

To: Mining and Minerals Division, State of New Mexico

From: Bonaventure Nevada Inc.

RE: Sugarloaf Plan of Operations Revision After Tour and Agency Comments

David, Carmen,

Attached is the revised Sugarloaf Plan of Operations. We've done our best to consider and respond to all agencies' comments and concerns. Two drill sites have been eliminated, and three have been moved. Site 11 above the pit wall, considered too dangerous in its previous position, has been moved back along the path to the site and away from the wall. Site 8, which would have had access along the bottom of a narrow drainage and would require later armoring when abandoned, has been moved down onto the path to site 10, and now sits on the floor of the old open pit. Site 12, like site 8, has been moved to the floor of the open pit along its previous path of access. All moved sites were kept on the path of access to ensure an archeologist had already surveyed the area.

While the P.O.O. has been thoroughly revised, and many sections have had additions made, we wanted to say more. Most importantly, we want to be clear that we are committed to conducting a bird nesting survey as close as possible to the initiation of any earthworks to prevent disturbance of any nesting sites. This way, we can ensure the survey is current and as accurate as possible before disturbance begins. We will then follow all state guidelines for avoidance and/or old nest removal by qualified state biologists.

Additionally, we find it pertinent to note we have now mailed our WR-07 and WD-08 to the state engineers office, and have attached copies to the P.O.O. as Figure F. We also have copies of the signed pages and the check we sent along proving we paid the \$5/borehole. Water for mixing cement and abandoning boreholes will be sourced from Meadow Hawk, a local water supply company out of Silver City. We are committed to minimizing disturbance and maintaining compliance in all areas. If any additional changes must be applied, please contact us immediately so we can work towards a permit as soon as possible.

-Richard Kern

PART 3
MINIMAL IMPACT EXPLORATION OPERATION
PERMIT APPLICATION

Accompanying instructions for this permit application are available from MMD, and on MMD webpage:

<http://www.emnrd.state.nm.us/MMD/MARP/MARPAApplicationandReportingForms.htm>

Send 6 copies of the completed application to:

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Director
Mining and Minerals Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505
Telephone: (505) 476-3400

Webpage: www.emnrd.state.nm.us/MMD/index.htm

CHECK OFF LIST TO DETERMINE YOUR PROJECT'S STATUS AS A MINIMAL IMPACT EXPLORATION OPERATION:

- Yes No My project **will exceed 1000 cubic yards of excavation**, per permit.
- Yes No Surface disturbances for constructed roads, drill pads and mud pits **will exceed 5 acres** total for my project.
- Yes No My project is located in or is expected to have a direct surface impact on wetlands, springs, perennial or intermittent streams, lakes, rivers reservoirs or riparian areas.
- Yes No My project is located in designated critical habitat areas as determined in accordance with the federal Endangered Species Act of 1973 or in areas determined by the Department of Game and Fish likely to result in an adverse impact on an endangered species designated in accordance with the Wildlife Conservation Act, Sections 17-2-37 through 17-2-46 NMSA 1978 or by the State Forestry Division for the Endangered Plants Act, section 75-6-1 NMSA 1978.
- Yes No My project is located in an area designated as Federal Wilderness Area,

Wilderness Study Area, Area of Critical Environmental Concern, or an area within the National Wild and Scenic River System.

- Yes No My project is located in a known cemetery or other burial ground.
- Yes No My project is located in an area with cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties.
- Yes No My project will or is expected to have a direct impact on ground water that has a total dissolved solids concentration of less than 10,000 mg/L, except exploratory drilling intersecting ground water may be performed as a minimal impact operation.
- Yes No My project is expected to use or using cyanide, mercury amalgam, heap leaching or dump leaching in its operations.
- Yes No My project is expected to result in point or non-point source surface or subsurface releases of acid or other toxic substances from the permit area.
- Yes No My project requires a variance from any part of the Mining Act Rules as part of the permit application.

If you answer yes to any of the above questions, your project does not qualify as a minimal impact exploration operation.

Confidential Information

- Yes No Is any of the information submitted in this application considered by the applicant to be confidential in nature? If yes, please provide this information separately and marked as “confidential.”

Timeline

- Exploration applications must be provided no less than 45 days prior to the anticipated date of operations desired by the applicant.
- Renewal applications shall be filed at least 30 days preceding expiration of the current permit. Permits are valid for one year.
- Approved permit is valid for one year from the date of approval.

SECTION 1 – OPERATOR INFORMATION (§304.D.1)

Project Name: _____

Nearest Town To Project: _____

Applicant Name and Contact Information (entity obligated under the Mining Act):

Name: _____

Address: _____

Office Phone: _____ Cell Phone: _____

Fax Number: _____ Email: _____

Name of On-Site Contact, Representative, or Consultant:

Name: _____

Address: _____

Office Phone: _____ Cell Phone: _____

Fax Number: _____ Email: _____

SECTION 2 – RIGHT TO ENTER INFORMATION (§302.D.1)

- A. Describe or attach copies of documents that give the applicant the right to enter the property to conduct the exploration and reclamation, include: lease agreements, access agreements, right of way agreements, surface owner agreements, and claim numbers, if applicable.

Attachment _____

- B. List the names and addresses of surface and mineral ownership within the proposed permit area. If the mineral is federal mineral, indicate as federal mineral, but provide the name of the claim holder or lease holder.

Surface Estate Owner(s):

Name	Address	Phone #
<input type="checkbox"/> U.S. BLM	_____	_____

<input type="checkbox"/> U.S. Forest Service	_____	_____

<input type="checkbox"/> State of NM	_____	_____

<input type="checkbox"/> Private/Corporate	_____	_____
Name: _____	_____	
<input type="checkbox"/> Other	_____	_____
Name: _____	_____	

Lease Holder(s) of Surface Estate (if applicable):

Name	Address	Phone #
_____	_____	_____
_____	_____	_____
_____	_____	_____

Mineral Estate Owner(s):

Name	Address	Phone #
<input type="checkbox"/> Bureau of Land Management	_____	_____

<input type="checkbox"/> US Forest Service	_____	_____

<input type="checkbox"/> State of NM	_____	_____

<input type="checkbox"/> Claim/Lease Holder	_____	_____
Name: _____	_____	
Claim Numbers: _____		
<input type="checkbox"/> Claim/Lease Holder	_____	_____
Name: _____	_____	
Claim Numbers: _____		
<input type="checkbox"/> Other	_____	_____
Name: _____	_____	

C. Has a Cultural Resource Survey been performed on the site? Yes No

If yes, please provide the author, title, date and report number, and include a copy of the survey with this application, if possible:

Attachment _____

D. Has a wildlife survey or vegetation survey been performed for the permit area?

Yes No If yes, please provide the author, title, date and report number, and include a copy of the survey with this application, if possible:

Attachment _____

SECTION 3 – MAPS AND PROJECT LOCATION (§302.D.2)

A. Project Location:

Township _____ Range _____ Section _____

Township _____ Range _____ Section _____

Township _____ Range _____ Section _____

List the drill hole/exploration name and the GPS coordinates for each site.

