in a hard-rock, non-depositional, environment and the features are primarily abandoned shallow prospect pits, cairn remnants, or artifact scatters. It is AML's determination that LA AMLIS Key: NM935066

204216, 204217, and 204218 are *not eligible* for listing in the NRHP under any of the four National Register Criteria (A, B, C, or D).

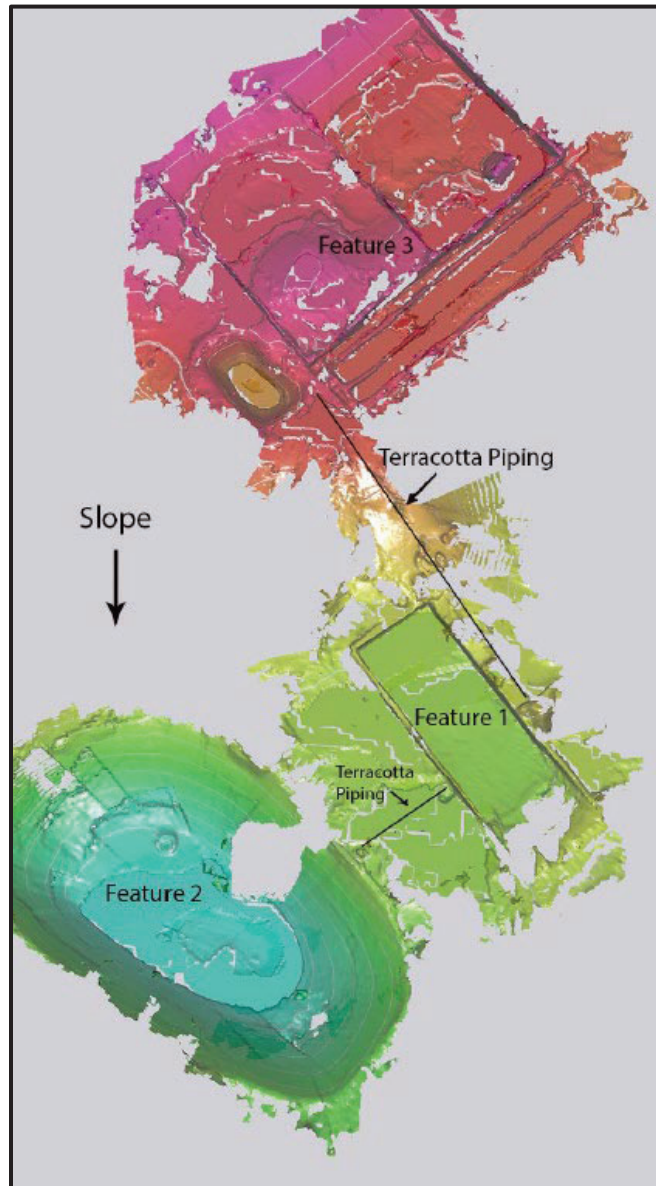


Figure 5.) Lidar Image for Features 1-3 at LA 182585 ((Kibler and Kurota 2024, NMCRIS 154823)

The Lone Eagle Mine project is designed to help protect the public from the hazards associated with abandoned mines by safeguarding shafts, adits, open pits, subsidence areas, and other physical openings associated with the mining landscape. The two features being targeted by the AML for the current undertaking include a mine shaft (Feature 1) at LA 182556 and a large open pit with a highwall (Feature 4) at 182585. Project activities will not include the razing or destruction of structural foundations such as Features 1 through 3 at LA 182586 shown in Figure 5. Typical AML projects have a suite of standard procedures for reclaiming and safeguarding mining features as described above on page 2. For this undertaking, the AML has chosen to backfill both features (potential steel grate at F 1, LA 182556) using existing waste rock and/or imported fill materials from a nearby active materials (caliche) quarry and potentially in combination with PUF (Table 2). Structural closures are typically built on site to BLM Visual Resource Management specifications, (<https://www.blm.gov/programs/recreation/recreation-programs/visual-resource-management>).

During the construction phase AML will treat all archaeological sites, regardless of their NRHP determination, as *eligible* for listing in the NRHP. As with the NRHP *eligible* sites, the AML will institute safeguarding methods that protect the visual and informational integrity of the sites. Whenever possible, AML will use existing roads to access the features scheduled for closure. The AML proposes to avoid any remaining mine related features (structural foundations, prospect pits, cairns, etc...) outside the treatment areas with all equipment, vehicles, foot traffic, and any other ground surface disturbing activities during construction. Designated avoidance areas that extend up to 50 feet (15 meters) from cultural resources will be established prior to construction. When working near designated avoidance areas and where construction access routes pass next to these locations, high visibility barrier/indicators will be installed around the avoidance perimeter. The Contractor, AML Cultural Resource Manager/Archaeologist, and AML Project Manager shall cooperate fully with prescribed practices to preserve archaeological and historic artifacts/features present within the project area. Moving, removal, or collecting of archaeological or historic materials from the project area or vicinity is prohibited.

Lastly, if previously unidentified archaeological sites, deposits, or in situ artifacts are encountered, all operation in that immediate area shall be terminated (100-ft. radius, 30 meters) until the proper preservation agencies and Native American groups have been notified and offered the opportunity to assess the discovery site.

The Comanche Nation of Oklahoma, Kiowa Tribe, Mescalero Apache Tribe, Tesuque Pueblo, and the Ysleta del Sur Pueblo were sent consultation letters regarding the proposed undertaking and the impending cultural resource survey in December 2023. As of this letter, the AML program has not received any interest from the tribes.

