

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: Steins Mineral Exploration Project

Nearest Town To Project: Steins, New Mexico

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

Name: Curiosity Exploration LLC

Address: 2021 Shattuck Avenue, Suite 210

Berkeley, CA 94704

Office Phone: _____ Cell Phone: (612) 432-3012

Fax Number: _____ Email: land@koboldmetals.com

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

Name: Zak Smith

Address: 4745 E Adams St

Tucson, AZ 85712

Office Phone: _____ Cell Phone: (803) 640-0888

Fax Number: _____ Email: zak.smith@koboldmetals.com

- The Project Area includes BLM-administered public lands in Sections 19 and 33, Township 24 South, Range 21 West, NMPM, as well as adjacent private lands owned by the Hooper family. The applicant has secured legal rights to access the project area and conduct exploration and reclamation activities through a combination of agreements and mineral claim holdings, as documented in the attachments. These include: A Surface Use Agreement between the surface owner (Susan and James Hooper) and the operator, which grants access for exploration, drilling, and reclamation activities, including ingress and egress across the property and use of the surface for mineral exploration operations (Attachment A). A recorded Memorandum of Agreement / Exploration and Earn-In Agreement between Curiosity Exploration LLC (KoBold) and Freeport-McMoRan entities, which provides the applicant with the right and privilege to explore and develop the subject mineral claims and associated project area (Attachment B). Documentation of valid, existing unpatented mining claims, including BLM serial numbers and proof of maintenance fee payments for the assessment year, demonstrating control of mineral rights across the project area (Attachment C).

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.

Name	Address	Phone #
☒ U.S. BLM	<u>Las Cruces District Office</u> <u>1800 Marquess St.</u>	<u>575-525-4300</u>
☐ U.S. Forest Service	<u>Las Cruces, NM 88005</u> <u></u>	<u></u>
☐ State of NM	<u></u> <u></u>	<u></u>
☒ Private/Corporate	<u>391 Braidfoot Road</u>	<u></u>
Name: <u>Hooper Family</u>	<u>Steins, NM 88045</u>	
☐ Other	<u></u>	<u></u>
Name: _____	_____	

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

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

Mineral Estate Owner(s):

Name	Address	Phone #
☐ Bureau of Land Management	_____	_____

☐ US Forest Service	_____	_____

☐ State of NM	_____	_____

☒ Claim/Lease Holder	<u>333 North Central Ave.</u>	_____
Name: <u>Freeport-McMoRan Exp</u>	<u>Phoenix, AZ 85004</u>	
Claim Numbers: _____		
☐ Claim/Lease Holder	_____	_____
Name: _____	_____	
Claim Numbers: _____		
☐ 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:

WestLand Engineering & Environmental Services, Class III Cultural Resources Inventory.
WestLand Cultural Resources Report No. 2026-136
Bureau of Land Management Report No. BLM-NM-030-26-023
May 14, 2026

Attachment D

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:

1. WestLand Engineering & Environmental Services, Biological Evaluation, field evaluations in February and March of 2026.
2. Special-Status Plant Species Survey Report for the Steins Exploratory Drilling Project in Hidalgo County, New Mexico. May 18, 2026.

Attachment E and F

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

A. Project Location:

Township 24 South Range 21 West Section 19,28-29,32-33

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
ST-PP-009: 3562582 686716 ST25P-1: 3562760 686877 ST25P-2: 3563053 686877 ST25P-4: 3563566 686865 ST25P-5: 3563717 687119 ST25P-6: 3562037 687219 ST25P-7: 3562186 687462 ST25P-8: 3564416 684927 ST25P-9: 3564289 684650 Zone 12					

Coordinate system used to collect GPS data points:

☐ NAD83 Geographic

☐ NAD27 Geographic

☒ NAD83 UTM Zone 13 (or 12)

☐ NAD27 UTM Zone 13 (or 12)

☐ WGS 1984

☐ 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 Figures 1-6

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 Figure 6

C. Provide detailed driving directions to access the site:

From Steins, New Mexico, head southeast on Summit Road for approximately 0.1 mile, then turn right to merge onto Interstate 10 westbound toward Arizona. Travel west on Interstate 10 for approximately 3.8 miles and take Exit 390 for Cavot Road. Turn left (south) onto North Cavot Road and proceed approximately 0.2 miles, then turn left (east) onto Chato Road. Continue on Chato Road for approximately 3.6 miles to reach the project area. Access to drill sites follows existing two-track and improved access roads as shown on the Project Map (Figure 2).

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

A. Anticipated exploration: Start Date: August 15, 2026 End Date: August 15, 2027

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

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:**

9 # of holes 3,500 Depth (ft.) 4.5 Diameter (in.)

9 # of drill pads 100 Length (ft.) 100 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? Mud pits

If mud/fluid pits are proposed:

18 # of pits 12 Length (ft.) 12 Width (ft.) 4 Depth (ft.)

Anticipated excavating equipment: D9 bulldozer or equivalent

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

Low-boy

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 = 2.07 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):

☒ 4x4 Trucks/Vehicles	Quantity:	<u>4</u>
☒ Water Truck	Weight (lbs.):	<u>1</u>
☐ Geophysical Truck	Weight (lbs.):	_____
☒ Pipe Truck (rig support)	Weight (lbs.):	<u>1</u>
☒ Bulldozer	Type:	<u>1</u>
☐ Backhoe	Type:	_____
☐ Trackhoe	Type:	_____
☒ Scaper/Grader	Type:	<u>1</u>
☒ Trailers	Quantity/Type:	<u>1</u>
☒ Portable Toilet	Quantity:	<u>1</u>
☒ Other	List:	<u>1x Forklift</u>

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)
Temporary access for drill rig	4895	15	1.69
TOTAL ACRES DISTURBED BY NEW ROAD CONSTRUCTION :			1.69

Describe how new roads will be constructed:

New roads will be constructed to a 15-foot width (13-foot blade width plus 1-foot spoil on either side).

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)
Widening of existing roads from 11' to 15'	6436	4	0.59
TOTAL ACRES DISTURBED BY ROAD IMPROVEMENTS :			0.59

Describe how existing roads will be extended or widened:

Some existing roads will be widened with dozer blade per box above. Other existing roads will be regraded infrequently (only as needed) to achieve a consistent running surface; maintenance with no new disturbance. See Figures 4 and 5.

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 :			0

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 = 4.35 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.

☒ Drilling Mud (i.e., EZ Mud)	Type/Quantity:	
☒ Diesel Fuel	Quantity:	
☒ Down-hole Lubricants	Type/Quantity:	
☐ Lost Circulation Materials	Type/Quantity:	
☒ Oils/Grease	Quantity:	
☒ Gasoline	Quantity:	
☒ Hydraulic Fluid	Quantity:	
☐ Ethylene Glycol	Quantity:	
☐ Cement	Type/Quantity:	
☒ Water	Source:	Commercial water hauling from permitted sources
☒ Bentonite	Quantity:	
☐ Fertilizer	Type/Quantity:	
☐ Other	Type/Quantity:	

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

All chemicals will be stored in original containers with secondary containment where applicable. Refueling will occur on level ground away from drainages. Spill kits will be maintained on site. Any contaminated material will be removed and disposed of at an approved facility.

C. Describe where equipment fueling/refueling will occur:

Fueling procedures and locations would be managed operationally in compliance with BLM requirements.

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

Spill prevention and response equipment will be maintained on-site and readily available for immediate response to any releases. All waste materials will be removed to licensed disposal facilities in accordance with applicable federal, state, and local regulations.

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.): 43-800 TDS concentration (mg/L): unknown

Describe the source of this information:

Used the form at this address:

<https://nmwrrs.ose.nm.gov/nmwrrs/well-log-meter-info-form> to look at depth to water recorded during drilling activities within the basin. NOTE: No data available for the actual Project Area, only other wells in the same general area. Many wells have no DTG listed and encountering groundwater during exploration is not certain.

- 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 Will be completed prior to work (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

Only small ephemeral washes are in the area, no intermittent or perennial streams.

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: | As needed |
| | | <hr/> |
| ☒ Straw wattles | Location: | As needed |
| | | <hr/> |
| ☐ Straw bales | Location: | |
| | | <hr/> |
| ☐ Ditches/swales | Location: | |
| | | <hr/> |
| ☒ Berms/dikes/dams | Location: | As needed |
| | | <hr/> |
| ☐ Sediment basins | Location: | |
| | | <hr/> |
| ☐ Other or N/A | Type/Location: | |
| | | <hr/> |
| | | <hr/> |

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:

Snow fencing

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

T-posts

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:

Drill pads will be regraded to blend with surrounding topography and eliminate sharp angles or unnatural landforms. Roads will be reclaimed by pulling berms, installing water bars on slopes greater than 5 percent at 50- to 100-foot intervals, and restoring natural drainage patterns. Compacted surfaces will be scarified to a minimum depth of 6 inches on drill pads and 8 inches on roads to restore soil permeability and provide suitable seedbed conditions for revegetation. All reclaimed areas will be seeded with native plant species appropriate for Chihuahuan Desert plant communities native to Hidalgo County, New Mexico. Seed mixes will be selected in consultation with BLM Las Cruces District Office personnel to ensure species composition is consistent with the surrounding vegetation community and meets BLM reclamation standards. Seeding will be performed using hydroseeding or broadcast seeding with crimped straw mulch applied immediately following seeding operations to improve moisture retention and seed-to-soil contact. Noxious weed monitoring and control will be implemented throughout operations and the post-reclamation monitoring period using methods approved by BLM and the New Mexico Department of Agriculture.

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

Sumps will be filled with excavated materials and compacted in 12-inch lifts.

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: \$80,596 calculation spreadsheet available

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.

DocuSigned by:
Sandy Alexander
72B51D3678B9461

Signature of Permittee or Authorized Agent: _____

Name (type or print):

Sandy Alexander

By: KoBold Metals Company, as the Managing
Member of Curiosity Exploration LLC

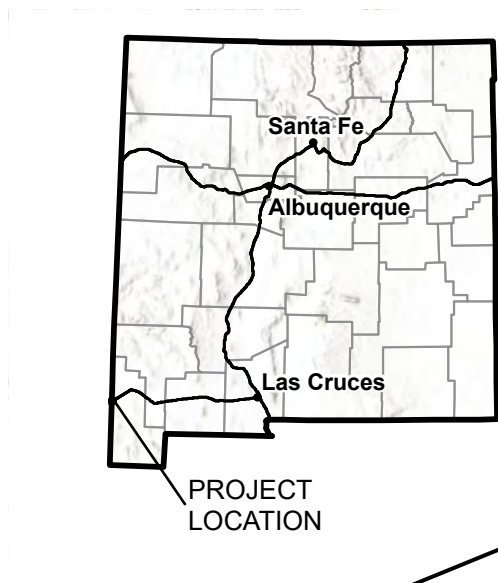
Title/Position: _____

Date:

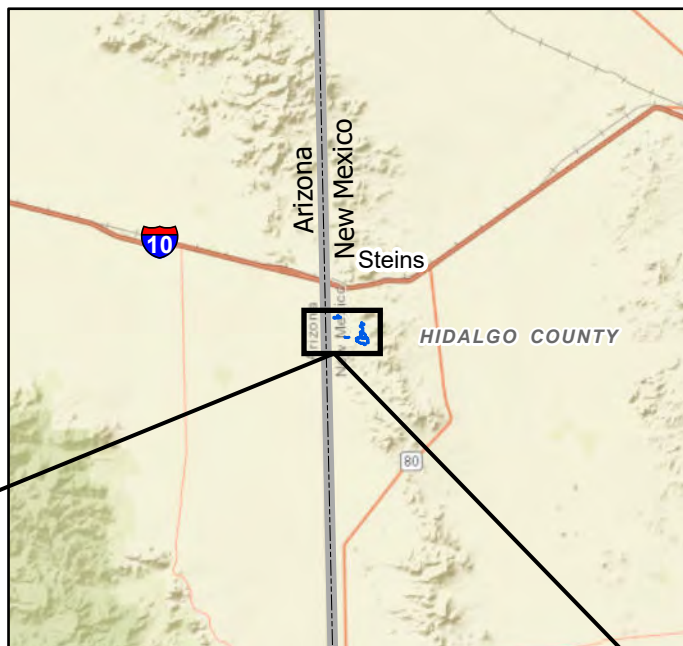
17-Jun-2026

FIGURES

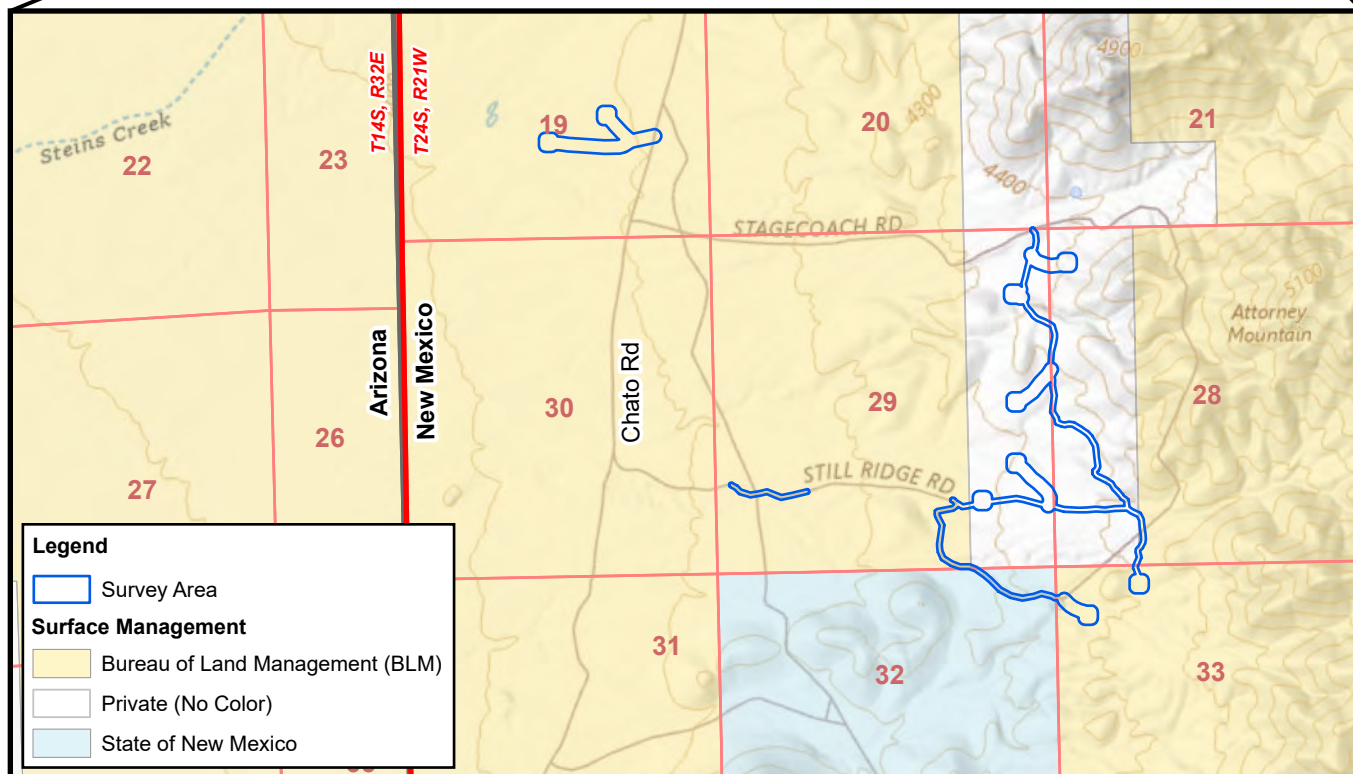
NEW MEXICO



PROJECT VICINITY



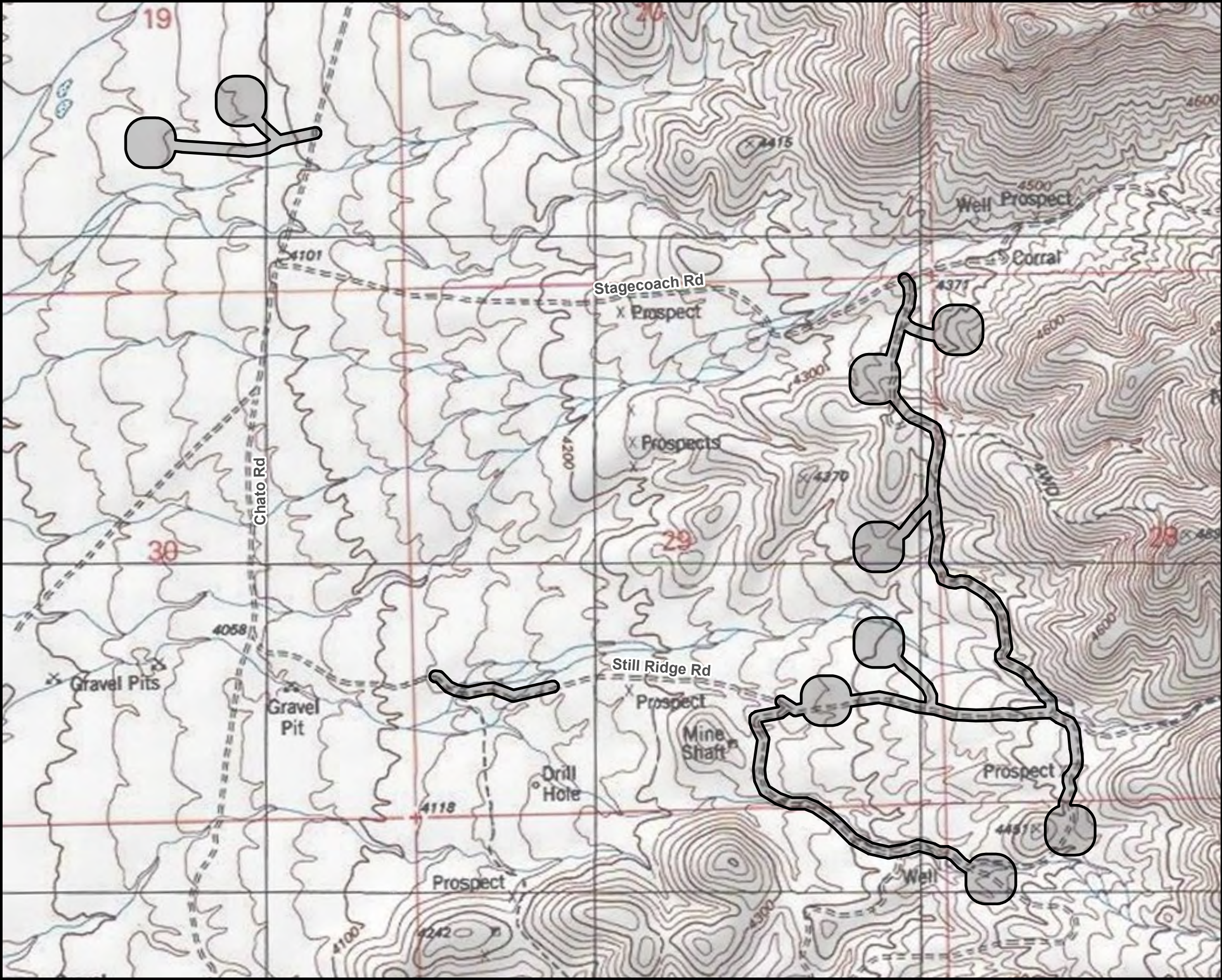
Approximate Scale 1 inch equals 10 miles



T24S, R21W, Portions of Sections 19, 20, 28, 29, 32, and 33,
Hidalgo County, New Mexico
Projection: NAD 1983 UTM Zone 12N
Surface Management: BLM ArcGIS service accessed 05/12/2026
Image Source: ArcGIS Online, World Street Map
and USGS TNM Topo Base Map

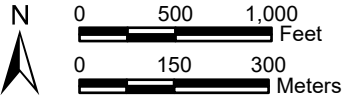
CURIOSITY EXPLORATION LLC
Steins Exploratory Drilling Project
Minimal Impact Exploration Operation
Permit Application

VICINITY MAP
Figure 1



T24S, R21W, Portions of Sections 19,
28, 29, 32, and 33,
Hidalgo County, New Mexico
Vanar USGS 7.5' Quadrangle
Projection: NAD 1983 UTM Zone 12N

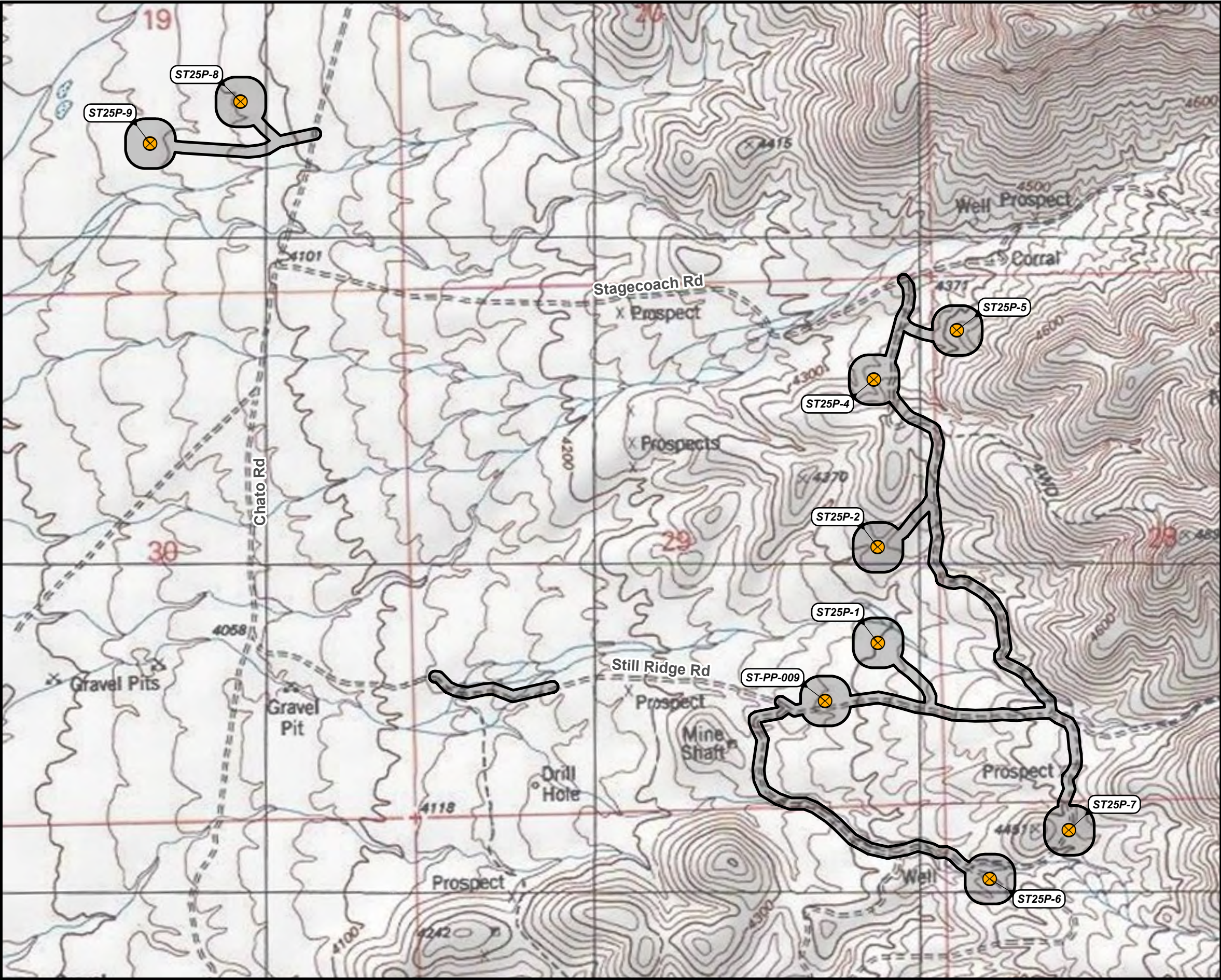
Legend
Permit Area



WestLand Engineering & Environmental Services

CURIOSITY EXPLORATION LLC
Steins Exploratory Drilling Project
Minimal Impact Exploration Operation
Permit Application

PERMIT AREA
Figure 2



T24S, R21W, Portions of Sections 19,
28, 29, 32, and 33,
Hidalgo County, New Mexico
Vanar USGS 7.5' Quadrangle
Projection: NAD 1983 UTM Zone 12N

Legend

-  Drill Hole
-  Permit Area

N

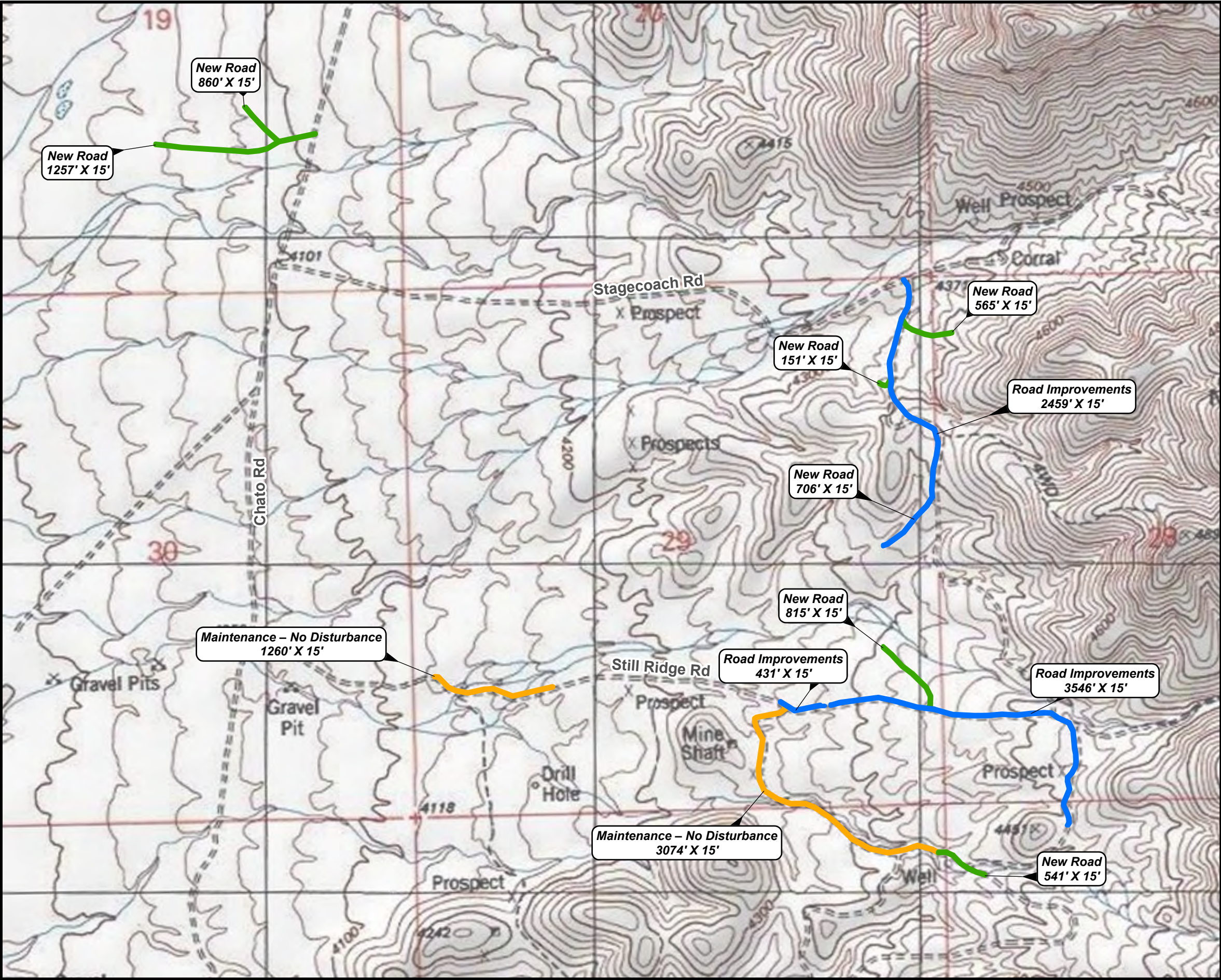
0 500 1,000 Feet

0 150 300 Meters

 Engineering &
Environmental
Services

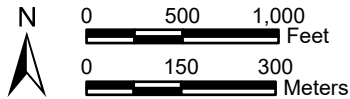
CURIOSITY EXPLORATION LLC
Steins Exploratory Drilling Project
Minimal Impact Exploration Operation
Permit Application

BOREHOLE/EXPLORATION LOCATIONS
Figure 3



T24S, R21W, Portions of Sections 19,
28, 29, 32, and 33,
Hidalgo County, New Mexico
Vanar USGS 7.5' Quadrangle
Projection: NAD 1983 UTM Zone 12N

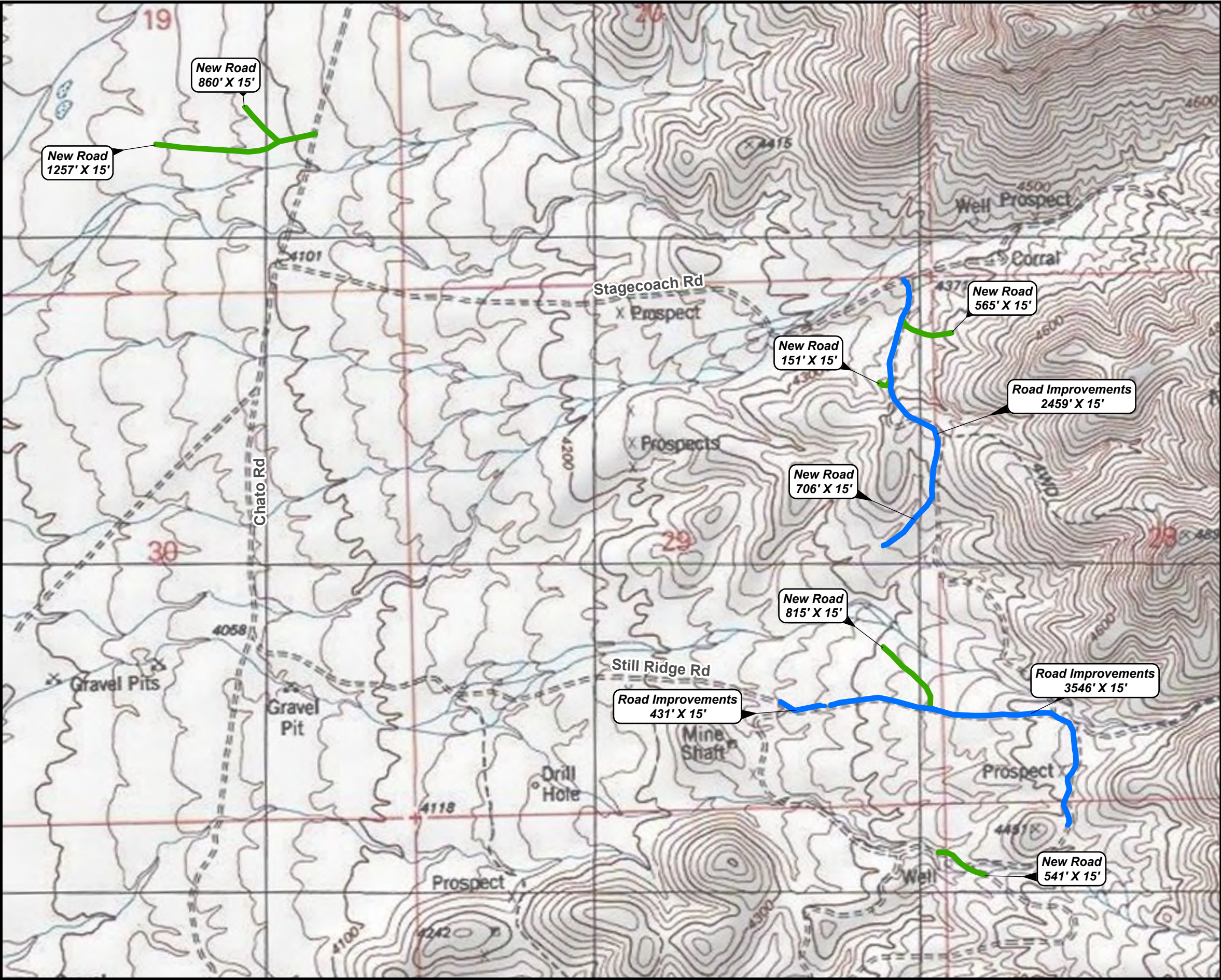
- Legend**
- Maintenance – No Disturbance
 - New Road
 - Road Improvements



WestLand Engineering & Environmental Services

CURIOSITY EXPLORATION LLC
Steins Exploratory Drilling Project
Minimal Impact Exploration Operation
Permit Application

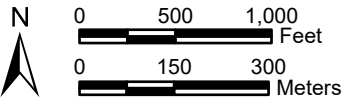
EXISTING ROADS AND NEW ROADS
Figure 4



T24S, R21W, Portions of Sections 19,
28, 29, 32, and 33,
Hidalgo County, New Mexico
Vanar USGS 7.5' Quadrangle
Projection: NAD 1983 UTM Zone 12N

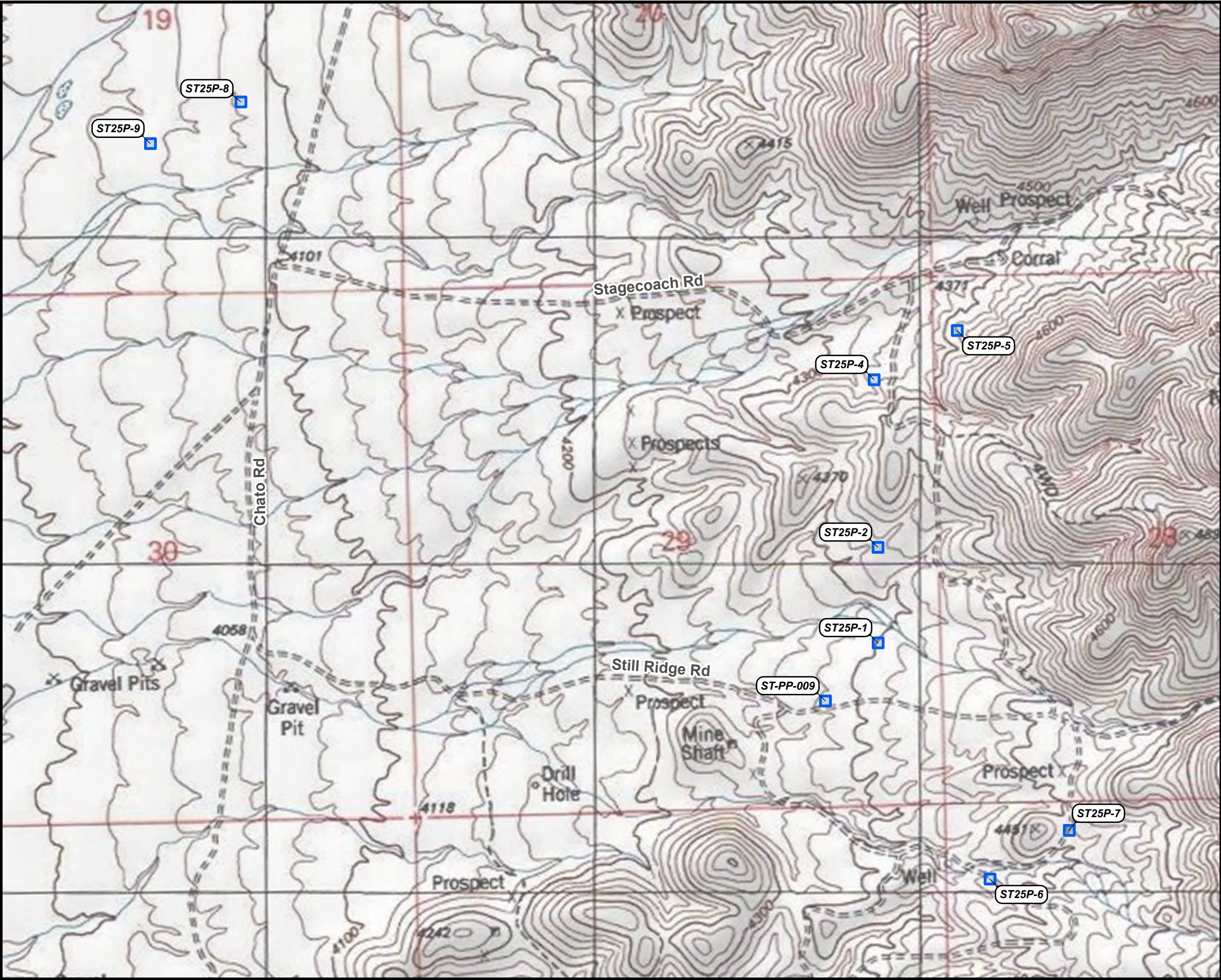
Legend

- █ New Road
- █ Road Improvements



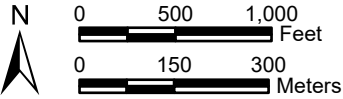
CURIOSITY EXPLORATION LLC
Steins Exploratory Drilling Project
Minimal Impact Exploration Operation
Permit Application

AREAS OF ROAD IMPROVEMENT
Figure 5



T24S, R21W, Portions of Sections 19,
28, 29, 32, and 33,
Hidalgo County, New Mexico
Vanar USGS 7.5' Quadrangle
Projection: NAD 1983 UTM Zone 12N

Legend
[Blue square icon] Drill Pad



WestLand | Engineering &
Environmental
Services

CURIOSITY EXPLORATION LLC
Steins Exploratory Drilling Project
Minimal Impact Exploration Operation
Permit Application

DRILL PAD LOCATIONS
Figure 6

ATTACHMENT A
Surface Use Agreement

SURFACE USE AGREEMENT

THIS SURFACE USE AGREEMENT (“**Agreement**”) is made the date of last signature below (“**Effective Date**”), by and between Susan and James Hooper, whose address is 391 Braidfoot Road, Steins, NM 88045 (hereinafter collectively referred to as “**Owner**”) and KoBold Metals Company, a Delaware Corporation (hereinafter referred to as “**Licensee**”).

RECITALS

A. Owner owns various surface parcels and fee lands situated in Hidalgo County, NM, New Mexico, and more particularly described in Part 1 of Exhibit A and incorporated into this Agreement by this reference. Attached as Exhibit B is a map identifying the Owner’s surface parcels and fee lands. The surface parcels which are shaded overlie federal minerals and shall be referred to in this Agreement as the “**Property**”.

B. Licensee represents that it has acquired the right to explore valid and current unpatented mining claims (the “**Claims**”) as described in Part 2 of Exhibit A covering the Property and represents that it has the exclusive right to explore the minerals associated with the Property. The rights granted to Licensee under this Agreement shall be deemed appurtenant to, and for the benefit of, the Claims, but shall not run to any third party unless rights under this Agreement are transferred as provided herein to any transferee of the Claims.

C. Owner and Licensee wish to enter into an agreement providing for Licensee’s use of, and access to, the Property for the purposes herein stated.

NOW THEREFORE, the parties have agreed as follows.

1. Term and Termination. This Agreement shall commence on the Effective Date and continue for a “**Term**” of two (2) years, and for so long thereafter as Licensee is conducting its Operations (as defined in Section 2) on the Property, unless sooner terminated by either party as provided in Section 8. Licensee may renew for one additional one (1) year increments upon written agreement of Owner. Notwithstanding any termination of this Agreement, Licensee shall thereafter remain obligated to fulfill any obligation accrued under this Agreement, including but not limited to any accrued payment, environmental protection, reclamation, remediation, and legal compliance obligations.

2. Access, Consent to Exploration, and Restoration. Owner hereby grants to Licensee the right of access through existing gates and fences identified on the map attached hereto as Exhibit B for the purposes of Operations. For purposes of this Agreement, “**Operations**” shall be limited to activities related to Licensee’s claims on the Property and shall include, without limitation, exploration, reclamation, and remediation activities, and may consist of, among other things, geological, geochemical and geophysical surveys and sampling of the Property, drilling, trenching, assaying, conducting required surveys for permitting purposes, facilitating site evaluations by regulatory agencies, road improvements, pad construction, and other activities which are intended to further the exploration of the Property. Operations shall not include any

obligation to develop, maintain, or operate facilities for the benefit of Owner or third parties. Owner hereby consents to Licensee's access and conduct of exploration, development, mining and restoration activities on the Property pursuant to the terms of this Agreement. This consent is intended to satisfy the requirements of 43 U.S.C. § 299(c). Owner further agrees that the schedule of compensation set forth in Sections 3 and 4 below shall be sufficient to compensate Owner for Licensee's reasonable, lawful and prudent use of the Property (as defined in Section 3.G below). Licensee agrees that the uses of the Property granted by this Agreement shall be the extent and limit of its rights to use the Property, and it hereby forever waives and disclaims all other rights, whether express, implied, statutory, regulatory or based upon common law, to the Property. Licensee shall provide Owner with at least forty-eight (48) hours advance notice prior to initial entry onto the Property for any new phase of Operations. No additional notice shall be required for ongoing daily activities during an active work program.

3. Surface Rental and Access. The Property described in Part 1 of Exhibit A contains approximately 641.36 acres, more or less. Licensee's compensation obligations to Owner for use of the Property shall be satisfied through the activity-based compensation payments set forth in Section 4 below. Upon execution of this Agreement, Owner grants Licensee the right of reasonable access for ingress and egress to the Property across Owner's adjacent fee lands, limited to using existing roads identified on the map attached hereto as Exhibit B. Licensee may drop portions of its mining claims from time to time in accordance with the procedures set forth below regarding claim dropping, current payment obligations, and surface use compliance. Upon proper abandonment and reclamation of any dropped claim areas in accordance with applicable regulations, Licensee shall have no further obligations under this Agreement with respect to such dropped areas.

4. Compensation for Surface Use. Licensee understands that its intended surface use activities may potentially have an impact on ranching, agricultural or other surface operations of Owner or Owner's lessee(s) or licensee(s). As compensation for Licensee's use and disturbance of the surface of the Property, Licensee shall compensate Owner as follows:

A. Drill Pad Compensation. Licensee shall pay Owner the sum of Three Thousand Five Hundred Dollars (\$3,500.00) for each drill pad constructed or utilized by Licensee on the Property, payable within thirty (30) days after construction or first use of each such pad.

B. Road Work Compensation. Licensee shall pay Owner the sum of Twenty-Five Cents (\$0.25) per linear foot for road construction, improvement, or maintenance work conducted by Licensee on the Property, measured along the centerline of the disturbed roadway. Payment shall be made within thirty (30) days after completion of each road work project. In the event Owner performs road construction, improvement, or maintenance work at Licensee's request, Licensee shall compensate Owner for the actual cost of such work as agreed in writing in advance, and no additional per-foot compensation under this subsection shall apply.

C. Additional Drill Collar Compensation. For each drill collar beyond the first collar on any drill pad, Licensee shall pay Owner the sum of Five Hundred Dollars (\$500.00) per additional collar, payable within thirty (30) days after drilling commences on each such additional collar.

D. **Reclamation Obligation.** Licensee is obligated to reclaim and revegetate all disturbed areas after appropriate contouring measures have been taken to prevent erosion, in accordance with applicable federal, state, and local requirements.

E. **Exclusive Compensation.** The compensation set forth in subsections (a) through (c) above constitutes the sole and exclusive compensation due to Owner for all surface use, access, and disturbance activities conducted under this Agreement, and no additional fees, rentals, or compensation shall be due.

5. **Surface Use and Protection.** Subject to Sections 2 and 3 above, Owner shall continue to have the right to use the surface of the Property and its own fee lands used for ingress and egress to the property for livestock grazing, ranching, agricultural and environmental remediation, monitoring and reclamation activities unrelated to Licensee's Operations. Licensee shall have the concurrent right to use and occupy the surface of the Property upon making the payments described in Sections 3 and 4 above. Licensee's activities shall be subject to the provisions set forth in Exhibit C attached hereto, the provisions of which are incorporated into this Section 5 by this reference.

6. **Protection of Existing Water Rights and Water Remediation and Monitoring Infrastructure.** Licensee shall avoid Operations in areas of the Property associated with springs or surface water, or enhanced cattle forage caused by such groundwater. Licensee shall also avoid Operations in areas of the Property with water remediation or monitoring facilities. In conducting its drilling activities on the Property, Licensee shall comply with all requirements of federal, state and local laws and regulations, including, but not limited to the requirements of the New Mexico Office of the State Engineer, the Mining and Minerals Division, and the Environment Department regarding completion, plugging, and abandonment of drill holes, and Licensee shall have a standby plan in place for dealing with artesian wells, should any be encountered on the Property.

Licensee shall consult and cooperate with Owner to undertake reasonable and necessary measures to prevent any potential effects of Licensee's exploration activities on Owner's water supply(ies) and groundwater remediation and monitoring facilities, including but not limited to the proper hydrological supervision of drilling and excavation Operations.