I.D. Number	Northing / Latitude	Easting / Longitude	I.D. Number	Northing / Latitude	Easting / Longitude

Coordinate system used to collect GPS data points:

- | | |
|--|--|
| <input type="checkbox"/> NAD83 Geographic
<input type="checkbox"/> NAD83 UTM Zone 13 (or 12)
<input type="checkbox"/> WGS 1984 | <input type="checkbox"/> NAD27 Geographic
<input type="checkbox"/> NAD27 UTM Zone 13 (or 12)
<input type="checkbox"/> Other: _____ |
|--|--|

Attachment _____ (for listing additional boreholes)

B. Maps (see application form instructions for examples of maps to be included):

Are topographic maps included with the application that show the following items:

- Yes – The boundary of the proposed exploration project Permit Area
- Yes – The proposed exploration locations (i.e., borehole locations)
- Yes – Existing roads, new roads and overland travel routes
- Yes N/A – Areas of proposed road improvement

Attachments _____

Are maps or figures included with the application showing the approximate dimensions and locations of drill pads and other disturbances:

- Yes – Drill pad dimensions and constructed drill pad locations

Attachments _____

C. Provide detailed driving directions to access the site:

SECTION 4 – EXPLORATION DESCRIPTION (§302.D.3 & 4)

A. Anticipated exploration: Start Date: _____ End Date: _____

B. List the mineral(s)/element(s) to be explored for: _____

C. Proposed method(s) of exploration:

Air drilling (air rotary, coring, etc.):

_____ # of holes _____ Depth (ft.) _____ Diameter (in.)

_____ # of drill pads _____ Length (ft.) _____ Width (ft.)

Will drill pads be graded/bladed or overland: Graded/bladed Overland

Will drill pads need some mechanical leveling (grading/blading): Yes No

Approx. Weight of Drill Rig (lbs.) _____ Number of Axles: _____

Total length of drill stem that can be carried on the rig: _____

Is a support pipe truck anticipated? Yes No _____ Weight (lbs.)

Weight of support compressor (lbs.): _____ Trailer mounted? _____

Anticipated Drilling Contractor: _____ License No. _____

Mud/fluid drilling:

_____ # of holes _____ Depth (ft.) _____ Diameter (in.)

_____ # of drill pads _____ Length (ft.) _____ Width (ft.)

Will drill pads be graded/bladed or overland: Graded/bladed Overland

Will drill pads need some mechanical leveling (grading/blading): Yes No

Will a closed loop system be used or will mud/fluid pits be used? _____

If mud/fluid pits are proposed:

_____ # of pits _____ Length (ft.) _____ Width (ft.) _____ Depth (ft.)

Anticipated excavating equipment: _____

How will excavating equipment be transported to the site (i.e., driven, low-boy, etc.):

Will mud pits be lined?: Yes No

If yes, proposed material to line the mud pits: _____

Approx. Weight of Drill Rig (lbs.) _____ Number of Axles: _____

Anticipated Drilling Contractor: _____ License No. _____

Test pits / exploratory trenches:

_____ # of pits _____ Length (ft.) _____ Width (ft.) _____ Depth (ft.)

Anticipated excavating equipment: _____

How will excavating equipment be transported to the site (i.e., driven, low-boy, etc.):

Other methods of exploration (i.e., cuts, shafts, tunnels, adits, declines, blasting, etc.). Indicate method and details:

TOTAL ACREAGE TO BE DISTURBED DUE TO DRILL PADS = _____ acres
(to convert to acres, multiply total square footage of drill pads by 0.0000229)

D. Disposal of drill cuttings

If this exploration project is for uranium or other radioactive elements/minerals, applicant agrees to perform a gamma radiation survey at each drill site prior to, and after, exploration activities. Applicant/Owner/Operator agrees to restore gamma radiation levels at each drill site to pre-exploration levels. Yes No N/A

Will excess drill cuttings be buried at each drill site location or within a single disposal pit?
 At each drill pad location Within a single disposal pit

If a single disposal pit is proposed, please provide the following:

Description or GPS coordinates of the proposed cuttings disposal pit location:

Dimensions of the single proposed cuttings disposal pit (length, width, and depth):

_____ Length (ft.) _____ Width (ft.) _____ Depth (ft.)

TOTAL ACREAGE TO BE DISTURBED DUE TO DISPOSAL PIT = _____ acres
(to convert to acres, multiply total square footage of disposal pit by 0.0000229)

E. Other Supporting Equipment (check all that apply):

- | | | |
|---|----------------|-------|
| <input type="checkbox"/> 4x4 Trucks/Vehicles | Quantity: | _____ |
| <input type="checkbox"/> Water Truck | Weight (lbs.): | _____ |
| <input type="checkbox"/> Geophysical Truck | Weight (lbs.): | _____ |
| <input type="checkbox"/> Pipe Truck (rig support) | Weight (lbs.): | _____ |
| <input type="checkbox"/> Bulldozer | Type: | _____ |
| <input type="checkbox"/> Backhoe | Type: | _____ |
| <input type="checkbox"/> Trackhoe | Type: | _____ |
| <input type="checkbox"/> Scaper/Grader | Type: | _____ |
| <input type="checkbox"/> Trailers | Quantity/Type: | _____ |
| <input type="checkbox"/> Portable Toilet | Quantity: | _____ |
| <input type="checkbox"/> Other | List: | _____ |
| | | _____ |
| | | _____ |
| | | _____ |
| | | _____ |

F. Roads and Overland Travel:

List of new roads to be constructed for this exploration project:

Description of <i>NEW</i> Roads	Length (ft.)	Width (ft.)	Total Acres (length x width x 0.0000229)
TOTAL ACRES DISTURBED BY NEW ROAD CONSTRUCTION :			

Describe how new roads will be constructed:

List for extension or widening of existing roads:

Description of Modification to <i>EXISTING</i> Roads	Length (ft.)	Width (ft.)	Total Acres (length x width x 0.0000229)
TOTAL ACRES DISTURBED BY ROAD IMPROVEMENTS :			

Describe how existing roads will be extended or widened:

List for routes of overland travel:

Description of <i>OVERLAND TRAVEL</i> Routes	Length (ft.)	Width (ft.)	Total Acres (length x width x 0.0000229)
TOTAL ACRES DISTURBED BY OVERLAND TRAVEL :			

G. Support Facilities

Describe (location and size) any support facility disturbances (equipment staging, equipment and material storage and/or lay down areas, vehicle parking, temporary housing and/or trailers) to be created or situated on the site during exploration operations.

H. **TOTAL ACREAGE TO BE DISTURBED BY PROJECT = _____ acres**
 (include all disturbed acreage from drill pads, cuttings disposal pit, new roads, improved roads and overland travel routes)

SECTION 5 – CHEMICAL USE (§302.D.4)

A. Check any and all chemicals that will be used for this project.

<input type="checkbox"/> Drilling Mud (i.e., EZ Mud)	Type/Quantity:	_____
<input type="checkbox"/> Diesel Fuel	Quantity:	_____
<input type="checkbox"/> Down-hole Lubricants	Type/Quantity:	_____
<input type="checkbox"/> Lost Circulation Materials	Type/Quantity:	_____
<input type="checkbox"/> Oils/Grease	Quantity:	_____
<input type="checkbox"/> Gasoline	Quantity:	_____
<input type="checkbox"/> Hydraulic Fluid	Quantity:	_____
<input type="checkbox"/> Ethylene Glycol	Quantity:	_____
<input type="checkbox"/> Cement	Type/Quantity:	_____
<input type="checkbox"/> Water	Source:	_____
<input type="checkbox"/> Bentonite	Quantity:	_____
<input type="checkbox"/> Fertilizer	Type/Quantity:	_____
<input type="checkbox"/> Other	Type/Quantity:	_____

B. Describe, in detail, a plan for the containment, use and disposal of all chemicals listed above:

C. Describe where equipment fueling/refueling will occur:

D. Describe how hazardous material spills/leaks will be handled:

E. Identify spill cleanup materials that will be kept on-site (check all that apply):

- Bentonite clay or cat litter
- Adsorbent pads, rolls, mats, socks, pillows, dikes, etc.
- Drum or barrel for containing contaminated soil/adsorbent materials
- Other/list: _____
- Other/list: _____
- Other/list: _____

F. Applicant/owner/representative agrees to immediately notify the State of New Mexico immediately of any spills of hazardous materials (see page 1 of this application for phone numbers to notify): Yes No

**SECTION 6 – GROUNDWATER/SURFACE WATER INFORMATION
(§302.D.5)**

- A. Provide an estimate of depth to ground water and the total dissolved solids (TDS) concentration.