Table 1 provides a summary of AML's NRHP eligibility determinations based on our review of the accompanying cultural resources report and site forms provided by OCA. Further, following the above protocol, AML has assessed that the proposed undertaking will result in ***no adverse effect to historic properties*** or the mining landscape. The AML is seeking concurrence from the BLM-CFO on site eligibility determinations for sites located on BLM-CFO managed lands, and on the AML Program's effect assessment. Accordingly, please review the OCA report and LA Forms, and provide AML with any comments, recommendations, or corrections for sites administered by the BLM-CFO (See Table 1. for Land Status). The report and cultural resource documentation have been uploaded to the NMCRIS database and can be downloaded for you to view.

If the BLM-CFO has no objections, please return a signed copy of this correspondence to concur with the AML determinations as presented. Along with the BLM-CFO's response, and once the AML has received comment from the Commissioner of Public Lands, the AML will forward copies of the final report and site forms to the SHPO for final review and concurrence. Lastly, the AML will forward any project related correspondence it receives from the SHPO and Commissioner of Public Lands to the BLM-CFO for their project file.

If you would like additional information or have any questions, please feel free to contact me by email at andrew.zink@emnrd.nm.gov or by phone at 505-490-7379.

Thank you for your coordination on this project.


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Sincerely,



Andrew Zink
AMLP Cultural Resources Manager
EMNRD-MMD

Concurrence:  Digitally signed by EVELYN RODRIGUEZ
Date: 2024.05.20 14:31:45 -06'00' _____ Date: _____

For: BLM-CFO Deputy Field Manager

Comments: Support the AML determinations as presented

CC: Aaron Whaley (BLM-CFO Supervisory Archaeologist)
Christopher Teske (BLM AMLP Lead)
Lloyd Moiola (NM AML Program Environmental Manager)
Chuck Dentino (NM AMLP Project Manager)

Attachments:

- 1.) Lone Eagle Project Area and Cultural Resource Map

Uploaded in NMCRIS:

- Report: Activity No. 154823
- NIAF: Activity No. 154823
- LA 182556, LA 182586, & LA 204216 – LA 204218, Site Forms and Supporting Documentation

References Cited:

Kibler, Robin and Alexander Kurota
2024 *Archeology of the New Mexico Abandoned Mine Land Program: Cultural Resources Inventory of Lone Eagle Mine, Eddy County, New Mexico (NMCRIS 154823)*, Office of Contract Archaeology, University of New Mexico.

McLemore, Virginia T.
2006 Mineral Deposits in Eddy County, New Mexico, and their Relationship to Karst Processes. In *Caves and karst of Southeastern New Mexico.*, edited by Land, L., Lueth, V.W., Raatz, W., Boston, P., and Love, D.L., New Mexico Geological Society 57th Field Conference Guidebook, p.337-344.

Noble, Bruce J., and Robert Spruce
1992 *National Register Bulletin 42; Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties*, National Park Service.

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Dylan Fuge
Deputy Secretary

Melanie Kenderdine
Cabinet Secretary

Albert Chang, Director
Mining and Minerals Division



May 17, 2023

Stephanie Garcia Richard
Commissioner of Public Lands
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501
505-827-5760

RE: *Archeology of the New Mexico Abandoned Mine Land Program: Cultural Resources Inventory of Lone Eagle Mine, Eddy County, New Mexico (NMCRIS 154823)*

Dear Ms. Richard,

The New Mexico Abandoned Mine Land Program (AML), in partnership with the U.S. Department of the Interior (USDI), Office of Surface Mining Reclamation and Enforcement (OSMRE), is conducting preliminary environmental studies prior to planned mine safeguarding activities that involve New Mexico State Trust Land (STL) (Attachment 1). The portion of the project that occurs on STL is approximately 6 miles northeast of Carlsbad in Eddy County, New Mexico. The activity involving STL (T:21S, R:25E, S:14) has been authorized by the New Mexico Commissioner of Public Lands (Commissioner) under a Natural Resource Authorization (NRA) agreement (#FOD-NR-329) between the State of New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Mining and Minerals Division (MMD) and the Commissioner.

Because the Area of Potential Effect (APE) involves STL, this AML undertaking is subject to review by the Commissioner under Rule 19.2.24 NMAC; *Cultural Properties Protection*, in accordance with the New Mexico Cultural Properties Protection Act Sections 18-6A-6 NMSA 1978. To encourage coordination, the AML is requesting input from the New Mexico State Land Office (SLO) regarding any concerns you might have with the project as proposed in this letter regarding the identification and treatment of historic properties on STL as documented in the above referenced report and associated LA Forms.

As a federally funded program the proposed AML undertaking is subject to Section 106 (54 U.S.C. 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. 300101 et seq.) and its implementing regulations (36 CFR Part 800: Protection of Historic Properties, as revised August 2004). The *Area of Potential Effect* (APE) for these activities is encompassed within a ~43-acre block (Attachment 1) that consists of ~10 acres of federal lands managed by the USDI – Bureau of Land Management, Carlsbad Field Office (BLM-CFO) and ~33 acres of trust lands managed by the SLO. The AML has also requested input from the BLM-CFO regarding any concerns they might have with the proposed undertaking.

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In general, AML safeguards mine features that are eight (8) feet or more in depth or length, which intrude into the ground surface. AML safeguarding activities include a variety proposed methods such as mechanically or manually filling mine openings with surrounding waste material, imported materials, and/or polyurethane foam (PUF). Other alternatives include building structural barriers that restrict human access such as fences, locking gates, cupolas, or other wildlife compatible closures. These safeguarding measures minimize exposure of hazardous abandoned mine openings to the public, while also working to preserve the visual and informational integrity of cultural manifestations, and wildlife habitat, if present.