7. **Permitting and Regulatory Cooperation.** Owner agrees to cooperate with Licensee in obtaining all necessary permits and regulatory approvals for Operations on the Property, including but not limited to exploration drilling permits from the Bureau of Land Management and New Mexico Mining and Minerals Division. Such cooperation shall include, without limitation, providing reasonable access for regulatory site inspections, executing permit applications or other documents as a surface owner where required, and providing reasonable assistance in responding to regulatory inquiries related to Licensee's Operations. Owner's cooperation shall not require Owner to incur any out-of-pocket costs, which shall be borne by Licensee.

8. **Assignment, Termination, and Default.** Licensee may assign this Agreement to another party to whom it intends to likewise assign the Claims (to which the rights under this Agreement shall be deemed appurtenant) after first obtaining the written consent of Owner, which consent shall not be unreasonably withheld, except that Licensee may assign this Agreement to an

affiliate or subsidiary without obtaining such consent. Owner, prior to selling, assigning or encumbering its interest in the Property to any unaffiliated third party, shall first give Licensee written notice. Any sale, assignment or encumbrance by Owner shall be made subject to this Agreement and shall not act to enlarge Licensee's responsibilities or obligations under this Agreement.

Licensee may terminate this Agreement at any time upon thirty (30) day's advance written notice to Owner, following which Licensee shall complete all reclamation, remediation and closure requirements of local, State, and federal agencies that are applicable to Licensee's Operations or any conditions resulting in whole or in part from Licensee's Operations.

If Licensee fails to make any of the payments required by Sections 3 and 4 above, or if Licensee fails to perform any other obligation required by this Agreement, Owner shall give written notice to Licensee specifying the nature of the default. Licensee shall have thirty (30) days from receipt of the notice to remedy any default in payment and to remedy or commence to remedy (and diligently proceed to complete remedying) any other default. Should Licensee fail to do so, Owner may terminate this Agreement by written notice to Licensee, which shall remain responsible to remedy the default, but without any right to reinstatement of this Agreement.

9. Bonding. Licensee shall fully comply with any bonding or financial assurance requirements contemplated by federal, state and local laws applicable to its Operations on the Property. In the event no such requirements apply to any portions of Licensee's Operations, then Owner may require reasonable bonding or other form of financial assurance commensurate with the anticipated cost of reclaiming or otherwise addressing disturbances or conditions expected to result from those Operations. In the event Owner requires it, the bond or other form of financial assurance shall be released upon Licensee's completion of all surface use and protection requirements in Section 5 and Exhibit C or shall be forfeited to Owner in the event of non-completion for any reason, including, but not limited to Licensee's abandonment, bankruptcy or insolvency.

10. Force Majeure. For purposes of this Agreement, failures of timely performance other than payment of monies due to Owner or remedying of any default by Licensee may be excused by an event of a force majeure. For purposes of this Agreement, "**Force Majeure**" shall only include the following causes beyond Licensee's control: inability after diligent and persistent efforts to obtain any license, permit or other governmental authorization required to conduct Operations; unusually severe weather; acts of God; mining casualty; material damage to or destruction of a mine, mill or other facility that is integral to Licensee's Operations; fire; unexpected explosions; flood; insurrection; riot; labor dispute; inability after diligent and persistent efforts to obtain necessary workers, materials or supplies; and/or regulatory delays or permit processing delays beyond Licensee's reasonable control or changes in applicable law or regulations that materially affect Operations.

11. Notices and Payments. All payments required by this Agreement shall be in U.S. currency payable to Owner at the address below. Any notices to either party shall be sent by courier or certified mail, return receipt requested, to the addresses below. Any notice sent by certified mail

shall be effective five (5) days after the date of mailing, or upon actual receipt, whichever is earlier. Notice of any change of address shall be given in the same manner.

To Owner: Susan and James Hooper
Attention: 391 Braidfoot Road, Steins, NM 88045

To Licensee: KoBold Metals Company
Attention: 2021 Shattuck Avenue, Suite 210, Berkeley, CA 94704
Copy to: legalnotices@koboldmetals.com.

12. Binding Effect. This Agreement shall inure to the benefit of and be binding upon the parties hereto, their respective administrators, successors, and assigns.

13. Applicable Law. This Agreement is to be governed by and construed under the laws of the State of New Mexico, without regard to the conflicts of law provisions thereof, and each of the parties hereto irrevocably attorns to the jurisdiction of the State District Court in Grant County, New Mexico for adjudication of rights, obligations and interests arising pursuant to this Agreement.

14. Entire Agreement. This Agreement terminates and replaces all prior agreements, either written, oral or implied, between the parties hereto, and constitutes the entire agreement between the parties.

15. Sharing of Data and Confidentiality. Except for proprietary information concerning target minerals, exploration methodologies, artificial intelligence algorithms, predictive models, and any other proprietary technical information or data for which Licensee is conducting exploration operations, during Operations Licensee agrees to share with Owner any data, including but not limited to, assay results, water quality information, hydrogeologic and geochemical information, etc., obtained by Licensee as a result of drilling, sampling, monitoring or other types of operations by Licensee on the Property. During the Term of this Agreement, Owner shall not disclose to any third parties any information furnished to them by Licensee or obtained through any other source whatsoever, concerning Licensee's Operations on the Property without the prior written consent of Licensee, which consent shall not be unreasonably withheld. Upon termination of this Agreement for any reason, Licensee agrees that all data described above and any copies thereof in Licensee's possession, custody or control shall become the property of Owner and shall be provided by Licensee to Owner, including but not limited to data that was not previously shared with Owner on the basis of the "proprietary information" grounds mentioned in the first sentence of this Section.

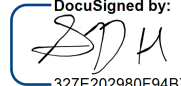
IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date of last signature below.

OWNER:

By:  Signed by:
327E202980F94B7...

Date: 28-Jan-2026

OWNER:

By:  DocuSigned by:
327E202980F94B7...

Date: 28-Jan-2026

LICENSEE:

By:  Signed by:
ECDD39543BEC46C...
JOSHUA DAVID GOLDMAN

Its: President

Date: 29-Jan-2026

**EXHIBIT A
TO
SURFACE USE AGREEMENT**

Attached to and made a part of the certain Surface Use Agreement by and between Susan and James Hooper (Owner) and Kobold Metals Company (Licensee).

PART 1—PROPERTY

The following described real property located in Hidalgo County, New Mexico, subject to this Surface Access Agreement:

Parcel 1: The East Half of the Southeast Quarter ($E\frac{1}{2}SE\frac{1}{4}$) and the East Half of the Northeast Quarter ($E\frac{1}{2}NE\frac{1}{4}$) of Section 29, Township 24 South, Range 21 West, New Mexico Principal Meridian, Hidalgo County, New Mexico.

Parcel 2: The East Half of the Southeast Quarter ($E\frac{1}{2}SE\frac{1}{4}$) and the Southeast Quarter of the Northeast Quarter ($SE\frac{1}{4}NE\frac{1}{4}$) of Section 20, Township 24 South, Range 21 West, New Mexico Principal Meridian, Hidalgo County, New Mexico.

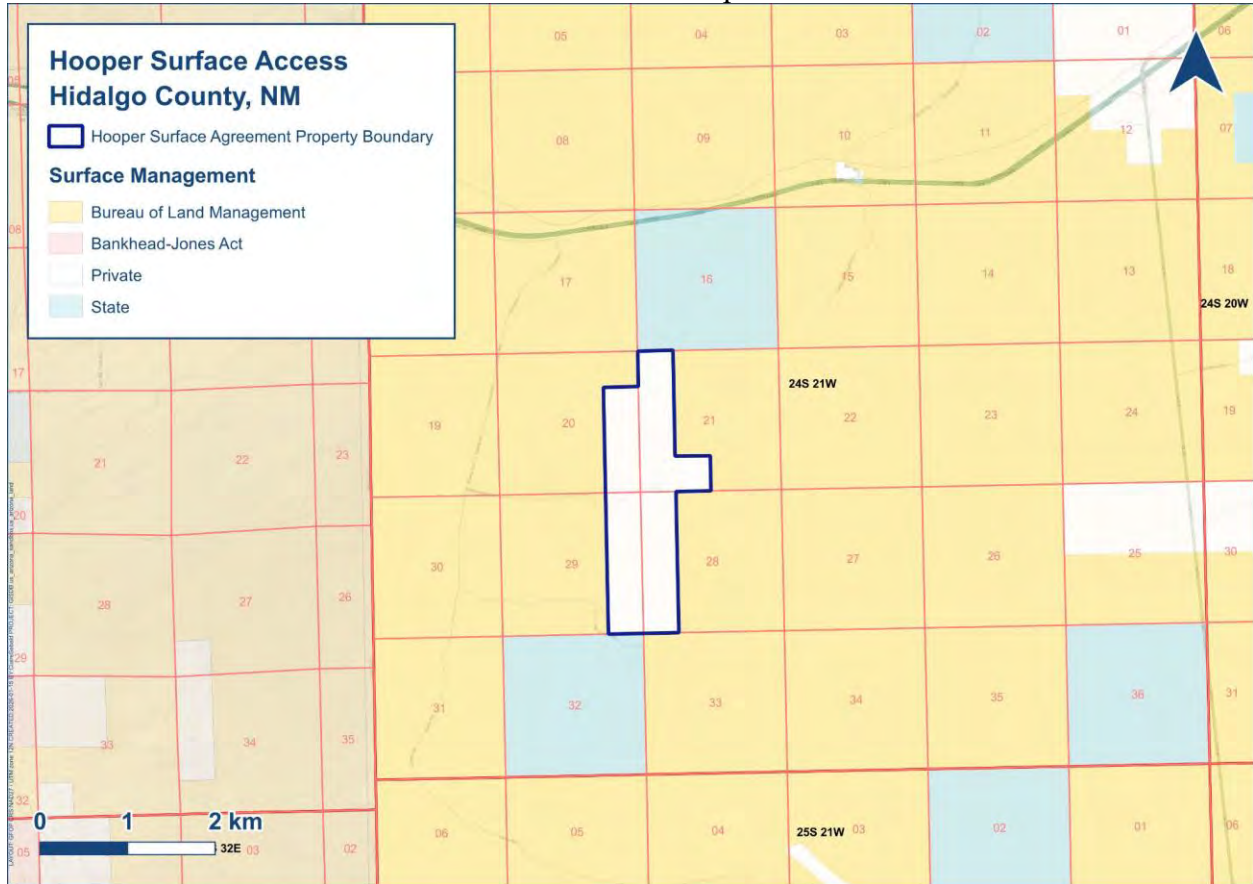
Parcel 3: The West Half of the Northwest Quarter ($W\frac{1}{2}NW\frac{1}{4}$), the West Half of the Southwest Quarter ($W\frac{1}{2}SW\frac{1}{4}$), and the Southeast Quarter of the Southwest Quarter ($SE\frac{1}{4}SW\frac{1}{4}$) of Section 21, Township 24 South, Range 21 West, New Mexico Principal Meridian, Hidalgo County, New Mexico.

Parcel 4: The West Half of the Southwest Quarter ($W\frac{1}{2}SW\frac{1}{4}$) and the West Half of the Northwest Quarter ($W\frac{1}{2}NW\frac{1}{4}$) of Section 28, Township 24 South, Range 21 West, New Mexico Principal Meridian, Hidalgo County, New Mexico.

EXHIBIT B TO SURFACE USE AGREEMENT

Attached to and made a part of the certain Surface Use Agreement by and between Susan and James Hooper (Owner) and Kobold Metals Company (Licensee).

See attached map.



**EXHIBIT C
TO
SURFACE USE AGREEMENT**

Attached to and made a part of the certain Surface Use Agreement by and between Susan and James Hooper (Owner) and Kobold Metals Company (Licensee).

SURFACE USE AND PROTECTION

(a) Licensee shall use reasonable care and shall exert good faith effort to minimize disruption of or interference with the ranching, livestock and environmental remediation, monitoring and reclamation operations conducted by the Owner upon the Property and upon Owner's fee lands used by Licensee as the for ingress and egress to the Property. Such good faith efforts shall include advance consultation with Owner concerning the location, size and design of such disturbances as roads, drill pads, trenches, wells, mud sumps, etc. Such good faith efforts shall also include taking reasonable precautions to keep animals and unauthorized persons safely away from its Operations on the Property. Licensee shall ensure that all gates are left open or closed according to the Owner's needs and directions, and shall repair any gates, fences, roads, culverts or other facilities of Owner that may be damaged by Licensee during its Operations. Licensee shall ensure that its employees, contractors, visitors and/or supplies shall stay on established roads whenever possible, will limit traveling outside of the established roads whenever possible, and will operate all motor vehicles in a reasonable and. prudent manner while traversing such roads. No employee, agent, contractor, visitor and/or supplier of Licensee shall bring any alcohol, illegal drugs, dogs or firearms upon Owner's lands; Licensee shall conduct all Operations in such a way as to prevent fire and safety hazards. Motorized vehicles will not be allowed to park or idle in any vegetated areas. All work locations shall be equipped with an adequate fire extinguisher and all personnel shall be trained in their use and operation. Licensee shall be responsible for the actions of its agents, employees, contractors, visitors and/or suppliers while using the Property. Licensee shall pay actual damages for any damage to livestock and Owner's personal property and improvements to the Property. Such damages may include, by way of illustration and not limitation, fair market value for any livestock destroyed, reasonable veterinary costs for livestock injured, reasonable costs incurred due to fire, damage to fences, cattle guards, water sources, environmental remediation and monitoring wells, and any other loss attributable to Licensee's Operations. Any claim for damages shall include supporting documentation reflecting the actual damages suffered and must be made in writing to Licensee. Licensee shall pay within forty-five (45) days. Licensee shall have the right to contest, in good faith, any claim for actual damages which it deems to be unreasonable. In such event, any cancellation of this Agreement shall not become effective until the contest has been finally disposed of in a court of competent jurisdiction. Thereafter, should the claim be upheld, Licensee shall make payment to Owner within forty-five (45) days of court disposition. In the event Owner prevails in any court action, Owner shall also be entitled to collect its reasonable attorney fees and costs from Licensee. Owner, or its agent, may inspect any and all Operations conducted under this Agreement upon twenty-four hours advance notice to the Project Manager.

(b) Licensee shall, in its exploration Operations, plug and/or cap any exploratory holes in accordance with any applicable federal, state or local law, rule, regulation or order including but

not limited to the plugging and abandonment requirements of the New Mexico Office of the State Engineer, the Mining and Minerals Division, and Environment Department. All such holes shall be sufficiently plugged to prevent injury to livestock and wildlife. Licensee shall not be responsible for drill holes or any other disturbance existing prior to this Agreement unless further disturbed by Licensee, in which case Licensee shall be fully responsible. Licensee agrees not to conduct any drilling within two hundred (200) feet of any water well (including production, remediation or monitoring wells), developed spring or building, without prior written permission of Owner.

Water-Bearing Holes and Conversion to Water Wells: If any exploratory hole encounters water (including groundwater, artesian flow, or any water-bearing zone) during drilling Operations, Licensee will use good faith efforts to notify Owner within two (2) business days of such discovery. If Owner wishes to convert such hole to a water well, Owner must notify Licensee in writing of such intent within five (5) business days of receiving Licensee's notification. Upon receiving Owner's written notice of intent, Licensee agrees to provide Owner with available drilling records for such hole that are reasonably necessary to support Owner's water well permit application with the State Engineer; provided, however, that such cooperation shall not require Licensee to modify hole diameter, case any hole, delay Operations, or undertake any work beyond providing documentation. Owner shall be solely responsible for obtaining the water well permit, completing any required construction modifications to meet State Engineer water well standards, and completing all conversion work.

The hole must be either: (a) properly plugged and abandoned by Licensee in accordance with applicable regulations, or (b) transferred to Owner with a valid State Engineer water well permit, before the drilling rig moves off the hole location. For transfer to Owner, Owner must provide Licensee with: (i) a copy of the approved State Engineer water well permit issued in Owner's name, and (ii) written acknowledgment accepting full ownership, liability, and responsibility for the hole and all future conversion, maintenance, and compliance obligations.

Licensee will provide financial assurance to the Mining and Minerals Division for plugging each hole as required by regulation. Upon either: (a) completion of plugging and abandonment in accordance with applicable regulations and receipt of regulatory approval from the Mining and Minerals Division, or (b) Owner's delivery of the approved water well permit and written assumption of responsibility as described above, Licensee's financial assurance shall be released by the Mining and Minerals Division and Licensee shall have no further bonding obligations, liability, or responsibility for such hole. Owner waives any claims related to such properly abandoned or transferred holes.

If Owner does not: (i) timely file a complete water well permit application, (ii) obtain an approved water well permit from the State Engineer, (iii) provide the required written assumption of responsibility, or (iv) complete the permit process (or if Owner's permit application is denied), then Licensee shall proceed with plugging and abandonment in accordance with regulatory requirements. Such compliance shall not constitute a breach of this Agreement. Owner acknowledges that Licensee cannot guarantee any hole can be legally converted to a water well and that regulatory requirements, permitting outcomes, and timing constraints may necessitate plugging despite Owner's interests.

(c) Licensee shall reclaim all surface damage caused by its Operations in accordance with New Mexico Rules and Regulations, as well as any applicable requirements of federal or local laws. Owner may submit a bid for such reclamation work, and if Owner's bid is competitive with other bids, Licensee may contract with Owner for such reclamation work on Owner's lands. All disturbed Property will be ripped or plowed and be revegetated using a seed mix approved by Owner and federal, state or local authorities.

ATTACHMENT B
Memorandum of Agreement
Recorded in Hidalgo County

Hidalgo County Clerk's Office
300 Shakespeare Street
Lordsburg, NM 88045

FIRST-CLASS



US POSTAGE PAID BY PITNEY BOWES
ZIP 85016 \$ 003.43
02 7W
0008035790 JAN 10 20

Attn: Sarah Strunk
Carol Ray

FENNEMORE CRAIG
2394 E CAMELBACK ROAD
SUITE 600
PHOENIX AZ 85016

RECEIVED
JAN 14 2025
SUPPORT SERVICES



HIDALGO COUNTY CLERK
ALYSSA OLIVAS ESQUIVEL
300 SHAKESPEARE LORDSBURG, NM 88045-----

Receipt # 0000020297

HIDALGO COUNTY CLERK
ALYSSA OLIVAS ESQUIVEL
300 SHAKESPEARE
LORDSBURG, NM 88045
(575) 542-9213

RECORDING RECEIPT

Recorded on: 01/09/2025 01:37:01 PM
Instrument No: 25300
No. of Pages: 42
Type: MINING RECORDS

Total Fee: \$ 25.00

Check Amount: \$ 25.00
Change Due: \$ 0.00

Check Number(485829): \$ 25.00

Filed By: FENNEMORE CRAIG
Cashier: ADMIN
01/09/2025 01:41:20 PM

COUNTY OF HIDALGO)
STATE OF NEW MEXICO) ss

MINING RECORDS
PAGES: 42

I Hereby Certify That This Instrument Was Filed for
Record On The 9TH Day Of January, 2025 at 01:37:01 PM
And Was Duly Recorded as Instrument # **25300**
Of The Records Of Hidalgo

When Recorded Return To:

Freeport-McMoRan Exploration Corporation
333 North Central Avenue
Phoenix, AZ 85004



Witness My Hand And Seal Of Office
Alyssa Olivas Esquivel
Deputy/County Clerk, Lordsburg, NM

(Space Above For Recorder's Use)

MEMORANDUM OF AGREEMENT

FOR EXPLORATION AND EARN-IN AGREEMENT

(Arizona and New Mexico Properties)

NOTICE IS HEREBY GIVEN that under that certain Exploration and Earn-In Agreement (Arizona and New Mexico Projects) (the “**Agreement**”) by and among **CURIOSITY EXPLORATION LLC**, a Delaware limited liability company (“**KoBold**”), and **FREEPORT-MCMORAN EXPLORATION CORPORATION**, a Delaware corporation (“**Freeport Exploration**”) and **FREEPORT-MCMORAN MINERAL PROPERTIES INC.**, a Delaware corporation (“**Freeport Properties**” and together with Freeport Exploration, “**FMEC**”), dated as of September 12, 2024: Capitalized terms not defined herein have the meaning set forth in the Agreement.

FMEC holds certain mining claims, state leases and mineral permits as more particularly described on **Schedule 1** attached hereto and by this reference made a part hereof (together with all associated Mineral Rights, the “Mineral Claims,” as such definition may be amended by any After-Acquired Property that becomes part of the Property pursuant to Section 9.3 of the Agreement, and including any renewals thereof and any other form of successor or substitute title thereto or tenure derived therefrom) in the four geographic areas in the States of Arizona and New Mexico described on **Schedule 1** within the red boundary labeled “land outline,” respectively known as (i) Stein Mountains, owed by Freeport Exploration, and (ii) ROW, (iii) Steins Mountains, (iv) Dos Burros and (v) Cloudburst, each owned by Freeport Properties (each, together with all associated Project Rights, a “**Project Area**” (the Project Areas and the Mineral Claims are sometimes referred to collectively as the “**Property**”). Some of the provisions of the Agreement are summarized as follows:

1. Possessory Rights. KoBold shall have the right and privilege of exploring and developing the Property pursuant to the terms of the Agreement and may appoint an operator to conduct the exploration and development work. KoBold has been designated as the operator to conduct the exploration and development work under the Agreement.

- 2. Area of Interest.** Each of the Project Areas has an area of interest that extends 1-mile from the exterior property boundary, as generally depicted on **Schedule 1** (the “Area of Interest”). KoBold and their Affiliates are prohibited from acquiring any properties within the Area of Interest without the prior approval of Technical Committee. If either KoBold or FMEC acquires any property within the Area of Interest during the term of the Agreement, that acquired property may become part of the Property for purposes of the Agreement.
- 3. Transaction.** KoBold may acquire a 51% interest in one or more Project Area by completing the transaction contemplated by the Agreement. FMEC may elect to repurchase 11% of KoBold’s interest by electing and completing the Back-In Option.
- 4. Termination.** KoBold may terminate the Agreement at any time by notice to FMEC and the termination will be effective when given.
- 5. Limitation on Transfer.** Except as expressly permitted under and in accordance with the Agreement, a party to the Agreement shall not transfer, convey, assign, mortgage or grant an option in respect of or grant a right to purchase or in any manner transfer, alienate or otherwise dispose of any or all of its interest in the Property or its rights or obligations under the Agreement.
- 6. Purpose.** This Memorandum is executed for the purpose of affording notice of the existence of the Agreement and terms and conditions thereof, which terms and conditions are incorporated herein by reference for all purposes. This Memorandum is not intended to alter or vary the terms or conditions of the Agreement. All capitalized words and phrases in this Memorandum have the same meaning as assigned to them in the Agreement.
- 7. Availability.** A copy of the Agreement is on file with KoBold and FMEC.

[Signature page follows.]

EXECUTED as of the Execution Date and effective as of the Effective Date.

CURIOSITY EXPLORATION LLC

By: 

Name: Joshua Goldman

Title: President

STATE OF Alabama)

) ss

County of Jefferson)

On this 13 day of September 2024, before me, the undersigned Notary Public, personally appeared Joshua Goldman, a President of CURIOSITY EXPLORATION LLC, a Delaware limited liability company, personally known to me (or satisfactorily proved to me) to be the persons whose name is subscribed to the above instrument and acknowledged to me that he executed the same for and on behalf of said companies.

WITNESS my hand and official seal.



Notary Public

My commission expires: 1.4.28



[Signature page to Memorandum of Agreement]

FREEPORT-MCMORAN EXPLORATION CORPORATION

By: [Signature]

Name Vertres McNeil Gashy
Title Sr VP Exploration

STATE OF Arizona

) ss

County of Maricopa

On this 5 day of Dec., 2024, before me, the undersigned Notary Public, personally appeared Vertres McNeil Gashy Sr. VP of FREEPORT-MCMORAN EXPLORATION CORPORATION, a Delaware corporation, known to me (or satisfactorily proved to me) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same for and on behalf of said corporation.

WITNESS my hand and official seal.

[Signature]

Notary Public

My commission expires:

6-9-27



[Signature page to Memorandum of Agreement]

FREEPORT-MCMORAN MINERAL PROPERTIES INC.

By: [Signature]
Name Vertrees McNeil Canby
Title VP Exploration

STATE OF Arizona

) ss

County of Maricopa

On this 5 day of Dec., 2024, before me, the undersigned Notary Public, personally appeared Vertrees McNeil Canby the VP of FREEPORT-MCMORAN MINERAL PROPERTIES INC., a Delaware corporation, known to me (or satisfactorily proved to me) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same for and on behalf of said corporation.

WITNESS my hand and official seal.

[Signature]

Notary Public

My commission expires:

6-9-27



[Signature page to Memorandum of Agreement]

Schedule 1

(To Memorandum of Agreement)

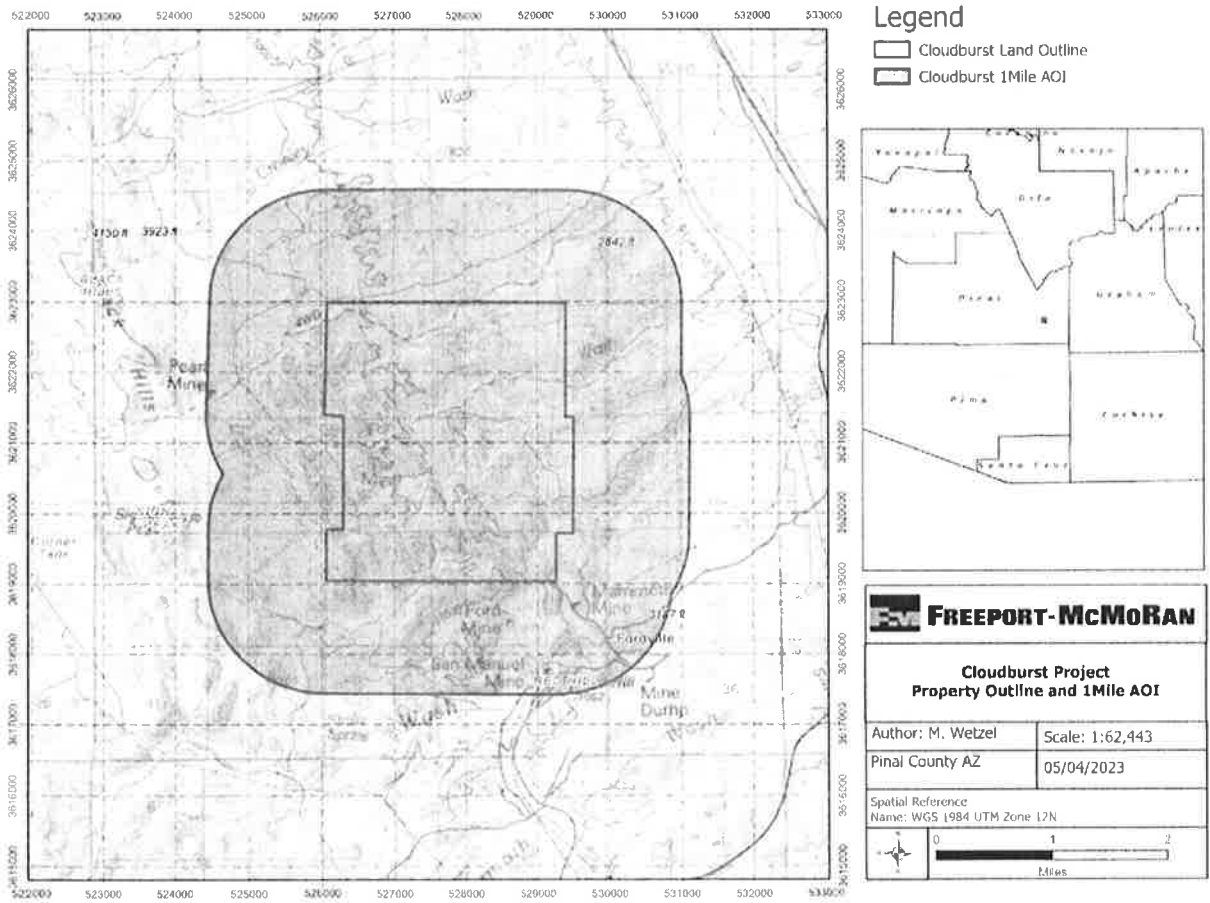
PROPERTY AND AREA OF INTEREST

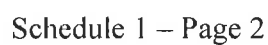
(see attached)

Schedule 1

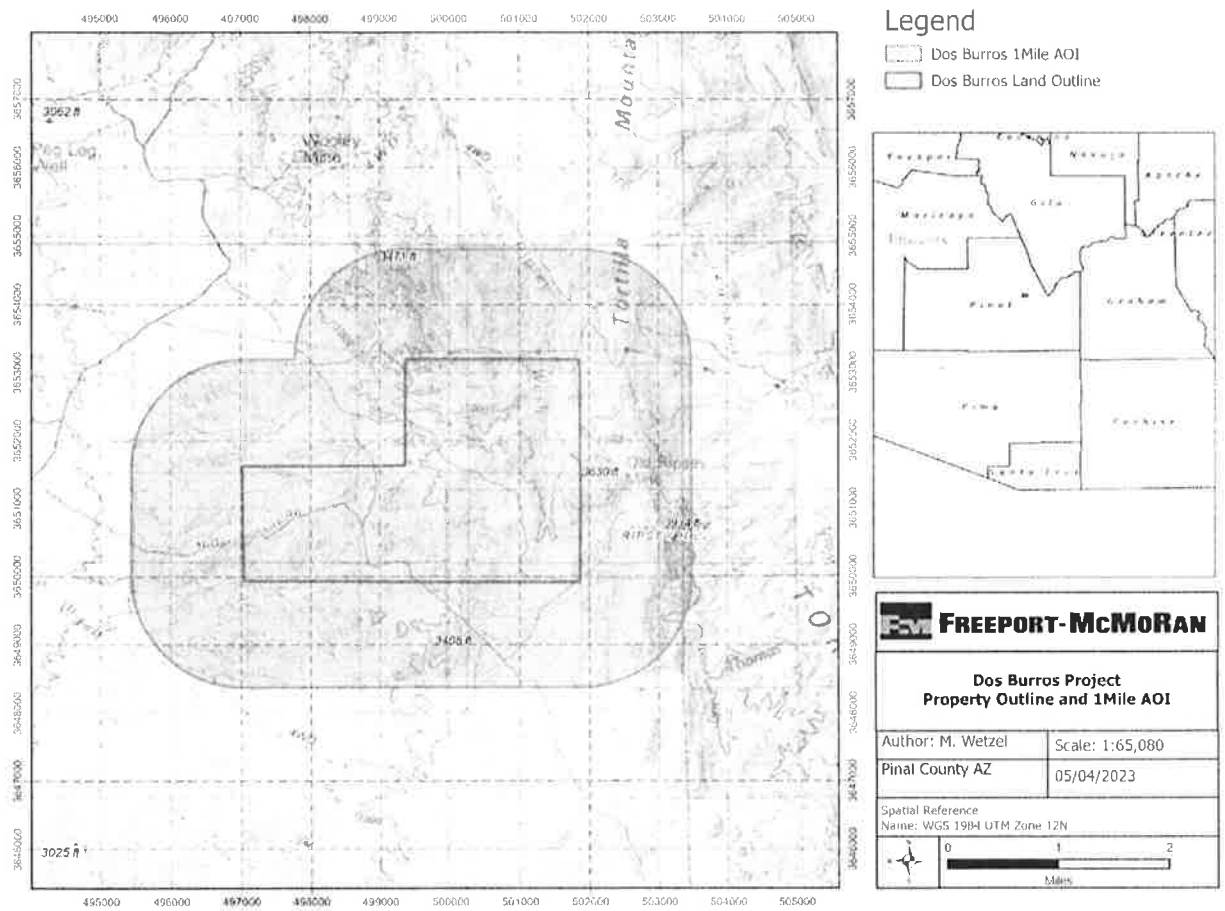
Map and List of Mineral Interests in JV Area

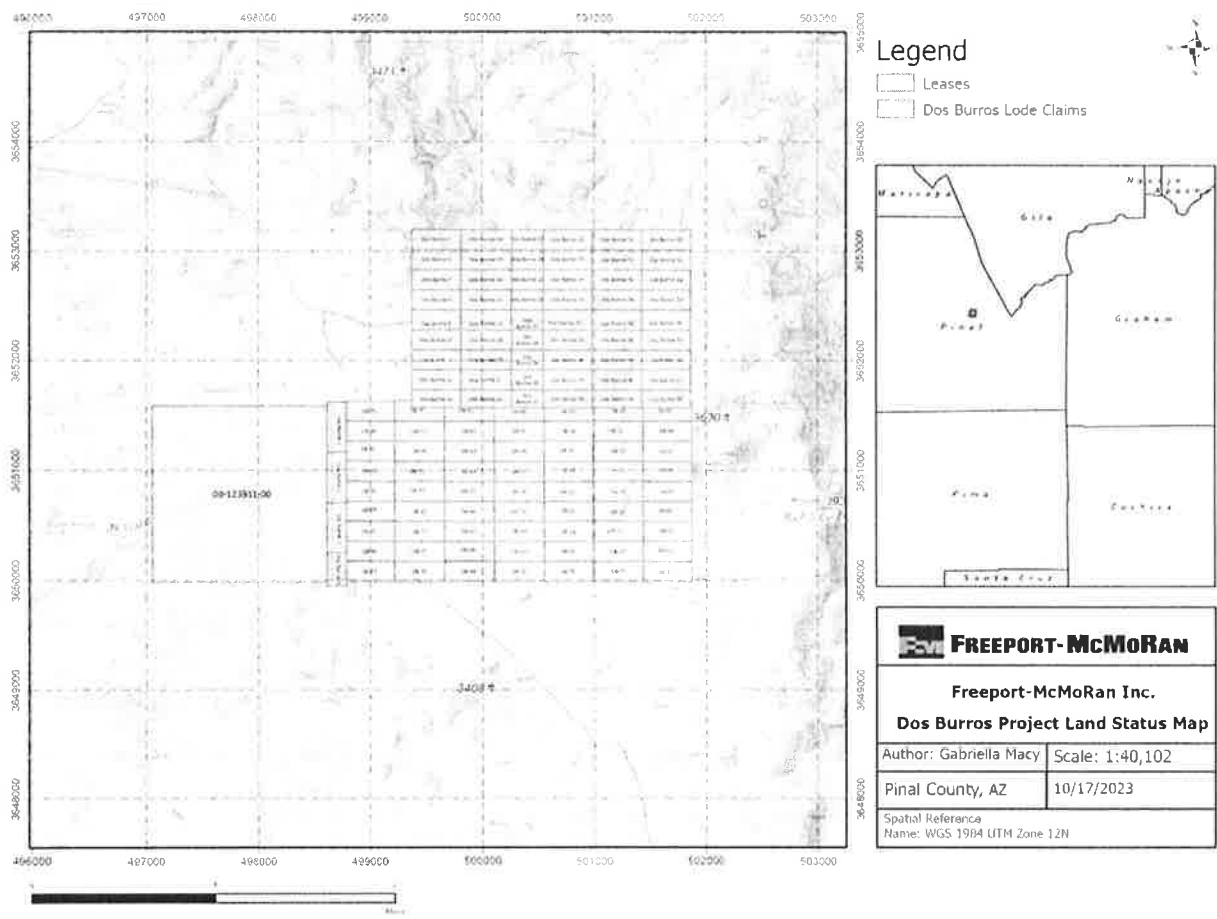
Cloudburst: map representation of the property comprising BLM unpatented mining lode claims and a mineral exploration permit in Arizona state lands. The subject property is in portions of Sections 15, 16, 21-23, and 26-28, T8S R16E, Gila and Salt Meridian, Pinal County, Arizona, plus a 1-mile Area of Interest (AOI) extending from the exterior property boundary.



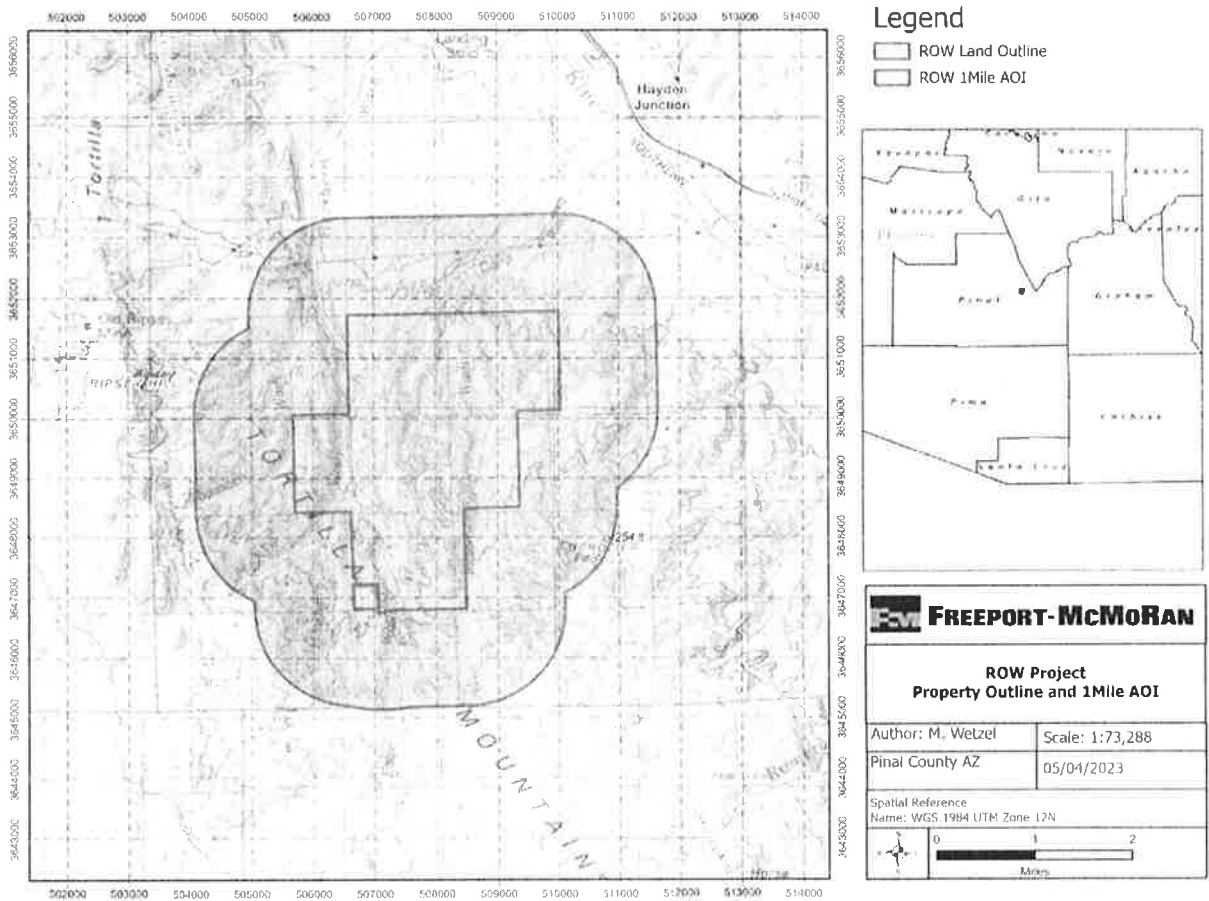


Dos Burros: map representation of the property comprising BLM unpatented mining lode claims and a mineral exploration permit in Arizona state lands. The subject property is in portions of Sections 10, 11, 14, 15, and 16, T5S R13E, Gila and Salt Meridian, Pinal County, Arizona, plus a 1-mile Area of Interest (AOI) extending from the exterior property boundary.

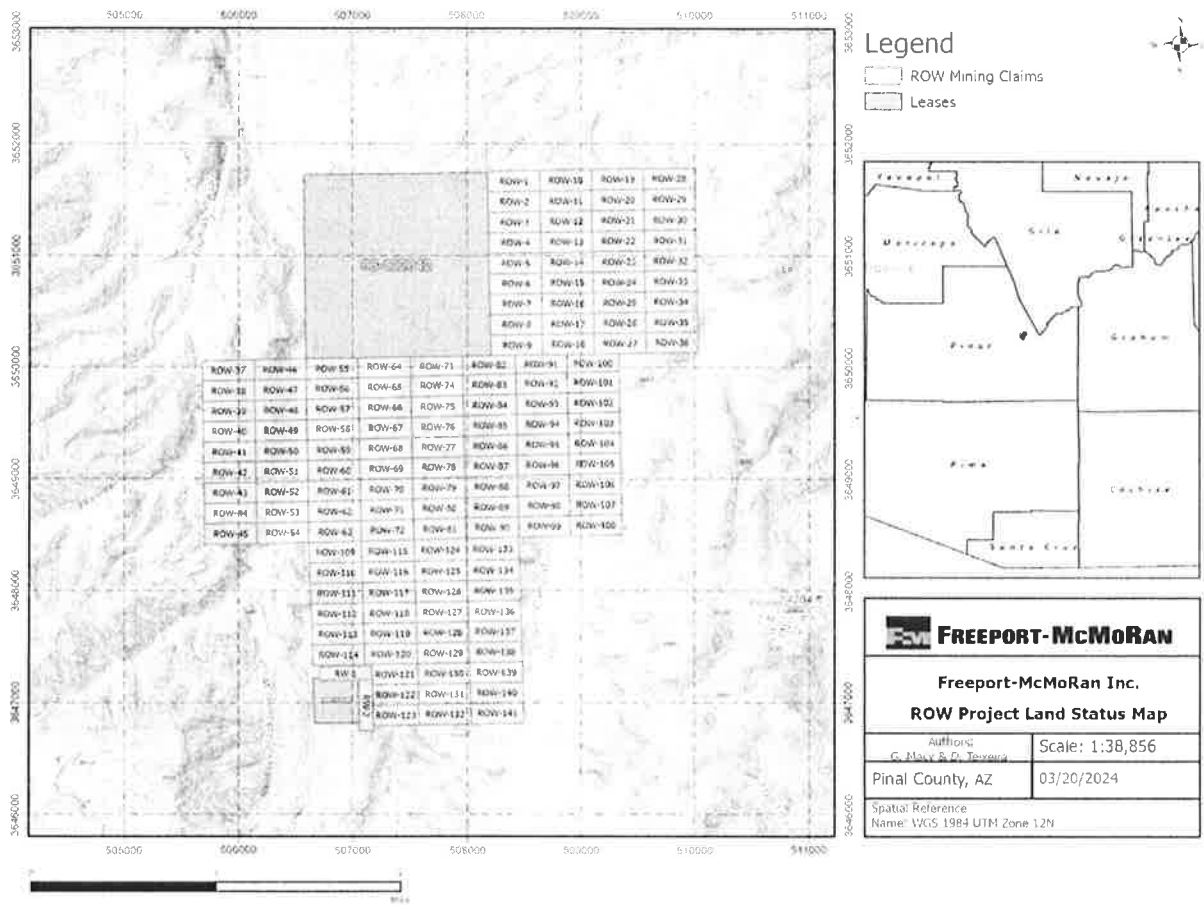




ROW: map representation of the property comprising BLM unpatented mining lode claims and mineral exploration permits in Arizona state lands. The subject property is in portions of Sections 15, 16, 20-22, 27-28, T5S R14E, Gila and Salt Meridian, Pinal County, Arizona, plus a 1-mile Area of Interest (AOI) extending from the exterior property boundary.