Depth to groundwater (ft.): _____ TDS concentration (mg/L): _____

Describe the source of this information:

- B. Will dewatering activities be conducted: Yes No

If yes, please describe:

- C. Is groundwater anticipated to be encountered during exploration: Yes No

If YES:

Have you completed Form WR-07 (Application for permit to drill a well with no consumptive use of water) and mailed it to the District Office of the State Engineer? Yes

Have you completed Form WD-08 (Well plugging plan of operations) and mailed it to the District Office of the State Engineer? Yes

Attachment _____ (copies of the completed WR-07 and WD-08 forms)

- D. Exploration Borehole Abandonment

Dry Boreholes

- Dry hole abandonment (option 1): 100% bentonite pellets/chips (i.e. HOLEPLUG® manufactured by Baroid Industrial Products), dropped from surface then hydrated in place according to the manufacturer's recommendations, emplaced from total depth to within 12 feet of the original ground surface, followed by 10 feet of neat cement, followed by 2 feet of topsoil/topdressing.

- Dry hole abandonment (option 2): Neat cement slurry, mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 2 feet of the original ground surface, followed by 2 feet of topsoil/topdressing.
- Dry hole abandonment (option 3): Cement + 6% bentonite slurry, mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 2 feet of the original ground surface, followed by 2 feet of topsoil/topdressing.
- Dry hole abandonment (option 4): High-density bentonite clay ($\geq 20\%$ active solids; i.e. QUIK-GROUT® manufactured by Baroid Industrial Products), mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 12 feet of the original ground surface, followed by 10 feet of neat cement, followed by 2 feet of topsoil/topdressing.
- Dry hole abandonment (option 5): Other materials / describe and justify use:

Wet Boreholes

- Wet hole abandonment (option 1): Neat cement slurry, mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 2 feet of the original ground surface, followed by 2 feet of topsoil/topdressing.
- Wet hole abandonment (option 2): High-density bentonite clay ($\geq 20\%$ active solids; i.e. QUIK-GROUT® manufactured by Baroid Industrial Products), mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 12 feet of the original ground surface, followed by 10 feet of neat cement, followed by 2 feet of topsoil/topdressing.
- Wet hole abandonment (option 3): Other sealing material approved by the Office of the State Engineer. Describe and include well plugging plan approval by the State Engineer:

- D. Applicant agrees to contain any water produced from the exploration borehole at the drill site and acknowledges that discharge of this water to a watercourse may be a violation of the Federal Clean Water Act: Yes No

E. Is any drilling proposed to occur within the channel of any perennial, intermittent, or ephemeral streams? Yes No

F. Is any drilling anticipated to occur within 100 feet of any perennial, intermittent, or ephemeral streams? Yes No

**SECTION 7 – RECLAMATION & OPERATION PLAN
(§302.D.6 AND 302.I.K)**

A. Salvage/Preservation of Topsoil

Before any grading/blading or similar activities occur in relation to this project, operator agrees to salvage and preserve all topsoil and topdressing for use in future reclamation of this project Yes No

Describe how topsoil will be salvaged prior to initiation of exploration activities (check all that apply):

- N/A – no construction work will occur, therefore no soil salvage is needed.
- Excavated from drill pads and stored at each drill pad
- Excavated from road improvements/construction and stored adjacent to road
- Excavated from mud/fluid pits and storage at each pit
- Other, describe:

B. Erosion Control

Describe the best management practices that will be implemented to control erosion:

- Silt fencing Location: _____
- Straw wattles Location: _____
- Straw bales Location: _____
- Ditches/swales Location: _____
- Berms/dikes/dams Location: _____
- Sediment basins Location: _____
- Other or N/A Type/Location: _____

C. Wildlife Protection / Noxious Weed Prevention

Will the perimeter of drill pits be fenced to prevent wildlife entrapment? Yes No

Proposed pit perimeter fence material:

Describe how the pit perimeter fencing will be installed and secured (i.e., T-posts, wooden stakes, etc.):

Will at least one side of the interior of the drill pits be sloped at 3:1 as a ramp for wildlife escape? Yes No

If No, will another type of constructed escape ramp be installed? Describe:

Applicant/Owner/Operator commits to pressure-washing or steam-clean all equipment prior to entering the permit area: Yes No

D. Reclamation Details

Describe in general how re-contouring or re-establishment of the surface topography will be restored:

Describe how the reclamation of portals, adits, drilling fluid/mud and/or waste pits, shafts, ponds, roads and other disturbances will be performed:

Is seeding of the reclaimed areas proposed: Yes No

If no, provide a justification as to why no revegetation is needed:

Plant mix to be used in the re-establishment of vegetation:

- US Forest Service specified mix applied through broadcast at their recommended rate
- BLM specified mix applied through broadcast at their recommended rate
- Other:

Plant Name	Seeding Rate (lbs./acre)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Broadcast applied or drill-seeded: Broadcast Drill-seeded

Scarification Methods (check all that apply):

- Primary tillage to greater than 6-inches depth of all constructed drill pads and roads
- Secondary tillage of all constructed drill pads and roads, and/or overland travel routes
- Chain drag or tire drag over seeds in areas used for overland travel
- Light raking of soil over seeds in areas used for overland travel
- None
- Other/describe:

Mulch Use:

- Certified weed-free straw mulch will be placed over areas that have been tilled/disc'd or ripped at a rate of 2 tons per acre, and will be crimped in place
- No mulch is proposed

E. Reclamation Timeline

Applicant/Owner/Operator commits to reclamation of the disturbed area as soon as possible following the completion or abandonment of the exploration operation, unless the disturbed area is included within a complete permit application for a new mining permit:

- Yes No

Anticipated Start of Reclamation:

- 0-30 days after completion of drilling
- 31-60 days after completion of drilling
- Other/specify: _____

**SECTION 8 – PERMIT FEES AND FINANCIAL ASSURANCE
(§302.1.2 AND 5)**

A. Financial assurance must be posted with Mining and Minerals Division prior to approval of this application. The acceptable forms of financial assurance are surety bonds, letters of credit, and certificates of deposit. Provide an estimate of, and an instrument for, the proposed financial assurance required by Subpart 3.

- Surety Bond
- Letter of Credit
- Cash Account / Certificate of Deposit

Estimated amount of financial assurance: _____

Or

Applicant will provide the amount of financial assurance calculated by MMD.

B. Attach the permit fees as determined pursuant to Subpart 2. The application fee for a minimal impact exploration permit is \$500.00.