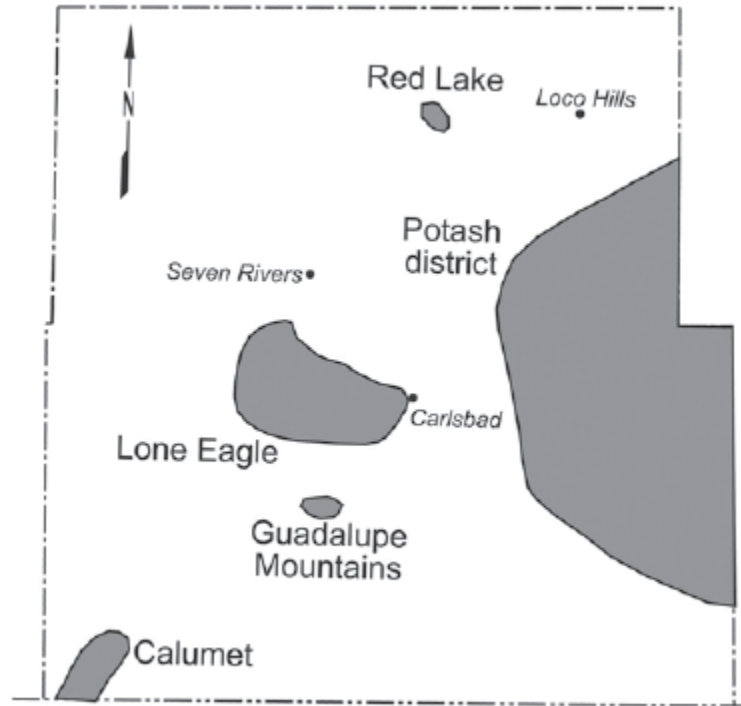


Figure 1.) Mining Districts in Eddy County, New Mexico (adapted from McLemore 2006)

The project area includes the Lone Eagle Mining District (Figures 1 & 2.) where the earliest recorded hard-rock mining activities date to ~1890 and continued into the late 1950s. The mine's sedimentary sandstone was primarily mined for its copper deposits, but these sandstones also contained small fractions of lead and uranium. The Lone Eagle Mining District does not appear to have been economically viable as the value of the extracted minerals from 1905 to 1956 is estimated at \$8,000 (McLemore 2006). The mining activities can best be described as small-scale operations.

As part of their preliminary studies, the EMNRD retained the University of New Mexico's Office of Contract Archaeology (OCA) to perform a cultural resource inventory of the proposed project's APE. A full-coverage pedestrian survey was performed between January 12, 2024, and January 13, 2024, under the supervision of OAC archaeologist Alexander Kurota.

During the current investigation, OCA documented three newly recorded sites (LA 204216 – LA 204218) and two previously recorded sites (LA 182556 and LA 182586). In total, five archaeological sites were documented, all historic hard-rock mining sites that were developed and in use sometime between 1890 and 1956. A total of nine Isolated Occurrences (IOs) were encountered

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in the project area which are *not eligible* for listing in the Nation Register of Historic Places (NRHP).



Figure 2.) Lone Eagle Mine Project Overview Photo, Looking North (Kibler and Kurota 2024, NMCRIS 154823)

Of the five recorded sites, OCA only recommended one site *eligible* and the remaining four sites *not eligible* for listing in the NRHP (Table 1.). Given certain integrity standards can be met, archaeological sites' eligibility evaluations are primarily evaluated for their information potential under NRHP eligibility Criterion D, but can also be eligible for listing under Criteria A, B, and C. As for these resources' contributions to an undefined historic/archaeological district, neither OCA nor the AML have pursued this level of NRHP eligibility evaluation.

Table 1.) Site Summary Table: NRHP Eligibility

LA Number	Occupation Type	Land Status	OCA Eligibility Recommendations	AML Eligibility Determination	Past SHPO Eligibility Recommendations	Past Agency Eligibility Determinations
182556	Historic Mining	BLM-CFO	Not Eligible	Not Eligible	Unevaluated (NMCRIS 133384, HPD Log 102999 2/16/2016)	Not Eligible (NMCRIS 133384 11/27/2015)
182586	Historic Mining	SLO	Eligible, D	Eligible, D	Eligible, D (NMCRIS 13334, HPD Log 102999 2/18/2026)	NA (Not Entered in NMCRIS)
204216	Historic Mining	BLM-CFO	Not Eligible	Not Eligible	NA	NA
204217	Historic Mining	BLM-CFO	Not Eligible	Not Eligible	NA	NA
204218	Historic Mining	SLO	Not Eligible	Not Eligible	NA	NA

In this instance, the primary factors influencing the AML's NRHP eligibility recommendations were whether a site contained loci with potential for intact subsurface archaeological deposits and whether a site contained intact or unique mine engineering features with the ability to visually convey an association with the period of historic mining in the Lone Eagle Historic Mining District. In the evaluation of historic mining resources and properties, our program relies on National Register Bulletin No. 42, *Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties* AMLIS Key: NM935066

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(Noble and Spude 1992). To summarize, the bulletin maintains that mining resources eligible for listing in the NRHP should possess historic significance in American history, architecture, archaeology, engineering, or culture, and they must exhibit the ability to convey their significance through the survival of their physical characteristics (historic integrity).

LA 182556 (Figure 3) was previously recorded by Lone Mountain Archaeological Services (LMAS) in 2015 (NMCRIS 133384). At that time, the BLM-CFO determined the site *was not eligible* for listing in the NRHP while both the recorder and SHPO recommended leaving the site's NRHP eligibility *unevaluated* pending a review of mine claim records (HPD Log 102999). The site dates from ~1890 A.D. to ~1930 and is assigned an Anglo/Euro-American, US Territorial-New Mexico Statehood–WWII cultural affiliation. It is located approximately 150-m west of the updated site boundary of LA 182586 (Lone Eagle Mine). OCA recommends LA 182556 *not eligible* for listing to the NRHP, as, “*the mine shaft, is one of the many prospecting features found throughout the Lone Eagle Mine area and beyond. It does not seem to hold significant research potential.*” Unlike with fossil fuels or potash, mining for copper or other hard-rock minerals was not a significant factor in the economic or cultural development of Eddy County or southeast New Mexico in general. The mineshaft and rock cairn are not unique and the timbers remaining visible within the mineshaft do not retain the integrity necessary to portray a typical timber collar let alone a unique design or work of a master. The site has surficial artifacts and there is little to no information potential as the site is in a hard-rock, non-depositional, environment. The site has some potential for intact subsurface material within the infill of Feature 1 (mineshaft); however, it is still unlikely that the site could yield additional significant information. The AML concurs with OCA's NRHP eligibility recommendation and has determined the site *not eligible* for listing in the NRHP. Even though the AML has determined LA 182556 *not eligible* as an individual resource, the site could be a contributing resource to what is currently an undefined historic archaeological mining district associated with the Early to Mid-Twentieth Century hard-rock mining of the Lone Eagle Mining District.