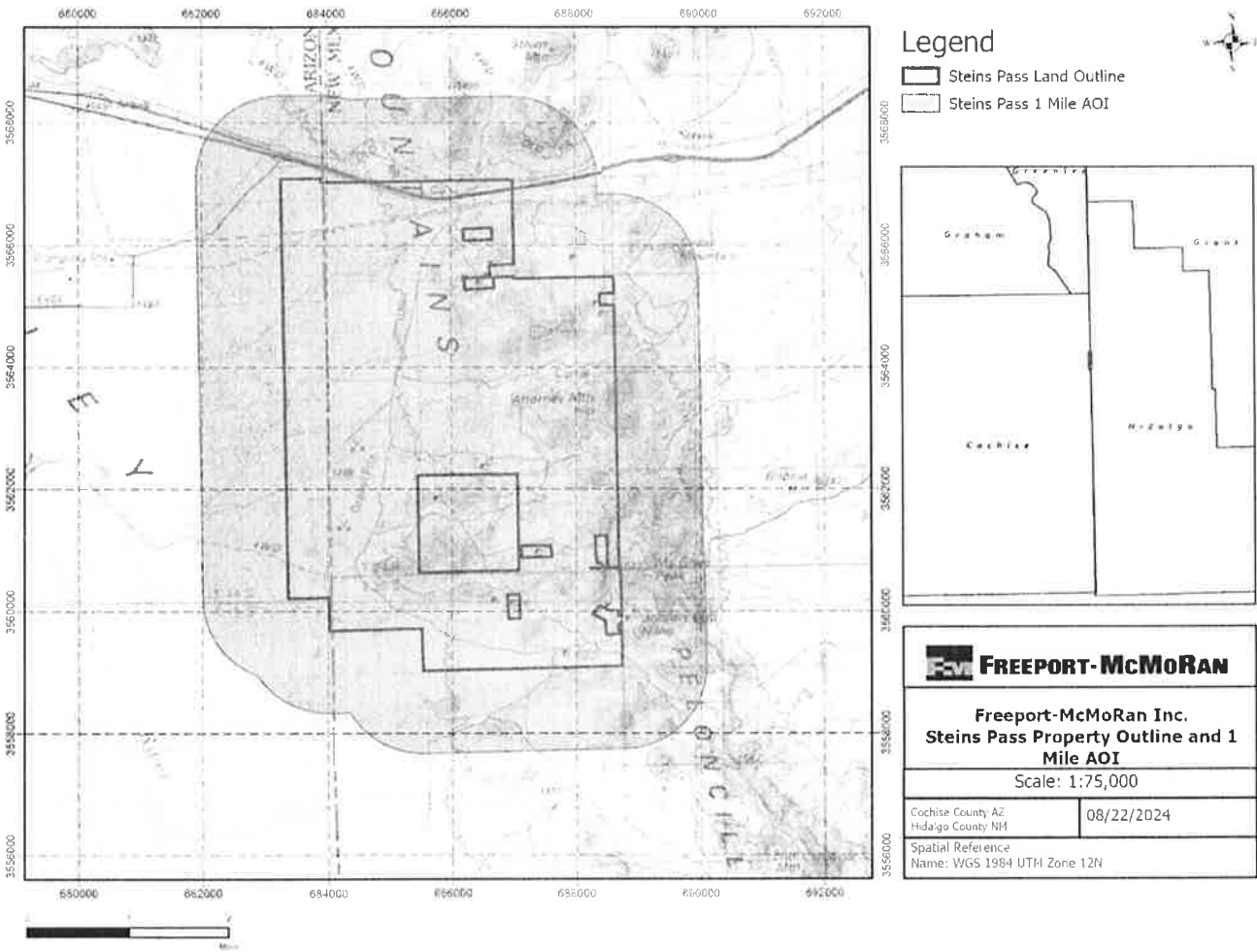


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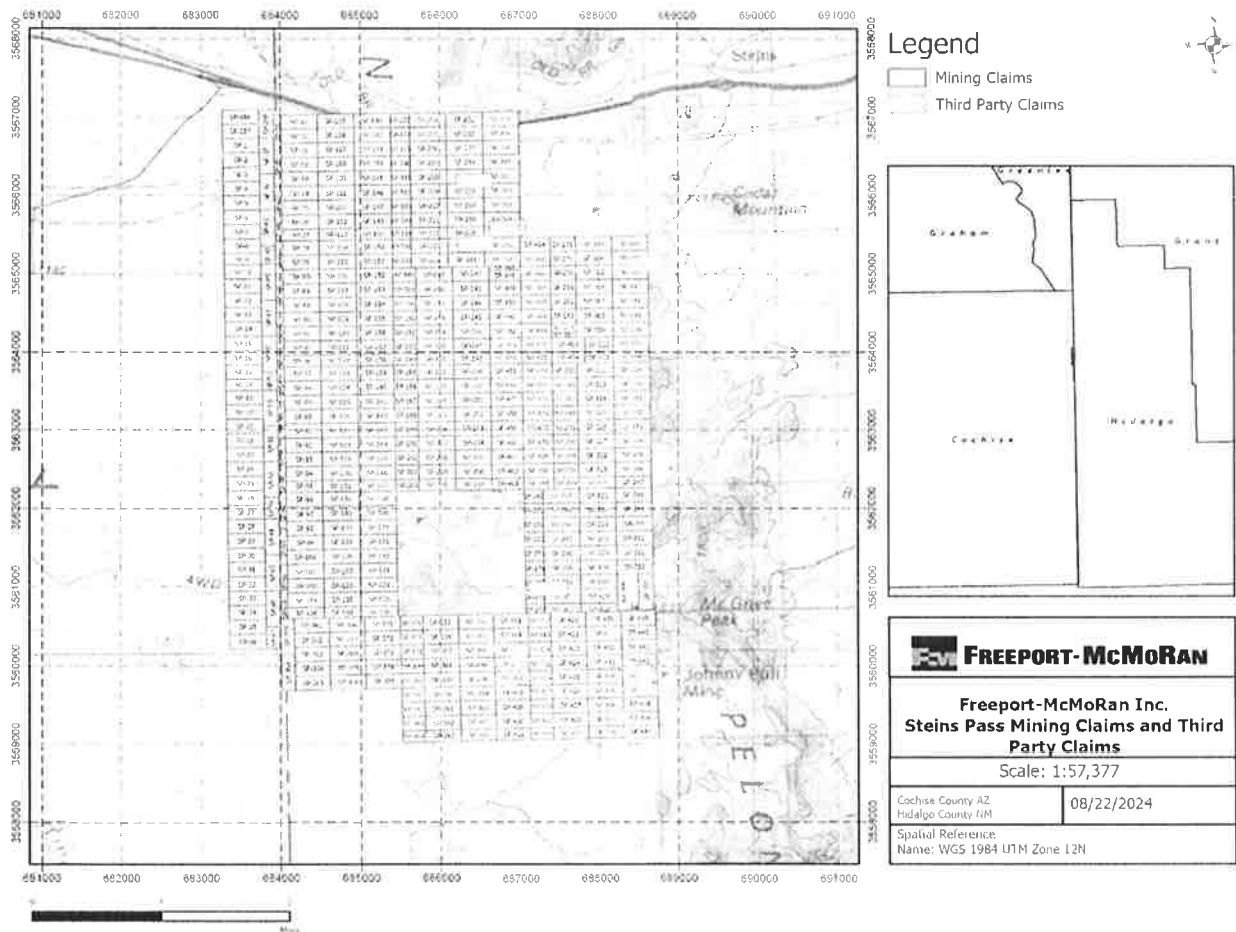


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Steins Pass: map representation of the property comprising BLM unpatented mining lode claims in Arizona and New Mexico. The subject property is in portions of Sections 11, 14, 23, 26, and 35, T14S R32E, Gila and Salt Meridian, Cochise County, Arizona, and Sections 17-21, 28-31, and 33, T24S R21W, New Mexico PM, Hidalgo County, New Mexico, and Sections 4-6, T25S R21W, New Mexico PM, Hidalgo County, New Mexico, plus a 1-mile Area of Interest (AOI) extending from the exterior property boundary.



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Schedule 1 (continued)

Description of the Property, Leases and Mineral Claims (Arizona)

Cloudburst BLM Claims

<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording#</u>	<u>Original Page#</u>	<u>Amended Recording#</u>	<u>Amended Page#</u>	<u>State</u>	<u>County</u>	<u>Location</u>
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AMC 405872	CB-0451	2011-010751				AZ	PINAL	SEC21-T08S-R16E
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Execution Copy

<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording#</u>	<u>Original Page#</u>	<u>Amended Recording#</u>	<u>Amended Page#</u>	<u>State</u>	<u>County</u>	<u>Location</u>
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<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording#</u>	<u>Original Page#</u>	<u>Amended Recording#</u>	<u>Amended Page#</u>	<u>State</u>	<u>County</u>	<u>Location</u>
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<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording#</u>	<u>Original Page#</u>	<u>Amended Recording#</u>	<u>Amended Page#</u>	<u>State</u>	<u>County</u>	<u>Location</u>
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<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording#</u>	<u>Original Page#</u>	<u>Amended Recording#</u>	<u>Amended Page#</u>	<u>State</u>	<u>County</u>	<u>Location</u>
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Dos Burros BLM Claims

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<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording#</u>	<u>Original Page#</u>	<u>Amended Recording#</u>	<u>Amended Page#</u>	<u>State</u>	<u>County</u>	<u>Location</u>
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AMC 440949	DB-52	2016-084584				AZ	PINAL	SEC15-T05S-R13E
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AMC 440955	DB-58	2016-084590				AZ	PINAL	SEC15-T05S-R13E
AMC 440956	DB-59	2016-084591				AZ	PINAL	SEC15-T05S-R13E
AMC 440957	DB-60	2016-084592				AZ	PINAL	SEC15-T05S-R13E
AMC 440958	DB-61	2016-084593				AZ	PINAL	SEC15-T05S-R13E
AMC 440959	DB-62	2016-084594				AZ	PINAL	SEC15-T05S-R13E
AMC 440960	DB-63	2016-084595				AZ	PINAL	SEC15-T05S-R13E
AMC 440961	DB-64	2016-084596				AZ	PINAL	SEC15-T05S-R13E
AMC 440962	DB-65	2016-084597				AZ	PINAL	SEC15-T05S-R13E
AMC 440963	DB-66	2016-084598				AZ	PINAL	SEC15-T05S-R13E
AMC 440964	DB-67	2016-084599				AZ	PINAL	SEC15-T05S-R13E
AMC 440965	DB-68	2016-084600				AZ	PINAL	SEC15-T05S-R13E
AMC 440966	DB-69	2016-084601				AZ	PINAL	SEC15-T05S-R13E
AMC 440967	DB-70	2016-084602				AZ	PINAL	SEC15-T05S-R13E
AMC 440968	DB-71	2016-084603				AZ	PINAL	SEC15-T05S-R13E
AMC 440969	DB-72	2016-084604				AZ	PINAL	SEC15-T05S-R13E
AMC 440970	DB-73	2016-084605				AZ	PINAL	SEC15-T05S-R13E
AMC 440971	DB-74	2016-084606				AZ	PINAL	SEC15-T05S-R13E
AMC 440972	DB-75	2016-084607				AZ	PINAL	SEC15-T05S-R13E
AMC 440973	DB-76	2016-084608				AZ	PINAL	SEC15-T05S-R13E
AMC 440974	DB-77	2016-084609				AZ	PINAL	SEC15-T05S-R13E
AMC 440975	DB-78	2016-084610				AZ	PINAL	SEC15-T05S-R13E
AMC 440976	DB-79	2016-084611				AZ	PINAL	SEC15-T05S-R13E
AMC 440977	DB-80	2016-084612				AZ	PINAL	SEC15-T05S-R13E
AMC 440978	DB-81	2016-084613				AZ	PINAL	SEC15-T05S-R13E

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AMC 440979	DB-82	2016-084614				AZ	PINAL	SEC15-T05S-R13E
AMC 440980	DB-83	2016-084615				AZ	PINAL	SEC15-T05S-R13E
AMC 440981	DB-84	2016-084616				AZ	PINAL	SEC15-T05S-R13E
AMC 440982	DB-85	2016-084617				AZ	PINAL	SEC15-T05S-R13E
AMC 440983	DB-86	2016-084618				AZ	PINAL	SEC15-T05S-R13E
AMC 440984	DB-87	2016-084619				AZ	PINAL	SEC15-T05S-R13E
AZ105835784	Dos Burros 1	2023-026957				AZ	PINAL	SEC15-T05S-R13E
AZ105835785	Dos Burros 2	2023-026958				AZ	PINAL	SEC15-T05S-R13E
AZ105835786	Dos Burros 3	2023-026959				AZ	PINAL	SEC15-T05S-R13E
AZ105835787	Dos Burros 4	2023-026960				AZ	PINAL	SEC15-T05S-R13E
AZ105835788	Dos Burros 5	2023-026961				AZ	PINAL	SEC10-T05S-R13E
AZ105835789	Dos Burros 6	2023-026962				AZ	PINAL	SEC10-T05S-R13E
AZ105835790	Dos Burros 7	2023-026963				AZ	PINAL	SEC10-T05S-R13E
AZ105835791	Dos Burros 8	2023-026964				AZ	PINAL	SEC10-T05S-R13E
AZ105835792	Dos Burros 9	2023-026965				AZ	PINAL	SEC10-T05S-R13E
AZ105835793	Dos Burros 10	2023-026966				AZ	PINAL	SEC10-T05S-R13E
AZ105835794	Dos Burros 11	2023-026967				AZ	PINAL	SEC10-T05S-R13E
AZ105835795	Dos Burros 12	2023-026968				AZ	PINAL	SEC10-T05S-R13E
AZ105835796	Dos Burros 13	2023-026969				AZ	PINAL	SEC10-T05S-R13E
AZ105835797	Dos Burros 14	2023-026970				AZ	PINAL	SEC10-T05S-R13E
AZ105835798	Dos Burros 15	2023-026971				AZ	PINAL	SEC10-T05S-R13E
AZ105835799	Dos Burros 16	2023-026972				AZ	PINAL	SEC10-T05S-R13E
AZ105835800	Dos Burros 17	2023-026973				AZ	PINAL	SEC10-T05S-R13E
AZ105835801	Dos Burros 18	2023-026974				AZ	PINAL	SEC10-T05S-R13E
AZ105835802	Dos Burros 19	2023-026975				AZ	PINAL	SEC10-T05S-R13E
AZ105835803	Dos Burros 20	2023-026976				AZ	PINAL	SEC10-T05S-R13E
AZ105835804	Dos Burros 21	2023-026977				AZ	PINAL	SEC10-T05S-R13E
AZ105835805	Dos Burros 22	2023-026978				AZ	PINAL	SEC10-T05S-R13E
AZ105835806	Dos Burros 23	2023-026979				AZ	PINAL	SEC11-T05S-R13E
AZ105835807	Dos Burros 24	2023-026980				AZ	PINAL	SEC11-T05S-R13E
AZ105835808	Dos Burros 25	2023-026981				AZ	PINAL	SEC11-T05S-R13E
AZ105835809	Dos Burros 26	2023-026982				AZ	PINAL	SEC11-T05S-R13E
AZ105835810	Dos Burros 27	2023-026983				AZ	PINAL	SEC11-T05S-R13E
AZ105835811	Dos Burros 28	2023-026984				AZ	PINAL	SEC11-T05S-R13E
AZ105835812	Dos Burros 29	2023-026985				AZ	PINAL	SEC11-T05S-R13E
AZ105835813	Dos Burros 30	2023-026986				AZ	PINAL	SEC11-T05S-R13E
AZ105835814	Dos Burros 31	2023-026987				AZ	PINAL	SEC11-T05S-R13E

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AZ105835815	Dos Burros 32	2023-026988				AZ	PINAL	SEC11-T05S-R13E
AZ105835816	Dos Burros 33	2023-026989				AZ	PINAL	SEC11-T05S-R13E
AZ105835817	Dos Burros 34	2023-026990				AZ	PINAL	SEC11-T05S-R13E
AZ105835818	Dos Burros 35	2023-026991				AZ	PINAL	SEC11-T05S-R13E
AZ105835819	Dos Burros 36	2023-026992				AZ	PINAL	SEC11-T05S-R13E
AZ105835820	Dos Burros 37	2023-026993				AZ	PINAL	SEC11-T05S-R13E
AZ105835821	Dos Burros 38	2023-026994				AZ	PINAL	SEC11-T05S-R13E
AZ105835822	Dos Burros 39	2023-026995				AZ	PINAL	SEC11-T05S-R13E
AZ105835823	Dos Burros 40	2023-026996				AZ	PINAL	SEC11-T05S-R13E
AZ105835824	Dos Burros 41	2023-026997				AZ	PINAL	SEC11-T05S-R13E
AZ105835825	Dos Burros 42	2023-026998				AZ	PINAL	SEC11-T05S-R13E
AZ105835826	Dos Burros 43	2023-026999				AZ	PINAL	SEC11-T05S-R13E
AZ105835827	Dos Burros 44	2023-027000				AZ	PINAL	SEC11-T05S-R13E
AZ105835828	Dos Burros 45	2023-027001				AZ	PINAL	SEC11-T05S-R13E
AZ105835829	Dos Burros 46	2023-027002				AZ	PINAL	SEC11-T05S-R13E
AZ105835830	Dos Burros 47	2023-027003				AZ	PINAL	SEC11-T05S-R13E
AZ105835831	Dos Burros 48	2023-027004				AZ	PINAL	SEC11-T05S-R13E
AZ105835832	Dos Burros 49	2023-027005				AZ	PINAL	SEC11-T05S-R13E
AZ105835833	Dos Burros 50	2023-027006				AZ	PINAL	SEC11-T05S-R13E
AZ105835834	Dos Burros 51	2023-027007				AZ	PINAL	SEC11-T05S-R13E
AZ105835835	Dos Burros 52	2023-027008				AZ	PINAL	SEC11-T05S-R13E
AZ105835836	Dos Burros 53	2023-027009				AZ	PINAL	SEC11-T05S-R13E
AZ105835837	Dos Burros 54	2023-027010				AZ	PINAL	SEC11-T05S-R13E
AZ105835838	Dos Burros 55	2023-027011				AZ	PINAL	SEC11-T05S-R13E
AZ105835839	Dos Burros 56	2023-027012				AZ	PINAL	SEC11-T05S-R13E
AZ105835840	Dos Burros 57	2023-027013				AZ	PINAL	SEC11-T05S-R13E
AZ105835841	Dos Burros 58	2023-027014				AZ	PINAL	SEC11-T05S-R13E

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AZ105239093	ROW-1	2021-060717				AZ	PINAL	SEC15-T05S-R14E
AZ105239094	ROW-2	2021-060718				AZ	PINAL	SEC15-T05S-R14E
AZ105239095	ROW-3	2021-060719				AZ	PINAL	SEC15-T05S-R14E
AZ105239096	ROW-4	2021-060720				AZ	PINAL	SEC15-T05S-R14E
AZ105239097	ROW-5	2021-060721				AZ	PINAL	SEC15-T05S-R14E
AZ105239098	ROW-6	2021-060722				AZ	PINAL	SEC15-T05S-R14E
AZ105239099	ROW-7	2021-060723				AZ	PINAL	SEC15-T05S-R14E

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AZ105239100	ROW-8	2021-060724				AZ	PINAL	SEC15-T05S-R14E
AZ105239101	ROW-9	2021-060725				AZ	PINAL	SEC15-T05S-R14E
AZ105239102	ROW-10	2021-060726				AZ	PINAL	SEC15-T05S-R14E
AZ105239103	ROW-11	2021-060727				AZ	PINAL	SEC15-T05S-R14E
AZ105239104	ROW-12	2021-060728				AZ	PINAL	SEC15-T05S-R14E
AZ105239105	ROW-13	2021-060729				AZ	PINAL	SEC15-T05S-R14E
AZ105239106	ROW-14	2021-060730				AZ	PINAL	SEC15-T05S-R14E
AZ105239107	ROW-15	2021-060731				AZ	PINAL	SEC15-T05S-R14E
AZ105239108	ROW-16	2021-060732				AZ	PINAL	SEC15-T05S-R14E
AZ105239109	ROW-17	2021-060733				AZ	PINAL	SEC15-T05S-R14E
AZ105239110	ROW-18	2021-060734				AZ	PINAL	SEC15-T05S-R14E
AZ105239111	ROW-19	2021-060735				AZ	PINAL	SEC15-T05S-R14E
AZ105239112	ROW-20	2021-060736				AZ	PINAL	SEC15-T05S-R14E
AZ105239113	ROW-21	2021-060737				AZ	PINAL	SEC15-T05S-R14E
AZ105239114	ROW-22	2021-060738				AZ	PINAL	SEC15-T05S-R14E
AZ105239115	ROW-23	2021-060739				AZ	PINAL	SEC15-T05S-R14E
AZ105239116	ROW-24	2021-060740				AZ	PINAL	SEC15-T05S-R14E
AZ105239117	ROW-25	2021-060741				AZ	PINAL	SEC15-T05S-R14E
AZ105239118	ROW-26	2021-060742				AZ	PINAL	SEC15-T05S-R14E
AZ105239119	ROW-27	2021-060743				AZ	PINAL	SEC15-T05S-R14E
AZ105239120	ROW-28	2021-060744				AZ	PINAL	SEC15-T05S-R14E
AZ105239121	ROW-29	2021-060745				AZ	PINAL	SEC15-T05S-R14E
AZ105239122	ROW-30	2021-060746				AZ	PINAL	SEC15-T05S-R14E
AZ105239123	ROW-31	2021-060747				AZ	PINAL	SEC15-T05S-R14E
AZ105239124	ROW-32	2021-060748				AZ	PINAL	SEC15-T05S-R14E
AZ105239125	ROW-33	2021-060749				AZ	PINAL	SEC15-T05S-R14E
AZ105239126	ROW-34	2021-060750				AZ	PINAL	SEC15-T05S-R14E
AZ105239127	ROW-35	2021-060751				AZ	PINAL	SEC15-T05S-R14E
AZ105239128	ROW-36	2021-060752				AZ	PINAL	SEC15-T05S-R14E
AZ105239129	ROW-37	2021-060753				AZ	PINAL	SEC20-T05S-R14E
AZ105239130	ROW-38	2021-060754				AZ	PINAL	SEC20-T05S-R14E
AZ105239131	ROW-39	2021-060755				AZ	PINAL	SEC20-T05S-R14E
AZ105239132	ROW-40	2021-060756				AZ	PINAL	SEC20-T05S-R14E
AZ105239133	ROW-41	2021-060757				AZ	PINAL	SEC20-T05S-R14E
AZ105239134	ROW-42	2021-060758				AZ	PINAL	SEC20-T05S-R14E
AZ105239135	ROW-43	2021-060759				AZ	PINAL	SEC20-T05S-R14E
AZ105239136	ROW-44	2021-060760				AZ	PINAL	SEC20-T05S-R14E

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AZ105239137	ROW-45	2021-060761				AZ	PINAL	SEC20-T05S-R14E
AZ105239138	ROW-46	2021-060762				AZ	PINAL	SEC20-T05S-R14E
AZ105239139	ROW-47	2021-060763				AZ	PINAL	SEC20-T05S-R14E
AZ105239140	ROW-48	2021-060764				AZ	PINAL	SEC20-T05S-R14E
AZ105239141	ROW-49	2021-060765				AZ	PINAL	SEC20-T05S-R14E
AZ105239142	ROW-50	2021-060766				AZ	PINAL	SEC20-T05S-R14E
AZ105239143	ROW-51	2021-060767				AZ	PINAL	SEC20-T05S-R14E
AZ105239144	ROW-52	2021-060768				AZ	PINAL	SEC20-T05S-R14E
AZ105239145	ROW-53	2021-060769				AZ	PINAL	SEC20-T05S-R14E
AZ105239146	ROW-54	2021-060770				AZ	PINAL	SEC20-T05S-R14E
AZ105239147	ROW-55	2021-060771				AZ	PINAL	SEC21-T05S-R14E
AZ105239148	ROW-56	2021-060772				AZ	PINAL	SEC21-T05S-R14E
AZ105239149	ROW-57	2021-060773				AZ	PINAL	SEC21-T05S-R14E
AZ105239150	ROW-58	2021-060774				AZ	PINAL	SEC21-T05S-R14E
AZ105239151	ROW-59	2021-060775				AZ	PINAL	SEC21-T05S-R14E
AZ105239152	ROW-60	2021-060776				AZ	PINAL	SEC21-T05S-R14E
AZ105239153	ROW-61	2021-060777				AZ	PINAL	SEC21-T05S-R14E
AZ105239154	ROW-62	2021-060778				AZ	PINAL	SEC21-T05S-R14E
AZ105239155	ROW-63	2021-060779				AZ	PINAL	SEC21-T05S-R14E
AZ105239156	ROW-64	2021-060780				AZ	PINAL	SEC21-T05S-R14E
AZ105239157	ROW-65	2021-060781				AZ	PINAL	SEC21-T05S-R14E
AZ105239158	ROW-66	2021-060782				AZ	PINAL	SEC21-T05S-R14E
AZ105239159	ROW-67	2021-060783				AZ	PINAL	SEC21-T05S-R14E
AZ105239160	ROW-68	2021-060784				AZ	PINAL	SEC21-T05S-R14E
AZ105239161	ROW-69	2021-060785				AZ	PINAL	SEC21-T05S-R14E
AZ105239162	ROW-70	2021-060786				AZ	PINAL	SEC21-T05S-R14E
AZ105239163	ROW-71	2021-060787				AZ	PINAL	SEC21-T05S-R14E
AZ105239164	ROW-72	2021-060788				AZ	PINAL	SEC21-T05S-R14E
AZ105239165	ROW-73	2021-060789				AZ	PINAL	SEC21-T05S-R14E
AZ105239166	ROW-74	2021-060790				AZ	PINAL	SEC21-T05S-R14E
AZ105239167	ROW-75	2021-060791				AZ	PINAL	SEC21-T05S-R14E
AZ105239168	ROW-76	2021-060792				AZ	PINAL	SEC21-T05S-R14E
AZ105239169	ROW-77	2021-060793				AZ	PINAL	SEC21-T05S-R14E
AZ105239170	ROW-78	2021-060794				AZ	PINAL	SEC21-T05S-R14E
AZ105239171	ROW-79	2021-060795				AZ	PINAL	SEC21-T05S-R14E
AZ105239172	ROW-80	2021-060796				AZ	PINAL	SEC21-T05S-R14E
AZ105239173	ROW-81	2021-060797				AZ	PINAL	SEC21-T05S-R14E

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AZ105239174	ROW-82	2021-060798				AZ	PINAL	SEC21-T05S-R14E
AZ105239175	ROW-83	2021-060799				AZ	PINAL	SEC21-T05S-R14E
AZ105239176	ROW-84	2021-060800				AZ	PINAL	SEC21-T05S-R14E
AZ105239177	ROW-85	2021-060801				AZ	PINAL	SEC21-T05S-R14E
AZ105239178	ROW-86	2021-060802				AZ	PINAL	SEC21-T05S-R14E
AZ105239179	ROW-87	2021-060803				AZ	PINAL	SEC21-T05S-R14E
AZ105239180	ROW-88	2021-060804				AZ	PINAL	SEC21-T05S-R14E
AZ105239181	ROW-89	2021-060805				AZ	PINAL	SEC21-T05S-R14E
AZ105239182	ROW-90	2021-060806				AZ	PINAL	SEC21-T05S-R14E
AZ105239183	ROW-91	2021-060807				AZ	PINAL	SEC22-T05S-R14E
AZ105239184	ROW-92	2021-060808				AZ	PINAL	SEC22-T05S-R14E
AZ105239185	ROW-93	2021-060809				AZ	PINAL	SEC22-T05S-R14E
AZ105239186	ROW-94	2021-060810				AZ	PINAL	SEC22-T05S-R14E
AZ105239187	ROW-95	2021-060811				AZ	PINAL	SEC22-T05S-R14E
AZ105239188	ROW-96	2021-060812				AZ	PINAL	SEC22-T05S-R14E
AZ105239189	ROW-97	2021-060813				AZ	PINAL	SEC22-T05S-R14E
AZ105239190	ROW-98	2021-060814				AZ	PINAL	SEC22-T05S-R14E
AZ105239191	ROW-99	2021-060815				AZ	PINAL	SEC22-T05S-R14E
AZ105239192	ROW-100	2021-060816				AZ	PINAL	SEC22-T05S-R14E
AZ105239193	ROW-101	2021-060817				AZ	PINAL	SEC22-T05S-R14E
AZ105239194	ROW-102	2021-060818				AZ	PINAL	SEC22-T05S-R14E
AZ105239195	ROW-103	2021-060819				AZ	PINAL	SEC22-T05S-R14E
AZ105239196	ROW-104	2021-060820				AZ	PINAL	SEC22-T05S-R14E
AZ105239197	ROW-105	2021-060821				AZ	PINAL	SEC22-T05S-R14E
AZ105239198	ROW-106	2021-060822				AZ	PINAL	SEC22-T05S-R14E
AZ105239199	ROW-107	2021-060823				AZ	PINAL	SEC22-T05S-R14E
AZ105239200	ROW-108	2021-060824				AZ	PINAL	SEC22-T05S-R14E
AZ105239201	ROW-109	2021-060825				AZ	PINAL	SEC28-T05S-R14E
AZ105239202	ROW-110	2021-060826				AZ	PINAL	SEC28-T05S-R14E
AZ105239203	ROW-111	2021-060827				AZ	PINAL	SEC28-T05S-R14E
AZ105239204	ROW-112	2021-060828				AZ	PINAL	SEC28-T05S-R14E
AZ105239205	ROW-113	2021-060829				AZ	PINAL	SEC28-T05S-R14E
AZ105239206	ROW-114	2021-060830				AZ	PINAL	SEC28-T05S-R14E
AZ105239207	ROW-115	2021-060831				AZ	PINAL	SEC28-T05S-R14E
AZ105239208	ROW-116	2021-060832				AZ	PINAL	SEC28-T05S-R14E
AZ105239209	ROW-117	2021-060833				AZ	PINAL	SEC28-T05S-R14E
AZ105239210	ROW-118	2021-060834				AZ	PINAL	SEC28-T05S-R14E

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AZ105239211	ROW-119	2021-060835				AZ	PINAL	SEC28-T05S-R14E
AZ105239212	ROW-120	2021-060836				AZ	PINAL	SEC28-T05S-R14E
AZ105239213	ROW-121	2021-060837				AZ	PINAL	SEC28-T05S-R14E
AZ105239214	ROW-122	2021-060838				AZ	PINAL	SEC28-T05S-R14E
AZ105239215	ROW-123	2021-060839				AZ	PINAL	SEC28-T05S-R14E
AZ105239216	ROW-124	2021-060840				AZ	PINAL	SEC28-T05S-R14E
AZ105239217	ROW-125	2021-060841				AZ	PINAL	SEC28-T05S-R14E
AZ105239218	ROW-126	2021-060842				AZ	PINAL	SEC28-T05S-R14E
AZ105239219	ROW-127	2021-060843				AZ	PINAL	SEC28-T05S-R14E
AZ105239220	ROW-128	2021-060844				AZ	PINAL	SEC28-T05S-R14E
AZ105239221	ROW-129	2021-060845				AZ	PINAL	SEC28-T05S-R14E
AZ105239222	ROW-130	2021-060846				AZ	PINAL	SEC28-T05S-R14E
AZ105239223	ROW-131	2021-060847				AZ	PINAL	SEC28-T05S-R14E
AZ105239224	ROW-132	2021-060848				AZ	PINAL	SEC28-T05S-R14E
AZ105239225	ROW-133	2021-060849				AZ	PINAL	SEC28-T05S-R14E
AZ105239226	ROW-134	2021-060850				AZ	PINAL	SEC28-T05S-R14E
AZ105239227	ROW-135	2021-060851				AZ	PINAL	SEC28-T05S-R14E
AZ105239228	ROW-136	2021-060852				AZ	PINAL	SEC28-T05S-R14E
AZ105239229	ROW-137	2021-060853				AZ	PINAL	SEC28-T05S-R14E
AZ105239230	ROW-138	2021-060854				AZ	PINAL	SEC28-T05S-R14E
AZ105239231	ROW-139	2021-060855				AZ	PINAL	SEC28-T05S-R14E
AZ105239232	ROW-140	2021-060856				AZ	PINAL	SEC28-T05S-R14E
AZ105239233	ROW-141	2021-060857				AZ	PINAL	SEC28-T05S-R14E
AZ105830597	RW 1	2023-027062				AZ	PINAL	SEC28-T05S-R14E
AZ105830598	RW 2	2023-027063				AZ	PINAL	SEC28-T05S-R14E

Steins Pass BLM Claims

AZ105777012	SP1	2022-19154				AZ	COCHISE	SEC14-T14S-R32E
AZ105777013	SP2	2022-19155				AZ	COCHISE	SEC14-T14S-R32E
AZ105777014	SP3	2022-19156				AZ	COCHISE	SEC14-T14S-R32E
AZ105777015	SP4	2022-19157				AZ	COCHISE	SEC14-T14S-R32E
AZ105777016	SP5	2022-19158				AZ	COCHISE	SEC14-T14S-R32E
AZ105777017	SP6	2022-19159				AZ	COCHISE	SEC14-T14S-R32E
AZ105777018	SP7	2022-19160				AZ	COCHISE	SEC14-T14S-R32E

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<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording#</u>	<u>Original Page#</u>	<u>Amended Recording#</u>	<u>Amended Page#</u>	<u>State</u>	<u>County</u>	<u>Location</u>
AZ105777019	SP8	2022-19161				AZ	COCHISE	SEC14-T14S-R32E
AZ105777020	SP9	2022-19162				AZ	COCHISE	SEC14-T14S-R32E
AZ105777021	SP10	2022-19163				AZ	COCHISE	SEC23-T14S-R32E
AZ105777022	SP11	2022-19164				AZ	COCHISE	SEC23-T14S-R32E
AZ105777023	SP12	2022-19165				AZ	COCHISE	SEC23-T14S-R32E
AZ105777024	SP13	2022-19166				AZ	COCHISE	SEC23-T14S-R32E
AZ105777025	SP14	2022-19167				AZ	COCHISE	SEC23-T14S-R32E
AZ105777026	SP15	2022-19168				AZ	COCHISE	SEC23-T14S-R32E
AZ105777027	SP16	2022-19169				AZ	COCHISE	SEC23-T14S-R32E
AZ105777028	SP17	2022-19170				AZ	COCHISE	SEC23-T14S-R32E
AZ105777029	SP18	2022-19171				AZ	COCHISE	SEC23-T14S-R32E
AZ105777030	SP19	2022-19172				AZ	COCHISE	SEC26-T14S-R32E
AZ105777031	SP20	2022-19173				AZ	COCHISE	SEC26-T14S-R32E
AZ105777032	SP21	2022-19174				AZ	COCHISE	SEC26-T14S-R32E
AZ105777033	SP22	2022-19175				AZ	COCHISE	SEC26-T14S-R32E
AZ105777034	SP23	2022-19176				AZ	COCHISE	SEC26-T14S-R32E
AZ105777035	SP24	2022-19177				AZ	COCHISE	SEC26-T14S-R32E
AZ105777036	SP25	2022-19178				AZ	COCHISE	SEC26-T14S-R32E
AZ105777037	SP26	2022-19179				AZ	COCHISE	SEC26-T14S-R32E
AZ105777038	SP27	2022-19180				AZ	COCHISE	SEC26-T14S-R32E
AZ105777039	SP28	2022-19181				AZ	COCHISE	SEC35-T14S-R32E
AZ105777040	SP29	2022-19182				AZ	COCHISE	SEC35-T14S-R32E
AZ105777041	SP30	2022-19183				AZ	COCHISE	SEC35-T14S-R32E
AZ105777042	SP31	2022-19184				AZ	COCHISE	SEC35-T14S-R32E
AZ105777043	SP32	2022-19185				AZ	COCHISE	SEC35-T14S-R32E
AZ105777044	SP33	2022-19186				AZ	COCHISE	SEC35-T14S-R32E
AZ105777045	SP34	2022-19187				AZ	COCHISE	SEC35-T14S-R32E
AZ105777046	SP35	2022-19188				AZ	COCHISE	SEC35-T14S-R32E
AZ105777047	SP36	2022-19189				AZ	COCHISE	SEC35-T14S-R32E
AZ105777048	SP37	2022-19190				AZ	COCHISE	SEC14-T14S-R32E
AZ105777049	SP39	2022-19191				AZ	COCHISE	SEC14-T14S-R32E
AZ105777050	SP41	2022-19192				AZ	COCHISE	SEC14-T14S-R32E
AZ105777051	SP43	2022-19193				AZ	COCHISE	SEC14-T14S-R32E
AZ105777052	SP45	2022-19194				AZ	COCHISE	SEC14-T14S-R32E
AZ105777053	SP47	2022-19195				AZ	COCHISE	SEC14-T14S-R32E
AZ105777054	SP49	2022-19196				AZ	COCHISE	SEC14-T14S-R32E
AZ105777055	SP51	2022-19197				AZ	COCHISE	SEC14-T14S-R32E

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AZ105777056	SP53	2022-19198				AZ	COCHISE	SEC14-T14S-R32E
AZ105777057	SP55	2022-19199				AZ	COCHISE	SEC14-T14S-R32E
AZ105777058	SP57	2022-19200				AZ	COCHISE	SEC14-T14S-R32E
AZ105777059	SP59	2022-19201				AZ	COCHISE	SEC14-T14S-R32E
AZ105777060	SP61	2022-19202				AZ	COCHISE	SEC14-T14S-R32E
AZ105777061	SP63	2022-19203				AZ	COCHISE	SEC23-T14S-R32E
AZ105777062	SP65	2022-19204				AZ	COCHISE	SEC23-T14S-R32E
AZ105777063	SP67	2022-19205				AZ	COCHISE	SEC23-T14S-R32E
AZ105777064	SP 356	2022-19206				AZ	COCHISE	SEC23-T14S-R32E
AZ105777065	SP 357	2022-19207				AZ	COCHISE	SEC23-T14S-R32E
AZ105777066	SP 358	2022-19208				AZ	COCHISE	SEC23-T14S-R32E

Clodburst State Mineral Lease

<u>KE Lease #</u>	<u>Amended Lease #</u>	<u>Effective Date</u>	<u>Expiry Date</u>	<u>Acreage</u>	<u>State</u>
008-123017-00-100		March 31, 2022	March 30, 2027	640	AZ

Clodburst Special Land Use Permit (SLUP)

<u>KE Lease #</u>	<u>Amended Lease #</u>	<u>Effective Date</u>	<u>Expiry Date</u>	<u>Acreage</u>	<u>State</u>
023-119113-08-102		November 7, 2022	November 6, 2026	3040	AZ

Dos Burros State Mineral Lease

<u>KE Lease #</u>	<u>Amended Lease #</u>	<u>Effective Date</u>	<u>Expiry Date</u>	<u>Acreage</u>	<u>State</u>
008-123911-00-100		March 9, 2023	March 8, 2028	640	AZ

Dos Burros Special Land Use Permit (SLUP)

Execution Copy

<u>KE Lease #</u>	<u>Amended Lease #</u>	<u>Effective Date</u>	<u>Expiry Date</u>	<u>Acreage</u>	<u>State</u>
023-119909-08-102		February 20, 2020	February 19, 2022 ¹	1696.24	AZ

ROW State Mineral Leases

<u>KE Lease #</u>	<u>Amended Lease #</u>	<u>Effective Date</u>	<u>Expiry Date</u>	<u>Acreage</u>	<u>State</u>
008-122042-00-100		June 1, 2021	May 31, 2026	640	AZ
008-122086-00-100		June 1, 2021	May 31, 2026	40	AZ

¹ Application for renewal submitted on 7/19/2023. Process is still in progress pending internal review from Arizona State Land Department.