- Money Order/Cashier's Check
- Check

Check Number : _____

Financial Institution: _____

SECTION 9 – CERTIFICATION REQUIREMENT (§302.I.3 & 4)

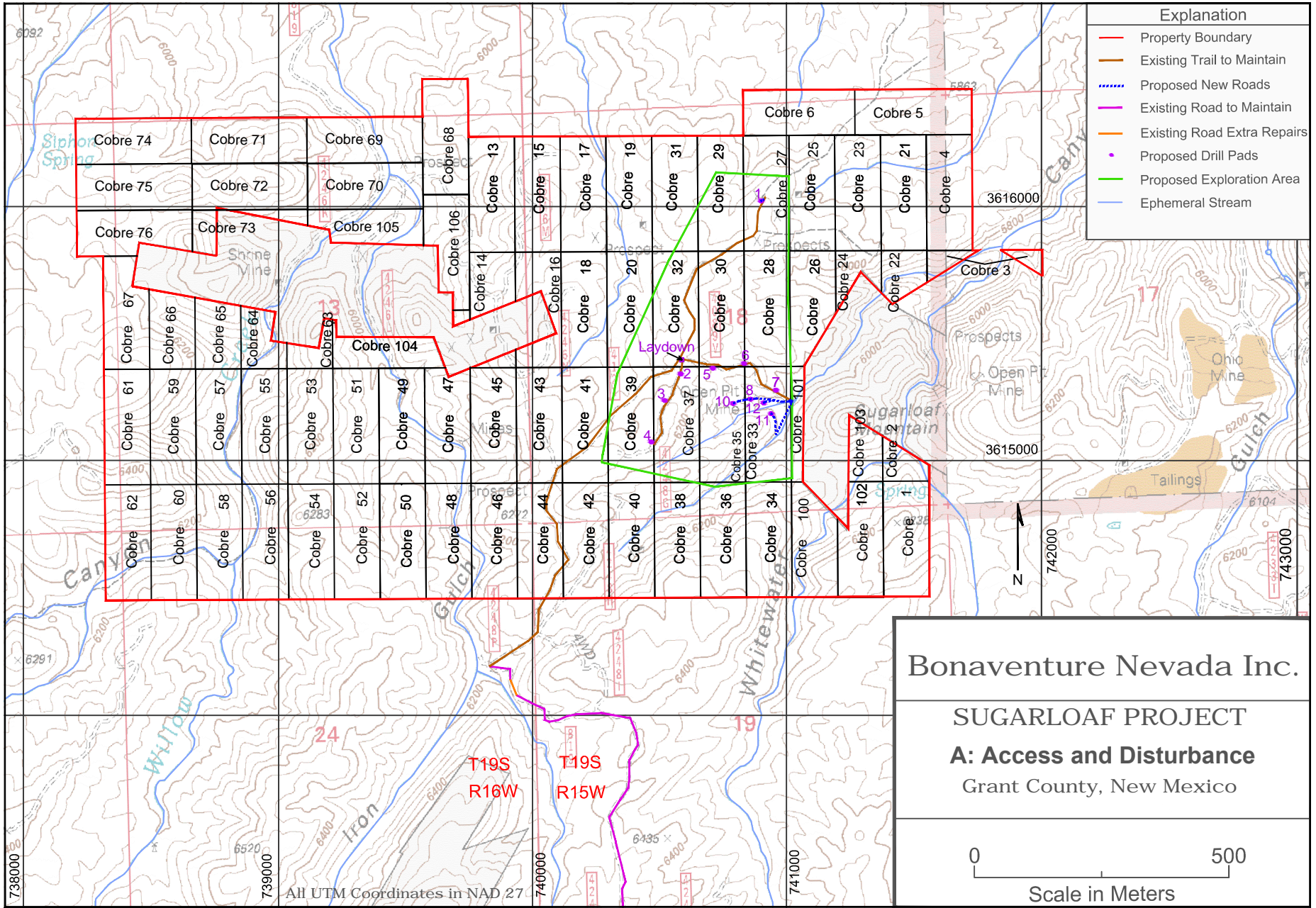
I certify that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals responsible for obtaining the information; I believe the submitted information is true, accurate, and complete. I agree to comply with the reclamation requirements set forth in this permit application and related correspondence, the New Mexico Mining Act and the Rules. Further, I certify that I am not in violation of any other obligation under the New Mexico Mining Act or the Rules adopted pursuant to that Act and I allow the Director to enter the permit area, without delay, for the purposes of conducting inspections during exploration and reclamation.

Signature of Permittee or Authorized Agent: _____

Name (type or print): _____

Title/Position: _____

Date: _____

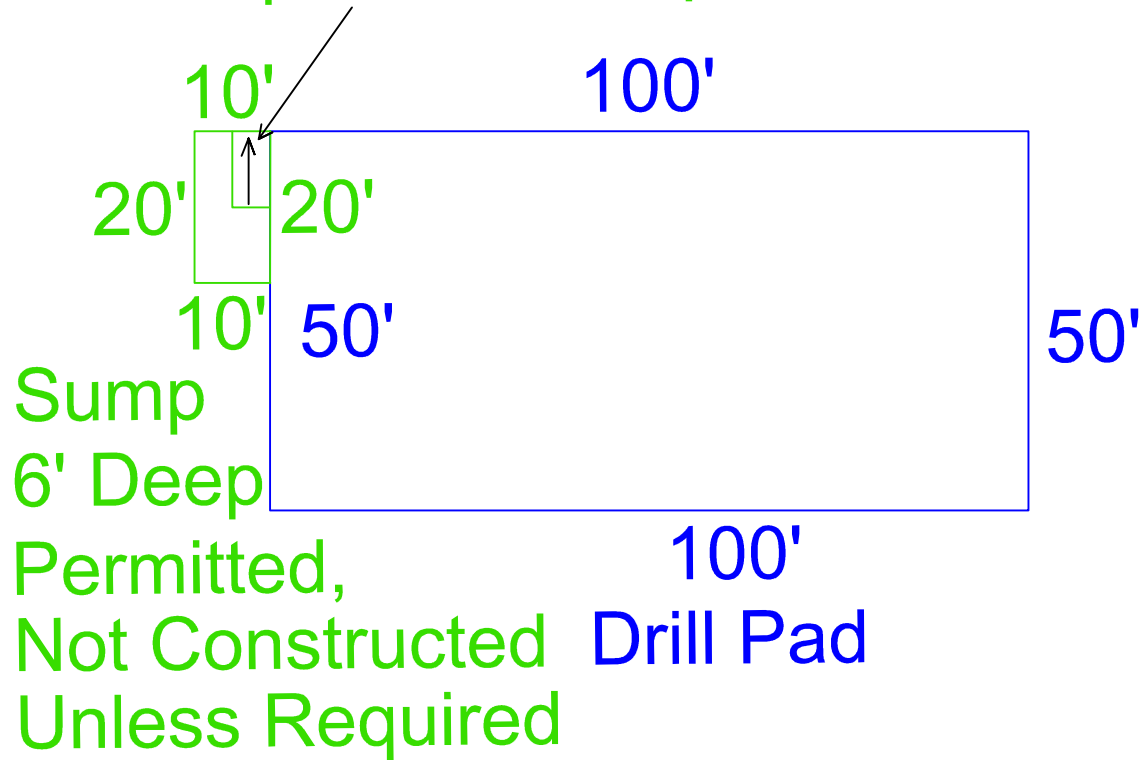


Attachment B

GRANT COUNTY

<u>CLAIM NAME</u>	<u>CLAIMANT'S NAME</u>	<u>NMMC NUMBER</u>
COBRE 27	MinQuest Inc.	173870
COBRE 28	MinQuest Inc.	173871
COBRE 29	MinQuest Inc.	173872
COBRE 30	MinQuest Inc.	173873
COBRE 31	MinQuest Inc.	173874
COBRE 32	MinQuest Inc.	173875
COBRE 33	MinQuest Inc.	173876
COBRE 35	MinQuest Inc.	173878
COBRE 37	MinQuest Inc.	173880
COBRE 39	MinQuest Inc.	173882
COBRE 41	MinQuest Inc.	173884
COBRE 42	MinQuest Inc.	173885
COBRE 43	MinQuest Inc.	173886
COBRE 44	MinQuest Inc.	173887
COBRE 101	MinQuest Inc.	173895

Ramp out of Sump for Safety, 5'x10', 30° Slope



Bonaventure Nevada Inc.

SUGAR LOAF PROJECT
D: Drill Site Layout and Size
Grant County, New Mexico

0 50
Scale in Feet

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity No. 154556

HPD Log No(s).