Figure 3.) Feature 1 at LA 182556, Mine Shaft Collar Timber Shoring 2015 vs. 2023 (Kibler and Kurota 2024, NMCRIS 154823)

Feature 1 at LA 182556 is scheduled to be backfilled using a PUF base which will then be covered using imported materials. An alternate method of safeguarding being considered is the placement of a steel grate over the adit entrance securing the grate to the bedrock with steel rods welded to the grate itself. In either scenario, the prominent limestone collar to the shaft will remain visible. If backfilled, a shallow depression will remain where the shaft entrance once existed. Both options will maintain the integrity of the site's visual setting and feel. The loose visible timbers will be
AMLIS Key: NM935066

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removed and if possible, placed back into the shaft before being backfilled or covered. Otherwise, they will be set either back into the shallow depression or to the side of the feature.

LA 182586 (Figure 4), an Anglo/Euro-American, New Mexico Statehood–WWII to Recent historic archaeological site dating from ~1935 A.D. to ~1957 A.D., is located on State Trust lands approximately 6 miles northwest of Carlsbad, New Mexico along the east escarpment of the Azotea Mesa. The site was previously recorded by LMAS in 2015 (NMCRI 133384). There is no record on file reflecting a NRHP eligibility recommendation from the land managing agency, in this case, the SLO. Both the recorder and SHPO recommended the site *eligible* under Criterion D (HPD Log 102999). OCA recommends LA 182586 *eligible* for listing to the NRHP under Criterion D. They explain, “*that buried cultural deposits are very likely inside Features 5 and 6 as these features may have functioned as temporary residences. It is also possible these structures may have been used to store explosives for the mining operations or as storage of dry foodstuffs. It is also likely that the buried floors with possible floor features are present under the modern sediments inside these structures. Therefore, features 5 and 6 can offer new information about the mining operations at the Lone Eagle Mine. We conclude the site has a great research potential and we recommend it as eligible for nomination to the NRHP under Criterion D.*”

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Figure 4.) Feature 4 at LA 182586, Overview and Contents of Pit (Kibler and Kurota 2024, NMCRI 154823)

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D) but the structures and mining features, though potentially unique (in style or methods of construction), lack integrity outside of their spatial relation to each other (location) and struggle to visually convey an association with the Early to Mid-Twentieth Century hard-rock mining in the Carlsbad area. The AML concurs with OCA's NRHP eligibility recommendation and has determined the site *eligible* for listing in the NRHP under Criterion D but fails to see LA 182586 meeting the integrity requirements to be eligible under any of the remaining three Criteria: A, B, or C. This site could be a contributing resource to what is currently an undefined historic archaeological mining district associated with the Early to Mid-Twentieth Century hard-rock mining of the Lone Eagle Mining District.

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Table 2.) Safeguard Methods by Site & Feature

LA Number	OCA Feature No.	Safeguard Method	Feature Type
182556	Feature 1	Backfill mine shaft - fill with imported materials and potentially PUF... Mine shaft (Feature 1) will remain visible as shallow depression to maintain the integrity of the site's visual setting and feel. The loose visible timbers will be removed and if possible, placed back into the shaft before backfilled	Mine Shaft
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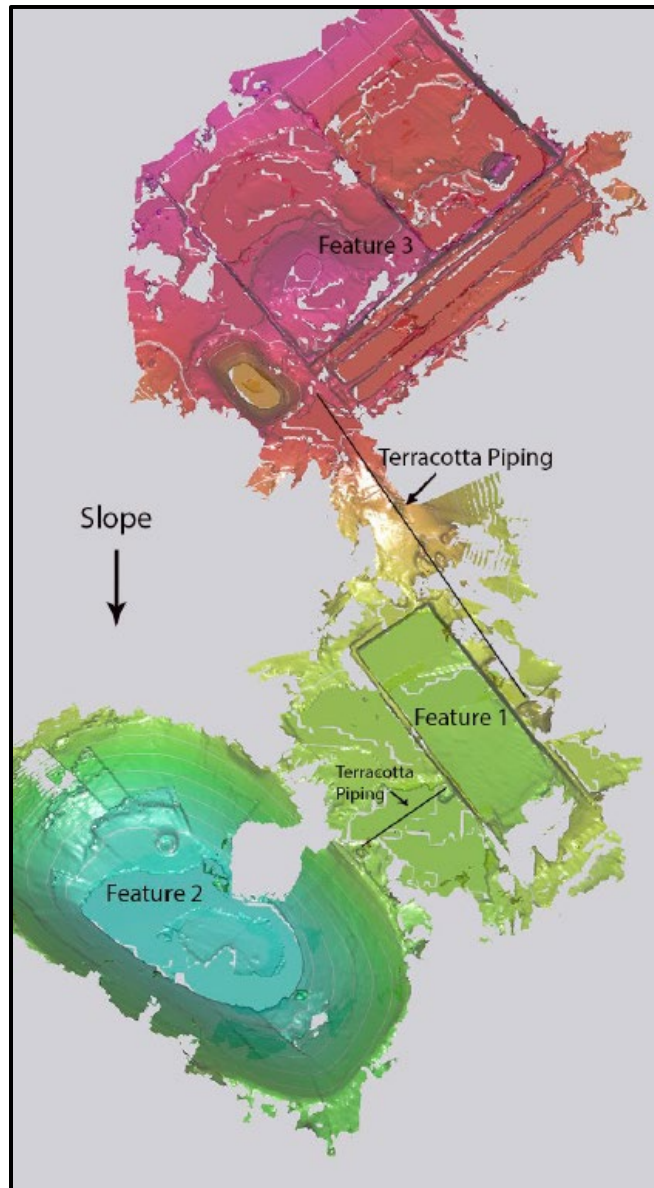