Schedule 1 (continued)

Description of the Property, Leases and Mineral Claims (New Mexico)

Steins Pass BLM Claims (New Mexico)

<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording #</u>	<u>Original Page #</u>	<u>Amended Recording #</u>	<u>Amended Page #</u>	<u>State</u>	<u>County</u>	<u>Location</u>
IM105777074	SP 38	220719				NM	HIDALGO	SEC18-T24S-R21W
IM105777075	SP 40	220720				NM	HIDALGO	SEC18-T24S-R21W
IM105777076	SP 42	220721				NM	HIDALGO	SEC18-T24S-R21W
IM105777077	SP 44	220722				NM	HIDALGO	SEC18-T24S-R21W
IM105777078	SP 46	220723				NM	HIDALGO	SEC19-T24S-R21W
IM105777079	SP 48	220724				NM	HIDALGO	SEC19-T24S-R21W
IM105777080	SP 50	220725				NM	HIDALGO	SEC19-T24S-R21W
IM105777081	SP 52	220726				NM	HIDALGO	SEC19-T24S-R21W
IM105777082	SP 54	220727				NM	HIDALGO	SEC30-T24S-R21W
IM105777083	SP 56	220728				NM	HIDALGO	SEC30-T24S-R21W
IM105777084	SP 58	220729				NM	HIDALGO	SEC30-T24S-R21W
IM105777085	SP 60	220730				NM	HIDALGO	SEC30-T24S-R21W
IM105777086	SP 62	220731				NM	HIDALGO	SEC31-T24S-R21W
IM105777087	SP 64	220732				NM	HIDALGO	SEC31-T24S-R21W
IM105777088	SP 66	220733				NM	HIDALGO	SEC31-T24S-R21W
IM105777089	SP 68	220734				NM	HIDALGO	SEC31-T24S-R21W
IM105777090	SP 69	220735				NM	HIDALGO	SEC18-T24S-R21W
IM105777091	SP 70	220736				NM	HIDALGO	SEC18-T24S-R21W
IM105777092	SP 71	220737				NM	HIDALGO	SEC18-T24S-R21W
IM105777093	SP 72	220738				NM	HIDALGO	SEC18-T24S-R21W
IM105777094	SP 73	220739				NM	HIDALGO	SEC18-T24S-R21W
IM105777095	SP 74	220740				NM	HIDALGO	SEC18-T24S-R21W
IM105777096	SP 75	220741				NM	HIDALGO	SEC18-T24S-R21W
IM105777097	SP 76	220742				NM	HIDALGO	SEC18-T24S-R21W
IM105777098	SP 77	220743				NM	HIDALGO	SEC18-T24S-R21W
IM105777099	SP 78	220744				NM	HIDALGO	SEC19-T24S-R21W

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IM105777100	SP 79	220745				NM	HIDALGO	SEC19-T24S-R21W
IM105777101	SP 80	220746				NM	HIDALGO	SEC19-T24S-R21W
IM105777102	SP 81	220747				NM	HIDALGO	SEC19-T24S-R21W
IM105777103	SP 82	220748				NM	HIDALGO	SEC19-T24S-R21W
IM105777104	SP 83	220749				NM	HIDALGO	SEC19-T24S-R21W
IM105777105	SP 84	220750				NM	HIDALGO	SEC19-T24S-R21W
IM105777106	SP 85	220751				NM	HIDALGO	SEC19-T24S-R21W
IM105777107	SP 86	220752				NM	HIDALGO	SEC19-T24S-R21W
IM105777108	SP 87	220753				NM	HIDALGO	SEC30-T24S-R21W
IM105777109	SP 88	220754				NM	HIDALGO	SEC30-T24S-R21W
IM105777110	SP 89	220755				NM	HIDALGO	SEC30-T24S-R21W
IM105777111	SP 90	220756				NM	HIDALGO	SEC30-T24S-R21W
IM105777112	SP 91	220757				NM	HIDALGO	SEC30-T24S-R21W
IM105777113	SP 92	220758				NM	HIDALGO	SEC30-T24S-R21W
IM105777114	SP 93	220759				NM	HIDALGO	SEC30-T24S-R21W
IM105777115	SP 94	220760				NM	HIDALGO	SEC30-T24S-R21W
IM105777116	SP 95	220761				NM	HIDALGO	SEC30-T24S-R21W
IM105777117	SP 96	220762				NM	HIDALGO	SEC31-T24S-R21W
IM105777118	SP 97	220763				NM	HIDALGO	SEC31-T24S-R21W
IM105777119	SP 98	220764				NM	HIDALGO	SEC31-T24S-R21W
IM105777120	SP 99	220765				NM	HIDALGO	SEC31-T24S-R21W
IM105777121	SP 100	220766				NM	HIDALGO	SEC31-T24S-R21W
IM105777122	SP 101	220767				NM	HIDALGO	SEC31-T24S-R21W
IM105777123	SP 102	220768				NM	HIDALGO	SEC31-T24S-R21W
IM105777124	SP 103	220769				NM	HIDALGO	SEC31-T24S-R21W
IM105777125	SP 104	220770				NM	HIDALGO	SEC31-T24S-R21W
IM105777126	SP 105	220771				NM	HIDALGO	SEC18-T24S-R21W
IM105777127	SP 106	220772				NM	HIDALGO	SEC18-T24S-R21W
IM105777128	SP 107	220773				NM	HIDALGO	SEC18-T24S-R21W
IM105777129	SP 108	220774				NM	HIDALGO	SEC18-T24S-R21W
IM105777130	SP 109	220775				NM	HIDALGO	SEC18-T24S-R21W
IM105777131	SP 110	220776				NM	HIDALGO	SEC18-T24S-R21W
IM105777132	SP 111	220777				NM	HIDALGO	SEC18-T24S-R21W
IM105777133	SP 112	220778				NM	HIDALGO	SEC18-T24S-R21W
IM105777134	SP 113	220779				NM	HIDALGO	SEC18-T24S-R21W
IM105777135	SP 114	220780				NM	HIDALGO	SEC19-T24S-R21W

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IM105777136	SP 115	220781				NM	HIDALGO	SEC19-T24S-R21W
IM105777137	SP 116	220782				NM	HIDALGO	SEC19-T24S-R21W
IM105777138	SP 117	220783				NM	HIDALGO	SEC19-T24S-R21W
IM105777139	SP 118	220784				NM	HIDALGO	SEC19-T24S-R21W
IM105777140	SP 119	220785				NM	HIDALGO	SEC19-T24S-R21W
IM105777141	SP 120	220786				NM	HIDALGO	SEC19-T24S-R21W
IM105777142	SP 121	220787				NM	HIDALGO	SEC19-T24S-R21W
IM105777143	SP 122	220788				NM	HIDALGO	SEC19-T24S-R21W
IM105777144	SP 123	220789				NM	HIDALGO	SEC30-T24S-R21W
IM105777145	SP 124	220790				NM	HIDALGO	SEC30-T24S-R21W
IM105777146	SP 125	220791				NM	HIDALGO	SEC30-T24S-R21W
IM105777147	SP 126	220792				NM	HIDALGO	SEC30-T24S-R21W
IM105777148	SP 127	220793				NM	HIDALGO	SEC30-T24S-R21W
IM105777149	SP 128	220794				NM	HIDALGO	SEC30-T24S-R21W
IM105777150	SP 129	220795				NM	HIDALGO	SEC30-T24S-R21W
IM105777151	SP 130	220796				NM	HIDALGO	SEC30-T24S-R21W
IM105777152	SP 131	220797				NM	HIDALGO	SEC30-T24S-R21W
IM105777153	SP 132	220798				NM	HIDALGO	SEC31-T24S-R21W
IM105777154	SP 133	220799				NM	HIDALGO	SEC31-T24S-R21W
IM105777155	SP 134	220800				NM	HIDALGO	SEC31-T24S-R21W
IM105777156	SP 135	220801				NM	HIDALGO	SEC31-T24S-R21W
IM105777157	SP 136	220802				NM	HIDALGO	SEC31-T24S-R21W
IM105777158	SP 137	220803				NM	HIDALGO	SEC31-T24S-R21W
IM105777159	SP 138	220804				NM	HIDALGO	SEC31-T24S-R21W
IM105777160	SP 139	220805				NM	HIDALGO	SEC31-T24S-R21W
IM105777161	SP 140	220806				NM	HIDALGO	SEC31-T24S-R21W
IM105777162	SP 141	220807				NM	HIDALGO	SEC18-T24S-R21W
IM105777163	SP 142	220808				NM	HIDALGO	SEC18-T24S-R21W
IM105777164	SP 143	220809				NM	HIDALGO	SEC18-T24S-R21W
IM105777165	SP 144	220810				NM	HIDALGO	SEC18-T24S-R21W
IM105777166	SP 145	220811				NM	HIDALGO	SEC18-T24S-R21W
IM105777167	SP 146	220812				NM	HIDALGO	SEC18-T24S-R21W
IM105777168	SP 147	220813				NM	HIDALGO	SEC18-T24S-R21W
IM105777169	SP 148	220814				NM	HIDALGO	SEC18-T24S-R21W
IM105777170	SP 149	220815				NM	HIDALGO	SEC18-T24S-R21W
IM105777171	SP 150	220816				NM	HIDALGO	SEC19-T24S-R21W

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IM105777172	SP 151	220817				NM	HIDALGO	SEC19-T24S-R21W
IM105777173	SP 152	220818				NM	HIDALGO	SEC19-T24S-R21W
IM105777174	SP 153	220819				NM	HIDALGO	SEC19-T24S-R21W
IM105777175	SP 154	220820				NM	HIDALGO	SEC19-T24S-R21W
IM105777176	SP 155	220821				NM	HIDALGO	SEC19-T24S-R21W
IM105777177	SP 156	220822				NM	HIDALGO	SEC19-T24S-R21W
IM105777178	SP 157	220823				NM	HIDALGO	SEC19-T24S-R21W
IM105777179	SP 158	220824				NM	HIDALGO	SEC19-T24S-R21W
IM105777180	SP 159	220825				NM	HIDALGO	SEC30-T24S-R21W
IM105777181	SP 160	220826				NM	HIDALGO	SEC30-T24S-R21W
IM105777182	SP 161	220827				NM	HIDALGO	SEC30-T24S-R21W
IM105777183	SP 162	220828				NM	HIDALGO	SEC30-T24S-R21W
IM105777184	SP 163	220829				NM	HIDALGO	SEC30-T24S-R21W
IM105777185	SP 164	220830				NM	HIDALGO	SEC30-T24S-R21W
IM105777186	SP 165	220831				NM	HIDALGO	SEC30-T24S-R21W
IM105777187	SP 166	220832				NM	HIDALGO	SEC30-T24S-R21W
IM105777188	SP 167	220833				NM	HIDALGO	SEC30-T24S-R21W
IM105777189	SP 168	220834				NM	HIDALGO	SEC31-T24S-R21W
IM105777190	SP 169	220835				NM	HIDALGO	SEC31-T24S-R21W
IM105777191	SP 170	220836				NM	HIDALGO	SEC31-T24S-R21W
IM105777192	SP 171	220837				NM	HIDALGO	SEC31-T24S-R21W
IM105777193	SP 172	220838				NM	HIDALGO	SEC31-T24S-R21W
IM105777194	SP 173	220839				NM	HIDALGO	SEC31-T24S-R21W
IM105777195	SP 174	220840				NM	HIDALGO	SEC31-T24S-R21W
IM105777196	SP 175	220841				NM	HIDALGO	SEC31-T24S-R21W
IM105777197	SP 176	220842				NM	HIDALGO	SEC31-T24S-R21W
IM105777198	SP 177	220843				NM	HIDALGO	SEC17-T24S-R21W
IM105777199	SP 178	220844				NM	HIDALGO	SEC17-T24S-R21W
IM105777200	SP 179	220845				NM	HIDALGO	SEC17-T24S-R21W
IM105777201	SP 180	220846				NM	HIDALGO	SEC17-T24S-R21W
IM105777202	SP 181	220847				NM	HIDALGO	SEC17-T24S-R21W
IM105777203	SP 182	220848				NM	HIDALGO	SEC17-T24S-R21W
IM105777204	SP 183	220849				NM	HIDALGO	SEC17-T24S-R21W
IM105777205	SP 184	220850				NM	HIDALGO	SEC17-T24S-R21W
IM105777206	SP 185	220851				NM	HIDALGO	SEC17-T24S-R21W
IM105777207	SP 186	220852				NM	HIDALGO	SEC20-T24S-R21W

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IM105777208	SP 187	220853				NM	HIDALGO	SEC20-T24S-R21W
IM105777209	SP 188	220854				NM	HIDALGO	SEC20-T24S-R21W
IM105777210	SP 189	220855				NM	HIDALGO	SEC20-T24S-R21W
IM105777211	SP 190	220856				NM	HIDALGO	SEC20-T24S-R21W
IM105777212	SP 191	220857				NM	HIDALGO	SEC20-T24S-R21W
IM105777213	SP 192	220858				NM	HIDALGO	SEC20-T24S-R21W
IM105777214	SP 193	220859				NM	HIDALGO	SEC20-T24S-R21W
IM105777215	SP 194	220860				NM	HIDALGO	SEC20-T24S-R21W
IM105777216	SP 195	220861				NM	HIDALGO	SEC29-T24S-R21W
IM105777217	SP 196	220862				NM	HIDALGO	SEC29-T24S-R21W
IM105777218	SP 197	220863				NM	HIDALGO	SEC29-T24S-R21W
IM105777219	SP 198	220864				NM	HIDALGO	SEC29-T24S-R21W
IM105777220	SP 199	220865				NM	HIDALGO	SEC29-T24S-R21W
IM105777221	SP 200	220866				NM	HIDALGO	SEC29-T24S-R21W
IM105777222	SP 201	220867				NM	HIDALGO	SEC29-T24S-R21W
IM105777223	SP 202	220868				NM	HIDALGO	SEC29-T24S-R21W
IM105777224	SP 203	220869				NM	HIDALGO	SEC29-T24S-R21W
IM105777225	SP 204	220870				NM	HIDALGO	SEC17-T24S-R21W
IM105777226	SP 205	220871				NM	HIDALGO	SEC17-T24S-R21W
IM105777227	SP 206	220872				NM	HIDALGO	SEC17-T24S-R21W
IM105777228	SP 207	220873				NM	HIDALGO	SEC17-T24S-R21W
IM105777229	SP 208	220874				NM	HIDALGO	SEC17-T24S-R21W
IM105777230	SP 209	220875				NM	HIDALGO	SEC17-T24S-R21W
IM105777231	SP 210	220876				NM	HIDALGO	SEC17-T24S-R21W
IM105777232	SP 211	220877				NM	HIDALGO	SEC17-T24S-R21W
IM105777233	SP 212	220878				NM	HIDALGO	SEC17-T24S-R21W
IM105777234	SP 213	220879				NM	HIDALGO	SEC20-T24S-R21W
IM105777235	SP 214	220880				NM	HIDALGO	SEC20-T24S-R21W
IM105777236	SP 215	220881				NM	HIDALGO	SEC20-T24S-R21W
IM105777237	SP 216	220882				NM	HIDALGO	SEC20-T24S-R21W
IM105777238	SP 217	220883				NM	HIDALGO	SEC20-T24S-R21W
IM105777239	SP 218	220884				NM	HIDALGO	SEC20-T24S-R21W
IM105777240	SP 219	220885				NM	HIDALGO	SEC20-T24S-R21W
IM105777241	SP 220	220886				NM	HIDALGO	SEC20-T24S-R21W
IM105777242	SP 221	220887				NM	HIDALGO	SEC20-T24S-R21W
IM105777243	SP 222	220888				NM	HIDALGO	SEC29-T24S-R21W

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IM105777244	SP 223	220889				NM	HIDALGO	SEC29-T24S-R21W
IM105777245	SP 224	220890				NM	HIDALGO	SEC29-T24S-R21W
IM105777246	SP 225	220891				NM	HIDALGO	SEC29-T24S-R21W
IM105777247	SP 226	220892				NM	HIDALGO	SEC29-T24S-R21W
IM105777248	SP 227	220893				NM	HIDALGO	SEC29-T24S-R21W
IM105777249	SP 228	220894				NM	HIDALGO	SEC29-T24S-R21W
IM105777250	SP 229	220895				NM	HIDALGO	SEC29-T24S-R21W
IM105777251	SP 230	220896				NM	HIDALGO	SEC29-T24S-R21W
IM105777252	SP 231	220897				NM	HIDALGO	SEC17-T24S-R21W
IM105777253	SP 232	220898				NM	HIDALGO	SEC17-T24S-R21W
IM105777254	SP 233	220899				NM	HIDALGO	SEC17-T24S-R21W
IM105777255	SP 234	220900				NM	HIDALGO	SEC17-T24S-R21W
IM105777256	SP 235	220901				NM	HIDALGO	SEC17-T24S-R21W
IM105777257	SP 236	220902				NM	HIDALGO	SEC17-T24S-R21W
IM105777258	SP 237	220903				NM	HIDALGO	SEC17-T24S-R21W
IM105777259	SP 238	220904				NM	HIDALGO	SEC17-T24S-R21W
IM105777260	SP 239	220905				NM	HIDALGO	SEC17-T24S-R21W
IM105777261	SP 240	220906				NM	HIDALGO	SEC20-T24S-R21W
IM105777262	SP 241	220907				NM	HIDALGO	SEC20-T24S-R21W
IM105777263	SP 242	220908				NM	HIDALGO	SEC20-T24S-R21W
IM105777264	SP 243	220909				NM	HIDALGO	SEC20-T24S-R21W
IM105777265	SP 244	220910				NM	HIDALGO	SEC20-T24S-R21W
IM105777266	SP 245	220911				NM	HIDALGO	SEC20-T24S-R21W
IM105777267	SP 246	220912				NM	HIDALGO	SEC20-T24S-R21W
IM105777268	SP 247	220913				NM	HIDALGO	SEC20-T24S-R21W
IM105777269	SP 248	220914				NM	HIDALGO	SEC20-T24S-R21W
IM105777270	SP 249	220915				NM	HIDALGO	SEC29-T24S-R21W
IM105777271	SP 250	220916				NM	HIDALGO	SEC29-T24S-R21W
IM105777272	SP 251	220917				NM	HIDALGO	SEC29-T24S-R21W
IM105777273	SP 252	220918				NM	HIDALGO	SEC29-T24S-R21W
IM105777274	SP 253	220919				NM	HIDALGO	SEC29-T24S-R21W
IM105777275	SP 254	220920				NM	HIDALGO	SEC29-T24S-R21W
IM105777276	SP 255	220921				NM	HIDALGO	SEC29-T24S-R21W
IM105777277	SP 256	220922				NM	HIDALGO	SEC29-T24S-R21W
IM105777278	SP 257	220923				NM	HIDALGO	SEC29-T24S-R21W
IM105777279	SP 258	220924				NM	HIDALGO	SEC17-T24S-R21W

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IM105777280	SP 259	220925				NM	HIDALGO	SEC17-T24S-R21W
IM105777281	SP 260	220926				NM	HIDALGO	SEC17-T24S-R21W
IM105777282	SP 261	220927				NM	HIDALGO	SEC17-T24S-R21W
IM105777283	SP 262	220928				NM	HIDALGO	SEC17-T24S-R21W
IM105777284	SP 263	220929				NM	HIDALGO	SEC17-T24S-R21W
IM105777285	SP 264	220930				NM	HIDALGO	SEC17-T24S-R21W
IM105777286	SP 265	220931				NM	HIDALGO	SEC17-T24S-R21W
IM105777287	SP 265B	220932				NM	HIDALGO	SEC17-T24S-R21W
IM105777288	SP 266	220933				NM	HIDALGO	SEC20-T24S-R21W
IM105777289	SP 267	220934				NM	HIDALGO	SEC20-T24S-R21W
IM105777290	SP 268	220935				NM	HIDALGO	SEC20-T24S-R21W
IM105777291	SP 269	220936				NM	HIDALGO	SEC33-T24S-R21W
IM105777292	SP 270	220937				NM	HIDALGO	SEC33-T24S-R21W
IM105777293	SP 271	220938				NM	HIDALGO	SEC33-T24S-R21W
IM105777294	SP 272	220939				NM	HIDALGO	SEC33-T24S-R21W
IM105777295	SP 273	220940				NM	HIDALGO	SEC33-T24S-R21W
IM105777296	SP 274	220941				NM	HIDALGO	SEC33-T24S-R21W
IM105777297	SP 275	220942				NM	HIDALGO	SEC33-T24S-R21W
IM105777298	SP 276	220943				NM	HIDALGO	SEC33-T24S-R21W
IM105777299	SP 277	220944				NM	HIDALGO	SEC33-T24S-R21W
IM105777300	SP 278	220945				NM	HIDALGO	SEC21-T24S-R21W
IM105777301	SP 279	220946				NM	HIDALGO	SEC21-T24S-R21W
IM105777302	SP 280	220947				NM	HIDALGO	SEC21-T24S-R21W
IM105777303	SP 281	220948				NM	HIDALGO	SEC21-T24S-R21W
IM105777304	SP 282	220949				NM	HIDALGO	SEC21-T24S-R21W
IM105777305	SP 283	220950				NM	HIDALGO	SEC21-T24S-R21W
IM105777306	SP 284	220951				NM	HIDALGO	SEC21-T24S-R21W
IM105777307	SP 285	220952				NM	HIDALGO	SEC28-T24S-R21W
IM105777308	SP 286	220953				NM	HIDALGO	SEC28-T24S-R21W
IM105777309	SP 287	220954				NM	HIDALGO	SEC28-T24S-R21W
IM105777310	SP 288	220955				NM	HIDALGO	SEC28-T24S-R21W
IM105777311	SP 289	220956				NM	HIDALGO	SEC28-T24S-R21W
IM105777312	SP 290	220957				NM	HIDALGO	SEC28-T24S-R21W
IM105777313	SP 291	220958				NM	HIDALGO	SEC28-T24S-R21W
IM105777314	SP 292	220959				NM	HIDALGO	SEC28-T24S-R21W
IM105777315	SP 293	220960				NM	HIDALGO	SEC28-T24S-R21W

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IM105777316	SP 294	220961				NM	HIDALGO	SEC33-T24S-R21W
IM105777317	SP 295	220962				NM	HIDALGO	SEC33-T24S-R21W
IM105777318	SP 296	220963				NM	HIDALGO	SEC33-T24S-R21W
IM105777319	SP 297	220964				NM	HIDALGO	SEC33-T24S-R21W
IM105777320	SP 298	220965				NM	HIDALGO	SEC33-T24S-R21W
IM105777321	SP 299	220966				NM	HIDALGO	SEC33-T24S-R21W
IM105777322	SP 300	220967				NM	HIDALGO	SEC33-T24S-R21W
IM105777323	SP 301	220968				NM	HIDALGO	SEC33-T24S-R21W
IM105777324	SP 302	220969				NM	HIDALGO	SEC33-T24S-R21W
IM105777325	SP 303	220970				NM	HIDALGO	SEC21-T24S-R21W
IM105777326	SP 304	220971				NM	HIDALGO	SEC21-T24S-R21W
IM105777327	SP 305	220972				NM	HIDALGO	SEC21-T24S-R21W
IM105777328	SP 306	220973				NM	HIDALGO	SEC21-T24S-R21W
IM105777329	SP 307	220974				NM	HIDALGO	SEC21-T24S-R21W
IM105777330	SP 308	220975				NM	HIDALGO	SEC21-T24S-R21W
IM105777331	SP 309	220976				NM	HIDALGO	SEC21-T24S-R21W
IM105777332	SP 310	220977				NM	HIDALGO	SEC21-T24S-R21W
IM105777333	SP 311	220978				NM	HIDALGO	SEC21-T24S-R21W
IM105777334	SP 312	220979				NM	HIDALGO	SEC28-T24S-R21W
IM105777335	SP 313	220980				NM	HIDALGO	SEC28-T24S-R21W
IM105777336	SP 314	220981				NM	HIDALGO	SEC28-T24S-R21W
IM105777337	SP 315	220982				NM	HIDALGO	SEC28-T24S-R21W
IM105777338	SP 316	220983				NM	HIDALGO	SEC28-T24S-R21W
IM105777339	SP 317	220984				NM	HIDALGO	SEC28-T24S-R21W
IM105777340	SP 318	220985				NM	HIDALGO	SEC28-T24S-R21W
IM105777341	SP 319	220986				NM	HIDALGO	SEC28-T24S-R21W
IM105777342	SP 320	220987				NM	HIDALGO	SEC28-T24S-R21W
IM105777343	SP 321	220988				NM	HIDALGO	SEC33-T24S-R21W
IM105777344	SP 322	220989				NM	HIDALGO	SEC33-T24S-R21W
IM105777345	SP 323	220990				NM	HIDALGO	SEC33-T24S-R21W
IM105777346	SP 324	220991				NM	HIDALGO	SEC33-T24S-R21W
IM105777347	SP 325	220992				NM	HIDALGO	SEC33-T24S-R21W
IM105777348	SP 326	220993				NM	HIDALGO	SEC33-T24S-R21W
IM105777349	SP 327	220994				NM	HIDALGO	SEC33-T24S-R21W
IM105777350	SP 328	220995				NM	HIDALGO	SEC33-T24S-R21W
IM105777351	SP 329	220996				NM	HIDALGO	SEC33-T24S-R21W

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IM105777352	SP 330	220997				NM	HIDALGO	SEC21-T24S-R21W
IM105777353	SP 331	220998				NM	HIDALGO	SEC21-T24S-R21W
IM105777354	SP 332	220999				NM	HIDALGO	SEC21-T24S-R21W
IM105777355	SP 333	221000				NM	HIDALGO	SEC21-T24S-R21W
IM105777356	SP 334	221001				NM	HIDALGO	SEC21-T24S-R21W
IM105777357	SP 335	221002				NM	HIDALGO	SEC21-T24S-R21W
IM105777358	SP 336	221003				NM	HIDALGO	SEC21-T24S-R21W
IM105777359	SP 337	221004				NM	HIDALGO	SEC21-T24S-R21W
IM105777360	SP 338	221005				NM	HIDALGO	SEC21-T24S-R21W
IM105777361	SP 339	221006				NM	HIDALGO	SEC28-T24S-R21W
IM105777362	SP 340	221007				NM	HIDALGO	SEC28-T24S-R21W
IM105777363	SP 341	221008				NM	HIDALGO	SEC28-T24S-R21W
IM105777364	SP 342	221009				NM	HIDALGO	SEC28-T24S-R21W
IM105777365	SP 343	221010				NM	HIDALGO	SEC28-T24S-R21W
IM105777366	SP 344	221011				NM	HIDALGO	SEC28-T24S-R21W
IM105777367	SP 345	221012				NM	HIDALGO	SEC28-T24S-R21W
IM105777368	SP 346	221013				NM	HIDALGO	SEC28-T24S-R21W
IM105777369	SP 347	221014				NM	HIDALGO	SEC28-T24S-R21W
IM105777370	SP 348	221015				NM	HIDALGO	SEC33-T24S-R21W
IM105777371	SP 349	221016				NM	HIDALGO	SEC33-T24S-R21W
IM105777372	SP 350	221017				NM	HIDALGO	SEC33-T24S-R21W
IM105777373	SP 351	221018				NM	HIDALGO	SEC33-T24S-R21W
IM105777374	SP 352	221019				NM	HIDALGO	SEC33-T24S-R21W
IM105777375	SP 353	221020				NM	HIDALGO	SEC33-T24S-R21W
IM105777376	SP 354	221021				NM	HIDALGO	SEC33-T24S-R21W
IM105777377	SP 355	221022				NM	HIDALGO	SEC33-T24S-R21W
IM105829633	SP 359	2300423				NM	HIDALGO	SEC06-T25S-R21W
IM105829634	SP 360	2300424				NM	HIDALGO	SEC06-T25S-R21W
IM105829635	SP 361	2300425				NM	HIDALGO	SEC06-T25S-R21W
IM105829636	SP 362	2300426				NM	HIDALGO	SEC06-T25S-R21W
IM105829637	SP 363	2300427				NM	HIDALGO	SEC06-T25S-R21W
IM105829638	SP 364	2300428				NM	HIDALGO	SEC06-T25S-R21W
IM105829639	SP 365	2300429				NM	HIDALGO	SEC06-T25S-R21W
IM105829640	SP 366	2300430				NM	HIDALGO	SEC06-T25S-R21W
IM105829641	SP 367	2300431				NM	HIDALGO	SEC06-T25S-R21W
IM105829642	SP 368	2300432				NM	HIDALGO	SEC06-T25S-R21W

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IM105829643	SP 369	2300433				NM	HIDALGO	SEC06-T25S-R21W
IM105829644	SP 370	2300434				NM	HIDALGO	SEC06-T25S-R21W
IM105829645	SP 371	2300435				NM	HIDALGO	SEC06-T25S-R21W
IM105829646	SP 372	2300436				NM	HIDALGO	SEC06-T25S-R21W
IM105829647	SP 373	2300437				NM	HIDALGO	SEC06-T25S-R21W
IM105829648	SP 374	2300438				NM	HIDALGO	SEC06-T25S-R21W
IM105829649	SP 375	2300439				NM	HIDALGO	SEC06-T25S-R21W
IM105829650	SP 376	2300440				NM	HIDALGO	SEC05-T25S-R21W
IM105829651	SP 377	2300441				NM	HIDALGO	SEC05-T25S-R21W
IM105829652	SP 378	2300442				NM	HIDALGO	SEC05-T25S-R21W
IM105829653	SP 379	2300443				NM	HIDALGO	SEC05-T25S-R21W
IM105829654	SP 380	2300444				NM	HIDALGO	SEC05-T25S-R21W
IM105829655	SP 381	2300445				NM	HIDALGO	SEC05-T25S-R21W
IM105829656	SP 382	2300446				NM	HIDALGO	SEC05-T25S-R21W
IM105829657	SP 383	2300447				NM	HIDALGO	SEC05-T25S-R21W
IM105829658	SP 384	2300448				NM	HIDALGO	SEC05-T25S-R21W
IM105829659	SP 385	2300449				NM	HIDALGO	SEC05-T25S-R21W
IM105829660	SP 386	2300450				NM	HIDALGO	SEC05-T25S-R21W
IM105829661	SP 387	2300451				NM	HIDALGO	SEC05-T25S-R21W
IM105829662	SP 388	2300452				NM	HIDALGO	SEC05-T25S-R21W
IM105829663	SP 389	2300453				NM	HIDALGO	SEC05-T25S-R21W
IM105829664	SP 390	2300454				NM	HIDALGO	SEC05-T25S-R21W
IM105829665	SP 391	2300455				NM	HIDALGO	SEC05-T25S-R21W
IM105829666	SP 392	2300456				NM	HIDALGO	SEC05-T25S-R21W
IM105829667	SP 393	2300457				NM	HIDALGO	SEC05-T25S-R21W
IM105829668	SP 394	2300458				NM	HIDALGO	SEC05-T25S-R21W
IM105829669	SP 395	2300459				NM	HIDALGO	SEC05-T25S-R21W
IM105829670	SP 396	2300460				NM	HIDALGO	SEC05-T25S-R21W
IM105829671	SP 397	2300461				NM	HIDALGO	SEC05-T25S-R21W
IM105829672	SP 398	2300462				NM	HIDALGO	SEC05-T25S-R21W
IM105829673	SP 399	2300463				NM	HIDALGO	SEC05-T25S-R21W
IM105829674	SP 400	2300464				NM	HIDALGO	SEC05-T25S-R21W
IM105829675	SP 401	2300465				NM	HIDALGO	SEC05-T25S-R21W
IM105829676	SP 402	2300466				NM	HIDALGO	SEC05-T25S-R21W
IM105829677	SP 403	2300467				NM	HIDALGO	SEC05-T25S-R21W
IM105829678	SP 404	2300468				NM	HIDALGO	SEC05-T25S-R21W

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IM105829679	SP 405	2300469				NM	HIDALGO	SEC05-T25S-R21W
IM105829680	SP 406	2300470				NM	HIDALGO	SEC05-T25S-R21W
IM105829681	SP 407	2300471				NM	HIDALGO	SEC05-T25S-R21W
IM105829682	SP 408	2300472				NM	HIDALGO	SEC05-T25S-R21W
IM105829683	SP 409	2300473				NM	HIDALGO	SEC05-T25S-R21W
IM105829684	SP 410	2300474				NM	HIDALGO	SEC05-T25S-R21W
IM105829685	SP 411	2300475				NM	HIDALGO	SEC05-T25S-R21W
IM105829686	SP 412	2300476				NM	HIDALGO	SEC04-T25S-R21W
IM105829687	SP 413	2300477				NM	HIDALGO	SEC04-T25S-R21W
IM105829688	SP 414	2300478				NM	HIDALGO	SEC04-T25S-R21W
IM105829689	SP 415	2300479				NM	HIDALGO	SEC04-T25S-R21W
IM105829690	SP 416	2300480				NM	HIDALGO	SEC04-T25S-R21W
IM105829691	SP 417	2300481				NM	HIDALGO	SEC04-T25S-R21W
IM105829692	SP 418	2300482				NM	HIDALGO	SEC04-T25S-R21W
IM105829693	SP 419	2300483				NM	HIDALGO	SEC04-T25S-R21W
IM105829694	SP 420	2300484				NM	HIDALGO	SEC04-T25S-R21W
IM105829695	SP 421	2300485				NM	HIDALGO	SEC04-T25S-R21W
IM105829696	SP 422	2300486				NM	HIDALGO	SEC04-T25S-R21W
IM105829697	SP 423	2300487				NM	HIDALGO	SEC04-T25S-R21W
IM105829698	SP 424	2300488				NM	HIDALGO	SEC04-T25S-R21W
IM105829699	SP 425	2300489				NM	HIDALGO	SEC04-T25S-R21W
IM105829700	SP 426	2300490				NM	HIDALGO	SEC04-T25S-R21W
IM105829701	SP 427	2300491				NM	HIDALGO	SEC04-T25S-R21W
IM105829702	SP 428	2300492				NM	HIDALGO	SEC04-T25S-R21W
IM105829703	SP 429	2300493				NM	HIDALGO	SEC04-T25S-R21W
IM105829704	SP 430	2300494				NM	HIDALGO	SEC04-T25S-R21W
IM105829705	SP 431	2300495				NM	HIDALGO	SEC04-T25S-R21W
IM105829706	SP 432	2300496				NM	HIDALGO	SEC04-T25S-R21W
IM105829707	SP 433	2300497				NM	HIDALGO	SEC04-T25S-R21W
IM105829708	SP 434	2300498				NM	HIDALGO	SEC04-T25S-R21W
IM105829709	SP 435	2300499				NM	HIDALGO	SEC04-T25S-R21W
IM105829710	SP 436	2300500				NM	HIDALGO	SEC04-T25S-R21W
IM105829711	SP 437	2300501				NM	HIDALGO	SEC04-T25S-R21W
IM105829712	SP 438	2300502				NM	HIDALGO	SEC04-T25S-R21W
IM105829713	SP 439	2300503				NM	HIDALGO	SEC04-T25S-R21W
IM105829714	SP 440	2300504				NM	HIDALGO	SEC04-T25S-R21W

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<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording #</u>	<u>Original Page #</u>	<u>Amended Recording #</u>	<u>Amended Page #</u>	<u>State</u>	<u>County</u>	<u>Location</u>
IM105829715	SP 441	2300505				NM	HIDALGO	SEC04-T25S-R21W
IM105829716	SP 442	2300506				NM	HIDALGO	SEC04-T25S-R21W
IM105829717	SP 443	2300507				NM	HIDALGO	SEC04-T25S-R21W
IM105829718	SP 444	2300508				NM	HIDALGO	SEC04-T25S-R21W
IM105829719	SP 445	2300509				NM	HIDALGO	SEC04-T25S-R21W
IM105829720	SP 446	2300510				NM	HIDALGO	SEC04-T25S-R21W
IM105829721	SP 447	2300511				NM	HIDALGO	SEC04-T25S-R21W
IM106311482	SP 448	2300703				NM	HIDALGO	SEC20-T24S-R21W
IM106311483	SP 449	2300704				NM	HIDALGO	SEC20-T24S-R21W
IM106311484	SP 450	2300705				NM	HIDALGO	SEC20-T24S-R21W
IM106311485	SP 451	2300706				NM	HIDALGO	SEC20-T24S-R21W
IM106311486	SP 452	2300707				NM	HIDALGO	SEC20-T24S-R21W
IM106311487	SP 453	2300708				NM	HIDALGO	SEC20-T24S-R21W
IM106311488	SP 454	2300709				NM	HIDALGO	SEC20-T24S-R21W
IM106311489	SP 455	2300710				NM	HIDALGO	SEC29-T24S-R21W
IM106311490	SP 456	2300711				NM	HIDALGO	SEC29-T24S-R21W
IM106311491	SP 457	2300712				NM	HIDALGO	SEC29-T24S-R21W
IM106311492	SP 458	2300713				NM	HIDALGO	SEC29-T24S-R21W
IM106311493	SP 459	2300714				NM	HIDALGO	SEC29-T24S-R21W
IM106311494	SP 460	2300715				NM	HIDALGO	SEC29-T24S-R21W
IM106311495	SP 461	2300716				NM	HIDALGO	SEC29-T24S-R21W
IM106311496	SP 462	2300717				NM	HIDALGO	SEC29-T24S-R21W
IM106311497	SP 463	2300718				NM	HIDALGO	SEC29-T24S-R21W
IM106311498	SP 464	2300719				NM	HIDALGO	SEC21-T24S-R21W
IM106311499	SP 465	2300720				NM	HIDALGO	SEC21-T24S-R21W
IM106311500	SP 466	2300721				NM	HIDALGO	SEC21-T24S-R21W
IM106311501	SP 467	2300722				NM	HIDALGO	SEC21-T24S-R21W
IM106311502	SP 468	2300723				NM	HIDALGO	SEC21-T24S-R21W
IM106311503	SP 469	2300724				NM	HIDALGO	SEC21-T24S-R21W
IM106311504	SP 470	2300725				NM	HIDALGO	SEC21-T24S-R21W
IM106311505	SP 471	2300726				NM	HIDALGO	SEC21-T24S-R21W
IM106311506	SP 472	2300727				NM	HIDALGO	SEC21-T24S-R21W
IM106311507	SP 473	2300728				NM	HIDALGO	SEC28-T24S-R21W
IM106311508	SP 474	2300729				NM	HIDALGO	SEC28-T24S-R21W
IM106311509	SP 475	2300730				NM	HIDALGO	SEC28-T24S-R21W
IM106311510	SP 476	2300731				NM	HIDALGO	SEC28-T24S-R21W

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<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original Recording #</u>	<u>Original Page #</u>	<u>Amended Recording #</u>	<u>Amended Page #</u>	<u>State</u>	<u>County</u>	<u>Location</u>
IM106311511	SP 477	2300732				NM	HIDALGO	SEC28-T24S-R21W
IM106311512	SP 478	2300733				NM	HIDALGO	SEC28-T24S-R21W
IM106311513	SP 479	2300734				NM	HIDALGO	SEC28-T24S-R21W
IM106311514	SP 480	2300735				NM	HIDALGO	SEC28-T24S-R21W
IM106311515	SP 481	2300736				NM	HIDALGO	SEC28-T24S-R21W
IM106311516	SP 482	2300737				NM	HIDALGO	SEC21-T24S-R21W
IM106311517	SP 483	2300738				NM	HIDALGO	SEC21-T24S-R21W
IM106311518	SP 484	2300739				NM	HIDALGO	SEC21-T24S-R21W

ATTACHMENT C
BLM Steins Claims Annual Filing

June 2, 2025

After recording, return to:
Freeport-McMoRan Inc.
Attn: C. Franks
333 North Central Avenue
Phoenix, AZ 85004

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Bureau of Land Management
New Mexico State Office
301 Dinosaur Trail
Santa Fe, NM 87508

2025

**NOTICE OF INTENT TO HOLD MINING CLAIMS AND PAYMENT OF BLM
MAINTENANCE FEE**

Re: Payment of Annual Claim Maintenance Fee

Dear Sir or Madam:

This will serve as notice that Freeport-McMoRan Exploration Corporation, whose address for purpose of this filing is Land and Water Department, 333 North Central Ave., Phoenix, Arizona 85004, intends to hold the mining claims and/or mill sites described on Exhibit A attached hereto for the assessment year ending at 12 o'clock, noon, on September 1, 2026 by payment of the annual maintenance fee of \$200 per claim or site. Payment of such amount is made herewith for such assessment year for each of the claims and sites, the name, and BLM serial number with the book and page or index number of recording of the location notice in the official records of Hidalgo County, New Mexico, of which, is set forth on Exhibit A attached hereto and by this reference incorporated herein.



Chris Franks for
Freeport-McMoRan Exploration Corporation

State of Arizona)
) ss.
County of Maricopa)

The foregoing instrument was acknowledged before me on June 2nd, 2025, by Chris Franks, on behalf of Freeport-McMoRan Exploration Corporation.

(Seal)




Notary Public
My commission expires: 11/18/2027

EXHIBIT A

County: Hidalgo

State: NM

<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original</u>		<u>Amended</u>		<u>Location</u>
		<u>Recording #</u>	<u>Page #</u>	<u>Recording #</u>	<u>Page #</u>	
1 NM105777074	SP 38	220719				SEC18-T24S-R21W
2 NM105777075	SP 40	220720				SEC18-T24S-R21W
3 NM105777076	SP 42	220721				SEC18-T24S-R21W
4 NM105777077	SP 44	220722				SEC18-T24S-R21W
5 NM105777078	SP 46	220723				SEC19-T24S-R21W
6 NM105777079	SP 48	220724				SEC19-T24S-R21W
7 NM105777080	SP 50	220725				SEC19-T24S-R21W
8 NM105777081	SP 52	220726				SEC19-T24S-R21W
9 NM105777082	SP 54	220727				SEC30-T24S-R21W
10 NM105777083	SP 56	220728				SEC30-T24S-R21W
11 NM105777084	SP 58	220729				SEC30-T24S-R21W
12 NM105777085	SP 60	220730				SEC30-T24S-R21W
13 NM105777086	SP 62	220731				SEC31-T24S-R21W
14 NM105777087	SP 64	220732				SEC31-T24S-R21W
15 NM105777088	SP 66	220733				SEC31-T24S-R21W
16 NM105777089	SP 68	220734				SEC31-T24S-R21W
17 NM105777090	SP 69	220735				SEC18-T24S-R21W
18 NM105777091	SP 70	220736				SEC18-T24S-R21W
19 NM105777092	SP 71	220737				SEC18-T24S-R21W
20 NM105777093	SP 72	220738				SEC18-T24S-R21W
21 NM105777094	SP 73	220739				SEC18-T24S-R21W
22 NM105777095	SP 74	220740				SEC18-T24S-R21W
23 NM105777096	SP 75	220741				SEC18-T24S-R21W
24 NM105777097	SP 76	220742				SEC18-T24S-R21W
25 NM105777098	SP 77	220743				SEC18-T24S-R21W
26 NM105777099	SP 78	220744				SEC19-T24S-R21W
27 NM105777100	SP 79	220745				SEC19-T24S-R21W
28 NM105777101	SP 80	220746				SEC19-T24S-R21W
29 NM105777102	SP 81	220747				SEC19-T24S-R21W
30 NM105777103	SP 82	220748				SEC19-T24S-R21W
31 NM105777104	SP 83	220749				SEC19-T24S-R21W
32 NM105777105	SP 84	220750				SEC19-T24S-R21W
33 NM105777106	SP 85	220751				SEC19-T24S-R21W
34 NM105777107	SP 86	220752				SEC19-T24S-R21W
35 NM105777108	SP 87	220753				SEC30-T24S-R21W
36 NM105777109	SP 88	220754				SEC30-T24S-R21W
37 NM105777110	SP 89	220755				SEC30-T24S-R21W
38 NM105777111	SP 90	220756				SEC30-T24S-R21W
39 NM105777112	SP 91	220757				SEC30-T24S-R21W
40 NM105777113	SP 92	220758				SEC30-T24S-R21W
41 NM105777114	SP 93	220759				SEC30-T24S-R21W

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EXHIBIT A

County: Hidalgo

State: NM

<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original</u>		<u>Amended</u>		<u>Location</u>
		<u>Recording #</u>	<u>Page #</u>	<u>Recording #</u>	<u>Page #</u>	
42 NM105777115	SP 94	220760				SEC30-T24S-R21W
43 NM105777116	SP 95	220761				SEC30-T24S-R21W
44 NM105777117	SP 96	220762				SEC31-T24S-R21W
45 NM105777118	SP 97	220763				SEC31-T24S-R21W
46 NM105777119	SP 98	220764				SEC31-T24S-R21W
47 NM105777120	SP 99	220765				SEC31-T24S-R21W
48 NM105777121	SP 100	220766				SEC31-T24S-R21W
49 NM105777122	SP 101	220767				SEC31-T24S-R21W
50 NM105777123	SP 102	220768				SEC31-T24S-R21W
51 NM105777124	SP 103	220769				SEC31-T24S-R21W
52 NM105777125	SP 104	220770				SEC31-T24S-R21W
53 NM105777126	SP 105	220771				SEC18-T24S-R21W
54 NM105777127	SP 106	220772				SEC18-T24S-R21W
55 NM105777128	SP 107	220773				SEC18-T24S-R21W
56 NM105777129	SP 108	220774				SEC18-T24S-R21W
57 NM105777130	SP 109	220775				SEC18-T24S-R21W
58 NM105777131	SP 110	220776				SEC18-T24S-R21W
59 NM105777132	SP 111	220777				SEC18-T24S-R21W
60 NM105777133	SP 112	220778				SEC18-T24S-R21W
61 NM105777134	SP 113	220779				SEC18-T24S-R21W
62 NM105777135	SP 114	220780				SEC19-T24S-R21W
63 NM105777136	SP 115	220781				SEC19-T24S-R21W
64 NM105777137	SP 116	220782				SEC19-T24S-R21W
65 NM105777138	SP 117	220783				SEC19-T24S-R21W
66 NM105777139	SP 118	220784				SEC19-T24S-R21W
67 NM105777140	SP 119	220785				SEC19-T24S-R21W
68 NM105777141	SP 120	220786				SEC19-T24S-R21W
69 NM105777142	SP 121	220787				SEC19-T24S-R21W
70 NM105777143	SP 122	220788				SEC19-T24S-R21W
71 NM105777144	SP 123	220789				SEC30-T24S-R21W
72 NM105777145	SP 124	220790				SEC30-T24S-R21W
73 NM105777146	SP 125	220791				SEC30-T24S-R21W
74 NM105777147	SP 126	220792				SEC30-T24S-R21W
75 NM105777148	SP 127	220793				SEC30-T24S-R21W
76 NM105777149	SP 128	220794				SEC30-T24S-R21W
77 NM105777150	SP 129	220795				SEC30-T24S-R21W
78 NM105777151	SP 130	220796				SEC30-T24S-R21W
79 NM105777152	SP 131	220797				SEC30-T24S-R21W
80 NM105777153	SP 132	220798				SEC31-T24S-R21W
81 NM105777154	SP 133	220799				SEC31-T24S-R21W
82 NM105777155	SP 134	220800				SEC31-T24S-R21W

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83	NM105777156	SP 135	220801			SEC31-T24S-R21W
84	NM105777157	SP 136	220802			SEC31-T24S-R21W
85	NM105777158	SP 137	220803			SEC31-T24S-R21W
86	NM105777159	SP 138	220804			SEC31-T24S-R21W
87	NM105777160	SP 139	220805			SEC31-T24S-R21W
88	NM105777161	SP 140	220806			SEC31-T24S-R21W
89	NM105777162	SP 141	220807			SEC18-T24S-R21W
90	NM105777163	SP 142	220808			SEC18-T24S-R21W
91	NM105777164	SP 143	220809			SEC18-T24S-R21W
92	NM105777165	SP 144	220810			SEC18-T24S-R21W
93	NM105777166	SP 145	220811			SEC18-T24S-R21W
94	NM105777167	SP 146	220812			SEC18-T24S-R21W
95	NM105777168	SP 147	220813			SEC18-T24S-R21W
96	NM105777169	SP 148	220814			SEC18-T24S-R21W
97	NM105777170	SP 149	220815			SEC18-T24S-R21W
98	NM105777171	SP 150	220816			SEC19-T24S-R21W
99	NM105777172	SP 151	220817			SEC19-T24S-R21W
100	NM105777173	SP 152	220818			SEC19-T24S-R21W
101	NM105777174	SP 153	220819			SEC19-T24S-R21W
102	NM105777175	SP 154	220820			SEC19-T24S-R21W
103	NM105777176	SP 155	220821			SEC19-T24S-R21W
104	NM105777177	SP 156	220822			SEC19-T24S-R21W
105	NM105777178	SP 157	220823			SEC19-T24S-R21W
106	NM105777179	SP 158	220824			SEC19-T24S-R21W
107	NM105777180	SP 159	220825			SEC30-T24S-R21W
108	NM105777181	SP 160	220826			SEC30-T24S-R21W
109	NM105777182	SP 161	220827			SEC30-T24S-R21W
110	NM105777183	SP 162	220828			SEC30-T24S-R21W
111	NM105777184	SP 163	220829			SEC30-T24S-R21W
112	NM105777185	SP 164	220830			SEC30-T24S-R21W
113	NM105777186	SP 165	220831			SEC30-T24S-R21W
114	NM105777187	SP 166	220832			SEC30-T24S-R21W
115	NM105777188	SP 167	220833			SEC30-T24S-R21W
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117	NM105777190	SP 169	220835			SEC31-T24S-R21W
118	NM105777191	SP 170	220836			SEC31-T24S-R21W
119	NM105777192	SP 171	220837			SEC31-T24S-R21W
120	NM105777193	SP 172	220838			SEC31-T24S-R21W
121	NM105777194	SP 173	220839			SEC31-T24S-R21W
122	NM105777195	SP 174	220840			SEC31-T24S-R21W
123	NM105777196	SP 175	220841			SEC31-T24S-R21W

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County: Hidalgo

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124	NM105777197	SP 176	220842				SEC31-T24S-R21W
125	NM105777198	SP 177	220843				SEC17-T24S-R21W
126	NM105777199	SP 178	220844				SEC17-T24S-R21W
127	NM105777200	SP 179	220845				SEC17-T24S-R21W
128	NM105777201	SP 180	220846				SEC17-T24S-R21W
129	NM105777202	SP 181	220847				SEC17-T24S-R21W
130	NM105777203	SP 182	220848				SEC17-T24S-R21W
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132	NM105777205	SP 184	220850				SEC17-T24S-R21W
133	NM105777206	SP 185	220851				SEC17-T24S-R21W
134	NM105777207	SP 186	220852				SEC20-T24S-R21W
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137	NM105777210	SP 189	220855				SEC20-T24S-R21W
138	NM105777211	SP 190	220856				SEC20-T24S-R21W
139	NM105777212	SP 191	220857				SEC20-T24S-R21W
140	NM105777213	SP 192	220858				SEC20-T24S-R21W
141	NM105777214	SP 193	220859				SEC20-T24S-R21W
142	NM105777215	SP 194	220860				SEC20-T24S-R21W
143	NM105777216	SP 195	220861				SEC29-T24S-R21W
144	NM105777217	SP 196	220862				SEC29-T24S-R21W
145	NM105777218	SP 197	220863				SEC29-T24S-R21W
146	NM105777219	SP 198	220864				SEC29-T24S-R21W
147	NM105777220	SP 199	220865				SEC29-T24S-R21W
148	NM105777221	SP 200	220866				SEC29-T24S-R21W
149	NM105777222	SP 201	220867				SEC29-T24S-R21W
150	NM105777223	SP 202	220868				SEC29-T24S-R21W
151	NM105777224	SP 203	220869				SEC29-T24S-R21W
152	NM105777225	SP 204	220870				SEC17-T24S-R21W
153	NM105777226	SP 205	220871				SEC17-T24S-R21W
154	NM105777227	SP 206	220872				SEC17-T24S-R21W
155	NM105777228	SP 207	220873				SEC17-T24S-R21W
156	NM105777229	SP 208	220874				SEC17-T24S-R21W
157	NM105777230	SP 209	220875				SEC17-T24S-R21W
158	NM105777231	SP 210	220876				SEC17-T24S-R21W
159	NM105777232	SP 211	220877				SEC17-T24S-R21W
160	NM105777233	SP 212	220878				SEC17-T24S-R21W
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163	NM105777236	SP 215	220881				SEC20-T24S-R21W
164	NM105777237	SP 216	220882				SEC20-T24S-R21W