Registration

Lead Agency: US Forest Service Gila NF-Silver City Ranger District

Performing Agency: Okun Consulting Solutions

Activity ID: Sugar Loaf Mineral Exploration Phase II

Performing Agency Report No: OCS-2023-21

Other Agencies: NM Energy, Minerals & Natl. Res. Dept. Mining and Minerals Division

Report Recipient (Your Client): Great Basin Resources

Activity Types:

- Research Design Archaeological Survey/Inventory
- Architectural Survey/Inventory Test Excavation Monitoring
- Collections/Non-Field Study Compliance Decision
- Literature Review Overview Excavation Ethnographic Study
- Resource/Property Visit Historic Structures Report
- Other:

Total Survey Acreage: 8.36

Total Tribal Acreage: 0.00

Total Resources Visited: 0

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity No. 154556

HPD Log No(s).

Report Details

Lead Agency

Lead Agency: US Forest Service Gila NF-Silver City Ranger District

Lead Agency Report No.

Report Number: Forest Service Report No. 2023-06-025B

Title of Report

Title of Report: Supplemental Cultural Resource Survey for Phase II of Proposed Exploratory Drill Holes and New Access Roads for the Sugar Loaf Mineral Exploration Project, Gila National Forest-Silver City District, Grant County, New Mexico

Authors: Okun, Adam

Type of Report

Publication Type: Report, Monograph, or Book
Negative

Description of Undertaking (what does the project entail?)

Description: Great Basin Resources proposes to drill 12 exploratory holes and develop new associated access roads for the Sugar Loaf Mineral Exploration Project within Gila National Forest (Gila NF)—Silver City District lands in Grant County, New Mexico. It will be privately funded by Great Basin Resources and will take place on Gila NF lands managed by the USDA National Forest Service. The New Mexico Energy, Minerals, and Natural Resources Department, Mining and Minerals Division (MMD) is serving as a reviewing agency for the state-led permitting process. Great Basin Resources will use existing forest roads (FRs), including FR 851, FR 852, and FR 136, to access the general area. Some of the 12 drill holes can be reached using Forest Roads or existing routes, but other drill sites will require the construction of new roads for access.

A recent survey (NMCRIS No. 153016) was conducted for the original drill holes and access routes, but these locations ultimately were not approved by the MMD or Gila NF because they did not meet slope thresholds and other requirements. As a result, new drill holes have been proposed, and their locations were refined during fieldwork using an iterative process designed to identify favorable locations (see details in the Addendum attachment). A new area of potential effects (APE) was defined based on criteria outlined in the Addendum, and all portions of this APE that were not covered by the first inventory were subsequently surveyed, and results of this supplemental survey are reported herein. The only cultural resource in the project area is an archaeological site that has been previously determined not eligible, was fully

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity No. 154556

HPD Log No(s).

Report Details

updated within the first survey, and was not further updated during the supplemental survey because the original drill location has not been altered. As a result, per Gila NF guidance, this supplemental investigation is considered a negative-finding survey, and only a NIAF is being submitted (along with an IS&A to the Gila NF).

Dates of Investigation

From: 15-Nov-2023 **To:** 17-Nov-2023

Report Date

Report Date: 22-Dec-2023

Performing Agency/Consultant

Name: Okun Consulting Solutions

Principal Investigator: Adam Okun

Field Supervisor: Timothy Schoonover

Field Personnel Names:

Historian/Other

Performing Agency Report Number

Report Number: OCS-2023-21

Client/Customer (project proponent)

Name: Great Basin Resources

Contact: Richard Kern

Address: 5560 Rue St., Tropez Reno, NV 89519

Phone

Client/Customer Project Number

Project Number: N/A

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity No. 154556

HPD Log No(s).

Ownership & Location

Land Ownership Status (Must be indicated on Project Map)

Owner/Manager List:

Land Owner/Manager	Protocol	Acres Surveyed	Acres in APE
US Forest Service Gila NF-Silver City Ranger District	Class III	8.36	8.36

Total Survey Acreage: 8.36

Total Tribal Acreage: 0.00

Record Search(es)

Date of HPD/ARMS File Review: 23-Apr-2023

Date of Other Agency File Review 24-Apr-2023

Survey Data

Source Graphics: NAD 83

- USGS 7.5' (1:24,000) topo map Other Topo Map Scale:
- GPS Unit <1M
- Aerial Photos Other Source Graphic(s):

The following tables (b,c,& e) are calculated by the NMCRIS Map Service

USGS 7.5' Topographic County(ies) Legal Description
Map(s)

Map Name	USGS Quad Code	County	FIPS	Unplatted	Township (N/S)	Range (E/W)	Section
Wind Mountain, NM	32108-F4	GRANT	35017	No	T19S	R15W	18

Projected Legal Description

Nearest City or Town: Tyrone

Other Description: The project area is located within the Big Burro Mountains, approximately 12 miles southwest of Silver City.

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity No. 154556

HPD Log No(s).

Methodology

Survey Field Methods

Intensity: 100% coverage

Configuration: Block Survey Units Linear Survey Units (l x y)

Other Survey Units

Scope: All Resources

Coverage Method: Systematic Pedestrian Coverage **Other Method:**

Survey Interval (m): 15 **Crew Size** 2

Fieldwork Dates **From** 15-Nov-2023 **To** 17-Nov-2023

Survey Person Hours: 32.00 **Recording Person Hours** 0.00

Additional Narrative: The inventory was completed by walking transects that were no more than 15 m (50 ft) apart along the entire project corridor. In general, this required walking two transects along the access roads, one on each side of the centerline. Each drill site was inspected and fully inventoried if it was not included in the original survey.

Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.)

Environmental Setting: The project area is located on the northeastern side of the Big Burro Mountains, near Sugar Loaf Mountain, approximately 12 miles southwest of Silver City. The area is characterized by a series of low northeast-southwest oriented ridges with short, steep slopes that lead into narrow northeast-flowing drainages. Elevation ranges from a minimum of 5,980 ft above mean sea level (amsl) at the eastern ends of the new access roads to a maximum of 6,250 ft along the existing road to the southwest. The existing access roads are lightly-maintained routes in varying conditions. Some of the proposed new access routes contain faint two-tracks or unmaintained, user-generated roads, while other segments currently do not contain a road. Proposed exploratory drill sites are currently undeveloped. The Big Burro Mountains are a northwest-to-southeast trending mountain range that is bordered by the Mangas Valley to the northeast and the Lordsburg Valley and Lordsburg Mesa to the southwest. More broadly, the Big Burro Mountains are at the southern edge of the Mogollon-Datil Section of the Basin and Range Physiographic Province. The project area is within the Madrean Lower Montane Woodlands, which stretch south of the Silver City area.

Please refer to the original survey (NMCRIS 153016; Okun and Schoonover 2023) for additional details about the environmental setting.

Percent Ground Visibility

Ground Visibility: 51-75%

Condition of Survey Area: Surface visibility within the project area ranges from 25 to 75 percent, with surface exposures most common in erosional areas on colluvial slopes and along roads or trails with sparse

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Methodology

vegetation. The project area has been impacted by historic and modern mining activity, recreational use, and severe erosion in some places.

Attachments (check all appropriate boxes)

- USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn (required)
- Copy of NMCRIS Map Check (required)
- LA Site Forms - new sites (with sketch map & topographic map) if applicable
- LA Site Forms (update) - previously recorded & un-relocated sites (first 2 pages minimum)
- Historic Cultural Property Inventory Forms, if applicable
- List and Description of Isolates, if applicable
- List and Description of Collections, if applicable

Other Attachments

- Photographs and Log
- Other attachments **Describe:** NIAF Addendum

NMCRIS Investigation Abstract Form (NIAF)

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HPD Log No(s).