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AML proposes to avoid any remaining mine related features (structural foundations, prospect pits, cairns, etc...) outside the treatment areas with all equipment, vehicles, foot traffic, and any other ground surface disturbing activities during construction. Designated avoidance areas that extend up to 50 feet (15 meters) from cultural resources will be established prior to construction. When working near designated avoidance areas and where construction access routes pass next to these locations, high visibility barrier/indicators will be installed around the avoidance perimeter. The Contractor, AML Cultural Resource Manager/Archaeologist, and AML Project Manager shall cooperate fully with prescribed practices to preserve archaeological and historic artifacts/features present within the project area. Moving, removal, or collecting of archaeological or historic materials from the project area or vicinity is prohibited.

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Sincerely,



Andrew Zink
AMLP Cultural Resources Manager
EMNRD-MMD

Concurrence: DocuSigned by:
Stephanie Garcia Richard
80A84ED7FDCE465... Date: 6/10/2024

For: New Mexico Commissioner of Public Lands

Comments: The NMSLO Cultural Resources Office concurs with the determinations outlined in this document.

CC: Ethan Ortega (NM SLO, Assistant Commissioner of Cultural Resources)
Lloyd Moiola (NM AML Program Environmental Manager)
Chuck Dentino (NM AMLP Project Manager)

Attachments:

1.) Lone Eagle Project Area and Cultural Resource Map

Uploaded in NMCRIS:

- Report: Activity No. 154823
- NIAF: Activity No. 154823
- LA 182556, LA 182586, & LA 204216 – LA 204218, Site Forms and Supporting Documentation

References Cited:

Kibler, Robin and Alexander Kurota

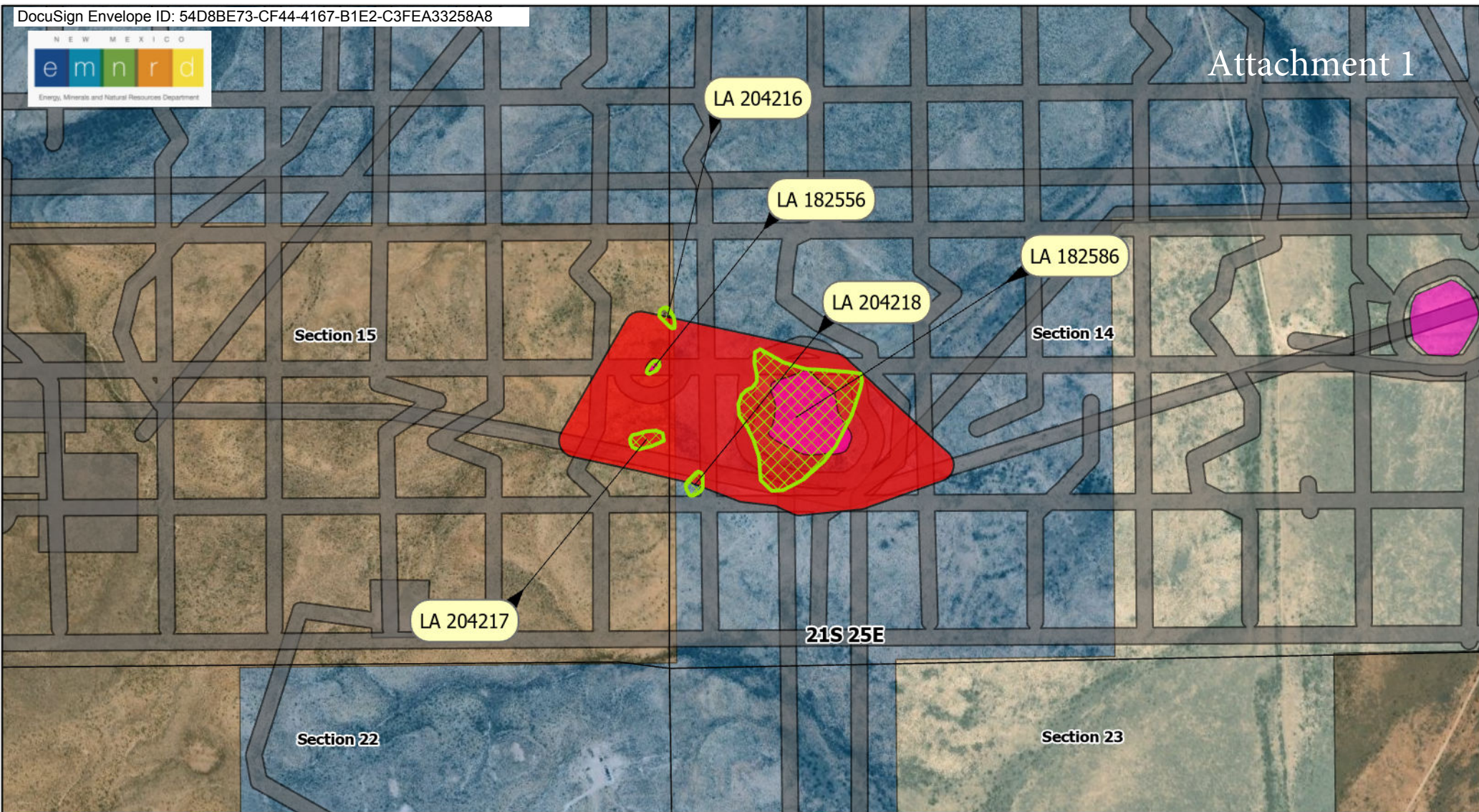
2024 *Archeology of the New Mexico Abandoned Mine Land Program: Cultural Resources Inventory of Lone Eagle Mine, Eddy County, New Mexico (NMCRIS 154823)*, Office of Contract Archaeology, University of New Mexico.