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County: Hidalgo State: NM		Original		Amended		Location
<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Recording #</u>	<u>Page #</u>	<u>Recording #</u>	<u>Page #</u>	
165 NM105777238	SP 217	220883				SEC20-T24S-R21W
166 NM105777239	SP 218	220884				SEC20-T24S-R21W
167 NM105777240	SP 219	220885				SEC20-T24S-R21W
168 NM105777241	SP 220	220886				SEC20-T24S-R21W
169 NM105777242	SP 221	220887				SEC20-T24S-R21W
170 NM105777243	SP 222	220888				SEC29-T24S-R21W
171 NM105777244	SP 223	220889				SEC29-T24S-R21W
172 NM105777245	SP 224	220890				SEC29-T24S-R21W
173 NM105777246	SP 225	220891				SEC29-T24S-R21W
174 NM105777247	SP 226	220892				SEC29-T24S-R21W
175 NM105777248	SP 227	220893				SEC29-T24S-R21W
176 NM105777249	SP 228	220894				SEC29-T24S-R21W
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178 NM105777251	SP 230	220896				SEC29-T24S-R21W
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181 NM105777254	SP 233	220899				SEC17-T24S-R21W
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183 NM105777256	SP 235	220901				SEC17-T24S-R21W
184 NM105777257	SP 236	220902				SEC17-T24S-R21W
185 NM105777258	SP 237	220903				SEC17-T24S-R21W
186 NM105777259	SP 238	220904				SEC17-T24S-R21W
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188 NM105777261	SP 240	220906				SEC20-T24S-R21W
189 NM105777262	SP 241	220907				SEC20-T24S-R21W
190 NM105777263	SP 242	220908				SEC20-T24S-R21W
191 NM105777264	SP 243	220909				SEC20-T24S-R21W
192 NM105777265	SP 244	220910				SEC20-T24S-R21W
193 NM105777266	SP 245	220911				SEC20-T24S-R21W
194 NM105777267	SP 246	220912				SEC20-T24S-R21W
195 NM105777268	SP 247	220913				SEC20-T24S-R21W
196 NM105777269	SP 248	220914				SEC20-T24S-R21W
197 NM105777270	SP 249	220915				SEC29-T24S-R21W
198 NM105777271	SP 250	220916				SEC29-T24S-R21W
199 NM105777272	SP 251	220917				SEC29-T24S-R21W
200 NM105777273	SP 252	220918				SEC29-T24S-R21W
201 NM105777274	SP 253	220919				SEC29-T24S-R21W
202 NM105777275	SP 254	220920				SEC29-T24S-R21W
203 NM105777276	SP 255	220921				SEC29-T24S-R21W
204 NM105777277	SP 256	220922				SEC29-T24S-R21W
205 NM105777278	SP 257	220923				SEC29-T24S-R21W

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EXHIBIT A

County: Hidalgo

State: NM

<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original</u>		<u>Amended</u>		<u>Location</u>
		<u>Recording #</u>	<u>Page #</u>	<u>Recording #</u>	<u>Page #</u>	
206	NM105777279	SP 258	220924			SEC17-T24S-R21W
207	NM105777280	SP 259	220925			SEC17-T24S-R21W
208	NM105777281	SP 260	220926			SEC17-T24S-R21W
209	NM105777282	SP 261	220927			SEC17-T24S-R21W
210	NM105777283	SP 262	220928			SEC17-T24S-R21W
211	NM105777284	SP 263	220929			SEC17-T24S-R21W
212	NM105777285	SP 264	220930			SEC17-T24S-R21W
213	NM105777286	SP 265	220931			SEC17-T24S-R21W
214	NM105777287	SP 265B	220932			SEC17-T24S-R21W
215	NM105777288	SP 266	220933			SEC20-T24S-R21W
216	NM105777289	SP 267	220934			SEC20-T24S-R21W
217	NM105777290	SP 268	220935			SEC20-T24S-R21W
218	NM105777291	SP 269	220936			SEC33-T24S-R21W
219	NM105777292	SP 270	220937			SEC33-T24S-R21W
220	NM105777293	SP 271	220938			SEC33-T24S-R21W
221	NM105777294	SP 272	220939			SEC33-T24S-R21W
222	NM105777295	SP 273	220940			SEC33-T24S-R21W
223	NM105777296	SP 274	220941			SEC33-T24S-R21W
224	NM105777297	SP 275	220942			SEC33-T24S-R21W
225	NM105777298	SP 276	220943			SEC33-T24S-R21W
226	NM105777299	SP 277	220944			SEC33-T24S-R21W
227	NM105777300	SP 278	220945			SEC21-T24S-R21W
228	NM105777301	SP 279	220946			SEC21-T24S-R21W
229	NM105777302	SP 280	220947			SEC21-T24S-R21W
230	NM105777303	SP 281	220948			SEC21-T24S-R21W
231	NM105777304	SP 282	220949			SEC21-T24S-R21W
232	NM105777305	SP 283	220950			SEC21-T24S-R21W
233	NM105777306	SP 284	220951			SEC21-T24S-R21W
234	NM105777307	SP 285	220952			SEC28-T24S-R21W
235	NM105777308	SP 286	220953			SEC28-T24S-R21W
236	NM105777309	SP 287	220954			SEC28-T24S-R21W
237	NM105777310	SP 288	220955			SEC28-T24S-R21W
238	NM105777311	SP 289	220956			SEC28-T24S-R21W
239	NM105777312	SP 290	220957			SEC28-T24S-R21W
240	NM105777313	SP 291	220958			SEC28-T24S-R21W
241	NM105777314	SP 292	220959			SEC28-T24S-R21W
242	NM105777315	SP 293	220960			SEC28-T24S-R21W
243	NM105777316	SP 294	220961			SEC33-T24S-R21W
244	NM105777317	SP 295	220962			SEC33-T24S-R21W
245	NM105777318	SP 296	220963			SEC33-T24S-R21W
246	NM105777319	SP 297	220964			SEC33-T24S-R21W

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EXHIBIT A

County: Hidalgo

State: NM

<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original</u>		<u>Amended</u>		<u>Location</u>
		<u>Recording #</u>	<u>Page #</u>	<u>Recording #</u>	<u>Page #</u>	
247	NM105777320	SP 298	220965			SEC33-T24S-R21W
248	NM105777321	SP 299	220966			SEC33-T24S-R21W
249	NM105777322	SP 300	220967			SEC33-T24S-R21W
250	NM105777323	SP 301	220968			SEC33-T24S-R21W
251	NM105777324	SP 302	220969			SEC33-T24S-R21W
252	NM105777325	SP 303	220970			SEC21-T24S-R21W
253	NM105777326	SP 304	220971			SEC21-T24S-R21W
254	NM105777327	SP 305	220972			SEC21-T24S-R21W
255	NM105777328	SP 306	220973			SEC21-T24S-R21W
256	NM105777329	SP 307	220974			SEC21-T24S-R21W
257	NM105777330	SP 308	220975			SEC21-T24S-R21W
258	NM105777331	SP 309	220976			SEC21-T24S-R21W
259	NM105777332	SP 310	220977			SEC21-T24S-R21W
260	NM105777333	SP 311	220978			SEC21-T24S-R21W
261	NM105777334	SP 312	220979			SEC28-T24S-R21W
262	NM105777335	SP 313	220980			SEC28-T24S-R21W
263	NM105777336	SP 314	220981			SEC28-T24S-R21W
264	NM105777337	SP 315	220982			SEC28-T24S-R21W
265	NM105777338	SP 316	220983			SEC28-T24S-R21W
266	NM105777339	SP 317	220984			SEC28-T24S-R21W
267	NM105777340	SP 318	220985			SEC28-T24S-R21W
268	NM105777341	SP 319	220986			SEC28-T24S-R21W
269	NM105777342	SP 320	220987			SEC28-T24S-R21W
270	NM105777343	SP 321	220988			SEC33-T24S-R21W
271	NM105777344	SP 322	220989			SEC33-T24S-R21W
272	NM105777345	SP 323	220990			SEC33-T24S-R21W
273	NM105777346	SP 324	220991			SEC33-T24S-R21W
274	NM105777347	SP 325	220992			SEC33-T24S-R21W
275	NM105777348	SP 326	220993			SEC33-T24S-R21W
276	NM105777349	SP 327	220994			SEC33-T24S-R21W
277	NM105777350	SP 328	220995			SEC33-T24S-R21W
278	NM105777351	SP 329	220996			SEC33-T24S-R21W
279	NM105777352	SP 330	220997			SEC21-T24S-R21W
280	NM105777353	SP 331	220998			SEC21-T24S-R21W
281	NM105777354	SP 332	220999			SEC21-T24S-R21W
282	NM105777355	SP 333	221000			SEC21-T24S-R21W
283	NM105777356	SP 334	221001			SEC21-T24S-R21W
284	NM105777357	SP 335	221002			SEC21-T24S-R21W
285	NM105777358	SP 336	221003			SEC21-T24S-R21W
286	NM105777359	SP 337	221004			SEC21-T24S-R21W
287	NM105777360	SP 338	221005			SEC21-T24S-R21W

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EXHIBIT A

County: Hidalgo		Original		Amended		Location
State: NM						
<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Recording #</u>	<u>Page #</u>	<u>Recording #</u>	<u>Page #</u>	
288 NM105777361	SP 339	221006				SEC28-T24S-R21W
289 NM105777362	SP 340	221007				SEC28-T24S-R21W
290 NM105777363	SP 341	221008				SEC28-T24S-R21W
291 NM105777364	SP 342	221009				SEC28-T24S-R21W
292 NM105777365	SP 343	221010				SEC28-T24S-R21W
293 NM105777366	SP 344	221011				SEC28-T24S-R21W
294 NM105777367	SP 345	221012				SEC28-T24S-R21W
295 NM105777368	SP 346	221013				SEC28-T24S-R21W
296 NM105777369	SP 347	221014				SEC28-T24S-R21W
297 NM105777370	SP 348	221015				SEC33-T24S-R21W
298 NM105777371	SP 349	221016				SEC33-T24S-R21W
299 NM105777372	SP 350	221017				SEC33-T24S-R21W
300 NM105777373	SP 351	221018				SEC33-T24S-R21W
301 NM105777374	SP 352	221019				SEC33-T24S-R21W
302 NM105777375	SP 353	221020				SEC33-T24S-R21W
303 NM105777376	SP 354	221021				SEC33-T24S-R21W
304 NM105777377	SP 355	221022				SEC33-T24S-R21W
305 NM105829633	SP 359	2300423				SEC06-T25S-R21W
306 NM105829634	SP 360	2300424				SEC06-T25S-R21W
307 NM105829635	SP 361	2300425				SEC06-T25S-R21W
308 NM105829636	SP 362	2300426				SEC06-T25S-R21W
309 NM105829637	SP 363	2300427				SEC06-T25S-R21W
310 NM105829638	SP 364	2300428				SEC06-T25S-R21W
311 NM105829639	SP 365	2300429				SEC06-T25S-R21W
312 NM105829640	SP 366	2300430				SEC06-T25S-R21W
313 NM105829641	SP 367	2300431				SEC06-T25S-R21W
314 NM105829642	SP 368	2300432				SEC06-T25S-R21W
315 NM105829643	SP 369	2300433				SEC06-T25S-R21W
316 NM105829644	SP 370	2300434				SEC06-T25S-R21W
317 NM105829645	SP 371	2300435				SEC06-T25S-R21W
318 NM105829646	SP 372	2300436				SEC06-T25S-R21W
319 NM105829647	SP 373	2300437				SEC06-T25S-R21W
320 NM105829648	SP 374	2300438				SEC06-T25S-R21W
321 NM105829649	SP 375	2300439				SEC06-T25S-R21W
322 NM105829650	SP 376	2300440				SEC05-T25S-R21W
323 NM105829651	SP 377	2300441				SEC05-T25S-R21W
324 NM105829652	SP 378	2300442				SEC05-T25S-R21W
325 NM105829653	SP 379	2300443				SEC05-T25S-R21W
326 NM105829654	SP 380	2300444				SEC05-T25S-R21W
327 NM105829655	SP 381	2300445				SEC05-T25S-R21W
328 NM105829656	SP 382	2300446				SEC05-T25S-R21W

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EXHIBIT A

County: Hidalgo

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<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original</u>		<u>Amended</u>		<u>Location</u>
		<u>Recording #</u>	<u>Page #</u>	<u>Recording #</u>	<u>Page #</u>	
329	NM105829657	SP 383	2300447			SEC05-T25S-R21W
330	NM105829658	SP 384	2300448			SEC05-T25S-R21W
331	NM105829659	SP 385	2300449			SEC05-T25S-R21W
332	NM105829660	SP 386	2300450			SEC05-T25S-R21W
333	NM105829661	SP 387	2300451			SEC05-T25S-R21W
334	NM105829662	SP 388	2300452			SEC05-T25S-R21W
335	NM105829663	SP 389	2300453			SEC05-T25S-R21W
336	NM105829664	SP 390	2300454			SEC05-T25S-R21W
337	NM105829665	SP 391	2300455			SEC05-T25S-R21W
338	NM105829666	SP 392	2300456			SEC05-T25S-R21W
339	NM105829667	SP 393	2300457			SEC05-T25S-R21W
340	NM105829668	SP 394	2300458			SEC05-T25S-R21W
341	NM105829669	SP 395	2300459			SEC05-T25S-R21W
342	NM105829670	SP 396	2300460			SEC05-T25S-R21W
343	NM105829671	SP 397	2300461			SEC05-T25S-R21W
344	NM105829672	SP 398	2300462			SEC05-T25S-R21W
345	NM105829673	SP 399	2300463			SEC05-T25S-R21W
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347	NM105829675	SP 401	2300465			SEC05-T25S-R21W
348	NM105829676	SP 402	2300466			SEC05-T25S-R21W
349	NM105829677	SP 403	2300467			SEC05-T25S-R21W
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351	NM105829679	SP 405	2300469			SEC05-T25S-R21W
352	NM105829680	SP 406	2300470			SEC05-T25S-R21W
353	NM105829681	SP 407	2300471			SEC05-T25S-R21W
354	NM105829682	SP 408	2300472			SEC05-T25S-R21W
355	NM105829683	SP 409	2300473			SEC05-T25S-R21W
356	NM105829684	SP 410	2300474			SEC05-T25S-R21W
357	NM105829685	SP 411	2300475			SEC05-T25S-R21W
358	NM105829686	SP 412	2300476			SEC04-T25S-R21W
359	NM105829687	SP 413	2300477			SEC04-T25S-R21W
360	NM105829688	SP 414	2300478			SEC04-T25S-R21W
361	NM105829689	SP 415	2300479			SEC04-T25S-R21W
362	NM105829690	SP 416	2300480			SEC04-T25S-R21W
363	NM105829691	SP 417	2300481			SEC04-T25S-R21W
364	NM105829692	SP 418	2300482			SEC04-T25S-R21W
365	NM105829693	SP 419	2300483			SEC04-T25S-R21W
366	NM105829694	SP 420	2300484			SEC04-T25S-R21W
367	NM105829695	SP 421	2300485			SEC04-T25S-R21W
368	NM105829696	SP 422	2300486			SEC04-T25S-R21W
369	NM105829697	SP 423	2300487			SEC04-T25S-R21W

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EXHIBIT A**County: Hidalgo****State: NM**

<u>BLM Serial #</u>	<u>Claim Name</u>	<u>Original</u>		<u>Amended</u>		<u>Location</u>
		<u>Recording #</u>	<u>Page #</u>	<u>Recording #</u>	<u>Page #</u>	
370 NM105829698	SP 424	2300488				SEC04-T25S-R21W
371 NM105829699	SP 425	2300489				SEC04-T25S-R21W
372 NM105829700	SP 426	2300490				SEC04-T25S-R21W
373 NM105829701	SP 427	2300491				SEC04-T25S-R21W
374 NM105829702	SP 428	2300492				SEC04-T25S-R21W
375 NM105829703	SP 429	2300493				SEC04-T25S-R21W
376 NM105829704	SP 430	2300494				SEC04-T25S-R21W
377 NM105829705	SP 431	2300495				SEC04-T25S-R21W
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381 NM105829709	SP 435	2300499				SEC04-T25S-R21W
382 NM105829710	SP 436	2300500				SEC04-T25S-R21W
383 NM105829711	SP 437	2300501				SEC04-T25S-R21W
384 NM105829712	SP 438	2300502				SEC04-T25S-R21W
385 NM105829713	SP 439	2300503				SEC04-T25S-R21W
386 NM105829714	SP 440	2300504				SEC04-T25S-R21W
387 NM105829715	SP 441	2300505				SEC04-T25S-R21W
388 NM105829716	SP 442	2300506				SEC04-T25S-R21W
389 NM105829717	SP 443	2300507				SEC04-T25S-R21W
390 NM105829718	SP 444	2300508				SEC04-T25S-R21W
391 NM105829719	SP 445	2300509				SEC04-T25S-R21W
392 NM105829720	SP 446	2300510				SEC04-T25S-R21W
393 NM105829721	SP 447	2300511				SEC04-T25S-R21W
394 NM106311482	SP 448	2300703				SEC20-T24S-R21W
395 NM106311483	SP 449	2300704				SEC20-T24S-R21W
396 NM106311484	SP 450	2300705				SEC20-T24S-R21W
397 NM106311485	SP 451	2300706				SEC20-T24S-R21W
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400 NM106311488	SP 454	2300709				SEC20-T24S-R21W
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403 NM106311491	SP 457	2300712				SEC29-T24S-R21W
404 NM106311492	SP 458	2300713				SEC29-T24S-R21W
405 NM106311493	SP 459	2300714				SEC29-T24S-R21W
406 NM106311494	SP 460	2300715				SEC29-T24S-R21W
407 NM106311495	SP 461	2300716				SEC29-T24S-R21W
408 NM106311496	SP 462	2300717				SEC29-T24S-R21W
409 NM106311497	SP 463	2300718				SEC29-T24S-R21W
410 NM106311498	SP 464	2300719				SEC21-T24S-R21W

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		<u>Recording #</u>	<u>Page #</u>	<u>Recording #</u>	<u>Page #</u>	
411 NM106311499	SP 465	2300720				SEC21-T24S-R21W
412 NM106311500	SP 466	2300721				SEC21-T24S-R21W
413 NM106311501	SP 467	2300722				SEC21-T24S-R21W
414 NM106311502	SP 468	2300723				SEC21-T24S-R21W
415 NM106311503	SP 469	2300724				SEC21-T24S-R21W
416 NM106311504	SP 470	2300725				SEC21-T24S-R21W
417 NM106311505	SP 471	2300726				SEC21-T24S-R21W
418 NM106311506	SP 472	2300727				SEC21-T24S-R21W
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420 NM106311508	SP 474	2300729				SEC28-T24S-R21W
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429 NM106311517	SP 483	2300738				SEC21-T24S-R21W
430 NM106311518	SP 484	2300739				SEC21-T24S-R21W

Claim Total 430BLM, NMSO
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United States Department of the Interior
Bureau of Land Management
 BRANCH OF SUPPORT SERVICES
 301 DINOSAUR TRAIL
 SANTA FE, NM 87508
 Phone: (505) 954-2098

Receipt

No: 5500010

Transaction #: 5667924

Date of Transaction: 07/15/2025

CUSTOMER:

FREEPORT MCMORAN EXPLORATION CORP
 333 N CENTRAL AVE
 PHOENIX, AZ 85004-2121 US

2026 Maintenance Fee

LINE #	QTY	DESCRIPTION	REMARKS	UNIT PRICE	TOTAL
1	393.00	MLRS MINING CLAIMS / MINING CLAIMS-EXISTING-MLRS ONLY / MAINTENANCE FEE CASES: NM105777074/\$200.00, NM105777075/\$200.00, NM105777076/\$200.00, NM105777077/\$200.00, NM105777078/\$200.00, NM105777079/\$200.00, NM105777080/\$200.00, NM105777081/\$200.00, NM105777082/\$200.00, NM105777083/\$200.00, NM105777084/\$200.00, NM105777085/\$200.00, NM105777086/\$200.00, NM105777087/\$200.00, NM105777088/\$200.00, NM105777089/\$200.00, NM105777090/\$200.00, NM105777091/\$200.00, NM105777092/\$200.00, NM105777093/\$200.00, NM105777094/\$200.00, NM105777095/\$200.00, NM105777096/\$200.00, NM105777097/\$200.00, NM105777098/\$200.00, NM105777099/\$200.00, NM105777100/\$200.00, NM105777101/\$200.00, NM105777102/\$200.00, NM105777103/\$200.00, NM105777104/\$200.00, NM105777105/\$200.00, NM105777106/\$200.00, NM105777107/\$200.00, NM105777108/\$200.00, NM105777109/\$200.00, NM105777110/\$200.00, NM105777111/\$200.00, NM105777112/\$200.00, NM105777113/\$200.00, NM105777114/\$200.00, NM105777115/\$200.00, NM105777116/\$200.00, NM105777117/\$200.00, NM105777118/\$200.00, NM105777119/\$200.00, NM105777120/\$200.00, NM105777121/\$200.00, NM105777122/\$200.00, NM105777123/\$200.00, NM105777124/\$200.00, NM105777125/\$200.00, NM105777126/\$200.00, NM105777127/\$200.00, NM105777128/\$200.00, NM105777129/\$200.00, NM105777130/\$200.00, NM105777131/\$200.00, NM105777132/\$200.00, NM105777133/\$200.00, NM105777134/\$200.00, NM105777135/\$200.00, NM105777136/\$200.00, NM105777137/\$200.00,	393 Claims	- n/a -	78600.00

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Transaction #: 5667926

Date of Transaction: 07/15/2025

CUSTOMER:

FREEPORT-MCMORAN EXPLORATION CORP
 333 N CENTRAL AVE
 PHOENIX, AZ 85004-2189 US

2026 Maintenance Fee

LINE #	QTY	DESCRIPTION	REMARKS	UNIT PRICE	TOTAL
1	37.00	MLRS MINING CLAIMS / MINING CLAIMS-EXISTING- MLRS ONLY / MAINTENANCE FEE CASES: NM106311482/\$200.00, NM106311483/\$200.00, NM106311484/\$200.00, NM106311485/\$200.00, NM106311486/\$200.00, NM106311487/\$200.00, NM106311488/\$200.00, NM106311489/\$200.00, NM106311490/\$200.00, NM106311491/\$200.00, NM106311492/\$200.00, NM106311493/\$200.00, NM106311494/\$200.00, NM106311495/\$200.00, NM106311496/\$200.00, NM106311497/\$200.00, NM106311498/\$200.00, NM106311499/\$200.00, NM106311500/\$200.00, NM106311501/\$200.00, NM106311502/\$200.00, NM106311503/\$200.00, NM106311504/\$200.00, NM106311505/\$200.00, NM106311506/\$200.00, NM106311507/\$200.00, NM106311508/\$200.00, NM106311509/\$200.00, NM106311510/\$200.00, NM106311511/\$200.00, NM106311512/\$200.00, NM106311513/\$200.00, NM106311514/\$200.00, NM106311515/\$200.00, NM106311516/\$200.00, NM106311517/\$200.00, NM106311518/\$200.00	<i>37 Claims</i>	- n/a -	7400.00
TOTAL:					\$86,000.00

PAYMENT INFORMATION

1	AMOUNT:	86000.00	POSTMARKED:	N/A
	TYPE:	CHECK	RECEIVED:	07/11/2025
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Of The Records Of Hidalgo

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Alyssa Olivas Esquivel

Deputy/County Clerk, Lordsburg, NM

HIDALGO COUNTY CLERKALYSSA OLIVAS ESQUIVEL
300 SHAKESPEARELORDSBURG, NM 88045-----

Receipt # 0000020625

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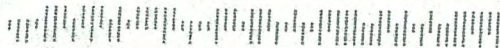
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333 North Central Ave- Land + Water Development
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Attn: Stephanie Turton

ATTACHMENT D
Cultural Resources Report

A Cultural Resources Inventory of 77.8 Acres for the Proposed Steins Mineral Exploration Project, Hidalgo County, New Mexico

Curiosity Exploration LLC

Prepared by:

Alexander C Hutton, B.S.

Reviewed and Submitted by:

Jeremy Loven, M.A.

WestLand Engineering & Environmental Services

4001 E. Paradise Falls Drive – Tucson, Arizona 85712

+1 520-206-9585

WestLand Cultural Resources Report No. 2026-136

Bureau of Land Management Report No. BLM-NM-030-26-023

NMCRIS Activity No. 160933

WestLand Project No. 14301

May 14, 2026



Overview of the survey area with Peloncillo Mountains in background, view to the northeast



Engineering &
Environmental
Services

STATEMENT OF CONFIDENTIALITY

This information is to be used only in compliance with applicable state and federal laws and regulations including but not limited to the New Mexico Cultural Properties Act of 1978 (NMSA 1978, §§18-6-1 to 18-6-171) and the Archaeological Resources Protection Act of 1979 (16 U.S.C. §470aa, *et seq.*). Additional applicable United States laws include but may not be limited to Section 304 (54 U.S.C. §307103) of the National Historic Preservation Act of 1966.

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INTRODUCTION AND PROJECT BACKGROUND

Curiosity Exploration LLC (Curiosity), a wholly owned subsidiary of KoBold Metals, contracted WestLand Engineering and Environmental Services (WestLand) to conduct a Class III cultural resources inventory for the Steins Mineral Exploration Project (Project). The Project will evaluate mineral resource quality and quantity through an exploration drilling program in Hidalgo County, New Mexico. The Project area is located within lands managed by the Bureau of Land Management-Las Cruces District Office (BLM-LCDO) in Township 24 South, Range 21 West (T24S, R21W), Sections 19 and 33, as well as adjacent private lands owned by the Hooper family over which the operator has secured surface access and exploration agreements. The Project area also includes approximately 0.25 miles of existing access road traversing New Mexico State Trust lands administered by the New Mexico State Land Office (NMSLO). (**Figures 1 and 2**).

The proposed exploration program will consist of exploratory diamond core and/or reverse circulation drilling to evaluate subsurface minerals at nine drill pad locations (ST25P-1, ST25P-2, ST25P-4, ST25P-5, ST25P-6, ST25P-7, ST25P-8, ST25P-9, and ST-PP-009; **Figure 3**). Drilling at each location will be performed using a track-mounted drill rig and will extend to a maximum depth of 3,500 feet. The drill pads will be approximately 100 feet by 100 feet and will be developed using a Caterpillar D6 bulldozer or equivalent equipment. The pads will accommodate the drill rig, support vehicles, water storage, core storage facilities, and ancillary equipment and supplies. Drill pad locations will be accessed via 1.02 miles of new access roads and 1.52 miles of existing access roads.

The Project will disturb a total of approximately 3.83 acres across all land ownerships; this is considered the Area of Potential Effects (APE). Nine drill pads at 100 feet by 100 feet each account for 2.07 acres (0.23 acres per pad) of disturbance. Approximately 0.93 miles of new access road construction at a 13-foot width (11-foot blade plus 1-foot spoil on each side) accounts for 1.46 acres of disturbance. Maintenance, including road widening, on 1.22 miles of existing access roads accounts for 0.3 acres of disturbance. Disturbance by surface ownership is as follows: BLM-administered lands in Sections 19 and 33, T24S, R21W account for 2.32 acres total, comprising 0.92 acres for four drill pads (ST25P-6, ST25P-7, ST25P-8, and ST25P-9), 0.86 acres for approximately 0.55 miles of new road construction, and 0.54 acres for approximately 0.82 miles of existing road work; Hooper private lands account for 2.01 acres total, comprising 1.15 acres for five drill pads (ST25P-1, ST25P-2, ST25P-4, ST25P-5, and ST-PP-009), 0.75 acres for approximately 0.47 miles of new road construction, and 0.11 acres for approximately 0.47 miles of road widening; and New Mexico State Trust lands administered by the NMSLO account for 0.38 acres consisting of 0.24 miles of existing road regrade within the existing road footprint. Total disturbance on BLM-LCDO-administered surface is 2.32 acres.

WestLand surveyed the APE in addition to 50-foot-wide cultural survey buffers on each side of all roads and a 100-foot-wide buffer around all drill pad locations. The survey area totals 77.8 acres, of which 26.84 acres are on land administered by the BLM, 3.85 acres are on land administered by the NMSLO, and

47.19 acres are on private land. The APE was redesigned following the completion of the survey. As such, portions of the survey area lack an associated APE in the final design, as depicted in **Figure 2**. Despite this change in the APE, the entire area surveyed by WestLand, and all cultural resources encountered therein, are presented in this report.

The purpose of the inventory was to locate significant archaeological sites within the survey area. WestLand performed the inventory and has prepared this report in accordance with Section 106 of the National Historic Preservation Act (as amended) and its implementing regulations (36 CFR 800); the New Mexico Prehistoric and Historic Sites Preservation Act (NMSA 1978 §18-8-1 through §18-8-8), the Cultural Properties Act (NM Statute §§18-6-1 through 18-6-7), the Cultural Properties Protection Act (NM Statute §§18-6A-1 through 18-6A-6), and the Federal Land Policy and Management Act of 1976.

The inventory was conducted following guidelines established in the BLM Manual Supplement H-8100-1: *Procedures for Performing Cultural Resource Fieldwork on Public Lands in the Area of New Mexico BLM Responsibilities, the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation*, and §4.10.15 of New Mexico Administrative Code (NMAC): *Standards for Survey and Inventory*. The goal of this inventory was to identify and evaluate all cultural resources within the APE for their eligibility to the National Register of Historic Places (NRHP) and evaluate potential effects from the proposed undertaking on resources that qualify as historic properties. The inventory was assigned New Mexico Cultural Resources Information System (NMCRIS) Activity Number 160933.

WestLand archaeologists conducted the cultural resources inventory in two field sessions between March 23–26 and April 6–7, 2026. Jeremy Loven served as the principal investigator. Alex Hutton served as the field supervisor and was assisted by Grant Fahrni and Josiah Toorman.

This report details the results of the cultural resources inventory conducted by WestLand. The following sections discuss the physiographic and historic contexts and background research, define the survey and evaluation methods used during the current investigation, describe the survey results, and summarize the NRHP eligibility and treatment recommendations for all sites.

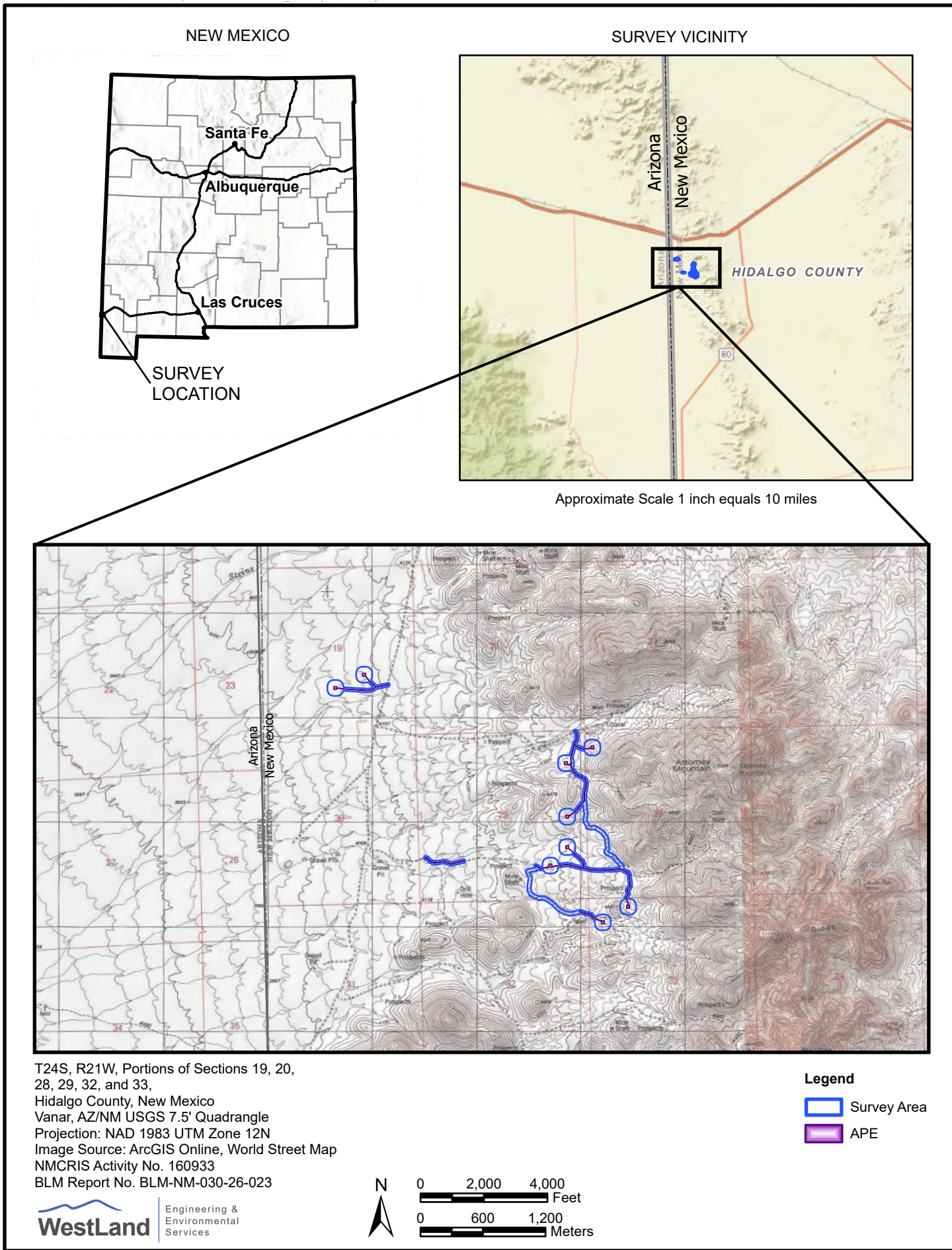
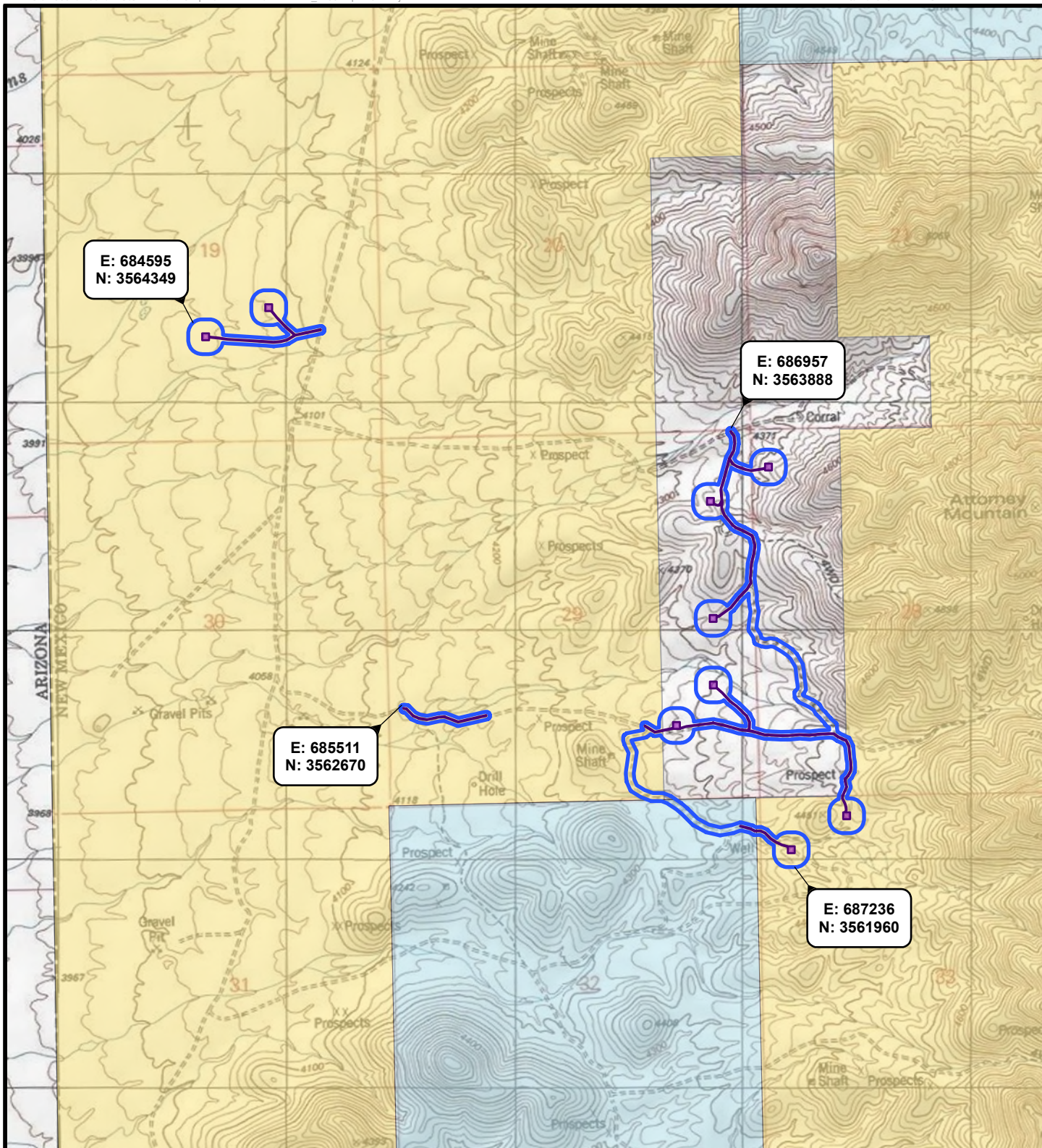


Figure 1. Vicinity map



T24S, R21W, Portions of Sections 19, 20,
28, 29, 32, and 33,
Hidalgo County, New Mexico
Vanar, AZ/NM USGS 7.5' Quadrangle
Projection: NAD 1983 UTM Zone 12N
Surface Management: BLM 2023
NMCRIIS Activity No. 160933
BLM Report No. BLM-NM-030-26-023

WestLand

Engineering &
Environmental
Services



0 1,000 2,000
Feet

0 300 600
Meters

Legend

 Survey Area

 APE

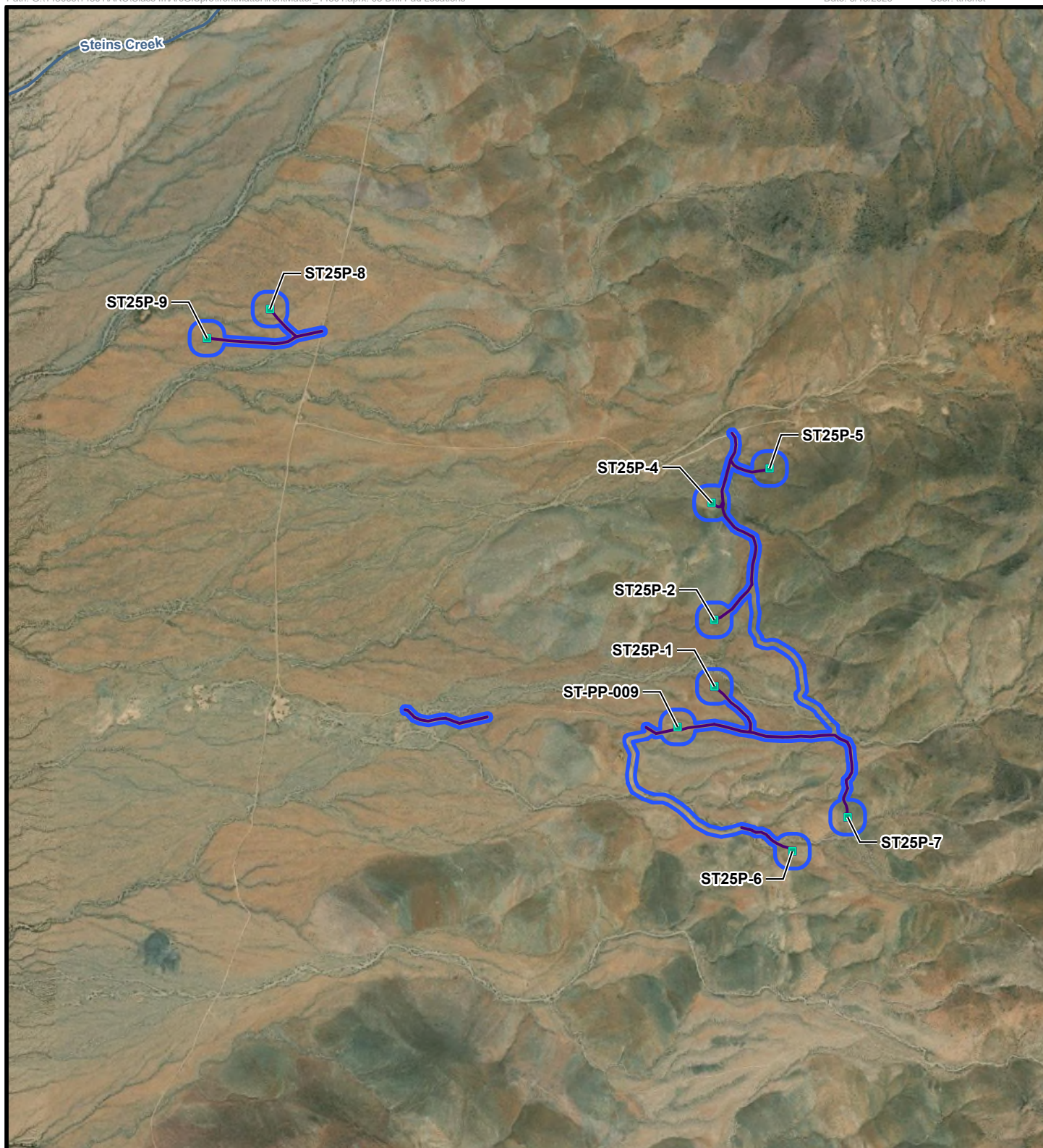
Surface Management

 Bureau of Land Management (BLM)

 Private (No Color)

 State of New Mexico

Figure 2. Project area showing surface management. UTM coordinates are Project location reference points.



Hidalgo County, New Mexico
 Projection: NAD 1983 UTM Zone 12N
 Image Source: Vantor 5/16/2025
 NMCRIS Activity No. 160933
 BLM Report No. BLM-NM-030-26-023

Legend

- Drill Pad
- Survey Area
- APE

WestLand

Engineering &
 Environmental
 Services



0 1,000 2,000
 Feet
 0 300 600
 Meters

Figure 3. Project location showing drill pad numbers

PHYSIOGRAPHIC CONTEXT

Physiography

The survey area lies within the Basin and Range province in southwestern New Mexico. The survey area is in the western foothills of the Peloncillo Mountains within Hidalgo County and mostly consists of Holocene to lower Pleistocene alluvial deposits with Paleocene and upper Cretaceous andesitic to dacitic lavas and pyroclastic breccias present in the eastern uplands (Green and Jones 1997). The most prominent peak is Attorney Mountain, located approximately 1.3 km east-northeast of the Project area. The survey area is associated with unimproved dirt road spurs off Chato Road, Stagecoach Road, and Still Ridge Road which run through land administered by the BLM-LCDO and the NMSLO, and private ranch land. Elevations range from approximately 4050 to 4460 feet above mean sea level (amsl). The survey area is cut by several unnamed arroyos and ephemeral washes. The nearest major water sources are Steins Creek, an ephemeral drainage north of the Project area which flows to the southwest, and the San Simon River located to the west in Arizona. Water within the Project area drains west-southwest towards the San Simon River.

There are three primary soil groups present in the survey area. The largest group is Eba very gravelly loam, 1 to 15 percent slopes, which is a well-mixed alluvium derived from igneous and sedimentary rock and typically consists of very gravelly loam from 0 to 6 inches, over very gravelly clay from 6 to 29 inches and very gravelly clay loam from 29 to 60 inches. Lehman's extremely rocky loam, 10 to 25 percent slopes, is also represented, and is also a well-mixed alluvium derived from igneous and sedimentary rock and typically consists of stony loam from 0 to 4 inches and stony clay loam from 4 to 18 inches over bedrock. Lastly is the Rough broken land and Rock land group, which consists entirely of exposed igneous, metamorphic or sedimentary bedrock (National Resources Conservation Service 2026).