Cultural Resource Findings

Investigation Results

Archaeological Sites Discovered and Registered: 0

Archaeological Sites Discovered and NOT Registered: 0

Previously Recorded Archaeological Sites Revisited (site update form required): 0

Previously Recorded Archaeological Sites Not Relocated (site update form required): 0

Total Archaeological Sites (visited & recorded): 0

Total Isolates Recorded: 0

Non-Selective Isolate Recording

HCPI Properties Discovered and Registered: 0

HCPI Properties Discovered And NOT Registered: 0

Previously Recorded HCPI Properties Revisited: 0

Previously Recorded HCPI Properties NOT Relocated: 0

Total HCPI Properties (visited & recorded, including acequias): 0

If No Cultural Resources Found, Discuss Why: The supplemental survey is located in a high-elevation area of steep hill slopes, rocky ridges, and arroyos, locations that rarely contain prehistoric/aboriginal resources. The area has been extensively mined in both historic and modern times, but the only items noted during the survey are modern mine-related features and infrastructure, including plywood, plastic, and other modern materials that likely date to the 1980s, as well as mechanical disturbance. Because this area does not contain any definitively historic materials or intact mining/engineering features, it was not documented.

Management Summary

Summary: No archaeological sites, built environment resources, isolated occurrences (IOs) or cultural materials of any kind were discovered during the supplemental survey. No previously documented sites are within the APE. One archaeological site is located within the Phase I survey area, as it was not further updated during the supplemental survey because it was fully updated within the first survey, and the original drill location has not been altered (see the Addendum for additional information).

Subject to agency consultation and comment, the proposed undertaking would have no effect on any historic property listed, or eligible for listing, on the National Register of Historic Places (NRHP). However, if buried cultural deposits are discovered during project activities, work should cease, and the Gila NF shall be notified immediately. This undertaking complies with the provisions of the NHPA of 1966, as amended through 1992, the New Mexico

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity No. 154556

HPD Log No(s).

Cultural Resource Findings

Cultural Properties Act (18-6-1 through 18-6-17 New Mexico Statutes Annotated 1978), and any other applicable cultural resource rules or regulations. The project was completed in accordance with the USDA-Forest Service Region 3 Cultural Resources Handbook, the Forest Service Region 3 First Amended PA, and §4.10.15 NMAC.

NMCRIS No. 154556 Continuation Pages

Description of Undertaking (Continued): Regulatory Background

Because the proposed project has the potential to adversely affect cultural resources and will take place on federal lands, it is defined as an undertaking under Section 106 of the National Historic Preservation Act of 1966 (NHPA; 54 U.S.C. §306108) and its implementing regulations (36 CFR Part 800). The NHPA obligates the lead federal agency (USDA Forest Service) to consider the effects a proposed undertaking may have on historic properties as defined under this legislation. Because New Mexico state permitting/certification from the MMD is also required, the project must comply with a variety of state statutes and agency guidelines pertaining to the treatment of cultural resources, including the New Mexico Cultural Properties Protection Act (18-6A-1 through 18-6A-6 New Mexico Statutes Annotated [NMSA] 1978), the New Mexico Cultural Properties Act (18-6-1 through 18-6-17 NMSA, as amended through 2005), the implementing regulations of the New Mexico Administrative Code (§4.10.15 NMAC: *Standards for Survey and Inventory*), and general Historic Preservation Division (HPD)/State Historic Preservation Officer (SHPO) policies and guidance.

To satisfy these guidelines, Okun Consulting Solutions (OCS) performed a 100-percent pedestrian (Class III) cultural resource survey of all portions of the Area of Potential Effect (APE) that were not surveyed during Phase I of this project. The purpose of this investigation was to identify and evaluate all cultural resources within the APE, including historic districts, archaeological sites, and historic built environment resources over 50 years in age. All discovered resources were evaluated for their eligibility to the National Register of Historic Places (NRHP).

Description of Undertaking (Continued): APE/Survey Area

The survey was completed using an iterative process designed to refine drill hole and access road locations in the field. Great Basin Resources provided estimated proposed drill hole and access road locations, and these locations were then ground-truthed and adjusted as necessary based on the following criteria:

- Drill sites should be on open ground with minimal slope, where removal of trees and disturbance can be minimized.
- Drill sites should not be placed within existing roads.
- Proposed access roads to these drill sites should follow contours and avoid slopes over 25 percent.

After locations were selected, all drill sites and access roads were marked with wooden lathe and flagging tape so they could be easily identified in the field. GIS spatial data were provided to Great Basin Resources to ensure that the locations surveyed for cultural resources matched project implementation. Based on the field-adjusted locations, the total length of new access roads is 0.50 miles (2,649 feet [ft]) divided among five different segments, each of which will access one or more drill hole site (see attached maps). This total does not include general access to the area on Forest Roads or access along existing user-generated roads that were fully surveyed during Phase I of the project. At each drill hole, ground disturbance will be limited to a small pad/footprint area defined by Great Basin Resources. A polygon described as a “Laydown Area” located along the existing access road will be used for staging, but this area was fully surveyed during the original inventory.

The APE was defined based on consultation with Gila NF heritage resource personnel, New Mexico state requirements outlined above, and for consistency with the original inventory completed for this project. The APE/survey area was therefore defined as a 100-ft-wide corridor along the proposed access roads and, minimally, a 100-by-100-ft survey block surrounding each drill site location. Many of the field-adjusted drill sites had already been fully or partially surveyed for cultural resources during Phase I, so only small areas of additional survey were required to ensure that the 100-by-100-ft buffers were fully inspected (see attached maps). For access roads, a decision was made to fully survey all the gaps between the previous access road survey areas to ensure all routes were fully inventoried, and also allow flexibility in case the road locations require minor adjustments in the future. Including all buffers, the new survey area is 8.36 acres in total size.

Records Search (Continued):

Six previous cultural resource investigations have been completed within 500 m (1,640 ft) of the project area, including the first round of survey completed for this project (Table 1). Previous investigations in the area have been conducted for road improvements or maintenance (n=3), a travel management plan for camping corridors (n=1), and a series of drill pads and access roads similar to the current project (n=1). Two of these projects include portions of the current survey area or the Phase I survey area: the Gila NF surveyed FRs 818, 820, and 4089W in 1991 (FS Report 1991-06-158; NMCRIS No. 37185) and second road inventory by the Gila NF in 2006 intersected with isolated segments of the current project corridor. The original survey for the Sugar Loaf Mineral Exploration Project (Okun and Schoonover 2023; NMCRIS No. 153016) was completed earlier in 2023.

Table 1. Previous Cultural Resource Inventories Completed within 500 m (1640 ft) of the Current Project

NMCRIS	Forest Service No.	Date	Performing Agency	Report Title
11632	Unknown	1975	NM State University	An Archaeological Survey of Four Drill Pads and Associated Access Roads in the Burro Mountains
37185*	1991-06-158	1991	Gila NF-Silver City Ranger District	FR 818, 820, and 4089W Light Maintenance Burro Mountain Homestead Area
97474	2006-06-009	2006	Gila NF-Silver City Ranger District	Fdr 819/Shrine Mine Road Heavy Road Maintenance
119048*	2010-06-085	2010	Gila NF-Silver City Ranger District	Burro Mountains and Avalanche Peak Travel Management Survey of Routes for Motor Vehicle Use
120220	2010-06-091	2011	Hammerstone Archaeological Services	Cultural Resource Survey of the Silver City Ranger District Travel Management Camping Corridors (Priority 2) on the Gila National Forest, Grant and Hidalgo Counties, New Mexico
153016	2023-06-025	2023	Okun Consulting Solutions	A Cultural Resource Survey for Proposed Exploratory Drill Holes and New Access Roads for the Sugar Loaf Mineral Exploration Project, Gila National Forest-Silver City District, Grant County, New Mexico

One previously documented archaeological site is located within 500 meters (m) (1,640 ft) of the current project area. AR 03-06-07-0669/LA 167143 is a twentieth century historic mining site that was updated during the original survey for this project (see NMCRIS No. 153016).