McLemore, Virginia T.

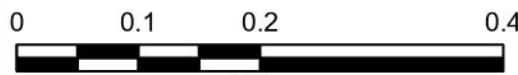
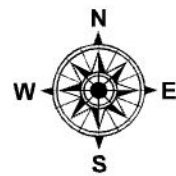
2006 Mineral Deposits in Eddy County, New Mexico, and their Relationship to Karst Processes. In *Caves and karst of Southeastern New Mexico.*, edited by Land, L., Lueth, V.W., Raatz, W., Boston, P., and Love, D.L., New Mexico Geological Society 57th Field Conference Guidebook, p.337-344.

Noble, Bruce J., and Robert Spruce

1992 *National Register Bulletin 42; Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties*, National Park Service.



Lone Eagle Mine Safeguarding Project



Scale: 1:10,000
Datum: North American 1983

- Township & Range
- Section
- NMCRIS 154823 Archaeological Sites
- NMCRIS 154823 Surveyed Space
- Previously Recorded Archaeological Sites

- Previous NMCRIS Activities
- Surface Land Ownership**
- BLM
- Private
- State



State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Dylan Fuge
Acting Deputy Secretary

Sarah Cottrell Propst
Cabinet Secretary

Albert Chang, Director
Mining and Minerals Division



December 1, 2023

Ms. Martina Minthorn
Tribal Historic Preservation Officer
Comanche Nation of Oklahoma
P.O. Box 908
Lawton, OK 73502
Martina.minthorn@comanchenation.com

RE: *Proposed Abandoned Mine Safeguarding Project, Lone Eagle Mine, Eddy County, New Mexico.*

Dear, Ms. Minthorn-

The New Mexico Abandoned Mine Land Program (AML), in partnership with the U.S. Department of the Interior (USDI), Office of Surface Mining Reclamation and Enforcement (OSMRE), is conducting preliminary environmental studies for proposed mine safeguarding activities at the abandoned Lone Eagle Copper Mine. The proposed project area is in Eddy County, approximately 6 miles northeast of Carlsbad, New Mexico, within Township 21S, Range 25E, sections 14 and 15. As a federally funded program this proposed AML undertaking is subject to Section 106 (54 U.S.C. 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. 300101 et seq.) and its implementing regulations (36 CFR Part 800: Protection of Historic Properties, as revised August 2004).

The area of potential effect (APE) is determined in consultation with project managers and engineers, and accounts for the planned mine remediation and environmental concerns, including cultural resources. The APE (Enclosure 1) is expected to encompass all the physical actions of the undertaking and covers an area of approximately 30.55 acres. This APE includes approximately 7.028 acres of federal lands administered by the USDI-Bureau of Land Management, Carlsbad Field Office (BLM-CFO) and approximately 23.552 acres of State Trust Land (STL) administered by the New Mexico State Land Office (SLO).

Two previous cultural resource survey activities have occurred within the current APE. The most recent survey occurred in 2015 (NMCRIS Activity No. 133384) by Lone Mountain Archaeological Services, Inc. (LMAS) in advance of a 3D exploratory seismic project but did not provide complete coverage of the proposed APE. This activity resulted in the documentation of two historic archaeological sites within the project area. These sites were LA 182556 and LA 182586 (Lone Eagle Copper Mine). The only other cultural resource survey (NMCRIS Activity No. 74847) was

December 1, 2023

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Because these past surveys did not completely cover the current APE and because noticeable changes have occurred to features within the known sites since the 2015 recordings, the AML program is planning for an intensive pedestrian block survey of the proposed APE, updates to the previously recorded sites, and the recording of any new sites that may be encountered during survey.

If the Comanche Nation of Oklahoma would like a copy of the culture resource report once the inventory is completed, please sign the provided signature block below and return the signed letter to the AMLP. Any comments the Comanche Nation of Oklahoma may have on the proposed AMLP safeguarding undertaking can be added to the space provided below.

If you would like additional information or have any questions, please feel free to contact me by email at andrew.zink@emnrd.nm.gov or by phone at 505-490-7379.

Sincerely,



Andrew Zink
Cultural Resource Manager
New Mexico Abandoned Mine Land Program
Energy, Minerals and Natural Resources Department
8801 Horizon Blvd. NE, Suite 260
Albuquerque, NM 87113

Enclosures: 1.) Project Area Map & Proposed APE

Concurrence: _____ Date: _____

For: Tribal Historic Preservation Officer

Comments: _____

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Dylan Fuge
Acting Deputy Secretary

Sarah Cottrell Propst
Cabinet Secretary

Albert Chang, Director
Mining and Minerals Division



December 1, 2023

Mr. Lawrence SpottedBird
Chairman
Kiowa Indian Tribe of Oklahoma
P.O. Box 369
Carnegie, Ok 73015
admin@kiowatribe.org

RE: *Proposed Abandoned Mine Safeguarding Project, Lone Eagle Mine, Eddy County, New Mexico.*

Dear, Mr. SpottedBird-

The New Mexico Abandoned Mine Land Program (AML), in partnership with the U.S. Department of the Interior (USDI), Office of Surface Mining Reclamation and Enforcement (OSMRE), is conducting preliminary environmental studies for proposed mine safeguarding activities at the abandoned Lone Eagle Copper Mine. The proposed project area is in Eddy County, approximately 6 miles northeast of Carlsbad, New Mexico, within Township 21S, Range 25E, sections 14 and 15. As a federally funded program this proposed AML undertaking is subject to Section 106 (54 U.S.C. 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. 300101 et seq.) and its implementing regulations (36 CFR Part 800: Protection of Historic Properties, as revised August 2004).