Environment

The survey area primarily falls within the Chihuahuan desertscrub community, though the far eastern portions of the Project area extend into the Semidesert Grasslands community, which is typically a transitional zone bounding Chihuahuan or Sonoran desertscrub (Brown 1994; **Photo 1**). Most of the survey area lies within the Chihuahuan desertscrub community, which extends across much of the arid highland plains and basins of southern New Mexico into southeastern Arizona. This biome is typically defined by the dominant presence of creosote bush (*Larrea tridentata*) along with open stands of mesquite (*Prosopis glandulosa* var. *torreyana*) and the occasional presence of allthorn (*Koeberlinia spinosa*). Dominant succulents include Lechuguilla (*Agave lechuguilla*), various yuccas (*Yucca elata*, *Y. rostrata*, *Y. thompsoniana*, *Y. filifera*, *Y. carnerosana*, *Y. torreyi*), sotols (*Dasylirion leiophyllum*, *D. wheeleri*), and agaves (*Agave scabra*, *A. falcata*, *A. neomexicana*, *A. parryi*, *A. striata*). Common woody shrubs include ocotillo (*Fouquieria splendens*), catclaw (*Acacia greggii*), condalias (*Condalia* spp.), cenizos (*Leucophyllum minus*, *L. frutescens*), and little

leaf sumac (*Rhus microphylla*). Interspersed clumps of grama grasses and juniper (*Juniperus monosperma*, *J. pinchottii*) can also be found in the upper reaches. A variety of cacti are also commonly present in the Chihuahuan desert, most commonly cane cholla (*Opuntia imbricata*), and prickly pears (*Opuntia violacea* var. *macrocentra*, *O. phaeacantha* var. *major*, *O. p.* var. *discata*). Other cacti include Turk's heads and hedgehogs (e.g., *Echinocactus horizonthalonius*, *E. texensis*, *Ancistrocactus uncinatus*, *Ferocactus hamatacanthus*), claret cups, rainbows, and strawberries (*Echinocereus triglochidiatus*, *E. pectinatus* var. *rigidissimus*, *E. p.* var. *neomexicanus*, *E. chloranthus*, *E. enneacanthus* var. *stramineus*), as well as several less prominent species, such as the night blooming cereus (*Peniocereus greggii*).



Photo 1. Project area overview, view to the southwest

Mammals characteristic of the Chihuahuan desertscrub community include the desert pocket gopher (*Geomys arenarius*), yellow-faced pocket gopher (*Pappogeomys castanops*), Nelson's kangaroo rat (*Dipodomys nelsoni*), Nelson's pocket mouse (*Perognathus neisoni*), southern grasshopper mouse (*Onychomys torridus*), Goldman's woodrat (*Neotoma goldmani*), Texas antelope squirrel (*Ammospermophilus interpres*), and desert pocket mouse (*Perognathus penicillatus*). A wider variety of broadly desert-adapted species can also be found, such as the desert cottontail (*Sylvilagus auduboni*), desert shrew (*Notiosorex crawfordi*), and desert mule deer (*Odocoileus hemionus*). Birds include scaled quail (*Callipepla squamata*) and white-necked raven (*Corvus cryptoleucus*) along with other species typically found in desert or grassland environments, such as the mourning dove (*Zenaida macroura*), roadrunner (*Geococcyx californianus*), lesser nighthawk (*Chordeiles acutipennis*), Scott's oriole (*Icterus*

parisorum), and cactus wren (*Campylorhynchus brunneicapillus*). Lizards include the Texas banded gecko (*Coleonyx brevis*), reticulated gecko (*C. reticulatus*), greater earless lizard (*Cophosaurus texanus*), roundtail horned lizard (*Phrynosoma modestum*), and various spiny lizards (*Sceloporus cautus*, *S. maculosus*, *S. merriami*, *S. ornatus*, *S. poinsettia*, and *S. magister bimaculosus*). Representative snakes include the trans-pecos ratsnake (*Elaphe subocularis*), western hooknose snake (*Gyalopion canum*), Texas blackheaded snake (*Tantilla atriceps*), whipsnakes (*Masticophis taeniatus* and *M. flagellum lineatus*), Mohave rattlesnake (*Crotalus scutulatus*), and the western diamondback (*C. atrox*).

The upland eastern extents of the survey area lie within the Semidesert Grasslands community, which is typically a transitional zone bounding Chihuahuan or Sonoran desertscrub. This biome is accordingly characterized by a variety of vegetation. Common grasses consist of a variety of summer-active grama grasses such as black grama (*Bouteloua eripoda*), slender grama (*Bouteloua filiformis*), Chino grama (*Bouteloua breviseta*), spruce top grama (*Bouteloua chondrosioides*), bush muhly (*Muhlenbergia porteri*), Arizona cottontop (*Trichachne californica*), slim tridens (*Tridens muticus*), pappus grass (*Pappophorum vaginatum*), tanglehead grass (*Heteropogon contortus*), vine mesquite grass (*Panicum obtusum*), and others. Forbs include filarees (*Erodinzn*), lupines (*Lupinus*), buckwheats (*Eriogonum*), mallows (*Sphaeralcea*), spiderlings (*Boerhaavia*), white-mats (*Tidestromia*), devils-claws (*Martynia*), and amaranths (*Amaranthus*). Succulents include sotols (*Dasyllirion wheeleri*, *D. leiophyllum*), beargrasses (*Nolina microcarpa*, *N. texana*, *N. erumpens*), agaves (*Agave lechuguilla*, *A. parviflora*, *A. schottii*, *A. scabra*, *A. parryi*; etc.), and yuccas (*Yucca torreyi*, *Y. elata*, *Y. baccata*, *Y. rostrata*, *Y. macrocarpa*, *Y. carnerosana*, etc.). Other commonly present plants include lotebush (*Zizyphus obtusifolia*, *Condalia spathulata*), allthorn, Mormon tea (*Ephedra trifurca*, *E. antisiphilitica*), mimosa (*Mimosa biuncifera*, *M. dysocarpa*), false mesquite (*Calliandra eriophylla*), Wright's lippia (*Aloysia wrightii*), catclaw acacia, littleleaf sumac, desert hackberry (*Celtis pallida*), javelina-bush (*Condalia ericoides*), barberry (*Berberis trifoliata*), and ocotillo. Cacti include barrel cactus (*Ferocactus wislizenii*), Turk's head, cane cholla, desert Christmas cactus (*Opuntia leptocaulis*, *O. kleiniae*), prickly pears (*Opuntia chlorotica*, *O. phaeacantha*, *O. violacea*), hedgehogs (*Echinocereus*), and pincushions (*Mammillaria wrightii*, *M. grahami*, *M. mainiae*, *M. gummifera*). Trees are nearly absent, though mesquite (*Prosopis glandulosa*, *P. juliflora*) and one-seed juniper (*Juniperus monosperma*) may be present.

Mammals expected in semidesert grassland include the black-tailed jack rabbit (*Lepus californicus*), spotted ground squirrel (*Spermophilus spilosoma*), hispid pocket mouse (*Perognathus hispidus*), Ord's, banner-tailed, and Merriam kangaroo rats (*Dipodomys ordii*, *D. spectabilis*, *D. merriami*), white-footed mouse (*Peromyscus leucopus*), cotton rats (*Sigmodon hispidus*, *S. fluviventer*), southern grasshopper mouse, southern plains and white-throated wood rats (*Neotoma micropus*, *N. albigula*), badger (*Taxidea taxus*), and coyote (*Canis latrans*). A wide variety of nesting birds are also present including the Swainson's hawk (*Buteo swainsoni*), prairie falcon, kestrel, mourning dove, scaled quail, roadrunner, burrowing owl, whitenecked raven, cactus wren, mockingbird (*Mimus polyglottos*), loggerhead shrike (*Lanius ludovicianus*), Scott's oriole, house finch (*Carpodacus mexicanus*), lark sparrow (*Chondestes grammacus*), and Cassin's sparrow (*Aimophila cassinii*).

Climate

The climate in the survey area is semi-arid. The average annual precipitation in the nearest town with full climate records, San Simon, Arizona, is 9.86 inches, with 5.41 inches falling from July through October, and 4.45 inches in November through June (**Table 1**). The maximum monthly average temperature occurs in July (96.4°F), and the minimum monthly average temperature occurs in January (30.1°F). The area receives low snowfall, with an average of 2.5 inches falling each year, mainly from December through February (Western Regional Climate Center 2026).

Table 1. Climate records for San Simon 9 ESE Station

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average max. temperature (°F)	58.7	63.5	69.7	77.7	86.7	95.8	96.4	93.8	88.5	79.4	67.7	59.6	78.1
Average min. temperature (°F)	30.1	32.6	37.0	42.8	51.8	61.2	67.3	65.63	60.2	48.9	38.0	30.8	47.2
Average total precipitation (inches)	0.63	0.52	0.50	0.13	0.14	0.30	2.02	1.89	1.50	0.98	0.51	0.74	9.86
Average total snowfall (inches)	0.2	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	2.5

CULTURE HISTORY

For thousands of years, many cultures have called New Mexico home. These past and present cultures have been, in part, shaped by the great diversity of the state's landscape, which includes the northern Chihuahuan Desert, the Mimbres River Valley, the Gila River Valley, the Gila Mountains, and various ranges of the Basin and Range province. Archaeologists have subdivided the known span of human occupation of the American Southwest into six periods based on the material culture of the people who lived there, as shown in **Table 2**.

Table 2. Cultural chronology[†]

Period		Subperiod	Phase	Date Range
1	Paleoindian	—	—	10,000–6000 B.C.
2	Archaic	Early		6000–4000 B.C.
		Middle	—	4000–2500 B.C.
		Late		2500 B.C.–A.D. 200
3	Formative	Pithouse	Early Pithouse	A.D. 200–550
			Georgetown	A.D. 550–650
			San Francisco	A.D. 650–750
			Three Circle	A.D. 750–1000
		Pueblo	Classic Mimbres	A.D. 1000–1150
			Mimbres Reorganization	A.D. 1150–1200
			Black Mountain	A.D. 1200–1300
			Cliff	A.D. 1300–1450
4	Precontact	—	—	A.D. 1450–1598
5	Protohistoric	—	—	A.D. 1598–1692
6	Historic	—	—	A.D. 1692–present

[†] Principal sources include Diehl 2007, Hegmon 2002, Hegmon et al. 2000, MacNeish 1993, Seymour 2017, and Simmons 1991.

Paleoindian Period (10,000 to 6000 B.C.)

While evidence exists of occupation as early as 20,000 years ago along Lake Otero in the Tularosa Basin during the Last Glacial Maximum of the Late Pleistocene (Bennett et al. 2021), much of the evidence of human occupation in what is today New Mexico dates to the Paleoindian period (10,000–6000 B.C.) which coincided with the end of the Pleistocene and the beginning of the Holocene, as well as with major climatic change following the end of the Wisconsinan Glaciation. Conventional archaeological theory suggests that Paleoindian peoples migrated into the Americas around this time (Plog 2008), with various hypotheses put forth regarding the timing (Haynes et al. 2007; Waters and Stafford 2007) and routes of these migrations (Bradley and Stanford 2004; Bryan 1999; Dixon 1993, 1999, 2001; Fladmark 1979; Mandryk 2004; Moratto 1984; Morrow and Morrow 1999:227; Smallwood 2012; Stanford and Bradley 2012).

Archaeological evidence indicates that the Clovis culture (10,000–9000 B.C.) was the first widespread Paleoindian culture in the American Southwest. The hallmarks of this culture in North America include a stone tool manufacturing technology featuring a high degree of craftsmanship and a hunting-gathering subsistence strategy. The Clovis complex is best identified by a distinctive lanceolate spear point that exhibits a concave base, longitudinal fluting, and lateral and marginal grinding (Slaughter 1992:72).

The conventional view of Clovis peoples is that they were highly mobile hunter-gatherers who pursued megafauna such as the Columbian mammoth (*Mammuthus columbi*), the Shasta ground sloth (*Northrotheriops shastensis*), and American camels (*Camelops* spp.), along with other large mammals, including horses (*Equus* sp.) and the American lion (*Panthera leo atrox*), over vast areas of the Americas (Beaton 1991; Kelly 1996; Kelly and Todd 1988; Plog 2008:37). Recent research (Jones et al. 2003; Jones et al. 2012) has refined archaeologists' understanding of the mobility of these Paleoindian peoples, and while the perception of them as big-game hunters endures, we now understand better the vital role that small game and plant foods played in their subsistence (Blackmar 2001; Ford 2004; Mabry 1998; Meltzer 2009). The faunal remains of small animals, reptiles, and amphibians have been identified in Clovis assemblages (Blackmar 2001), as have the remains of the plants collected and consumed (Ford 2004). This new evidence of the Clovis diet, coupled with studies of lithic raw material sources (Jones et al. 2012), suggests that Clovis groups had more limited territorial ranges than was envisioned by those who saw them as a culture that followed herds of megafauna as they migrated across the continent.

Gradual changes in the environment in the American Southwest resulted in the extinction of the mammoth, American camel, American lion, and many other mammalian species. The Folsom culture (9000–8000 B.C.), which followed the Clovis, represents a series of adaptations to these changing circumstances. In particular, Folsom people appear to have adapted to exploit the large herds of ancient bison (*Bison antiquus*), the ancestor of the modern American bison (*Bison bison*), and the most common large mammal to have survived the ongoing environmental changes. The Folsom culture is most easily recognized by a new kind of lanceolate fluted spear point, which is distinguished from the Clovis point by the extent of the fluting. In Folsom points, the fluting extends the full length of the blade, from the proximal end to the distal end, leaving only a narrow margin, which was retouched after fluting.

Following the decline of the widespread Folsom culture, regional variability in lithic technologies became more pronounced, and archaeologists no longer discuss the people of North America as members of a single culture. Instead, the Late Paleolithic period (8000–6500 B.C.) is distinguished by the proliferation of multiple regional cultures with unique flaked stone tool kits who hunted smaller, less migratory game animals to an extent not previously seen. South-central New Mexico is usually considered to fall within the Plano and Cody cultural traditions, but little is known—so far—of the Late Paleoindian occupation of this region.

The Paleoindian occupation in southwestern New Mexico is known from a limited number of excavated sites and an extensive distribution of distinctive spear points. Several Paleoindian sites located in southeastern Arizona—the Lehner, Murray Springs, and Naco sites—provide information on the earliest

culture, the Clovis (9000 or 9500 B.C.), in the area. Folsom points (8800–7300 B.C.) at two sites in western New Mexico are indicative of bison hunting. Following the Folsom culture, Paleoindian remains are less well documented. As the climate became drier and the extant grasslands shrank toward the east, Paleoindian hunters either migrated with the bison or adapted to new quarry and the intensified gathering and storage of wild plant products.

Archaic Period (ca. 6000 B.C. to A.D. 200)

Archaic peoples continued to employ a mobile hunting-gathering subsistence strategy but increasingly occupied smaller territorial areas, hunted smaller game, and practiced a less specialized subsistence strategy overall than their Paleoindian forebears (Janetski et al. 2012). These changes are thought to be related to ongoing shifts in climate as the Southwest grew increasingly warmer and drier (Dello-Russo 2012).

The more homogeneous regional material culture of the Paleoindian period was gradually replaced by greater local diversity. For example, flaked and ground stone technologies became less specialized during the Archaic period (Cordell 1997), with one-hand manos and slab metates the standard for Archaic ground stone tool assemblages (Huckell 1996). Regionally specific projectile point types emerged, presumably the product of local adaptation, a reduction in overall regional mobility, and a more diversified diet (Jelks 1992; Mabry 1998; Whittaker 1994). The advent of smaller notched projectile points occurs in the Early Archaic period and likely reflects the continuing shift toward the exploitation of smaller game animals such as deer (Mabry 1998).

Regional traditions and sub-traditions are apparent in point types, raw material preferences, and site distribution (Mabry 1998). The local Archaic sequence is not well defined and is understood primarily from work in adjacent areas. The Archaic adaptation of southwestern New Mexico was first defined by Sayles and Antevs (1941) as the Cochise culture based on work in southeastern Arizona. More recently, work by MacNeish (1993; MacNeish and Beckett 1987) has defined another adaptation, the Chihuahuan tradition, based on sites in south-central New Mexico. Huckell (1996) noted that the regional differences among the Archaic traditions were most pronounced in the Early Archaic but began to blur in the Middle Archaic. To add perspective, both regional traditions are discussed here.

Cochise Culture

Sayles and Antevs (1941) referred to the Archaic period of southern Arizona and southwestern New Mexico as the Cochise culture. They argued that this culture represented a continuation of the Paleoindian culture, although the temporal and cultural relationships between the Paleoindian period and the earliest Archaic remained unclear. The Cochise culture represented a shift from a hunting-based economy to a gathering-based one, as evidenced by the presence of milling stones in artifact assemblages. Sayles and Antevs' report was also significant for its use of geological stratigraphy in the relative dating of the Cochise culture stages.

The Cochise culture has been subdivided into three phases: the Sulphur Spring phase (6000–4000 B.C.), the Chiricahua phase (4000–2500 B.C.), and the San Pedro phase (2500 B.C.–A.D. 200; Whalen 1971). The phases are defined by ground and chipped stone tool types plus geologic and stratigraphic sequences. Handstones (manos) and milling stones (metates) were the characteristic artifacts of the Cochise culture, indicating the importance of the processing of plant foods in the economy (Sayles 1983:77). Through time, these ground stone artifacts changed form, from flat slabs to deep basin metates with associated mano forms. The Cochise culture was proposed as ancestral to the later ceramic Hohokam and Mogollon cultures.

In summary, the Archaic, at 6000 B.C. through A.D. 200, is a period of rather slow but distinctive change in exploitative patterns:

Early Archaic populations were highly mobile groups and followed a geographically diverse pattern of exploitation of naturally available resources, both plant and animal... At times of resource abundance, larger groups coalesced only to split up into smaller foraging units upon exhaustion of resources. The low population density, friable group composition, wide available territory, and numerous resources that were available and utilized probably allowed a flexible pattern of food provisioning (Minnis 1980:102).

Chihuahua Tradition

MacNeish and Beckett (1987:3; see also MacNeish 1993), having reevaluated the Archaic period in south-central New Mexico, proposed an Archaic tradition—the Chihuahua tradition—adapted to the Chihuahuan Desert of southern New Mexico and northern Mexico. This tradition extends from San Luis Potosi, Mexico, to Tularosa, New Mexico, with its eastern boundary marked by the western edge of the Guadalupe Mountains and the western boundary falling east of the Alamo Hueco and Little and Big Hatchet Mountains in the New Mexico bootheel. However, as the environmentally based definition of this Archaic tradition is the Chihuahuan Desert, it is quite possible that elements of the Chihuahua tradition extend farther into southwestern New Mexico.

Excavation of stratified rock shelters and open sites in the Rio Grande area and Fresnal Shelter in the Sacramento Mountains yielded diagnostic projectile points, chipped stone tools, manos, metates, and perishable artifacts, including sandals and baskets. The defined Chihuahua phases are Gardner Springs (6000–4000 B.C.), Keystone (4000–2500 B.C.), Fresnal (2500–900 B.C.), and Hueco (900 B.C.–A.D. 250) (MacNeish 1993). As with the Cochise culture, these phases are defined by changes in tool technology. Projectile point typology is important in distinguishing between the first two phases, with Jay and Bajada points predominant in the Gardner Springs phase and Armargosa and similar points prevalent in the Keystone phase. Another important development is the appearance of pit structures during the Keystone phase (e.g., at the Keystone Dam site near El Paso), suggesting increasing sedentism (Whalen 1994). Agricultural crops, particularly maize, increase in importance during the Fresnal and Hueco phases (MacNeish and Beckett 1987), which are sometimes considered to be part of the Early Agricultural period (Huckell 1996).

Formative Period (A.D. 200 to 1450)

Archaeologists have traditionally differentiated the Formative period from the Archaic period based on a shift away from hunting and gathering toward an increased reliance on agriculture, the widespread production of pottery, increasing sedentism, and changes in social organization leading to larger settlements and economic specialization (Miller and Kenmotsu 2004). Based on differences in the material culture, archaeologists have defined two distinct Ceramic period cultures that emerged at the beginning of the Formative period in New Mexico: Ancestral Puebloan and Mogollon (Cordell and McBrinn 2012). The APE lies within the Mogollon ceramic sphere and is considered to have been occupied by people affiliated with the Mimbres branch of the Mogollon. In this document, the Formative period in the Mimbres Mogollon area has been subdivided into two subperiods: Pithouse (A.D. 200–1000) and Pueblo (A.D. 1000–1450).

The Mogollon were the descendants of the Late Archaic period peoples who had inhabited the same region, including the Cochise and Chihuahuan cultures. Archaeologists subdivide the Mogollon culture into regional branches: Mimbres, Cibola, Reserve, Forestdale, San Simon, Black River, and Jornada (Wheat 1955). The APE lies on the western edge of the area associated with the Mimbres branch in what may be an internal frontier area with the Reserve (or Mountain) branch.

In general, the identifying traits of the Mogollon culture are brown and red wares (i.e., red-on-brown, red-on-white, and black-on-white ceramics constructed via the coil-and-scrape method and fired in an oxidizing atmosphere); pithouse architecture giving way over time to pueblos; canal-irrigated farming; and inhumation burials (Cordell and McBrinn 2012; Haury 1985; Martin 1979). Before A.D. 800, these traits were widespread. As Diehl (2007:146) notes, “There is no basis in ceremonial architecture, residential architecture, material culture, or subsistence practices to differentiate between the [Mogollon] branches prior to the ninth century A.D.” Early Formative period sites in the vicinity of the APE therefore represent a continuation of the Archaic period lifestyle with the introduction of pottery.

Because the APE falls within the Mimbres Mogollon culture area, this report uses a Mimbres-oriented chronological scheme borrowed (with one modification for the sake of simplicity) from Diehl (2007) and Hegmon (2002). This system divides the Mimbres Mogollon sequence first into two main periods: Pithouse and Pueblo. Within the Pithouse period, the Early Pithouse phase is distinguished from the Late Pithouse phase, which is divided into the Georgetown, San Francisco, and Three Circle phases. The Pueblo period begins with the Classic Mimbres phase, followed by the Reorganization phase. The Black Mountain phase and the Cliff phase mark the end of the Mogollon sequence.

Pithouse Period

The Pithouse period (A.D. 200 to ca. 1000) of the Mogollon is widely distributed throughout southwestern New Mexico and southeastern Arizona. Based on architectural features and site locations, it is divided into

the Early Pithouse phase and the Late Pithouse phase. The archaeological manifestations are best known from sites in the Gila and Mimbres drainages (Diehl and LeBlanc 2001; LeBlanc 1980).

The Early Pithouse phase appears to be the first fully sedentary occupation of the area, dating from approximately A.D. 200 to 550 (Diehl and LeBlanc 2001:20). Sites are generally located on the knolls, mesas, and high ridges within the river valleys with access to agricultural land (LeBlanc and Whalen 1980:112). The sites possibly needed to be defended (Diehl and LeBlanc 2001:31–32; LeBlanc 1980:125–128), as they clearly occupy defensible locations (Mathews and Mathews 2006:21). Alternatively, the elevated locations of Early Pithouse villages made them visible on the landscape and thus facilitated social interactions in a region with low population density (Diehl and LeBlanc 2001:33). The structures were round pithouses clustered in small villages spaced evenly along the Mimbres Valley, averaging 17 pithouses (73 percent of sites have 1 to 9 pithouse depressions, 20 percent have 10 to 24 pithouse depressions, and 7 percent have 25 or more pithouse depressions) and lacking superimposition, which suggests a single episode of occupation (Diehl and LeBlanc 2001:115–116). These are very similar in form and layout to Early Agricultural villages in the region, but with the addition of ceramics (Mathews and Mathews 2006). Typically, associated pottery includes Alma Plain, Alma Rough, and Mogollon Early Red (Mathews and Mathews 2006:21). Cienega and San Pedro points remain in use.

A general population increase is suggested up to A.D. 500, followed by a decline during the next 200 years. Large pitrooms (kivas) have been suggested as communal redistribution or ceremonial centers that were organized along lineage or clan lines. The material culture consists of Alma Plain pottery, with small amounts of San Francisco Red Ware, projectile points, and slab metates and one-hand manos. The pithouses are generally circular to oval and were often excavated into or to bedrock (Diehl and LeBlanc 2001). Subsistence strategies evidently focused on wild foods (piñon, acorns, deer, rabbits, rodents, and birds), with some cultigens (corn, squash, beans, and cotton).

Georgetown (A.D. 550–650) sites are located on the first terraces of major drainages. Population decline is indicated by smaller and fewer sites. Pithouses are round to D-shaped. Subsistence is considered by some to have retrogressed to more hunting and gathering (Martin and Plog 1973), whereas LeBlanc (1980) relates an uninterrupted reliance on corn. Later villages are superimposed over most Georgetown sites, indicating the beginning of the in-situ development of the culture.

San Francisco (A.D. 650–750) sites seem to vary geographically. Pithouses became rectangular, and their size and number increased markedly, with the distribution spreading mostly above 1,830 m (6,000 feet). Lower-elevation habitations have possibly been overlooked or buried by later sites. An increased reliance on cultigens is evident, with regional variation in the proportion of wild game remains on the sites. Large trough metates were first noted during the San Francisco phase. The variety of ceramic types developed rapidly, the markers for the phase being Mogollon and San Lorenzo Red-on-brown.

During the Three Circle (A.D. 750–1000) phase, three new ceramic types appear: Three Circle Red-on-white, Mimbres Boldface Black-on-white, and Mimbres Transitional Black-on-white. The rise of a decorated pottery tradition in the Mimbres area is debated; this black-on-white tradition may have been influenced by the Anasazi to the north, with the anthropomorphic designs originating with the Hohokam to the west. This debate includes the mode of influence, such as trade or sociopolitical diffusion. Villages expanded during the Three Circle phase, with the superimposition of later pithouses over earlier pithouses suggesting continued in situ development. New settlements placed along secondary drainages suggest expansion. Pithouses became straight sided and rectangular. Some had masonry half-walls. The orientation of the entrances tended toward the southeast, the first documented patterning for this orientation. The size of the communal structures increased in relation to the size of the habitations. Rapid population increase is postulated. Tree-ring dates cluster around A.D. 850–860, indicating an intensification of building during this decade. The increased building size suggests aggregation of the population into fewer, larger sites or a general increase in population. Burials appear within the houses, although this occurs almost exclusively at sites in the Mimbres Valley. Funerary goods include killed bowls (smashed Boldface bowls or punched Transitional bowls), turquoise, shell, and possibly macaw feathers. The distribution of grave goods is highly variable, suggesting social stratification. The presence of exotic goods indicates extensive contact with the southern and coastal regions. Subsistence data indicate a continued reliance on corn and probably beans and squash by farming the floodplains, as well as the hunting of deer and rabbits.

Prior to the Classic Mimbres, from A.D. 900 through 1060, there is a hiatus in tree-ring cutting dates from the spurt around A.D. 850 and the next reliable series of tree-ring dates. Although the pottery sequence is unbroken, a decline or collapse is postulated prior to the Classic Mimbres phase.

Pueblo Period

The Classic Mimbres is marked by masonry surface dwellings in blocks of rooms, a general lack of kivas, Mimbres Black-on-white pottery, and evidence of irrigation (Wheat 1955). Dating from A.D. 1000 to 1150, the Classic Mimbres phase was defined and is best studied in the Mimbres Valley; however, Mimbres architecture and ceramics are widely distributed in the Gila and Rio Grande Valleys as well as on secondary drainages and in the open desert. Architecture became square-walled above-ground masonry forming contiguous roomblocks. The reasonably large rooms have been postulated to indicate nuclear families organized at the household level. Burials are placed within the rooms below the floors, often with a Classic Black-on-white bowl and highly variable amounts and types of goods, including trade goods. Some extramural burials and cremations have been found. Very few trade ceramics are found at Classic period sites, except for occasional sherds of Socorro Black-on-white, Red Mesa Black-on-white, and Reserve Black-on-white. Dependence on corn apparently decreased, as did the consumption of deer and cottontails, whereas the reliance on jackrabbits and birds increased.

The Classic Mimbres phase reflects a population increase from the Pithouse period. The occupation of major river valleys continued, but the population spread to secondary drainages and to both higher and

lower elevations (LeBlanc and Whalen 1980:113). Large Mimbres settlements occur in the same locations as Late Pithouse period villages. Medium-sized villages of 10 to 20 rooms are located between the large villages and on the secondary drainages. Small sites of 10 rooms or fewer have been assumed to be seasonal farms, although this is debated (Laumbach 1982). Herrington (1982) provides an excellent study of Mimbres water-control systems near the Santa Rita area. Mimbres sites in agriculturally marginal areas are thought to have occurred late and to have been short lived.

The Classic Mimbres phase ended abruptly about A.D. 1130–1150, with an estimated 60 percent decrease in population throughout the Mimbres region based on room counts (Kemrer 2006:26). The cause of this decline is the subject of considerable debate (Lekson 1992). Environmental stressors in conflict with an expanded population that was already using all available resources is the most common explanation.

The end of the Classic Mimbres, whatever its nature, resulted in a period of change throughout the Mogollon area. This period has come to be called the Mimbres Reorganization phase (Hegmon 2002; Hegmon et al. 1998). During this period, the material culture remains similar to that of the Classic Mimbres phase, but the settlement pattern is characterized by small hamlets, and new styles of artifacts, possibly imported from the surrounding areas, begin to appear (Hegmon 2002:327). This period is also characterized by increased residential mobility, reflecting either seasonal moves or a residential shift every few years (Hegmon 2002).

In the subsequent Cliff phase, the Salado phenomenon manifested throughout the Mimbres Mogollon area, with the spread of Salado Polychromes and other red ware ceramics, as well as a return to masonry pueblos.

Precontact Period (A.D. 1450 to 1598)

After the end of the Formative period and before the permanent colonization of New Mexico by the Spanish, there is a period of more than 200 years that is poorly represented in the archaeological record and for which there is no generally agreed upon chronological scheme. In this document, this span has been subdivided into the Precontact period (A.D. 1450–1598)—between the end of the Pueblo period and Juan de Oñate's founding of the first successful Spanish colony in New Mexico—and the Protohistoric period (A.D. 1598–1692)—between the founding of that colony and the Reconquest of New Mexico by the Spanish following the Pueblo Revolt. This approach follows that applied in recent survey work in Doña Ana County (Sale and Silverberg 2017). There are many other approaches to subdividing this period, including simply referring to the entire span as the Protohistoric period or using the first Spanish incursion into the Southwest, in the A.D. 1540s, as the end of this period and the beginning of the Early Historic period.

The Precontact period, as defined here, begins at the end of the Late Formative period and continues until the early Spanish exploration of the Southwest. Relatively little is currently known about this period, but it has recently become the subject of research, so additional information may be forthcoming in the future. Seymour (2017) argues that assemblages from this period can be differentiated from previous assemblages

based on a complex, which she calls the Canutillo Complex, that includes flaked stone tools such as beveled knives, end scrapers, side scrapers, perforators, and small projectile points with straight or concave bases. It has been argued that Mogollon descendant groups include members of groups that the Spanish would come to identify as the Mansos and Zunis (e.g., Baugh and Sechrist 2001; Clark 2007).

Along with these possible Mogollon descendant groups, this period also saw the beginning of immigration into the Southwest by the ancestors of modern groups speaking languages in the Athabascan family. These include the Navajo and the Apache. The most common understanding of the Athabascan migrations is that these peoples arrived in the Southwest from the plains area of eastern New Mexico and southeastern Colorado beginning in the early A.D. 1500s (e.g., Schaafsma 1996; Wilcox 1981). Recent evidence suggests that this immigration might have been more complex, with small groups arriving earlier, during the 1400s (Malhi et al. 2008; Seymour 2002, 2012).

Protohistoric Period (A.D. 1598 to 1692)

The Protohistoric period is marked by the appearance of the first documentary evidence of the Indigenous peoples of southwestern New Mexico. The first Spanish people to pass through the Southwest were Alvar Nuñez Cabeza de Vaca and his companions Andrés Dorantes de Carranza, Alonso del Castillo Maldonado, and Esteban (or Estebanico), an enslaved Berber man from Morocco. This small party of survivors was part of an expedition shipwrecked on the Texas coast in 1527. Over the next seven years, they passed as slaves through the hands of Native American groups in the area before escaping and traveling through what are now Texas and northern Mexico before finally reaching the Spanish colonies in Mexico (Cabeza de Vaca 1555). Although they never entered New Mexico, the travels of these survivors were important in fixing Spanish interest on the Southwest. Esteban, in particular, played an important role in Southwestern history.

Esteban was purchased from Dorantes by Antonio de Mendoza, the Viceroy of New Spain, who began preparations for an expedition to the north (Maura 2008). First, Franciscan priest, Marcos de Niza, was sent north in 1539, with Esteban as a guide, to reconnoiter and to search for the legendary seven cities of Cíbola, a wealthy civilization that was rumored to exist somewhere to the northwest of Mexico. It is not known how far north de Niza himself traveled, but he certainly sent Esteban ahead into what is now New Mexico. Esteban, seeking wealthy cities and ignoring warnings from peoples along the route, was probably killed somewhere in the Southwest, possibly at the Zuni community of Hawikuh (Hammond and Rey 1940). Some of his companions likely returned to the south, bringing word of the large Zuni towns to de Niza.

Following these early contacts, the Spanish mounted their first major expedition into the Southwest in 1541 and 1542 under the leadership of Francisco Vasquez de Coronado (Hammond and Rey 1940). This major expedition likely did not enter southwestern New Mexico but instead passed through eastern Arizona to the Zuni area and continued eastward into the plains. In July 1598, Juan de Oñate established a New Mexico colony at San Juan de los Caballeros near modern-day Santa Fe (Simmons 1991). The route used by Oñate, which became known as *El Camino Real de Tierra Adentro* (Royal Inland Road), passed through

the El Paso and Las Cruces areas and mainly traveled through the Rio Grande Valley. This route became the primary corridor connecting the Spanish colonies in New Mexico to the outside world (Simmons 1991).

Early Spanish settlements in the vicinity of the APE lay well to the south, around Janos and in the Casas Grandes Valley in what is now the state of Chihuahua, Mexico. These settlements were the subject of frequent raiding by numerous groups, including the Sumas, Conchos, Janos, Jocome, and Apache (Fish et al. 2006). One of these raids resulted in a Suma and Apache band burning the mission of Nuestra Señora de la Soledad in Janos in 1663. In response to the raids, the viceregal government in Mexico City established a series of *presidios* (fortified garrisons) at the edges of the area of Spanish influence. These included San Felipe y Santiago near Janos and a short-lived (and never completed) post at San Bernardino near modern Douglas, Arizona (Fish et al. 2006).

Spanish colonists brutally subjugated local Native Americans and exported crops, livestock, and slaves in support of urban centers in Mexico (e.g., Sheridan and Koyiyumptewa 2017). Local indigenous peoples dwelling near the Spanish settlements became a subservient class subject to the *encomienda* and *repartimiento* systems (Douglass and Graves 2017). Through these quasi-feudal systems, the Spanish were able to extract land, goods, and labor as tribute, enriching Spanish settlements at the expense of local indigenous economies. This period also saw the settlement of a new class, the *Indios Amigos*, in the New Mexico colony. These were indigenous Central Mexicans who accompanied the Spanish conquerors and became an intermediate class in the new colony (Douglass and Graves 2017). Between 1610 and 1660, numerous missions were established in central New Mexico, and religious and civil authorities often vied for power, inevitably at the expense of the native inhabitants (Tainter and Levine 1987). Spanish colonial and missionary ambitions dramatically altered the lives of indigenous peoples, who spent much of the Protohistoric period resisting or avoiding Spanish subjugation.

This indigenous resistance to Spanish colonization culminated in the successful Pueblo Revolt of 1680, during which the Spanish were forced to retreat from most of New Mexico, with the exception of a few settlements amongst the Mansos near El Paso (Forbes 1960; Simmons 1991). Some Puebloan peoples from the more northerly Rio Grande settlements accompanied the Spanish during this retreat into Manso territory and established new pueblos near El Paso del Norte, including Ysleta del Sur (Baugh and Sechrist 2001). After more than a decade in retreat, the Spanish under Diego de Vargas were finally able, through the exploitation of factional differences amongst the Rio Grande Pueblos, to reconquer New Mexico in 1692, re-establishing the colony and ushering in the Historic period (Simmons 1991).

Historic Period (A.D. 1692 to present)

After reconquest, the New Mexico colony was governed from Santa Fe but remained relatively decentralized (Douglass and Graves 2017). Indigenous communities were able to negotiate their position within the economic and political system of the colony (Brown 2013; Fowles et al. 2017; Liebmann et al. 2017). In some of the more distant and rural areas, indigenous settlements remained the economic centers of the colony

(Trigg 2005). Spanish and mixed-race colonists slowly transformed into *vecinos*, a term denoting a new civic identity as Hispanic citizens of New Mexico rather than an identity inextricably linked with class or race (Jenks 2017).

The New Mexico colony was the extreme frontier of the Spanish Empire. Apache, Navajo, Comanche, and Ute raids became a constant threat to the Spanish and Pueblos alike. In the mid-1700s, Spain created a series of forts or *presidios* across the northern frontier of New Spain, from San Diego, California, to San Antonio, Texas (Trimble 2004). In the New Mexico colony, at least three *presidios* were established: at Santa Fe, El Paso del Norte, and Santa Rita del Cobre (near modern Silver City). In 1779, Juan Batista de Anza led a force of 600 Spanish soldiers against the Comanche Chief Cuerno Verde (“Green Horn”), defeating and killing him. This victory led to a decrease in Comanche raids into New Mexico. Spain eventually made peace with the Comanche and even enlisted their aid in fighting the Apache (Roberts and Roberts 2006). Conflict with the Apache and Navajo would continue to plague the New Mexico colony for years to come (Weber 1982).

Mexico gained its independence from Spain in 1821, but New Mexico would remain part of Mexico for only a short time. Following the U.S.-Mexican War (1846–1848), Mexico was forced to cede over half a million square miles of territory to the United States in the Treaty of Guadalupe Hidalgo (Griswold del Castillo 1990). This enormous concession of land in the western United States included all of New Mexico north of the 32nd parallel; all of Texas, California, Utah, and Nevada; Arizona north of the Gila River; and parts of Wyoming and Colorado. The new boundary divided south-central New Mexico. In the vicinity of Las Cruces, a new town, Mesilla, was formed on the Mexican side of the border as many Mexicans decided to remain in Mexico, while the new town of Las Cruces was founded on the American side of the border, near the village of Doña Ana (Fugate and Fugate 1989).

By the early 1850s, the U.S. government realized that additional lands south of the Gila River and south of the 32nd parallel would be needed for a southern transcontinental railroad route to the Pacific Ocean. Following a series of negotiations in 1853–1854 with its somewhat weakened southern neighbor, the United States settled on a \$15 million purchase from Mexico of 29,670 square miles south of the Gila River and south of the 32nd parallel. This land acquisition, largely in Arizona but also including a part of southwestern New Mexico, was known as the Gadsden Treaty or “Purchase” (Wagoner 1975:276).

New Mexico and Arizona were not immediately admitted as states to the Union in order to preserve the delicate balance of power between the slave-owning states and the free states prior to the Civil War (Sánchez et al. 2013). Upon the outbreak of the war, Confederate forces moved to secure trade routes through the Southwest to ports in California. The Confederate Army captured Mesilla and declared the formation of the Confederate Territory of Arizona, which included all of what is now southern New Mexico, in July 1861 (Vaughn 1923). The first major battle of the war fought in New Mexico was at Val Verde on February 20 and 21, 1862. Confederate forces then seized Albuquerque in February and Santa Fe in March (Sánchez et al. 2013). Between March 26 and 28, Union forces severed Confederate supply lines at the

battle of Glorieta Pass, 18 km southeast of Santa Fe. Without supplies or reinforcements, the Confederates were forced to retreat and eventually withdraw from New Mexico, thus ending the New Mexican campaign (Edrington and Taylor 1998). Following the end of the war, the U.S. began an aggressive expansion into the Southwest, including the subjugation of native peoples, the construction of forts, the establishment of laws that benefitted settlers, and the opening of trade routes.

The first railroad in New Mexico—the Atchison, Topeka, and Santa Fe—entered the state from the northwest. In December 1878, the first railcar of the Santa Fe passed over newly built tracks in Raton Pass in northeastern New Mexico (Myrick 1970). By March 1881, this line extended through Santa Fe and Albuquerque to the newly founded railroad town of Deming. The Southern Pacific line pushed east into southwestern New Mexico from Arizona, running through the Gadsden Purchase. Service began to the newly founded town of Lordsburg on October 8, 1880. On March 8, 1881, the Southern Pacific line and the Santa Fe line from the north were linked at Deming, completing the nation's second transcontinental railroad (Myrick 1970). On November 25, 1881, the Southern Pacific line extended east from Deming to connect to the Texas & Pacific Railroad at Tierra Blanca, Texas, establishing the country's third transcontinental route (Myrick 1970; Woodward et al. 1989).

Railroad expansion opened up possibilities in almost every aspect of economic development; trains enabled settlers to migrate west, farmers to ship crops to urban centers, miners to ship ore to cities and ports along the coasts, and ranchers to ship cattle to markets without long and dangerous cattle drives (Logan 1999).

The Homestead Act of 1862 allowed settlers to establish homesteads of up to 160 acres on public land, and amendments to the law increased the amount of land allotted (Stein 1990). Settlers taking advantage of the act pushed into New Mexico, arriving by train in modified freight cars called “immigrant cars” (Merlan 2010). Cattle and sheep ranching were important economic forces prior to the arrival of the railroad, however the ability to ship cattle by rail enabled large-scale livestock operations to dominate the market, which had before been managed at a smaller scale by individual ranchers (Dunmire 2013). Coal from mines near Socorro became a major export. Oil and natural gas were discovered in the northwestern and southeastern parts of the state and became a major source of economic growth following World War I (Roberts 2005), remaining so to this day. Trains also allowed those with excess income to visit the American Southwest as tourists.

San Simon Mining District

The San Simon mining district lies within the western foothills of the Peloncillo Mountains. Initially the only historic workings of major significance was the Granite Gap Mine, approximately 7.5 miles south-southeast of the Project area, which began production in 1880 (Lindgren et al. 1910). In 1903 this claim was consolidated with the Louise and San Simon claims. Most work was conducted prior to 1920, and it has only been worked intermittently at much reduced scale since that time (Gillerman 1958). The nearest named major working is the Mineral Mountain Mine, which included a 200-foot-deep shaft following a quartz vein

which produced silver and galena. Operations were shut down around 1904 and the shaft flooded. The Lizzie Paul prospect is located approximately one mile south of the Mineral Mountain workings and is the closest named mine, though much less developed than Mineral Mountain. It lies approximately one mile north of site LA 208576, a mapped but unnamed shaft identified during this survey. Little documentation exists about the Lizzie Paul prospect aside from the fact that it was a gold and copper mine which produced pyrite, chalcocite, and chrysocolla. The vicinity of the Project area was broadly described as containing numerous unnamed prospects and old shafts (Gillerman 1958). These likely date to the initial boom which lasted to the 1920s, though they produced at low volume, if at all, and very few were worked extensively, named, or described with any detail. The principal ores produced throughout the district were copper, zinc and lead, though some silver and gold are present in small amounts.

Ore shipped from the district for smelting was typically sent east to Deming or El Paso or west to Douglas. The nearby railroad town of Steins, located approximately five miles northeast of the Project area and founded in 1880 as Steins Pass, served as the nearest rail access on the newly extended—at the time—Southern Pacific line. While a rock crushing plant was built in 1905, the town never thrived due to the lack of accessible water in the area and little of it is present today (Julyan 1996). Water was also an issue for many mining operations and ultimately it had to be hauled in due to the scarcity of access within the mining district.

ARCHAEOLOGICAL RESEARCH AND RECORDS SEARCH

Archaeological Records Review

Prior to fieldwork, WestLand performed an archaeological records and literature review for the survey area and a surrounding 500 m search radius. WestLand obtained site and project files available through the NMCRIS, managed by the Archaeological Records Management Section (ARMS) of the New Mexico Historic Preservation Department and reviewed the State and National Registers databases. The information obtained from these sources on previously conducted surveys and previously recorded archaeological sites was used to gather baseline information on the cultural resources in the survey area.

According to the data obtained, two previous archaeological surveys intersect the current survey area, and one additional survey is located within 500 m (**Table A.1; Figure A.1** [Appendix A]). No previously recorded archaeological sites or Historic Cultural Properties Inventory (HCPI) resources are located within the survey area or plot within 500 m (**Tables A.2 and A.3; Figure A.2** [Appendix A]).