Investigations Results (Continued):

One drill site is located within the broader boundaries of AR 03-06-07-0669/LA 167143, a twentieth century historic mining site that was fully updated by OCS in 2023 and determined not eligible for listing on the NRHP by the Gila NF (see Okun and Schoonover 2023; Forest Service Report. 2023-06-025; NMCRIS Activity No. 153016). As noted by Okun and Schoonover (2023), this site was not a location of long-term residence and is very unlikely to contain subsurface cultural deposits, and the Recent Historic mining features on the site do not exhibit unique engineering or design characteristics. The drill site location was fully inventoried as part of NMCRIS No. 153016, when the entire site (including areas beyond the survey area) was updated and evaluated. Because the proposed location of this drill hole has not changed significantly, it was briefly revisited to confirm access feasibility, but the site was not updated. Information about AR 03-06-07-0669/LA 167143 is available from the recent investigation report, but it is not part of the current survey area and is not linked to this supplemental investigation.

References

Okun, Adam, and Timothy Schoonover

2023 *A Cultural Resource Survey for Proposed Exploratory Drill Holes and New Access Roads for the Sugar Loaf Mineral Exploration Project, Gila National Forest-Silver City District, Grant County, New Mexico.* Okun Consulting Report Number: OCS-2023-11. Forest Service Report No. 2023-06-025. NMCRIS Activity No. 153016.

Photographs



Photograph 1. General Project Setting Overview (with Tyrone Mine in Background)



Photograph 2. Example of Faint Two-track Road that will be Utilized for General Access



Photograph 3. Example of Drill Hole Location (Drill Hole 3)



Photograph 4. Example of Drill Hole Location (Drill Hole 6) 5772



Photograph 5. Example of Drill Hole Location (Drill Hole 8)



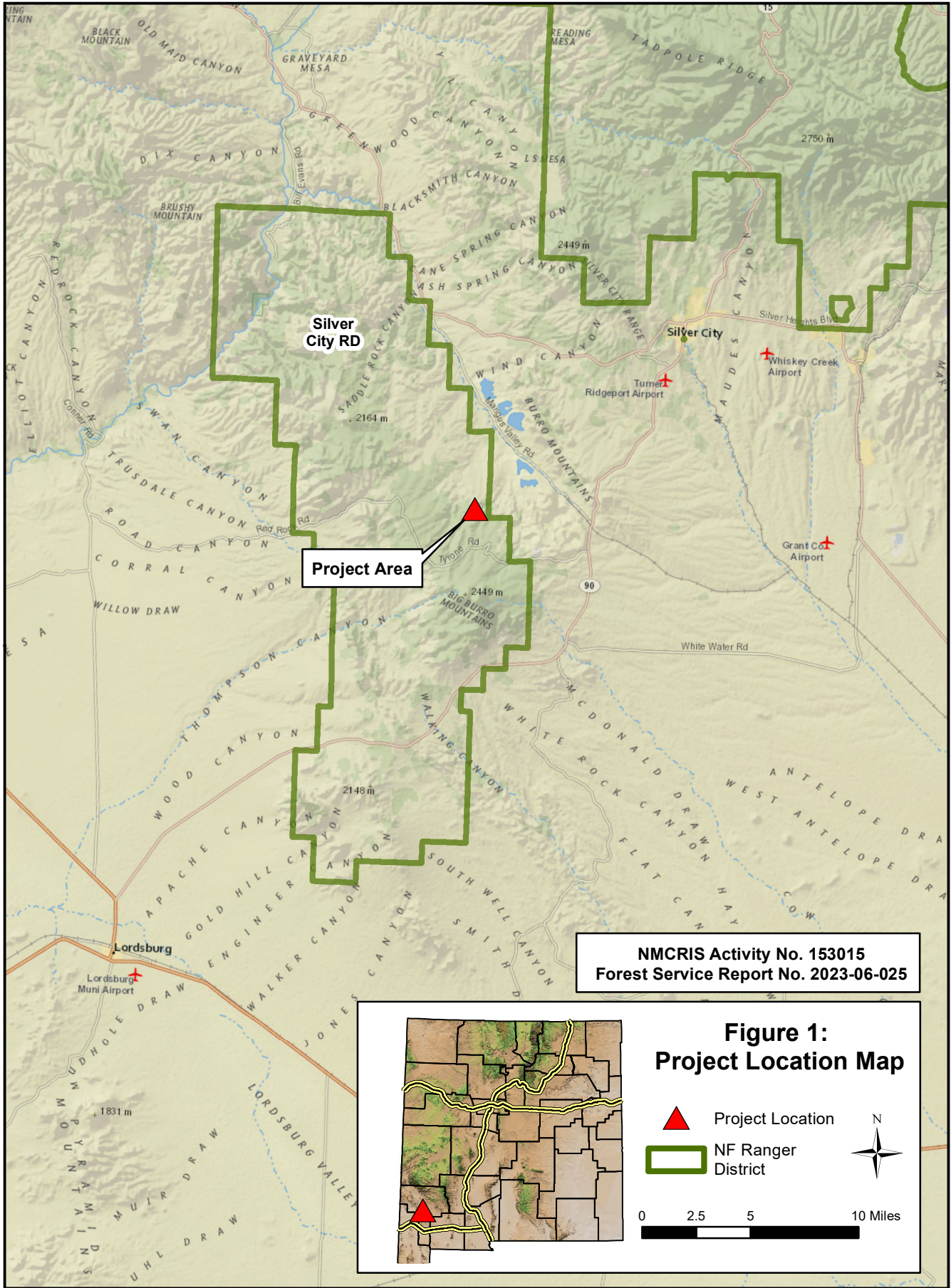
Photograph 6. Example of Proposed, Field-Referenced and Marked Access Road (Follows Faint Two-track)