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AMLIS Key: NM935066

December 1, 2023

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Because these past surveys did not completely cover the current APE and because noticeable changes have occurred to features within the known sites since the 2015 recordings, the AML program is planning for an intensive pedestrian block survey of the proposed APE, updates to the previously recorded sites, and the recording of any new sites that may be encountered during survey.

If the Kiowa Indian Tribe of Oklahoma would like a copy of the culture resource report once the inventory is completed, please sign the provided signature block below and return the signed letter to the AMLP. Any comments the Kiowa Indian Tribe of Oklahoma may have on the proposed AMLP safeguarding undertaking can be added to the space provided below.

If you would like additional information or have any questions, please feel free to contact me by email at andrew.zink@emnrd.nm.gov or by phone at 505-490-7379.

Sincerely,



Andrew Zink
Cultural Resource Manager
New Mexico Abandoned Mine Land Program
Energy, Minerals and Natural Resources Department
8801 Horizon Blvd. NE, Suite 260
Albuquerque, NM 87113

Enclosures: 1.) Project Area Map & Proposed APE

Concurrence: _____ Date: _____

For: Chairman - Kiowa Indian Tribe of Oklahoma

Comments: _____

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Dylan Fuge
Acting Deputy Secretary

Sarah Cottrell Propst
Cabinet Secretary

Albert Chang, Director
Mining and Minerals Division



December 1, 2023

Ms. Holly Houghton
Tribal Historic Preservation Officer (THPO)
Mescalero Apache Tribe
P.O. Box 227
Mescalero, NM 88340
holly@mathpo.org

RE: *Proposed Abandoned Mine Safeguarding Project, Lone Eagle Mine, Eddy County, New Mexico.*

Dear, Ms. Houghton-

The New Mexico Abandoned Mine Land Program (AML), in partnership with the U.S. Department of the Interior (USDI), Office of Surface Mining Reclamation and Enforcement (OSMRE), is conducting preliminary environmental studies for proposed mine safeguarding activities at the abandoned Lone Eagle Copper Mine. The proposed project area is in Eddy County, approximately 6 miles northeast of Carlsbad, New Mexico, within Township 21S, Range 25E, sections 14 and 15. As a federally funded program this proposed AML undertaking is subject to Section 106 (54 U.S.C. 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. 300101 et seq.) and its implementing regulations (36 CFR Part 800: Protection of Historic Properties, as revised August 2004).

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If the Mescalero Apache Tribe would like a copy of the culture resource report once the inventory is completed, please sign the provided signature block below and return the signed letter to the AMLP. Any comments the Mescalero Apache Tribe may have on the proposed AMLP safeguarding undertaking can be added to the space provided below.

If you would like additional information or have any questions, please feel free to contact me by email at andrew.zink@emnrd.nm.gov or by phone at 505-490-7379.

Sincerely,



Andrew Zink
Cultural Resource Manager
New Mexico Abandoned Mine Land Program
Energy, Minerals and Natural Resources Department
8801 Horizon Blvd. NE, Suite 260
Albuquerque, NM 87113

Enclosures: 1.) Project Area Map & Proposed APE

Concurrence: _____ Date: _____

For: Tribal Historic Preservation Officer - Mescalero Apache Tribe

Comments: _____

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Dylan Fuge
Acting Deputy Secretary

Sarah Cottrell Propst
Cabinet Secretary

Albert Chang, Director
Mining and Minerals Division



December 1, 2023

Mr. Larry Samuel
Tribal Historic Preservation officer (THPO)
Pueblo of Tesuque
20 TP828
Santa Fe, NM 87506
isamuel@pueblooftesuque.org

RE: *Proposed Abandoned Mine Safeguarding Project, Lone Eagle Mine, Eddy County, New Mexico.*

Dear, Mr. Samuel-

The New Mexico Abandoned Mine Land Program (AML), in partnership with the U.S. Department of the Interior (USDI), Office of Surface Mining Reclamation and Enforcement (OSMRE), is conducting preliminary environmental studies for proposed mine safeguarding activities at the abandoned Lone Eagle Copper Mine. The proposed project area is in Eddy County, approximately 6 miles northeast of Carlsbad, New Mexico, within Township 21S, Range 25E, sections 14 and 15. As a federally funded program this proposed AML undertaking is subject to Section 106 (54 U.S.C. 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. 300101 et seq.) and its implementing regulations (36 CFR Part 800: Protection of Historic Properties, as revised August 2004).

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If the Pueblo of Tesuque would like a copy of the culture resource report once the inventory is completed, please sign the provided signature block below and return the signed letter to the AMLP. Any comments the Pueblo of Tesuque may have on the proposed AMLP safeguarding undertaking can be added to the space provided below.

If you would like additional information or have any questions, please feel free to contact me by email at andrew.zink@emnrd.nm.gov or by phone at 505-490-7379.

Sincerely,



Andrew Zink
Cultural Resource Manager
New Mexico Abandoned Mine Land Program
Energy, Minerals and Natural Resources Department
8801 Horizon Blvd. NE, Suite 260
Albuquerque, NM 87113

Enclosures: 1.) Project Area Map & Proposed APE

Concurrence: _____ Date: _____

For: Tribal Historic Preservation Officer – Tesuque Pueblo

Comments: _____

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Dylan Fuge
Acting Deputy Secretary

Albert Chang, Director
Mining and Minerals Division



December 1, 2023

Mr. E. Michael Silvas
Governor
Ysleta del Sur Pueblo
117 S. Old Pueblo Road
P.O. Box 17579
El Paso, TX 79907
hisac@ydsp-nsn.gov

RE: *Proposed Abandoned Mine Safeguarding Project, Lone Eagle Mine, Eddy County, New Mexico.*

Dear, Mr. Samuel-

The New Mexico Abandoned Mine Land Program (AML), in partnership with the U.S. Department of the Interior (USDI), Office of Surface Mining Reclamation and Enforcement (OSMRE), is conducting preliminary environmental studies for proposed mine safeguarding activities at the abandoned Lone Eagle Copper Mine. The proposed project area is in Eddy County, approximately 6 miles northeast of Carlsbad, New Mexico, within Township 21S, Range 25E, sections 14 and 15. As a federally funded program this proposed AML undertaking is subject to Section 106 (54 U.S.C. 306108) of the National Historic Preservation Act (NHPA) (54 U.S.C. 300101 et seq.) and its implementing regulations (36 CFR Part 800: Protection of Historic Properties, as revised August 2004).