Historical Map Review

In addition to the Class I records search, WestLand reviewed historical plats and maps of the survey area dating from 1917 to 1962. This review examined General Land Office (GLO) plats, Mineral Survey plats, and U.S. Geological Survey (USGS) topographic quadrangles. Cultural features depicted in the vicinity of the survey area on historical plats or maps reviewed by WestLand are discussed below.

- **USGS 1950 Vanar, AZ 1:62,500:** A prospect is marked at the location of Feature 4 on site LA 208576 (**Appendix C, Figure C.1.**)
- **USGS 1951 Vanar, AZ 1:62,500:** A prospect is marked at the location of Feature 4 on site LA 208576 (**Appendix C, Figure C.2.**)

This record review resulted in one land patent within the survey area. Patent number 1092554, consisting of 640 acres, was patented on September 27, 1937, to Nelson A. Latham under the Homestead Entry-Stock Raising Act (39 Stat. 862).

SURVEY METHODS

Class III Field Survey

WestLand performed a 100 percent pedestrian cultural resources inventory of the survey area with the objective of finding and recording all prehistoric and historical sites and isolates. A 13-foot ROW with a 50-foot buffer area on either side (a 113-foot-wide corridor) along existing roadways and a 100-foot buffer area on all 100-foot by 100-foot-wide drill pad locations was surveyed within lands administered by the BLM-LCDO; a signed BLM Fieldwork Authorization Request form is provided in **Appendix D**. The remainder of the survey area falls on private land and NMSLO-administered land. This survey encompassed existing access roads and nine drill pad locations. In total, 77.8 acres were surveyed, including 26.84 acres of BLM-administered land, 47.19 acres of private land, and 3.85 acres of NMSLO-administered land.

The fieldwork was completed during the periods of March 23 to March 26, 2026 and April 6 to April 7, 2026. WestLand archaeologist Alex Hutton served as field supervisor and was assisted by field technicians Grant Fahrni and Josiah Toorman. Jeremy Loven served as the principal investigator for the Project.

Ground visibility across the survey area was good and ranged from approximately 75 to 90 percent. The entirety of the survey area was physically inspected during the survey, and all encountered sites and isolates were documented by the field crew.

Survey Methods

WestLand's Class III archaeological survey methods conformed to the applicable New Mexico State (4.10.15.1–4.10.15.22 NMAC) and BLM standards. The survey area was systematically inspected for evidence of prehistoric and historical cultural features and artifacts with close-interval parallel transects spaced 15 m or less apart.

Bureau of Land Management Site Definition

The BLM manual (BLM 2005:1-9–1-10) provides guidance on how to define cultural resources sites and isolated manifestations. Recognizing that cultural resources sites are variable, the definition reads as follows: "A site is a physical location of past human activities or events." The manual further classifies archaeological resources into (1) Category 1 Sites, (2) Category 2 Sites, and (3) Isolated Manifestations:

Category 1 Sites

- Contain small numbers of artifacts (less than 15 total); and/or
- Contain few features; and/or
- Are surface scatters; and

- May include soil stains, but no associated artifacts or features; and
- Have been shown to have no depth of deposit either through limited testing or through surface observations that establish that the site has little or no depth of sedimentary matrix (i.e., the site lies on highly eroded ground, highly disturbed ground, or bedrock); and
- Contain no datable hearths, hearths that may contain significant ethnobotanical or ethnozoological remains, prehistoric architectural features, or shrines; and
- Do not relate to nearby Category 1 sites.

Category 2 Sites

- Category 2 sites are all sites that do not fit the criteria for isolated manifestations or Category 1 sites. Although field recordation to current professional standards usually will not be sufficient in and of itself to preserve the information content of Category 2 sites, not all Category 2 sites will be eligible for nomination to the NRHP.

Isolated Manifestations

- This category is defined by the presence of fewer than 10 artifacts; or
- A single, undatable feature; and
- Frequently are found to be redeposited materials that lack significant locational context; and
- Are not related to other nearby isolated manifestations or sites.

Site Recording

Upon locating an artifact or feature, the archaeological field crew surveyed that area for additional cultural materials at intervals of less than 15 m. Pin flags and flagging tape were used to mark features and artifacts to define the overall extent of the site. The field recording of archaeological sites and isolates followed the Laboratory of Anthropology (LA) guidelines as outlined in the user's guide for the LA Site Record (New Mexico Historic Preservation Division 2018).

For each site, archaeologists provided a written description that included the materials present, the site's environmental and topographic settings, the presence of erosion and other disturbances, and any additional qualities that might influence the interpretation of the site; scaled hand-drawn maps or global positioning system (GPS) maps; digital photographs; and electronic data collection with a GPS unit. The standardized forms used during site recording consisted of the LA Site Record form and WestLand's supplemental site recording forms. Representative samples of both prehistoric and historic artifacts were analyzed in the field in order to better interpret the temporal affiliation, cultural affiliation, and function of each site.

A primary site datum (PSD) for each site was digitally recorded. For each PSD, UTM coordinates were electronically recorded with a handheld GPS collector using a Juniper Systems Geode receiver accurate to less than 1 m and initialized to the NAD83 CONUS datum. All features, subsurface testing locations and

select diagnostic artifacts were also recorded with the GPS receiver. Site boundaries were established based on the distribution of features and artifacts.

Artifacts and features that did not constitute a site were recorded as isolated manifestations. The UTM location of each isolate was recorded with a handheld GPS unit. Documentation through written descriptions, sketch drawings, and photographs took place as necessary.

Isolated Manifestations

This category includes all archaeological resources that are not identified as archaeological sites. The UTM location of each isolated manifestation is recorded with a handheld GPS unit and to the extent possible, the isolate is categorized into a conventional typological category and attributed to an archaeological culture, chronological period, and activity (e.g., resource procurement, transportation, ranching, and mining). Documentation through written descriptions, sketch drawings, and photographs took place as necessary.

Isolated manifestations can be individual artifacts, artifact scatters, or features. By definition, these are considered archaeological when they are more than 50 years old. Many artifacts of glass, metal, and synthetic material lack clear diagnostic characteristics to indicate their age. Because these are abundant around modern settlements and in areas frequently visited for hunting, camping, and other forms of recreation, it is impractical to map and record all glass, metal, and synthetic materials. These industrial-age artifacts are identified as archaeological resources only when clear diagnostic evidence establishes that they are over 50 years old.

Artifact and Feature Documentation

Data on artifacts and features are consistently collected, regardless of whether the artifact or feature is associated with a site or considered an isolated manifestation. Artifacts are described and classified into typological categories based on material, form, and manner of decoration. Artifacts representative of each type are photographed. Glass, metal, and other industrial-made artifacts are similarly classified: key diagnostic traits are recorded, and any diagnostic markings or embellishments are photographed and transcribed. Archaeological features are classified into quasi-functional categories, described, and measured. Descriptions include the form, composition, material, construction technique, setting, and any other observable characteristics considered relevant. All features are photographed.

Findings and Field Numbers

Archaeological resources found during a survey are designated as sites or isolated manifestations and are recorded as features or artifacts. WestLand also designates study units and reference points to assist in documentation. Each crew maintains a site log and an isolated manifestation log, each with a series of unique numbers from 1–*n*. When a survey uses more than one crew, each crew has an alphabetical designation that is used as a prefix when recording site or isolated manifestation numbers. Within each designated site, artifacts

and features are given a 1–*n* designation with the prefix “ART” used for artifacts and “F” used for features. A list of features is recorded for each site on the site form, and details are recorded on a feature form. Point-located artifacts are recorded on the site form or on a supplemental form, and observation units are recorded with artifact inventory forms.

Subsurface Testing

One of the major purposes of a Class III cultural resources inventory is to enable agencies to make determinations of NRHP eligibility for the properties that they manage. In some cases, eligibility may rest on whether a site has the potential to provide additional scientific information about the time period and culture represented by the property. Subsurface testing involved the excavation of a 0.3-by-0.3 m hand-excavated test unit. The test unit was excavated until cultural materials were encountered, after which excavation ceased immediately.

Management Report

This report has been prepared in accordance with the standards published by the State of New Mexico (4.10.15.20 NMAC). It includes detailed descriptions of all the identified cultural resources in the survey area. Maps of the Project location, the locations of previously recorded sites, and each site recorded during the survey are provided. Cultural resource location maps, legal descriptions, and UTM coordinates are provided in an appendix that can be easily redacted (**Appendix B**).

Eight newly discovered archaeological sites and one HCPI were recorded during the current survey. An LA site number for each has been obtained from ARMS and an LA Site Record has been completed and uploaded to NMCRIS. Final copies of this report will be submitted to the BLM-LCDO and uploaded to NMCRIS.

Each recorded site was evaluated for its NRHP eligibility. The criteria for evaluating the eligibility of a site for listing in the NRHP is specified in the Code of Federal Regulations (36 CFR 60.4). The pertinent criteria, as specified in these regulations, are excerpted and presented below:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or

- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history.

The NRHP eligibility of the sites documented by WestLand during the current survey was evaluated based on these criteria and following published National Park Service guidelines for their application (National Park Service 1997, 2002). If archaeological sites are deemed to have integrity and significance, they are recommended eligible for listing in the NRHP. If, however, they lack significance, integrity, or both, they are recommended not eligible. The reasoning for each recommendation is provided in the site descriptions below.

SURVEY FINDINGS

The archaeological survey resulted in the documentation of nine newly identified archaeological sites. In addition to the sites, thirty-one isolated manifestations also were recorded within the survey area. The sites and isolates are summarized below, listed in **Tables B.1 and B.2**, and depicted in **Figures B.1.a through B.1.b**. (Appendix B).

LA 208570

Other Site Number: n/a

WestLand Field Site Number: WR 01

Cultural Affiliation: Anglo

Age: Statehood-WWII to Recent (A.D. 1935 to 1958)

Type: Mining Exploration/Extraction

Dimensions: 66 × 40 m (1,699 m²)

Elevation: 4,038 feet amsl

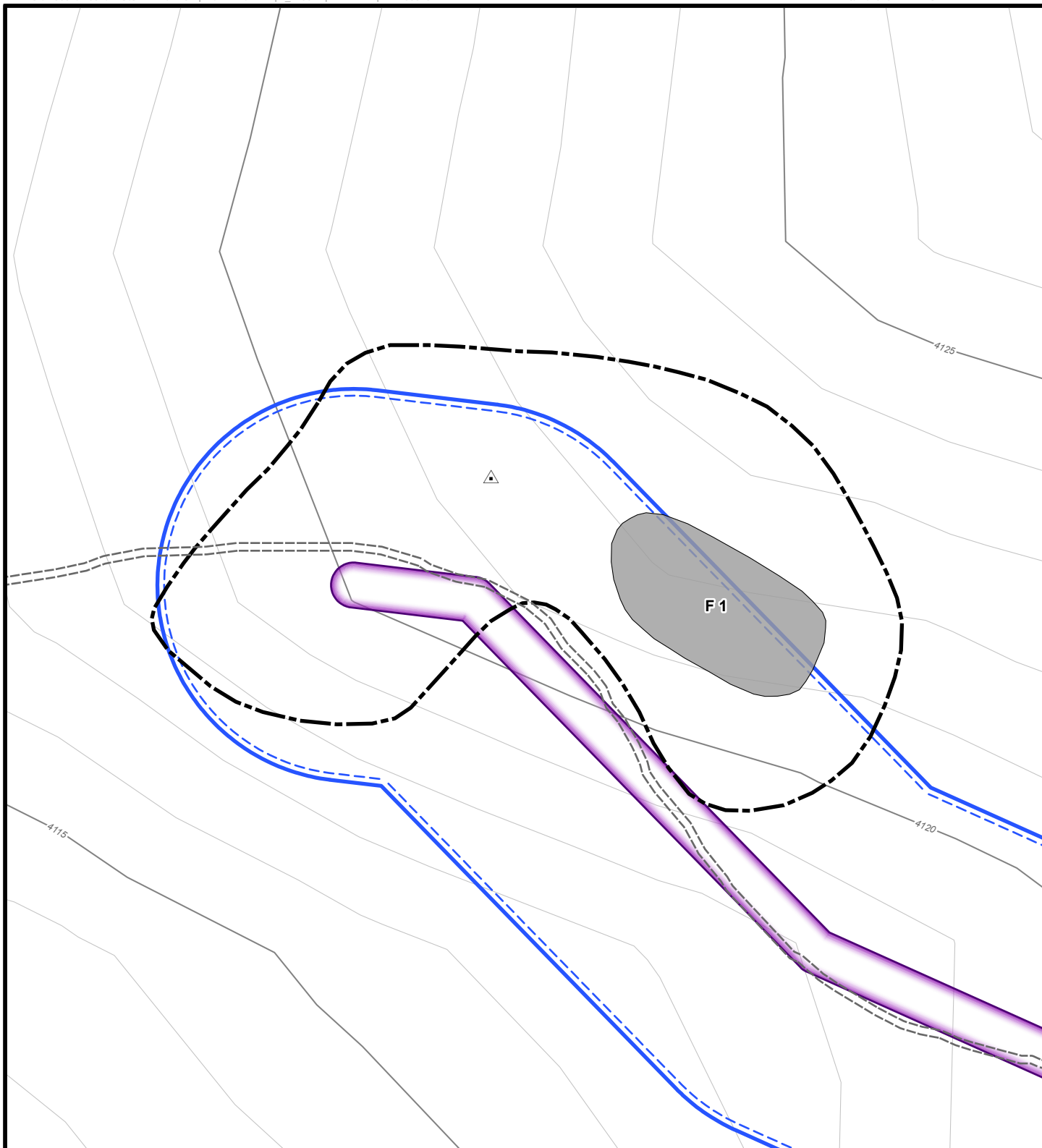
Land Jurisdiction: Bureau of Land Management-Las Cruces District Office

Identification Status: Newly recorded

National Register of Historic Places Eligibility Status: Recommended not eligible



Photo 2. Overview of LA 208570, view to the east



1-foot contours derived from USGS NED
NMCRIIS Activity No. 160933
BLM Report No. BLM-NM-030-26-023

Legend

-  Primary Site Datum
-  Access Road
-  Feature
-  Site Boundary
-  APE
-  Survey Area

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0 20 40
Feet

0 6 12
Meters

Figure 4. LA 208570 site map

Site Description: Site LA 208570 is a newly identified mid-twentieth century mining site consisting of a large prospect pit and an associated scatter of cans (see **Photo 2; Figure 4**). The site dates to the Statehood-WWII to Recent periods, most likely between A.D. 1935 to 1958.

Topographic and Environmental Setting: The site is on an open flat cut by Still Ridge Road, a graded road which runs roughly east–west through the site. A moderate-sized wash is present east of the site, which has caused substantial erosion in the area. Sediments are rocky and alluvial in character and consisting of clayey sand. Vegetation at the site includes creosote, Mormon tea, cholla, prickly pear, paperflower (*Psilostrophe cooperi*), ocotillo, soap tree yucca (*Yucca elata*), pepperweed (*Lepidium latifolium*), hedgehog, globemallow aster (*Sphaeralcea* spp.), catclaw, barrel cactus, desert marigold (*Baileya multiradiata*), mesquite, grama grasses, and senna plants from the family Fabaceae. The site surface is only slightly obscured by vegetation and visibility ranges from 76 to 99 percent across the site.

Features: One feature was identified at the site and is described in detail below.

Feature 1 – Prospect Pit

Dimensions (in meters): 20.7 L × 10.5 W × 1.5 D

Feature 1 is a large, mechanically excavated prospect pit oriented roughly northwest–southeast (**Photo 3**). The feature is located on the north side of Still Ridge Road. Spoils are piled on the northeast and southwest edges of the feature. A small pit has been excavated in the bottom of the feature pit with a shovel, though it is unclear to what purpose. Artifacts associated with the feature include an oil filter ($n = 1$), steel flat top beverage cans with church key openings ($n = 2$), motor oil cans ($n = 2$), and sanitary food cans ($n = 2$).



Photo 3. Feature 1, a prospect pit at LA 208570, view to the southeast

Material Culture: The surface assemblage consists entirely of cans and an oil filter and was fully recorded ($n = 57$). A total of 50 cans were documented, including those associated with Feature 1 (**Table 3**). Types observed include sanitary food cans ($n = 5$), motor oil cans ($n = 39$), aerosol spray cans ($n = 2$), squat sanitary meat cans ($n = 1$), church key opened flat top steel beverage cans ($n = 6$), large oil cans, or other liquid, ($n = 2$) and bimetal pull tab beverage cans ($n = 1$). Artifacts with a refined date range include steel flat top beverage cans, in use from 1935 to 1970s (Martells 1979) and all steel quart sized motor oil cans, which date from 1933 to 1958 (Rock 1989). The dominant presence of oil cans at this location is suggestive of the use and maintenance of heavy equipment used in ground disturbance. Some portion of the assemblage may be attributable to the use of Still Ridge Road, which runs through the site.

Table 3. LA 208570 surface assemblage

Description	Count
Sanitary Food Can	5
Motor Oil Quart Can	39
Aerosol Can	2
Squat Meat Can	1
Flat Top Steel Beverage Can	6
Bimetal Pull Tab Beverage Can	1
Large Oil/Liquid	2
Oil filter	1
Total	57

Condition: LA 208570 is in poor condition. Still Ridge Road runs through the southern portion of the site. The site surface has been severely impacted by mechanical disturbance with seemingly random push piles and scrapes present across the site. These may be attributable to road maintenance or use of the site as a staging area, but there is no clear pattern or obvious intent. Minor disturbance related to cattle grazing was also observed on the site. A small pit was recently excavated in the bottom of Feature 1 with a shovel. It is unknown if this was related to later re-examination of the prospect or modern soil survey. Based on the nature of the site and the observed conditions, subsurface deposits are not expected to be present.

Interpretation: LA 208570 appears to have been a short-term prospecting site related to mid-century mineral exploration. Excavation at the site, reflected in Feature 1, appears to have been deemed non-viable before reaching bedrock and operations ceased.

National Register of Historic Places Eligibility Evaluation: LA 208570 has been heavily impacted by mechanical disturbance related to formation of the site as well as use and maintenance of Still Ridge Road; however, the site still retains integrity of location, design, setting, and feeling. The site cannot be tied to any significant events or people (Criteria A and B), does not display a particular style or level of craftsmanship (Criterion C), and additional research and investigations are unlikely to enhance understanding of the site or mineral exploration in the area during the mid-twentieth century (Criterion D). For these reasons, WestLand recommends site LA 208570 not eligible for listing in the NRHP under any criteria.

Assessment of Project Impact: The proposed Project will not impact LA 208570. To avoid impacting the site, the Project proponent (Curiosity) plans to utilize the existing road through the site. Use of vehicles and equipment within the existing road grade poses no risk of damage to the site.

Treatment Recommendation: No further treatment is recommended for this resource.

LA 208571

Other Site Number: n/a

WestLand Field Site Number: WR 02

Cultural Affiliation: Anglo

Age: Statehood-WWII to Recent (A.D. 1913 to 1960)

Type: Mining exploration

Dimensions: 5 × 4 m (16 m²)

Elevation: 4,239 feet amsl

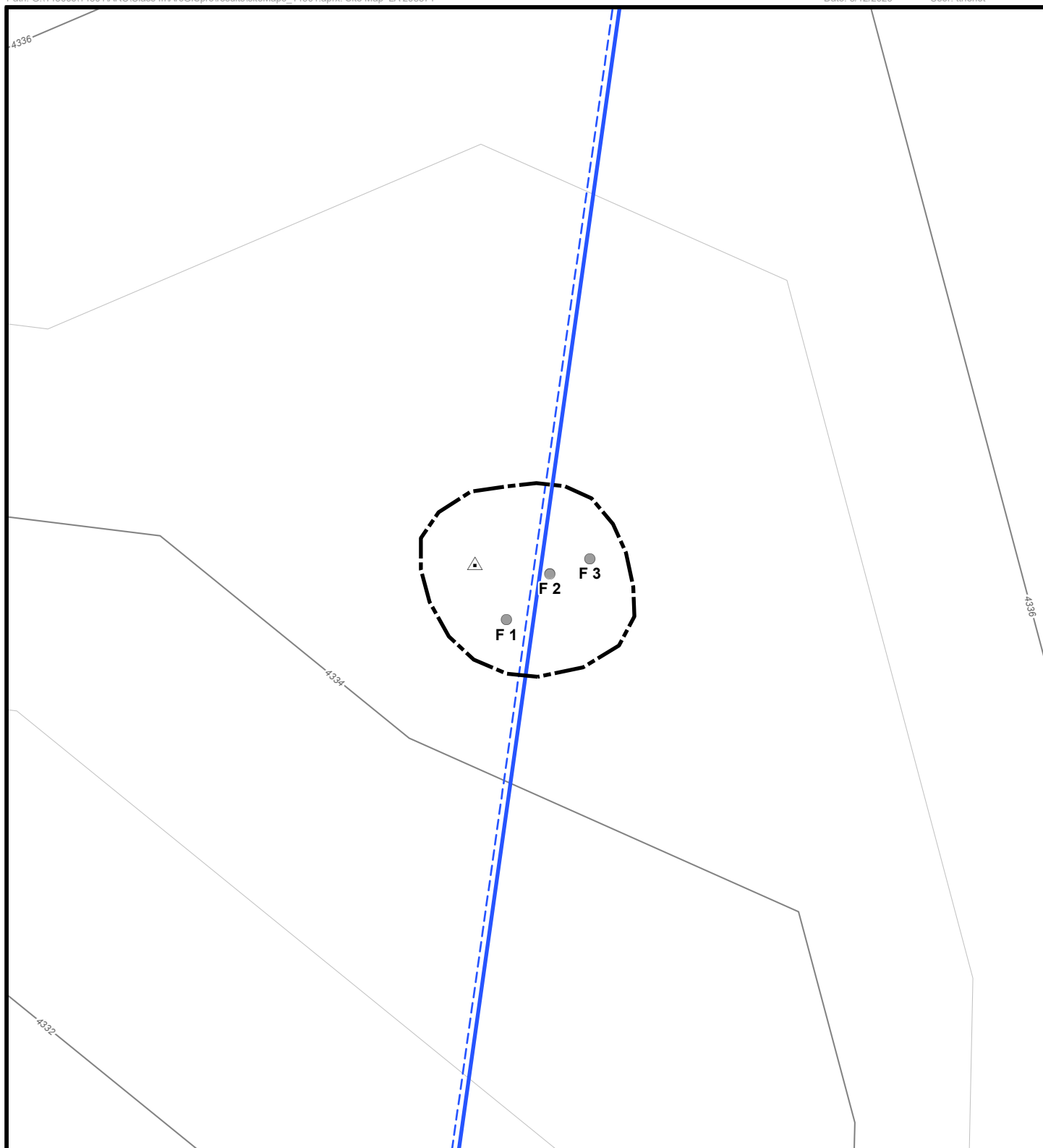
Land Jurisdiction: Private

Identification Status: Newly recorded

National Register of Historic Places Eligibility Status: Recommended not eligible



Photo 4. Overview of LA 208571, view to the east



1-foot contours derived from USGS NED
 NMCRIS Activity No. 160933
 BLM Report No. BLM-NM-030-26-023

Legend

- Feature
- ▲ Primary Site Datum
- ⬢ Site Boundary
- ⬢ Survey Area

WestLand Engineering & Environmental Services

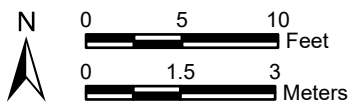


Figure 5. LA 208571 site map

Site Description: Site LA 208571 is a newly identified mining site consisting of three cairns which likely represent a corner of a prospecting claim. The site has a limited surface assemblage consisting of tobacco tins associated with the features and an additional fragment of scrap metal. (see **Photo 4; Figure 5**). The site most likely dates from some point in the Statehood-WWII to Recent periods, between 1913 and 1960.

Topographic and Environmental Setting: The site is located just west of an unnamed drainage near the base of a west facing hill slope. Sediments are rocky and alluvial in character. Vegetation at the site includes catclaw, creosote, Mormon tea, mesquite, cholla and grama grasses. Surface visibility ranges from 76 to 99 percent across the site with only light coverage by vegetation.

Features: Three features were identified at the site. They are described in detail below.

Feature 1 – Cairn

Dimensions (in meters): 1.2 L × 1.2 W × 0.4 H

Feature 1 is a partially collapsed cairn composed of an estimated 40 to 50 rocks (**Photo 5**). Individual rocks are volcanic in character, likely andesite, and measure up to 30 cm in maximum dimension. A faded Prince Albert hinged lid tobacco tin is present inside the feature, indicating it likely functioned as a claim marker, though no documents were contained within.

Feature 2 – Cairn

Dimensions (in meters): 0.9 L × 0.9 W × 0.3 H

Feature 2 is a mostly collapsed cairn composed of an estimated 30 to 40 rocks located slightly east of Feature 1 and slightly west of Feature 3 (see **Photo 5**). Individual rocks are volcanic in character, likely andesite, and measure up to 30 cm in maximum dimension. No artifacts are present in association with the feature.

Feature 3 – Cairn

Dimensions (in meters): 1.2 L × 0.9 W × 0.3 H

Feature 3 is a partially collapsed cairn composed of an estimated 40 to 50 rocks (see **Photo 5**). Individual rocks are volcanic in character, likely andesite, and measure up to 30 cm in maximum dimension. A faded Prince Albert hinged lid tobacco tin is present inside the feature, indicating it likely functioned as a claim marker, though no documents were contained within. A small fragment of wood is also present in the feature, likely the remains of a post.



Photo 5. Features 1 (right), 2 (center) and 3 (left) at LA 208571, view to the southeast

Material Culture: The surface assemblage was fully documented. The assemblage consists of hinged lid tobacco tins associated with Features 1 and 3 ($n = 2$). Both cans have faded lithography but are Prince Albert brand with hinged lids, which date from 1913 to 1960 (Rock 1989). The only other artifact present on the site is a sheet of ferrous scrap metal located southeast of the features ($n = 1$).

Condition: LA 208571 is in fair condition. The site surface has been subject to water erosion, though this does not appear to have impacted the features. The features have slumped and partially collapsed, though they are still intact and clearly definable. An unimproved north–south oriented two-track road runs just west of the site location, though the site does not appear to have been impacted by this road in any way. Based on the nature of the site and the observed conditions, subsurface deposits are not expected to be present.

Interpretation: LA 208571 is likely related to mineral exploration in the area. The three features likely served as a corner claim marker for a prospect in the area as the tobacco tins placed inside the features presumably held documentation at one point.

National Register of Historic Places Eligibility Evaluation: LA 208571 is in fair condition and the site still retains integrity of location, design, setting, and feeling. The site cannot be tied to any significant events or people (Criteria A and B), does not display a particular style or level of craftsmanship (Criterion C), and additional research and investigations are unlikely to enhance understanding of the site or mineral exploration in the area during the mid-twentieth century (Criterion D). For these reasons, WestLand recommends site LA 208571 not eligible for listing in the NRHP under any criterion.

Assessment of Project Impact: The proposed Project will not impact LA 208571. To avoid impacting the site, the Project proponent plans to utilize the existing road which runs north–south approximately 12 m west of the site. Use of vehicles and equipment or any potential maintenance within the existing road grade poses no risk of damage to the site.

Treatment Recommendation: No further treatment is recommended for this resource.

LA 208572

Other Site Number: n/a

WestLand Field Site Number: WR 03

Cultural Affiliation: Anglo

Age: Statehood-WWII to Recent (A.D. 1915 to 1977)

Type: Mining Exploration/Extraction

Dimensions: 21 × 15 m (245 m²)

Elevation: 4,243 feet amsl

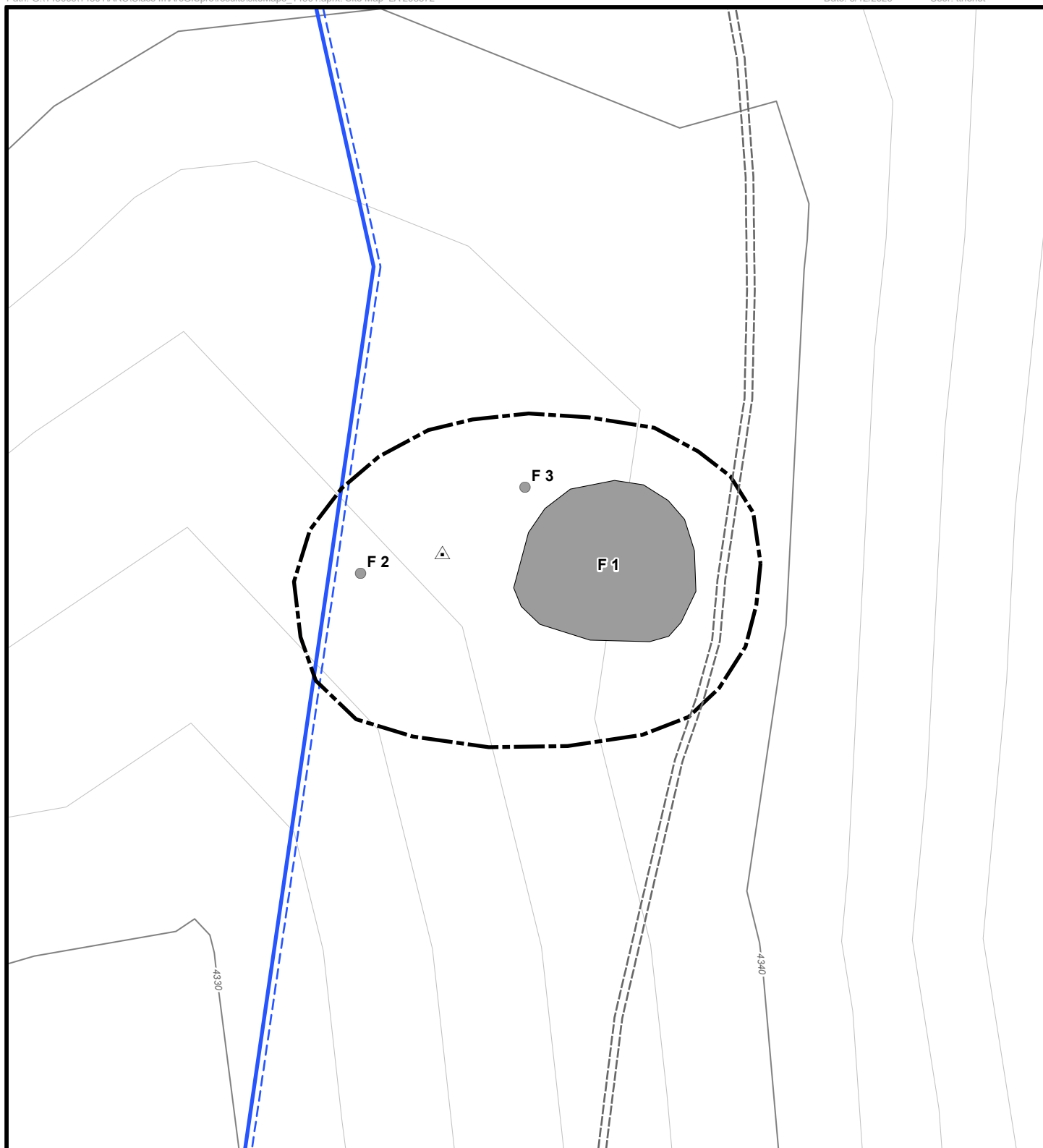
Land Jurisdiction: Private

Identification Status: Newly recorded

National Register of Historic Places Eligibility Status: Recommended not eligible



Photo 6. Overview of LA 208572, view to the southwest



2-foot contours derived from USGS NED
 NMCRIS Activity No. 160933
 BLM Report No. BLM-NM-030-26-023

Legend

- Feature
- △ Primary Site Datum
- Road
- Feature
- - - Site Boundary
- Survey Area

WestLand Engineering & Environmental Services

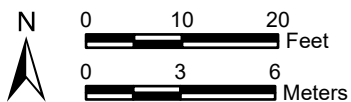


Figure 6. LA 208572 site map

Site Description: Site LA 208572 is a newly identified mining site consisting of two mining features and a survey monument (see **Photo 6; Figure 6**). A limited surface assemblage of two cans is present on the site, though these appear incidental and related to use of a two-track road that runs through the site.

Topographic and Environmental Setting: The site is located on the edge of a wash which runs along the base of a low ridge, just west of an unimproved two-track road. Sediments are rocky and alluvial in character, consistent with alluvial fan deposits. Vegetation at the site includes creosote, prickly pear, cholla, ocotillo, Mormon tea, catclaw, ragweed (*Ambrosia* spp.), a variety of wildflowers and grama grasses. Surface visibility ranges from 51 to 75 percent across the site. The site surface is partially obscured in areas by dense patches of vegetation and clustered shrubs.

Features: Three features were identified at the site. They are described in detail below.

Feature 1 – Prospect Pit

Dimensions (in meters): 8.1 L × 7.4 W × 1.2 D

Feature 1 is a roughly rectangular, mechanically excavated prospect pit (**Photo 7**). The feature is oriented northeast–southwest and is located just to the west of an unimproved two-track road. Spoils are largely concentrated on the north and south edges of the feature. The eastern portion of the spoils removed from the feature has been altered and compacted by use of the road. The western portion opens towards the drainage. No artifacts are associated with the feature.

Feature 2 – Mining Cut

Dimensions (in meters): 3 L × 1 W × 0.6 D

Feature 2 is an exploratory mine cut set in volcanic bedrock, likely either andesite or diorite, within a wash at the base of a low ridge (**Photo 8**). The feature has been excavated approximately 0.6 m deep and appears to have been targeting a quartz contact vein. Alluvial deposits have partially obscured the floor of the feature, though these deposits are not nearly extensive enough to backfill the feature. No artifacts are present in association.

Feature 3 – Survey Monument

Dimensions (in meters): 1.5 L × 0.9 W × 0.5 H

Feature 3 is a cairn composed of an estimated 50+ rocks housing a brass U.S. GLO ¼ section survey marker (**Photo 9**). The feature has partially collapsed and is eroding downslope to the southwest. Individual rocks are volcanic in character, likely andesite or diorite, and measure up to 30 cm in maximum dimension. The survey monument marks the ¼ section at the boundary of Sections 29 and 28 and is dated 1915. No artifacts are present in association.



Photo 7. Feature 1, a prospect pit at LA 208572, two-track at center behind shrubs, view to the northeast



Photo 8. Feature 2, a mining cut at LA 208572, view to the northwest



Photo 9. Feature 3, a U.S. GLO $\frac{1}{4}$ section marker at site LA 208572, plan view

Material Culture: The surface assemblage consists of a bimetal pull tab can and a sanitary food can. These appear to be incidentally present on the site and are most likely related to use of the road rather than being reflective of the original site formation process.

Condition: LA 208572 is in fair condition. Feature 1 has been impacted to a minor degree by the two-track road, which runs over the far eastern edge of the spoil pile associated with the feature. The site has also been subject to water erosion as the spoil piles on the north and south edges of Feature 1 have slumped. Some loss of material has also likely occurred from the western edge which opens into a drainage. Feature 3 has partially collapsed and is eroding downslope to the southwest. Based on the nature of the site and the observed conditions, subsurface deposits are not expected to be present.

Interpretation: LA 208572 appears to have served as a short-term prospecting site related to mid-century mineral exploration. Excavation at the site, reflected in Features 1 and 2, appears to have been deemed non-viable or shallowly played out and operations moved to a different location. The survey marker and associated monument (Feature 3) are unrelated to mineral exploration and likely predate the other features present on the site. The features are consistent with mid-century mining observed on dateable sites elsewhere in the Project area and are likely contemporary.

National Register of Historic Places Eligibility Evaluation: LA 208572 has been impacted by water erosion and vehicular traffic related to the two-track road which runs through the eastern edge of the site; however, the site still retains integrity of location, design, setting, and feeling. The site cannot be tied to any significant events or people (Criteria A and B), does not display a particular style or level of craftsmanship (Criterion C), and additional research and investigations are unlikely to enhance understanding of the site or mineral exploration in the area during the mid-twentieth century (Criterion D). For these reasons, WestLand recommends site LA 208572 not eligible for listing in the NRHP under any criteria.

Assessment of Project Impact: The proposed Project has potential to impact LA 208572. The existing two-track road grade passes over the far eastern portion of Feature 1, and any use of the road could result in further impacts the feature; however, no maintenance will be performed on the road and any impacts from travel on the road will be negligible.

Treatment Recommendation: Because LA 208572 is recommended not eligible for listing in the NRHP, WestLand recommends no further treatment for this resource.

LA 208573

Other Site Number: n/a

WestLand Field Site Number: WR-04

Cultural Affiliation: Anglo

Age: US Territorial to Recent (A.D. 1904 to 1977)

Type: Camp

Dimensions: 60 × 60 m (2,349 m²)

Elevation: 4,297 feet amsl

Land Jurisdiction: Private

Identification Status: Newly recorded

National Register of Historic Places Eligibility Status: Unevaluated



Photo 10. Overview of LA 208573, view to the east



2-foot contours derived from USGS NED
 NMCRIIS Activity No. 160933
 BLM Report No. BLM-NM-030-26-023

Legend

- Artifact
- Feature
- ▲ Primary Site Datum
- Road
- Feature
- Site Boundary
- Survey Area

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0 10 20
 Feet

0 3 6
 Meters

Figure 7. LA 208573 site map

Site Description: Site 208573 is a newly identified historic camp site consisting of the remains of a tent pad, a depression of unknown function and a small scatter of cans (see **Photo 10; Figure 7**). Two prehistoric artifacts are also present as non-contributing, underlying isolates.

Topographic and Environmental Setting: The site is located on an open rocky ridge top that slopes down very slightly to the northwest. The site overlooks a small canyon located just to the north-northeast. A hill grades up to an exposure of volcanic rock approximately 100 m east-southeast of the site. Sediments are rocky and alluvial in character, consistent with alluvial fan deposits. Vegetation at the site includes creosote, prickly pear, ragweed, ocotillo and grasses. Ground visibility is good, ranging between 51 to 75 percent. Surface coverage primarily consists of clustered vegetation. A pack rat midden obscures a portion of Feature 1.

Features: Two features were identified at the site. They are described in detail below.

Feature 1 – Tent Base

Dimensions (in meters): 4.4 L × 3.3 W

Feature 1 is a rectangular rock alignment representing the outline of a canvas tent platform (**Photo 11**). The stacked rock alignment is formed with locally procured and unmodified volcanic cobbles, likely andesite, though the amount of material is insufficient to represent the remains of a rock walled structure. Likewise, no evidence or remains of any superstructure was observed. The interior surface of the feature appears to have been leveled and all large rocks removed, indicating this likely served as the interior floor of a canvas tent. Much of the feature has been overgrown by prickly pear and creosote. A pack rat midden completely obscures the northeast corner. Small fragments of wooden post are present in association with this midden, likely brought in from a nearby claim marker. The only other associated artifact is a small fragment of cast iron which appears to be from a wood stove.

Feature 2 – Depression

Dimensions (in meters): 0.9 W × 0.9 W × 0.2 D

Feature 2 is a shallow, circular depression ringed with rock and of unknown function (**Photo 12**). The interior is overgrown by creosote. No ash/charcoal staining or any other evidence of thermal activity was observed. No artifacts are present in association with the feature. Potentially, the feature represents the remains of a shallow, infilled privy.



Photo 11. Feature 1, a tent base at LA 208573, view to the northwest



Photo 12. Feature 2, a depression at LA 208573, plan view

Material Culture: The surface assemblage was fully documented and consists of a sparse scatter of metal artifacts ($n = 9$), along with a background scatter of prehistoric lithic artifacts ($n = 2$). The assemblage consists of sanitary food cans ($n = 4$), a square key-wind open meat can ($n = 1$), a fragmentary lard pail ($n = 1$), indeterminate can fragments ($n = 2$), and a cast iron stove fragment associated with Feature 1 ($n = 1$). Of the sanitary food cans, two are multi-serving size, one of which is embossed "SANITARY", and two are single serving size.

Prehistoric artifacts include an informal flake tool ($n = 1$; ART 2) which consists of a retouched secondary rhyolite flake, which also shows signs of thermal alteration in the form of potlids, and a fine-grained volcanic core ($n = 1$; ART 1) with a nodule form and multidirectional removal which measures 10 to 11 cm in maximum dimension and retains 26 to 50 percent cortex.

Condition: LA 208573 is in fair condition. The site has been slightly impacted by a two-track road, which runs on the west side of the site. Two sanitary cans were observed in disturbed sediments along the eastern two-track shoulder. There was no structural debris found in association with Feature 1; presumably the structure was dismantled and removed from the site by the occupant. The area has also been subject to minor water erosion and sheetwash and Feature 1 has been impacted by bioturbation. Despite these impacts, the site appears to be largely intact and undisturbed.

The surface artifact assemblage is sparse; however, the site potentially retains subsurface deposits associated with Feature 1 and Feature 2. Additional elements of the prehistoric assemblage may also be present in a subsurface context. Because the site is located on private land, no subsurface testing was performed. Consequently, the potential for subsurface cultural materials remains unevaluated.

Interpretation: LA 208573 appears to have served as a short-term camp site, likely a temporary base related to mineral exploration. The most refined chronological marker present in the assemblage is a multi-serving sanitary can embossed "SANITARY" on the lid. These generally are attributed to the early twentieth century with an introduction date of 1904 when the Sanitary Can Company was formed, though the end date for this marking is somewhat ambiguous (Rock 1989). No other artifacts which can be attributed to a more refined time period are present on the site.

A two-track road which runs along the southwestern edge of the feature was first mapped on the 1987 Vanar, Arizona-New Mexico USGS 1:24,000 quadrangle map and was first clearly visible in 1978 aerial imagery (historicaerials.com) indicating that, minimally, the site pre-dates 1978 at most recent. The site most likely dates to the early-to-mid-twentieth century, contemporaneous with and related to mineral exploration in the local area.

National Register of Historic Places Eligibility Evaluation: LA 208573 has been impacted by water erosion and vehicular traffic related to the two-track road which runs on the southwestern edge of the site; however, the site still retains integrity of location, design, setting, and feeling. The site cannot be tied to any significant events or people (Criteria A and B) and does not display a particular style or level of

craftsmanship (Criterion C). The site potentially retains subsurface deposits, and as such, may hold further data potential which may enhance understanding of the site or mineral exploration in the area during the mid-twentieth century (Criterion D). Due to the site location on private land, no subsurface testing was performed to assess this potential. For these reasons WestLand recommends site LA 208573 unevaluated for listing in the NRHP pending subsurface testing.

Assessment of Project Impact: The proposed Project will not impact LA 208573. To avoid impacting the site, the Project proponent plans to utilize the existing road which runs along the southwestern edge of the site. Use of vehicles and equipment or any potential maintenance confined within the existing road grade poses no risk of damage to the site.

Treatment Recommendation: WestLand recommends the site be avoided and that all vehicle traffic and disturbance within 50 feet of the site boundary be restricted to the existing road grade.