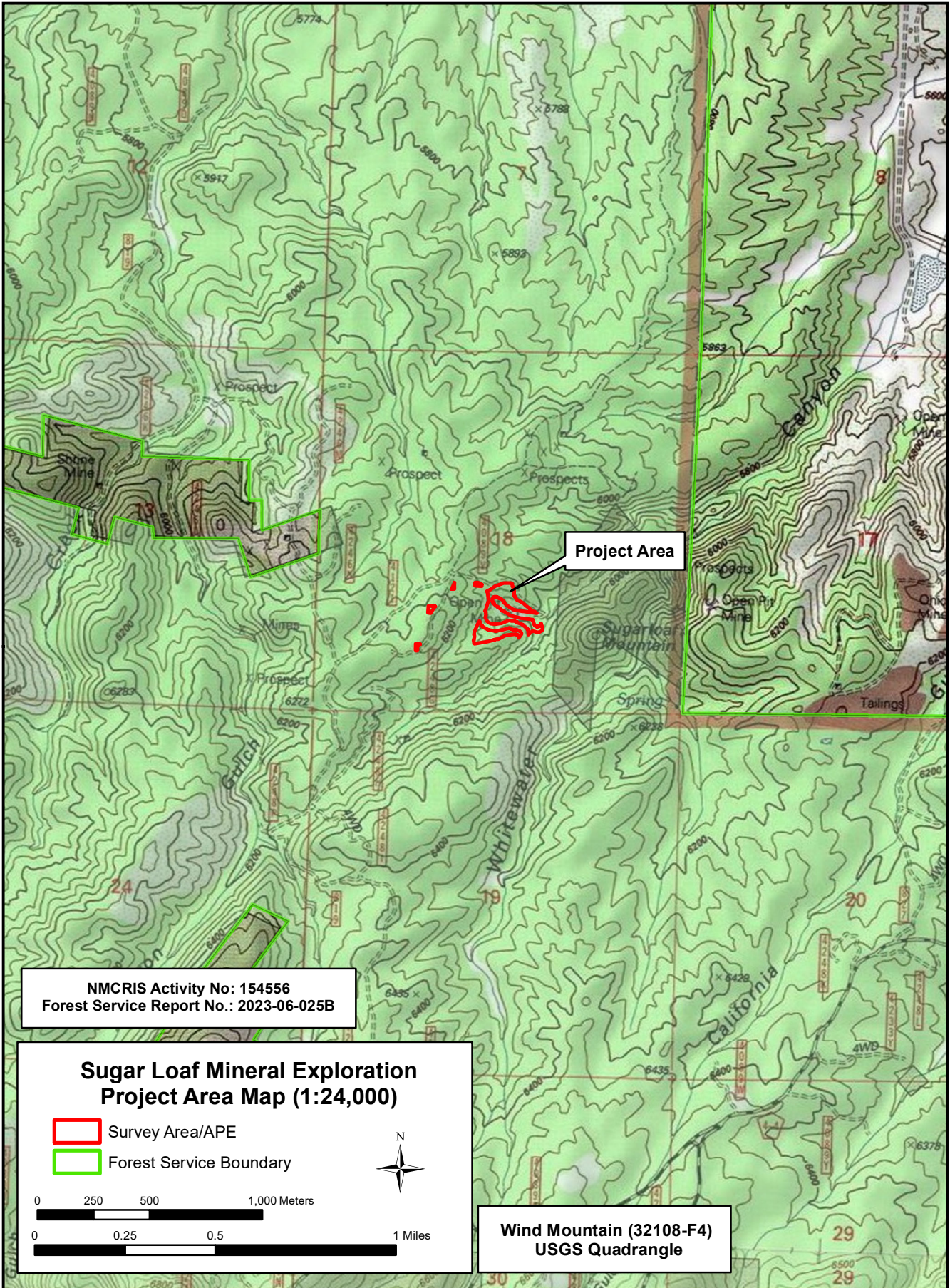


Photograph 7. Example of Proposed, Field-Referenced and Marked Access Road (Follows Drainage)








Photograph 6. Example of Proposed, Field-Referenced and Marked Access Road (Follows Road/Trail)





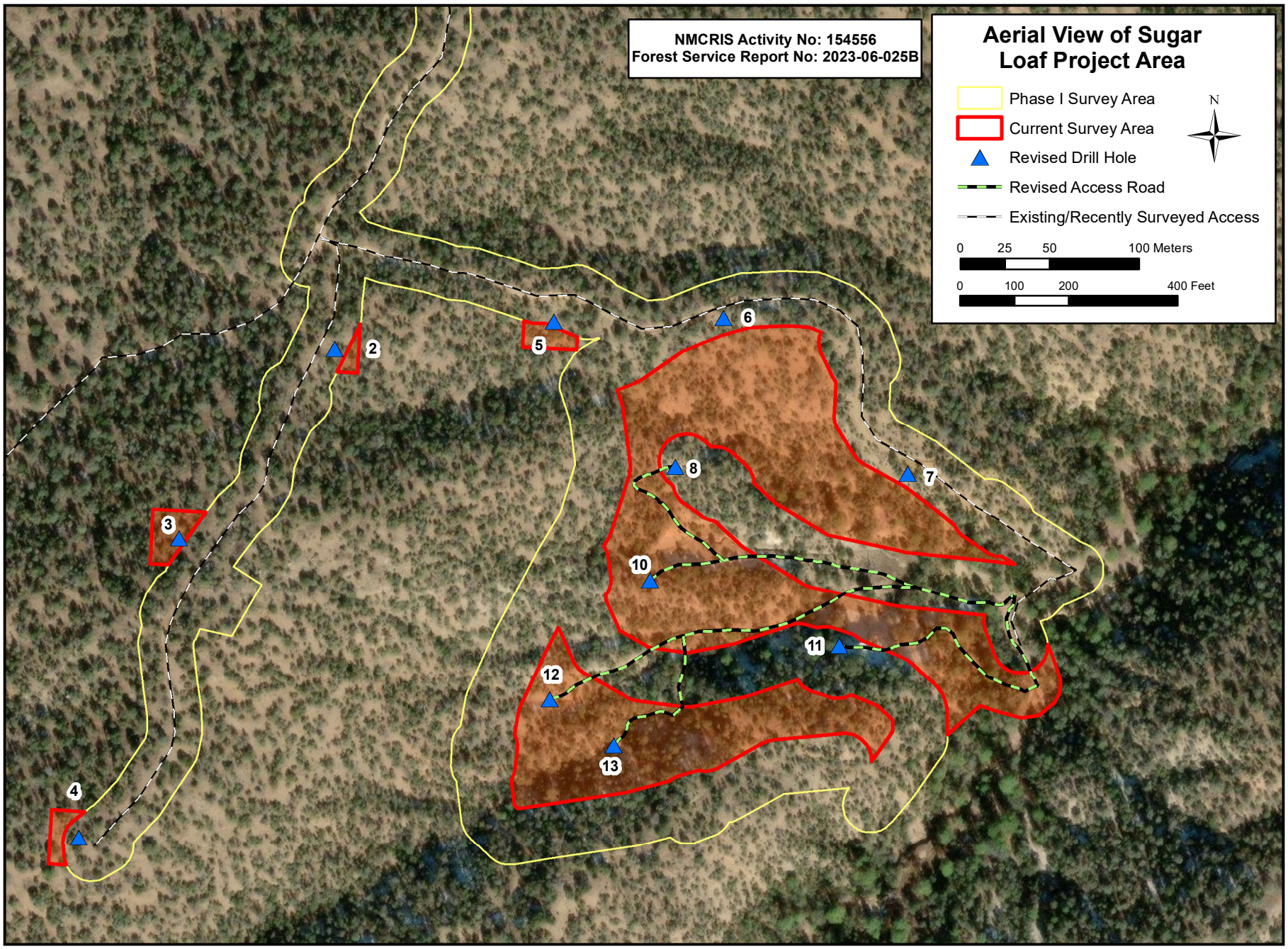

NMCRIS Activity No: 154556
Forest Service Report No: 2023-06-025B

Aerial View of Sugar Loaf Project Area

-  Phase I Survey Area
-  Current Survey Area
-  Revised Drill Hole
-  Revised Access Road
-  Existing/Recently Surveyed Access

0 25 50 100 Meters

0 100 200 400 Feet



To: The New Mexico Office of the State Engineer

Re: Water for Hole Abandonment at Sugarloaf Exploration Site

To whom it may concern,

Please find below an email correspondence that followed a phone conversation with Meadow Hawk Water. They have agreed to provide the water needed to mix cement and abandon the boreholes after drilling.

-Richard Kern



Rick Kern <rickskern@gmail.com>

Water Delivery

2 messages

Jesse Franklin-Owens <jesse4grantcounty@gmail.com>

Thu, Apr 4, 2024 at 8:11 AM

To: "RickSKern@gmail.com" <RickSKern@gmail.com>

Hi Rick, this is too confirm that Meadow Hawk Water will be able to supply you with water using our 2000 gal. truck in that May to June time frame. We usually only need 24 hr notice to schedule delivery. Our fee is \$250/load. We have worked with several drill operations sucessfully including some that needed round the clock deliveries. Look forward to hearing from you. Jesse. 575-313-3566

Rick Kern <rickskern@gmail.com>

Thu, Apr 4, 2024 at 8:35 AM

To: Jesse Franklin-Owens <jesse4grantcounty@gmail.com>

Jesse,

Thank you very much for the email and information. We look forward to working with you in the coming months.

-Rick