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December 1, 2023

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If the Ysleta del Sur Pueblo would like a copy of the culture resource report once the inventory is completed, please sign the provided signature block below and return the signed letter to the AMLP. Any comments the Ysleta del Sur Pueblo may have on the proposed AMLP safeguarding undertaking can be added to the space provided below.

If you would like additional information or have any questions, please feel free to contact me by email at andrew.zink@emnrd.nm.gov or by phone at 505-490-7379.

Sincerely,



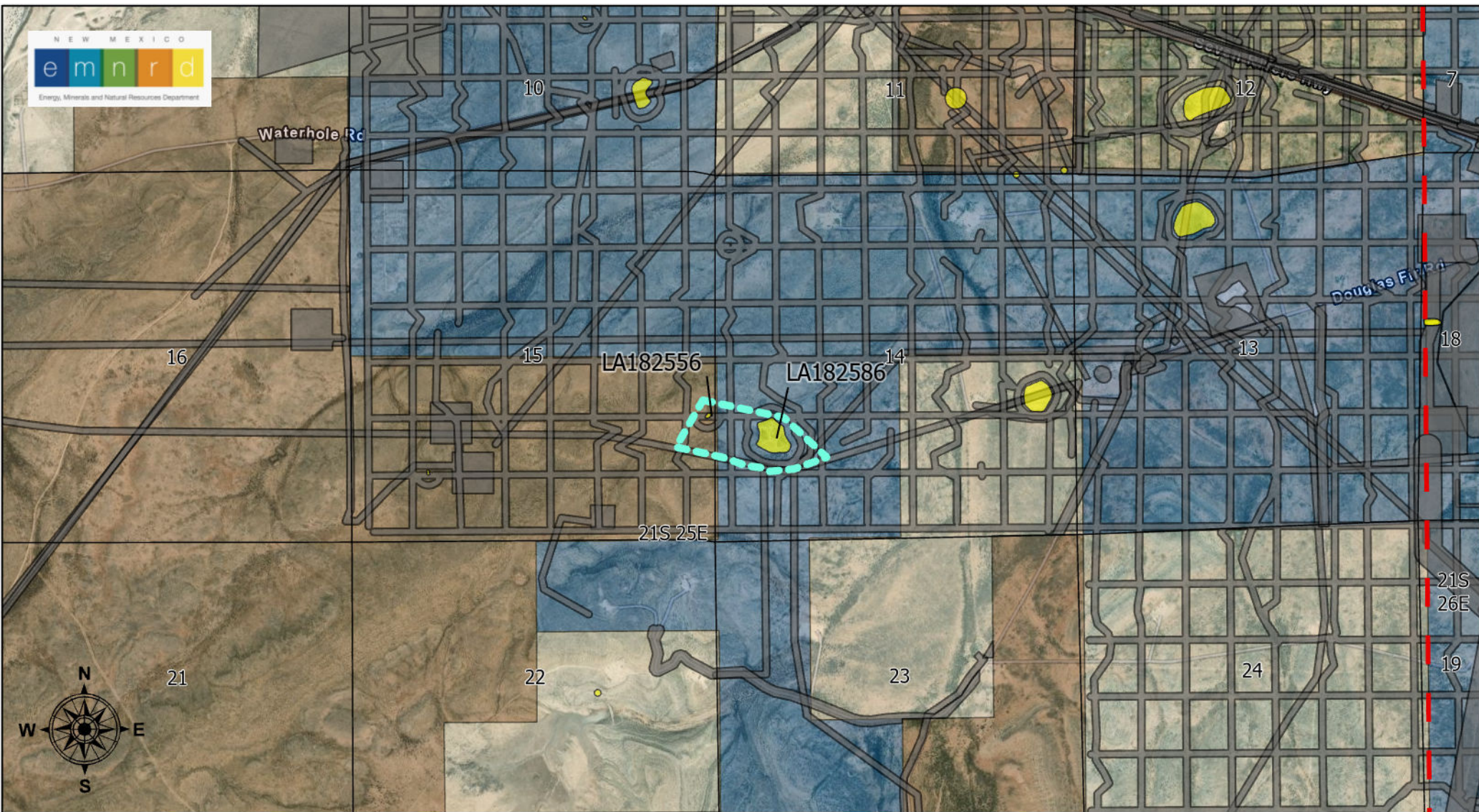
Andrew Zink
Cultural Resource Manager
New Mexico Abandoned Mine Land Program
Energy, Minerals and Natural Resources Department
8801 Horizon Blvd. NE, Suite 260
Albuquerque, NM 87113

Enclosures: 1.) Project Area Map & Proposed APE

Concurrence: _____ Date: _____

For: Governor – Ysleta del Sur Pueblo

Comments: _____



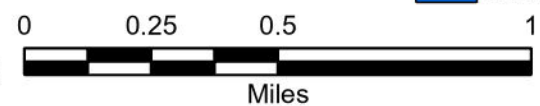
Lone Eagle Mine Safeguarding Project



- Lone Eagle APE
- Township & Range
- Section
- Archaeological Site
- Archaeological Survey

Surface Land Ownership

- BLM
- Private
- State



Datum: North American 1983