LA 208574

Other Site Number: n/a

WestLand Field Site Number: WR 05

Cultural Affiliation: Archaic, Anglo

Age: Unspecified Archaic (5500 B.C. to A.D. 200), US Territorial to Statehood-WWII (ca. A.D. 1898 to A.D. 1921)

Type: Resource Processing, Mining Exploration/Extraction

Dimensions: 134 × 60 m (4,321 m²)

Elevation: 4,329 feet amsl

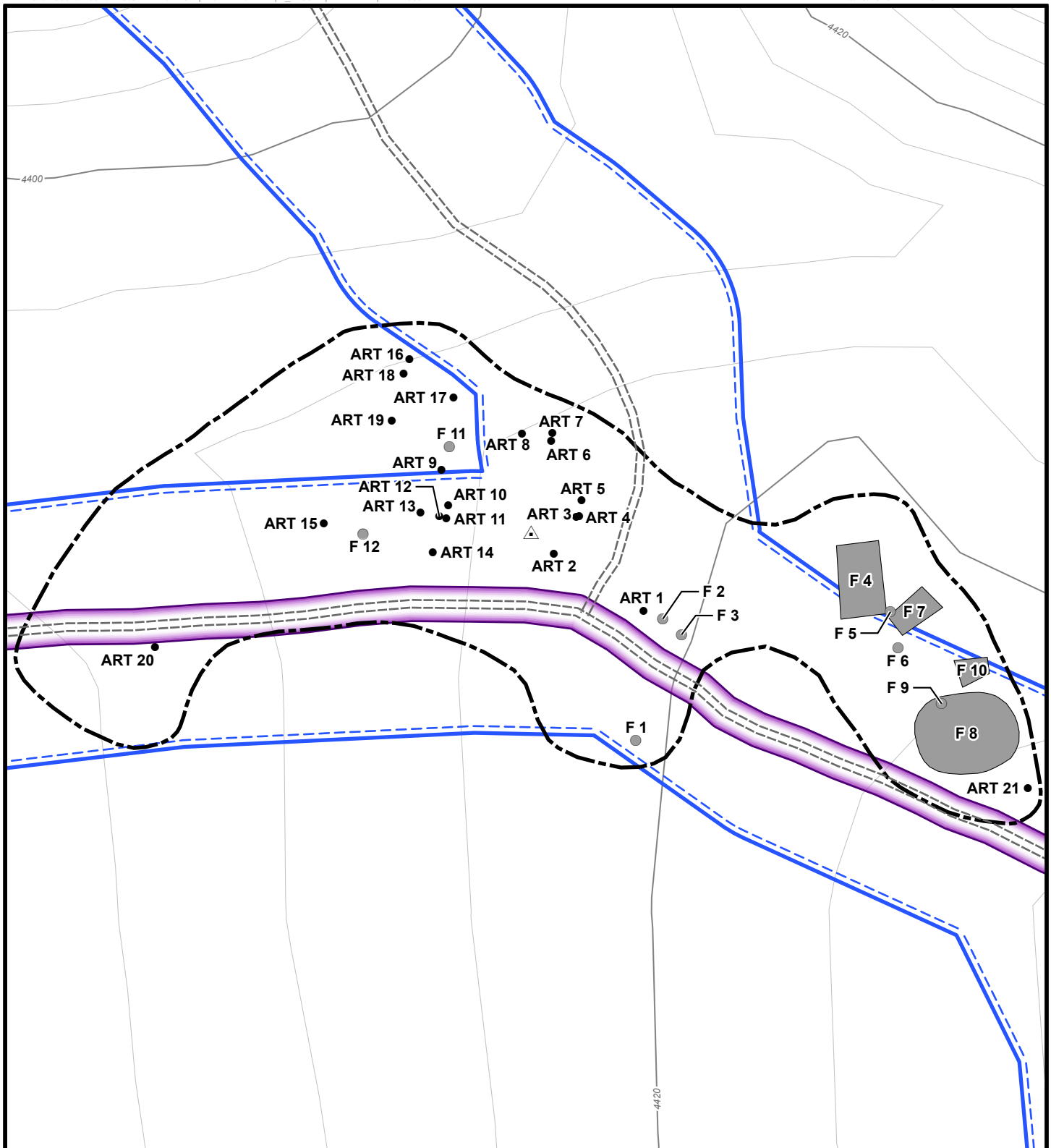
Land Jurisdiction: Private

Identification Status: Newly recorded

National Register of Historic Places Eligibility Status: Recommended eligible D



Photo 13. Overview of LA 208574, view to the northwest



5-foot contours derived from USGS NED
 NMCRIS Activity No. 160933
 BLM Report No. BLM-NM-030-26-023

Legend

- Artifact
- Feature
- △ Primary Site Datum
- Access Road
- Feature
- Site Boundary
- APE
- Survey Area

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0 30 60 Feet
 0 10 20 Meters

Figure 8. LA 208574 site map

Site Description: Site LA 208574 is a newly identified multicomponent site consisting of a series of mining related features and a moderately dense lithic artifact scatter most likely related to processing vegetal matter during the Archaic Period (see **Photo 13; Figure 8**). The site contains 12 features, 11 of which are attributable to early twentieth-century mineral exploration. The remaining feature is a prehistoric hearth association with the diverse scatter of lithic artifacts consisting of debitage, cores, tools and ground stone. A modern .22 caliber bullet casing was found on the site, indicating it has been visited in modern times.

Topographic and Environmental Setting: The site is located on an open flat bench top overlooking a small canyon to the north. An ephemeral east–west oriented drainage is located just south of the site. A two-track road leading up out of the canyon forms a three-way junction in the site with road spurs running to the north, east, and west. Sediments are alluvial in character consist primarily of light brown sand and sandy loam. The surface contains a high concentration of gravels and cobbles. Vegetation present at the site includes creosote, catclaw, cholla, ocotillo, prickly pear, ragweed, one-seed juniper and grasses. Surface visibility is good, ranging from 51 to 75 percent across the site. Coverage primarily consists of clustered pockets of shrubs.

Features: Twelve features were identified at the site. They are described in detail below.

Feature 1 – Cairn

Dimensions (in meters): 1.2 L × 1.2 W × 0.3 H

Feature 1 is a cairn composed of an estimated 25 locally procured volcanic cobbles. The feature has been impacted by a small drainage which runs directly south of the feature and has partially collapsed as a result. The feature is somewhat overgrown by cholla and various forbs. No artifacts are present in association.

Feature 2 – Cairn

Dimensions (in meters): 1 L × 0.8 W × 0.3 H

Feature 2 is a cairn composed of an estimated 15 locally procured volcanic cobbles (**Photo 14**). The feature is located near the edge of a two-track road approximately 3 m northwest of Feature 3. The feature has partly collapsed and is somewhat overgrown by cholla and various forbs. Associated artifacts include a bimetal pull tab can and a fragment of a wooden stake, though the can may be related to use of the two-track road which runs just west of the feature.

Feature 3 – Cairn

Dimensions (in meters): 1.5 L × 1.2 W × 0.5 H

Feature 3 is a cairn composed of an estimated 40 locally procured volcanic cobbles located near the edge of a two-track road, approximately 3 m southeast of Feature 2 (see **Photo 14**). The feature has partially collapsed. Red paint is spattered on some rocks comprising the feature. A small fragment of wooden stake is present in association with the feature.



Photo 14. Features 2 (foreground) and 3 (center), cairns at LA 208574, view to the east

Feature 4 – Mechanical Scrape

Dimensions (in meters): 9.7 L × 5.5 W × 0.5 H

Feature 4 is a mechanical test scrape and an associated push pile. The scrape is oriented north-northwest by south-southeast and the push pile is located at the north end. Dirt, rocks, and gravel have been disturbed and are present in the push pile, which has been overgrown with cholla, prickly pear, ragweed, and grasses. No artifacts are associated with the feature.

Feature 5 – Cairn

Dimensions (in meters): 1.2 L × 0.9 W × 0.3 H

Feature 5 is a cairn composed of an estimated 20 locally procured volcanic cobbles. The feature is in an undisturbed area between Feature 4 and Feature 7. It has partially collapsed and is overgrown by cholla and various forbs. No artifacts are present in association with the feature.

Feature 6 – Cairn

Dimensions (in meters): 1.5 L × 1.2 W × 0.2 H

Feature 6 is a cairn composed of an estimated 25 locally procured volcanic cobbles. The feature is located on the south side of Feature 7. The feature has partially collapsed and is overgrown by various forbs and ragweed. No artifacts are present in association with the feature.

Feature 7 – Mechanical Scrape

Dimensions (in meters): 6.2 L × 3.8 W × 0.5 H

Feature 7 is a mechanical test scrape and two associated push piles (**Photo 15**). The scrape is oriented northeast–southwest and push piles are located at the north and south ends. Dirt, rocks, and gravel have been disturbed and are present in the push pile, which has been overgrown with creosote, various forbs, and grasses. The push pile on the north end is 0.3 m tall, the push pile on the south end is 0.5 m tall. No artifacts are associated with the feature.



Photo 15. Feature 7, mechanical scrape at LA 208574, view to the northeast

Feature 8 – Mining Cut

Dimensions (in meters): 13.5 L × 10.6 W × 1.5 H

Feature 8 is an area disturbed by stepped exploratory mining cuts (**Photo 16**). Three benched areas have been excavated into the northeast face of the landform which opens into the canyon below. The uppermost of these is located just below the top of the landform while the lowest is just above the canyon floor. An associated pile of tailing is primarily located on the south side of the feature. Some of this spoil may be related to Feature 9, which falls within the northern area disturbed by these cuts. The area has been partially overgrown by creosote, ocotillo, along with various grasses and forbs. No artifacts are present in association with the feature.



Photo 16. Feature 8, mining cut and spoil pile at LA 208574, view to the northeast

Feature 9 – Shaft

Dimensions (in meters): 1.8 L × 1.8 W × ? D

Feature 9 is a small, infilled shaft set within the northern portion of the area disturbed by Feature 8 (**Photo 17**). The shaft appears to have been mostly backfilled with spoils and is of unknown depth. Surface observations indicate excavation to a minimum of 1.5 m below the surface. The shaft appears inclined towards the northwest. No artifacts are present in association with the feature.

Feature 10 – Mining Cut

Dimensions (in meters): 3.6 L × 4.2 W × 1.8 D

Feature 10 is a mining cut set in the exposed volcanic bedrock of the landform the site is located on. It is located on a roughly east-facing wall which has been excavated from the canyon below. The excavated area grades upslope. The feature has been overgrown by one-seed juniper and creosote. Several large wooden posts or tree limbs/trunks have been washed into the feature, likely as a result of flash flooding. A modern wooden stake from a claim marker is among these, though much more recent than the feature and unrelated. No artifacts are present in association with the feature.



Photo 17. Feature 9, infilled shaft at LA 208574, view to the northwest

Feature 11 – Fire-Cracked Rock Concentration

Dimensions (in meters): 1 L × 0.7 W

Feature 11 is a concentration of 18 thermally altered cobbles, most likely attributable to the prehistoric component of the site (**Photo 18**). No associated surface staining was observed. The feature has been overgrown by grasses and creosote. It has also been impacted by water erosion and is somewhat dispersed, eroding downslope to the north. Consequently, any potential retained subsurface element is likely to be shallow. Artifacts associated with the feature include a heavily battered 9 × 7 × 6 cm unifacial one-handed rhyolite mano, seemingly utilized as a hammerstone, a fine-grained volcanic chopper with a single working edge which measures 19.5 × 12 × 7 cm, a rhyolite core which retains 26 to 50 percent cortex and measures 9 × 7 × 4 cm, a rhyolite core which retains 26 to 50 percent cortex and measures 7 × 5 × 3 cm, a 2 to 3 cm chert flake with 0 percent cortex, a 1 to 2 cm fine-grained volcanic flake with 0 percent cortex, and two 3 to 4 cm rhyolite flakes with 26 to 50 percent cortex.



Photo 18. Feature 11, a fire-cracked rock concentration at LA 208574, view to the south

Feature 12 – Cairn

Dimensions (in meters): 0.9 L × 0.8 W × 0.2H

Feature 12 is a collapsed cairn composed of approximately 20 locally procured cobbles. The feature has completely collapsed and been partially overgrown by creosote. Associated artifacts include sanitary food cans ($n = 3$).

Material Culture: The surface assemblage was fully recorded using a pin flag tally. A total of 176 artifacts were documented in the surface assemblage. The assemblage consists of lithic debitage ($n = 73$) and historic artifacts including glass ($n = 59$) and cans ($n = 23$) (see **Tables 4 and 5**). An additional 21 artifacts were point-located. These include an amber bottle base ($n = 1$), metate fragments ($n = 2$), biface fragments ($n = 3$), cores ($n = 10$), a mano ($n = 1$), and scrapers ($n = 4$) (see **Table 6**). A variety of raw materials were observed on the site, some of which are not widely available locally and were likely brought in. Rhyolite was the most common material present as debitage (60.3 percent), followed by undifferentiated fine-grained volcanics, which are most likely dacites or basalts (23.3 percent). The remainder of materials consists of small amounts of chalcedony, obsidian, mudstone, quartzite and chert, all of which are represented by less than five flakes total. The prehistoric assemblage is lacking in temporally diagnostic materials. A proportionally high number of cores were documented in the surface assemblage, all of which are rhyolite.

Several diagnostic historic artifacts are present in the assemblage. Several shards of solarized amethyst glass were identified, likely originating from a single medicinal vessel. This type of glass dates from ca. 1870s to 1920 (Lockhart 2006). A hole-in-cap can is present in the assemblage, which dates from ca. 1820s to 1930 (Rock 1989). Two amber bottle bases with “WF & S MIL” embossed are present. This mark is attributed to the William Franzen & Son company and was in use from 1898 to 1921 (Lockhart et al. 2020). Several portions of external friction key-wind open coffee cans are also present on the site. These date from 1920s to 1960s (Rock 1989). Several modern sanitary cans were also noted on the site and these may be attributable to a later visitation with which the coffee cans are likely associated, indicating a later ephemeral mid-century presence.

Table 4. LA 208574 lithic debitage

Material Type	Description	Count
Fine-grained volcanic	Primary flake	1
	Secondary flake	2
	Tertiary flake	13
	Angular Debris	1
Rhyolite	Primary flake	3
	Secondary flake	13
	Tertiary flake	28
Chalcedony	Tertiary flake	1
Obsidian	Secondary flake	1
	Tertiary flake	2
Mudstone	Tertiary flake	3
Quartzite	Secondary flake	1
Chert	Tertiary flake	4
Total		73

Table 5. LA 208574 historic artifacts

Material Type	Description	Count
Glass	Amber (body)	40
	Amber (base)	2
	Colorless (body)	12
	Coke bottle (base)	2
	Solarized Amethyst (Finish/closure)	3
Cans	Motor Oil Quart	1
	Sanitary	13
	Upright Pocket Tobacco	2
	Coffee, key wind	3
	Rectangular Meat	1
	Juice	1
	Lard Pail	1
	Hole-in-cap	1
Total		82

Table 6. Point-located artifacts at LA 208574

Artifact Number	Class	Type	Material	Comments
1	Flaked stone	Core	Rhyolite	Nodule
2	Flaked stone	Core	Rhyolite	Nodule
3	Flaked stone	Core	Rhyolite	Tested Cobble
4	Flaked stone	Retouched Flake/Scraper	Rhyolite	Single Working Edge
5	Flaked stone	Core	Rhyolite	Nodule
6	Flaked stone	Biface	Chert	Medial
7	Flaked stone	Core	Rhyolite	Nodule
8	Flaked stone	Biface	Rhyolite	Complete (Photo 19)
9	Flaked stone	Core	Rhyolite	Nodule
10	Flaked stone	Retouched Flake/Scraper	Rhyolite	Single Working Edge (Photo 20)
11	Ground Stone	Metate	Granitoid	Broken, Basin Form
12	Ground Stone	Metate	Granitoid	Broken, Basin Form
13	Flaked stone	Core	Rhyolite	Nodule
14	Flaked stone	Biface	Chert	Medial
15	Flaked stone	Core	Rhyolite	Nodule
16	Flaked stone	Retouched Flake/Scraper	Rhyolite	Single Working Edge
17	Ground Stone	Mano	Sandstone	One-handed, Biscuit Form (Photo 21)
18	Flaked stone	Core	Rhyolite	Nodule
19	Flaked stone	Core	Rhyolite	Nodule
20	Glass	Bottle	Glass	2 "WF & S MIL" Amber Bottle Bases (Photo 22)
21	Flaked stone	Scraper	Rhyolite	Single working edge, potlids


Photo 19. ART 8, a biface at LA 208574, plan view



Photo 20. ART 10, a scraper at LA 208574, plan view



Photo 21. ART 17, a one-handed biscuit mano at LA 208574, plan view



Photo 22. ART 20, an amber bottle base at LA 208574, plan view

Condition: LA 208574 is in fair condition. It has been impacted by water erosion and use of the two-track road network, which runs through the site. The portion of the site northwest of the road has been heavily disturbed by cattle grazing. This surface disturbance is located within the densest area of prehistoric artifacts, which indicates the shallowly buried assemblage has likely been exposed by livestock disturbance. Some disturbance of the features is also likely attributable to livestock grazing. Most of the site appears to be undisturbed and additional intact subsurface deposits are likely to be present. Based on these observations, formal testing on Feature 11 may reveal a subsurface element. There is also the potential for additional subsurface thermal features to be present.

Interpretation: Prehistorically, LA 208574 appears to have been utilized for resource processing, possibly agave roasting and processing. The complete absence of ceramics along with the general characteristics of the assemblage and site location indicate it likely dates to the Archaic period, though the paucity of any temporally diagnostic artifacts precludes a more specific attribution. Historic use of LA 208574 is related to mineral extraction in the early twentieth century, most likely between 1898 and 1920s. Some later mid- to late-twentieth-century use of the site may be attributable to use of the road.

National Register of Historic Places Eligibility Evaluation: LA 208574 has been impacted by vehicular traffic, livestock grazing and water erosion; however, the site still retains integrity of location, design, setting, materials, workmanship, and feeling. The site cannot be tied to any significant events or people (Criteria A and B) and does not display a particular style or level of craftsmanship (Criterion C). Further archival

research and exploration of the mine shaft could yield additional significant information about the site's historic component and historical mining within the San Simon Mining District. Additionally, while the historic component consists of a series of features and artifacts all plainly visible on the surface, observations indicate the site is likely to retain subsurface prehistoric cultural deposits and displays the potential to provide additional meaningful data about land use and resource processing during the Archaic period in southwest New Mexico. For these reasons WestLand recommends the historic and prehistoric components of site LA 208574 eligible for listing in the NRHP under Criterion D at the local and state level of significance.

Assessment of Project Impact: The proposed Project will not impact LA 208574. To avoid impacting the site, the Project proponent plans to utilize the existing road which runs along the southern portion of the site. Use of vehicles and equipment or any potential maintenance confined within the existing road grade poses no further risk of damage to the site.

Treatment Recommendation: WestLand recommends the site be avoided and that all vehicle traffic and disturbance within 50 feet of the site boundary be restricted to the existing road grade.

LA 208575

Other Site Number: n/a

WestLand Field Site Number: WR 07

Cultural Affiliation: Anglo

Age: Recent (A.D. 1958 to 1977)

Type: Mining Exploration/Extraction

Dimensions: 51 × 67 m (1,832 m²)

Elevation: 4,318 feet amsl

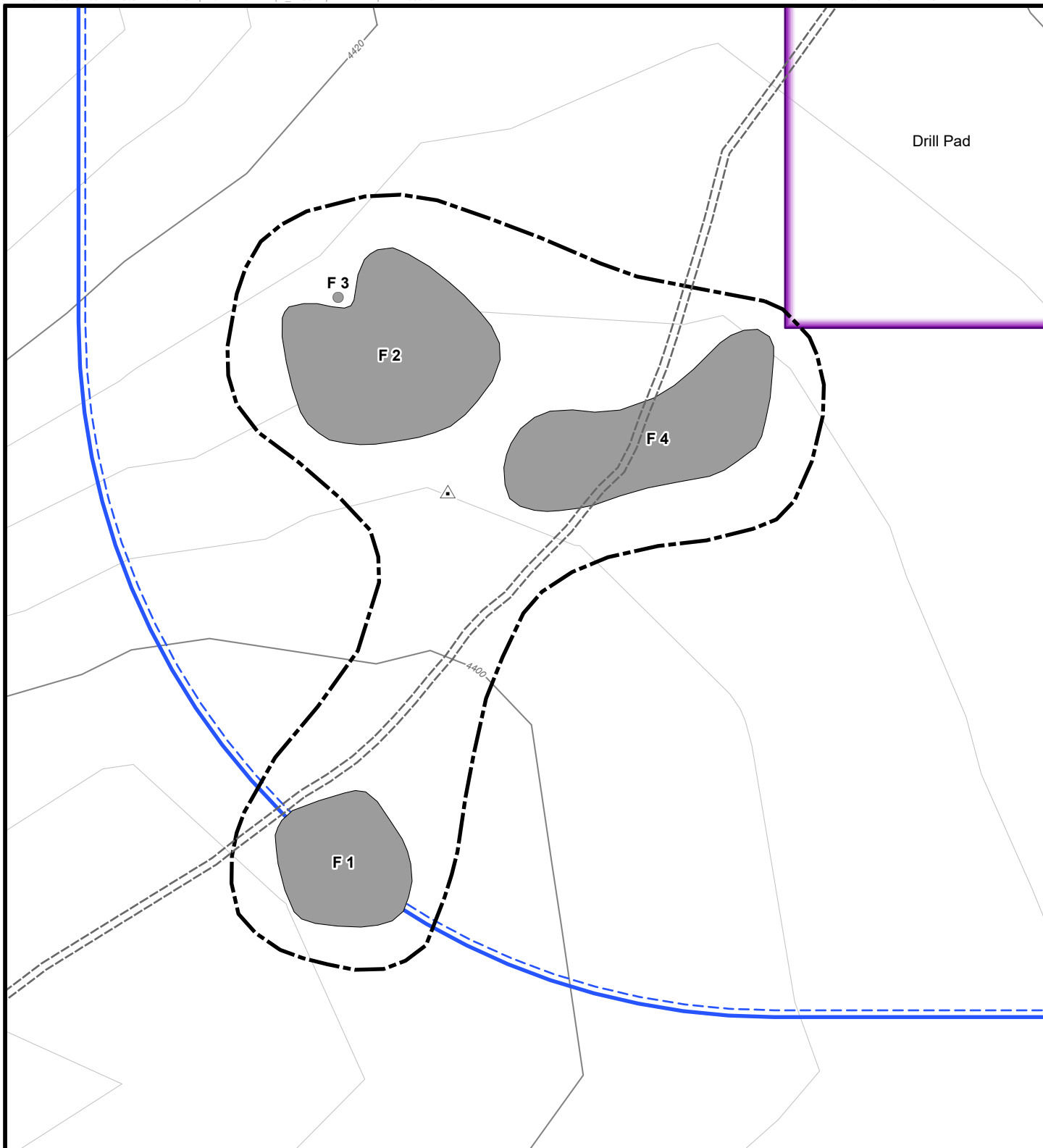
Land Jurisdiction: Bureau of Land Management-Las Cruces District Office

Identification Status: Newly recorded

National Register of Historic Places Eligibility Status: Unevaluated



Photo 23. Overview of LA 208575, view to the southwest



5-foot contours derived from USGS NED
 NMCRIS Activity No. 160933
 BLM Report No. BLM-NM-030-26-023

Legend

- Feature
- △ Primary Site Datum
- Road
- Feature
- Site Boundary
- APE
- Survey Area

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0 20 40 Feet
 0 6 12 Meters

Figure 9. LA 208575 site map

Site Description: Site LA 208575 is a newly identified historic site consisting of a series of mining features including prospect pits, a cairn, and a large tailings pile (see **Photo 23; Figure 9**). The site is also potentially the location of a shaft based on the characteristics of Feature 4 (see below), a mine waste concentration with no clear provenance. If a shaft was at this location, it has since been backfilled and is no longer evident on the surface.

Topographic and Environmental Setting: The site is located at the base of a southeast-facing hill slope which extends to a low rise overlooking an arroyo to the southeast. An unimproved two-track runs through the site contouring the hill to the west and running into the arroyo southwest of the site. Sediments are residual and alluvial in character and very rocky, and primarily consist of a reddish-brown sand formed from weathering granite and a sandy loam which grades to a grayish brown. A high percentage of gravels are present in the soils. Vegetation is moderately dense across much of the site, with visibility ranging from 26 to 50 percent. Vegetation observed includes creosote, prickly pear, cholla, ocotillo, ragweed, desert aster, globe mallows, soaptree yucca, fishhook barrel cactus, agave, crucifixion thorn and various grasses.

Features: Four features were identified at the site. They are described in detail below.

Feature 1 – Prospect Pit

Dimensions (in meters): 11.3 L × 12.6 W × 1.5 D

Feature 1 is a mechanically excavated prospect pit (**Photo 24**). The feature is located south of the two-track road which runs through the site near the northern edge of the drainage which runs along the southeastern portion of the site. Spoils were piled on the north and east edges of the feature. The feature has been impacted by water erosion and the spoil piles have slumped somewhat. The feature has also been overgrown with creosote, cholla, and ocotillo. Several completely deflated ambiguous rock concentrations are present around the feature, though nothing which displays the sufficient patterning or density of materials to warrant documentation as a separate feature. These may represent completely deflated cairns. No artifacts are present in association with the feature.

Feature 2 – Pit

Dimensions (in meters): 16 L × 18 W × 1 D

Feature 2 is a large prospect pit excavated into the southeast face of a hill slope north of a two-track road. It is unclear if the feature is related to mining or was used as a borrow pit. Feature 3, a cairn, is located just above the excavated area to the northwest. Feature 4, a mounded concentration of spoils, is present just east of the feature, however, the material observed in that feature does not match that observed in the excavated area of Feature 2. Excavation was more lateral focus than a depth exploration. No obvious spoil pile associated with the feature was observed. No artifacts are present in association with the feature.



Photo 24. Feature 1, a prospect pit at LA 208575, view to the west

Feature 3 – Cairn

Dimensions (in meters): 1.5 L × 1.2 W × 0.3 H

Feature 3 is a partially collapsed cairn. The feature is formed with an estimated 60 rocks, all locally procured granites and andesites, which range in size up to 35 cm maximum dimension. The feature is located just upslope to the northwest of Feature 3. No artifacts are present in association with the feature.

Feature 4 – Mine Waste

Dimensions (in meters): 25 L × 10 W × 1 H

Feature 4 is a mound of tailings, though the source is unclear (**Photo 25**). The feature is located east of Feature 2, though the material present differs from that observed in the exposure of Feature 2. Portions of Feature 4 are somewhat ambiguous as a two-track road runs through the center of the feature. The eastern edge of the feature has formed a pad built up approximately 1 m thick. The feature may represent the remains of an abandoned and infilled shaft, potentially backfilled using material from Feature 2. No clear evidence of an opening exists though the feature is overgrown with dense vegetation primarily consisting of creosote and ocotillo which obscures much of the surface. No artifacts are present in association with the feature, though two modern pull-tab cans are present next to the road north of the feature.



Photo 25. Feature 4, mine waste at LA 208575, view to the northeast

Material Culture: No surface assemblage is present at site LA 208575.

Condition: LA 208575 is in fair condition. Features 2 and 4 have been impacted by use of the two-track road which runs through the site. The site has been subject to extensive water erosion and sheetwash, which has caused slumping of the features. Although the site has been subject to multiple impacts, it still retains integrity. Based on the absence of a surface assemblage and the nature of the site, subsurface deposits are not expected to be present.

Interpretation: LA 208575 appears to have been a short-term prospecting site related to mineral exploration. The lack of an associated assemblage makes it difficult to attribute a date to the site. The features do not appear to be present in 1957 aerial photography but Features 1 and 2 are visible on imagery from 1978, indicating the site most likely dates between 1958 and 1977 (historicaerials.com). Excavation at the site, reflected in Feature 1, appears to have been deemed non-viable. It is unclear if an excavated shaft was present on the site and later remediated as suggested by Feature 4. If so, this excavation would likely predate the other Features as the two-track road which runs through the site, first visible in 1978 and contemporaneous with Features 1 and 2, passes over Feature 4.

National Register of Historic Places Eligibility Evaluation: LA 208575 has been heavily impacted by water erosion; however, the site still retains integrity of location, design, setting, and feeling. The site cannot be clearly tied to any significant events or people (Criteria A and B), does not display a particular style or

level of craftsmanship (Criterion C). The site potentially contains an undocumented and infilled mine shaft, the recovery and exploration of which falls outside the scope of the current Project. It is unclear based on available evidence if additional investigations will potentially enhance understanding of the site or mineral exploration in the area during the early-to-mid-twentieth century (Criterion D). For these reasons, WestLand recommends site LA 208575 as unevaluated for listing in the NRHP under any criterion pending further investigations.

Assessment of Project Impact: The proposed Project has the potential to impact LA 208575. The site falls within the projected area of a drill pad and could be impacted by construction and operation at this location, in addition to road use and related improvements.

Treatment Recommendation: WestLand recommends the site be avoided by all ground disturbing Project activities. Additionally, high visibility construction fencing should be erected around the site boundary to prevent inadvertent entry and damage to the site.

LA 208576

Other Site Number: n/a

WestLand Field Site Number: WR 09

Cultural Affiliation: Archaic, Anglo

Age: Unspecified Archaic (5500 B.C.to A.D. 200), US Territorial to Recent (A.D. 1900 to present)

Type: Resource Processing, Mining Exploration/Extraction

Dimensions: 118 × 150 m (13,135 m²)

Elevation: 4,164 feet amsl

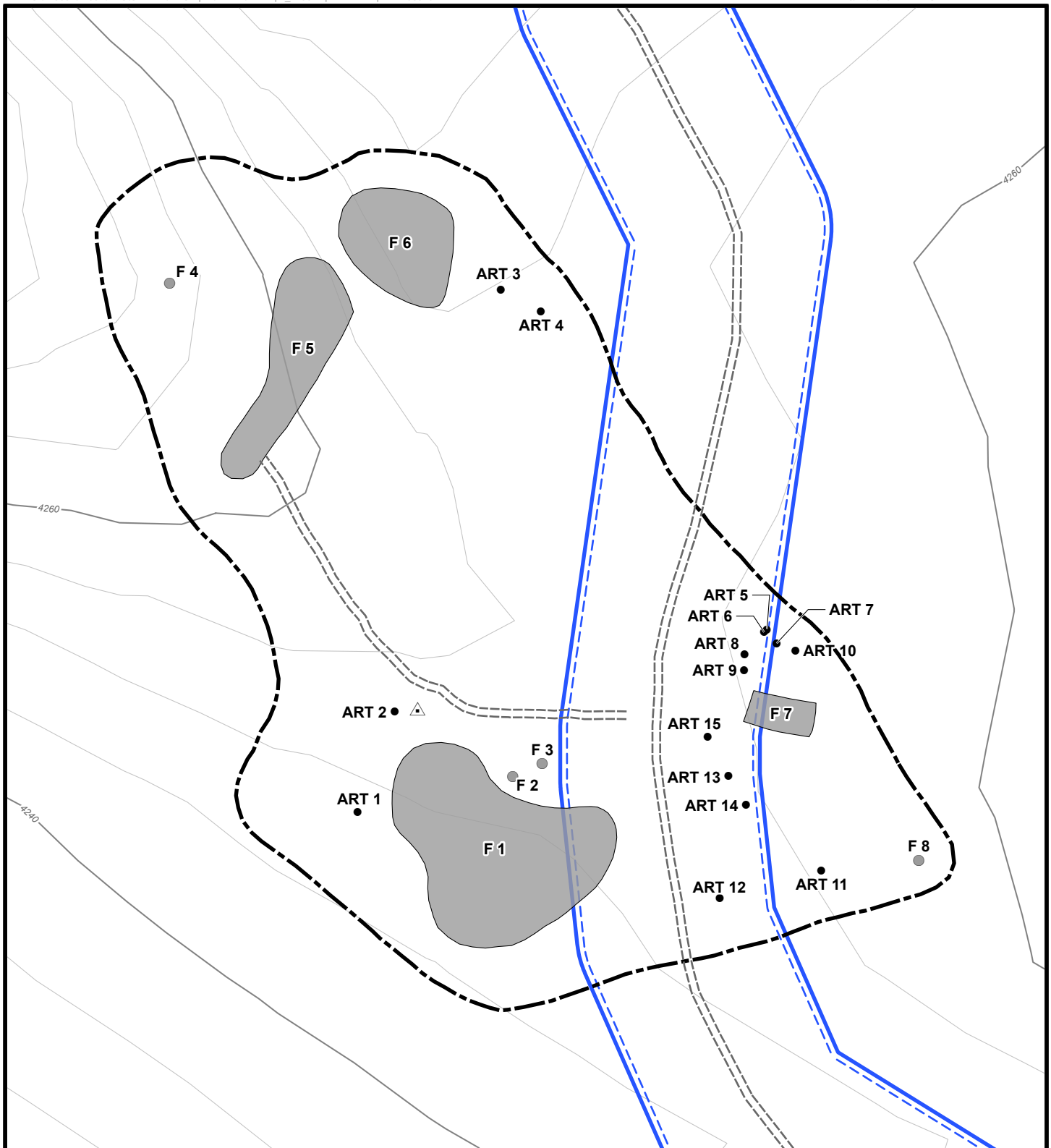
Land Jurisdiction: Bureau of Land Management-Las Cruces District Office

Identification Status: Newly recorded

National Register of Historic Places Eligibility Status: Recommended eligible A and D



Photo 26. Overview of LA 208576, view to the northwest



5-foot contours derived from USGS NED
 NMCRIS Activity No. 160933
 BLM Report No. BLM-NM-030-26-023

Legend

- Artifact
- Feature
- ▲ Primary Site Datum
- Road
- Feature
- Site Boundary
- Survey Area

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0 40 80 Feet
 0 10 20 Meters

Figure 10. LA 208576 site map

Site Description: Site LA 208576 is a newly identified multicomponent site consisting of a series of historic mining features and a scatter of lithic and ground stone artifacts (see **Photo 26; Figure 10**). The prehistoric component of the site likely dates to the Archaic period while the historic component is attributable to the early-to-mid twentieth century. The site location is plotted on the 1950 Vanar USGS 1:62,500 quadrangle map as a prospect, though workings at the site were found to be more intensive than depicted on the map.

Topographic and Environmental Setting: The site is located on an east-northeast facing hill slope and extends down across a north to southeast flowing wash onto an open flat cut by a Still Ridge Road, a graded gravel road. Sediments are rocky and range from residuum composed of decaying granite on the western hill to primarily alluvial in character and consisting of a greyish brown silty loam on the open flats. Vegetation at the site includes creosote, cholla, ocotillo, catclaw, paperflower, senna, fishhook barrel cactus, prickly pear cactus, pepperweed, hedgehog cactus, mustard, wolfberry, globemallow, aster, sand sage, ragweed, crucifixion thorn, desert marigold, one-seed juniper and grama grasses. Surface visibility is good and ranges from 51 to 75 percent across the site. The site surface is partially obscured in areas by pockets of clustered vegetation.

Features: Eight features were identified at the site. They are described in detail below.

Feature 1 – Prospect Pit

Dimensions (in meters): 39 L × 35 W × 1.8 D

Feature 1 is a large mechanically excavated prospect pit (**Photo 27**). Excavation has gone through the upper soils and extended into bedrock in the north and west portions. Spoils ring the excavated area, though the largest concentration is present on the south side of the feature which stands approximately 3 m tall. Feature 2 shares a wall with the excavated portion of the feature. The 1987 Vanar USGS 1:24,000 quadrangle map denotes a prospect at the location of this feature while also indicating Feature 4 as a mine shaft. Previous iterations of the map simply denote “Prospect” in the site location, at what appears to be the site of Feature 4. The interior and tailings have been overgrown with vegetation. The feature is clearly visible in 1978 aerial imagery (historicaerials.com), though it does not appear to be present in the previous aerals from 1957, indicating the feature was likely excavated between 1958 and 1977. No artifacts are present in association with the feature.

Feature 2 – Mine Shaft

Dimensions (in meters): 2.9 L × 1.9 W × 1.9 D

Feature 2 is a shallow shaft set in conglomerate with a thick limestone matrix overlying volcanic materials consisting of andesite and granite. The feature is located just north of Feature 1 and the southern wall of Feature 2 is shared with Feature 1. The feature is overgrown with vegetation, and the floor is obscured with debris and vegetation. Spoils are primarily located on the north and east sides of the feature. No artifacts are present in association with the feature.



Photo 27. Feature 1, a prospect pit at LA 208576, view to the southwest

Feature 3 – Mine Shaft

Dimensions (in meters): 3.4 L × 3 W × 1.2 D

Feature 3 is a shallow shaft cut into granite and andesite located north of Feature 2 (**Photo 28**). Spoils are piled on the north and east sides of the feature. The north and west portions of the feature are overgrown with creosote and catclaw. A large wooden beam is present in the feature, possibly a remnant element of a dismantled head frame.

Feature 4 – Mine Shaft

Dimensions (in meters): 10 L × 7 W

Feature 4 is a large, inclined mine shaft cut into andesite and granite (**Photo 29**). The feature is set on the east facing slope of hill on the western portion of the site. A disused lightly graded road connects the area between Feature 4 and Features 1–3 to the south. The opening of the shaft drops down 3.4 m before angling to the southeast. The total depth of the shaft is unknown, but it is estimated to be in excess of 10 m. An approximate 10 m ring of spoils is present on the downslope south, north, and east edges of the feature. The northern portion of the portal is composed of stacked boulders covered with small spoil material.



Photo 28. Feature 3, a mine shaft at LA 208576, view to the southwest



Photo 29. Feature 4, a mine shaft at LA 208576, view to the south

A prospect is denoted on the 1950 Vanar USGS 1:62,500 quadrangle map, which corresponds to the location of this feature. It is later denoted as a mine shaft on the 1987 Vanar USGS 1:24,000 quadrangle map, where the Feature 1 location is indicated as a prospect. The feature is also clearly visible in aerial imagery from 1947 (historicaerials.com). Based on all available evidence, excavation and abandonment of the feature predates 1947 at minimum, though it most likely dates from around the turn of the century, ca. 1900. The feature cannot be definitively dated based on the assemblage though as no artifacts are present in association with the feature and this attribution is based broadly on the characteristics of the feature and excavation techniques.

Feature 5 – Mechanical Scrape

Dimensions (in meters): 39 L × 6.5 W

Feature 5 is a large mechanically scraped area. The feature is oriented northeast–southwest and runs uphill from a wash. The feature widens from 6.5 m at the southern end to approximately 12 m on the northern end where a large push pile is present. The function of the feature is unclear; there is no clear indication as to why the area was graded or any direct physical association with other features. No artifacts are present in association with the feature.

Feature 6 – Tank

Dimensions (in meters): 18 L × 20 W

Feature 6 is a stock tank located in a drainage. The feature is located northeast of Feature 5 within the wash at the base of the hill. A 1.2 m tall berm has been constructed on the north side of the feature which spans across the wash damming it. The interior of the feature is slightly depressed and shows substantial impacts from cattle. The berm is washing out and the feature is unlikely to retain a significant volume of water and none was retained within the feature at the time of recording. Dense vegetation covers the area, including much of the berm itself. The feature is clearly visible in 1978 aerial imagery (historicaerials.com), though it is ambiguous in images before that date. No artifacts are present in association with the feature.

Feature 7 – Mechanical Scrape

Dimensions (in meters): 12 L × 6 W

Feature 7 is a mechanical scrape and push pile. The push pile is located on the east end of the scrape and measures 5 × 3.6 × 1 m. The feature likely represents a test scrape related to the other prospecting features on the site. A disused lightly graded road segment which runs roughly east–west is present south of the feature. The feature is clearly visible in 1978 aerial imagery (historicaerials.com), though it does not appear to be present in the previous aerials from 1957, indicating the feature was likely excavated between 1958 and 1977. Some unrelated lithic artifacts are present in the vicinity of the feature.

Feature 8 – Rock Concentration

Dimensions (in meters): 1.4 L × 1.3 W

Feature 8 is a deflated cluster of approximately 40 rocks. All rocks are present on the surface and consist of granites, rhyolites, and andesites. No indications of thermal activity were observed on the rocks and no staining or charcoal was noted in association with the feature. The feature is located on an open flat and has not accumulated through fluvial processes. The rocks are potentially present as a completely collapsed and deflated cairn. The only associated artifact is a rhyolite scraper.

Material Culture: The surface assemblage was fully documented with a pin flag tally and an additional 15 artifacts were point located (**Tables 7 and 8**). The assemblage comprises lithic debitage ($n = 17$), cores ($n = 7$), ground stone ($n = 1$), bifaces ($n = 1$), scrapers/flake tools ($n = 6$), and ceramics ($n = 43$). Raw materials observed as debitage include chert, fine-grained volcanic materials, rhyolite and chalcedony. All stages of lithic reduction are present, with primary flakes ($n = 3$), secondary flakes ($n = 5$), and tertiary flakes ($n = 9$) observed. While the density of artifacts is overall low, the diversity of materials and ratio of tools to debitage is quite high.

A completely disarticulated and unconsolidated low volume scatter of fire-cracked rock was also noted in the northeast portion of the site, approximately 10 m north of Feature 7. Although it lacked patterning and density sufficient for documentation as a feature, it does indicate the site holds the potential to retain additional subsurface thermal features.

Historic artifacts ($n = 3$) present in the assemblage are sparse and consist of a lard pail, a steel flat top beverage can, and a scrap of ferrous sheet metal. The beverage can and lard pail were both located west of Feature 1 and had been used as shooting targets.

Table 7. LA 208576 lithic debitage

Material Type	Description	Count
Chert	Secondary flakes	1
Fine-grained volcanic	Primary flake	1
	Secondary flake	2
	Tertiary flake	2
Rhyolite	Primary flake	2
	Secondary flake	2
	Tertiary flake	6
Chalcedony	Tertiary flake	1
Total		17

Table 8. Point-located artifacts at LA 208576

Artifact Number	Class	Type	Material	Comments
1	Flaked stone	Core	Rhyolite	11–12 cm, 1–25% cortex, nodule, bidirectional removal
2	Flaked stone	Core	Rhyolite	10–11 cm, 51–75% cortex, nodule, tested
3	Flaked stone	Biface	Chert	2.3x2x0.6 cm, proximal, possible drill fragment (Photo 30)
4	Flaked stone	Core	Rhyolite	9–10 cm, 0% cortex, nodule, multidirectional removal
5	Ground stone	Mano	Granitoid	9 cm max, one-handed, likely bifacial (Photo 31)
6	Flaked stone	Scraper	Rhyolite	10–11 cm, 0% cortex, multiple working edges (Photo 32)
7	Flaked stone	Core	Fine-grained Volcanic	6–7 cm, 0% cortex, nodule, multidirectional removal
8	Flaked stone	Core	Rhyolite	8–9 cm, 0% cortex, nodule, multidirectional removal
9	Flaked stone	Scraper	Rhyolite	4–5 cm, 0% cortex, single working edge
10	Flaked stone	Utilized Flake	Rhyolite	9–10 cm, 0% cortex, single working edge
11	Flaked stone	Scraper	Rhyolite	9–10 cm, 0% cortex, single working edge
12	Flaked stone	Scraper	Fine-grained Volcanic	9–10 cm, 0% cortex, multiple working edges
13	Flaked stone	Scraper	Fine-grained Volcanic	10–11 cm, 0% cortex, single working edge
14	Flaked stone	Core	Rhyolite	6–7 cm, 1–25% cortex, tabular, bidirectional removal
15	Flaked stone	Core	Fine-grained volcanic	7–8 cm, 0% cortex, nodule, multidirectional removal

**Photo 30. ART 3, a biface at LA 208576, plan view**



Photo 31. ART 5, a mano at LA 208576, plan view



Photo 32. ART 6, a scraper at LA 208576, plan view

Condition: LA 208576 is in fair condition. It has been impacted by water erosion, livestock, and vehicular traffic. Although the site has been subject to multiple impacts, it still retains integrity and displays potential for buried cultural deposits, as demonstrated by the presence of artifacts observed to be partially buried. The presence of disarticulated fire-cracked rock on the surface also indicates there may be retained subsurface elements of thermal features with no remaining surface expression.

Interpretation: Prehistorically, LA 208576 appears to have been utilized for resource processing, possibly roasting and processing agave. The complete absence of ceramics along with the general characteristics of the assemblage indicate it likely dates to the Archaic period, though the paucity of any temporally diagnostic artifacts precludes a more specific attribution. Historic use of LA 208576 is related to mineral extraction in the early twentieth century. The workings at the site were plotted on the 1950 Vanar USGS 1:62,500 quadrangle map, indicating excavations at the site occurred prior to 1947. Some later mid- to-late-twentieth-century use of the site may be attributable to use of the road. The stock tank, Feature 6, is of unknown relation to the rest of the historic component. It appears contemporary with later mid-century excavations that were undertaken, but is most likely related to ranching and livestock grazing.

National Register of Historic Places Eligibility Evaluation: LA 208576 has been impacted by vehicular traffic, livestock grazing, and water erosion; however, the site still retains integrity of location, design, setting, materials, workmanship, and feeling. WestLand recommends the site's historic component eligible for listing in the NRHP under Criterion A at the local and state level of significance as it relates to the theme of Industry and its association with mining and mineral extraction activities within the San Simon Mining District and the Peloncillo Mountains region of southwestern New Mexico during the early to mid-twentieth century. The historic component is also recommended eligible under Criterion D for its potential to inform on early- to mid-twentieth-century mining and mineral extraction practices in Hidalgo County and southwest New Mexico. Subsurface investigations into the features and additional archival research, has the potential to yield significant additional information concerning chronology and site function.

Observations indicate the site is likely to retain subsurface cultural deposits associated with the prehistoric component and has the potential to provide additional meaningful data about land use and resource processing during the Archaic period in southwest New Mexico. For these reasons, WestLand recommends the LA 208576 prehistoric component eligible for listing in the NRHP under Criterion D.

For these reasons described above, WestLand recommends LA 208576 eligible for listing in the NRHP under Criteria A and D at the local and state level of significance. The site is recommended not eligible under Criterion B because it is not associated with a significant person. Further the site has no structures that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master (Criterion C).

Assessment of Project Impact: To avoid impacting the site, the Project proponent plans to utilize the existing road through the site. Use of vehicles and equipment within the existing improved road grade poses no risk of damage to the site.

Treatment Recommendation: WestLand recommends the site be avoided by all ground disturbing activities and all vehicle traffic be restricted to the existing road grade.

LA 208577

Other Site Number: n/a

WestLand Field Site Number: WR 11

Cultural Affiliation: Anglo

Age: Statehood-WWII to Recent (A.D. 1912 to 1960)

Type: Mining Exploration/Extraction

Dimensions: 15 × 14 m (156 m²)

Elevation: 4,185 feet amsl

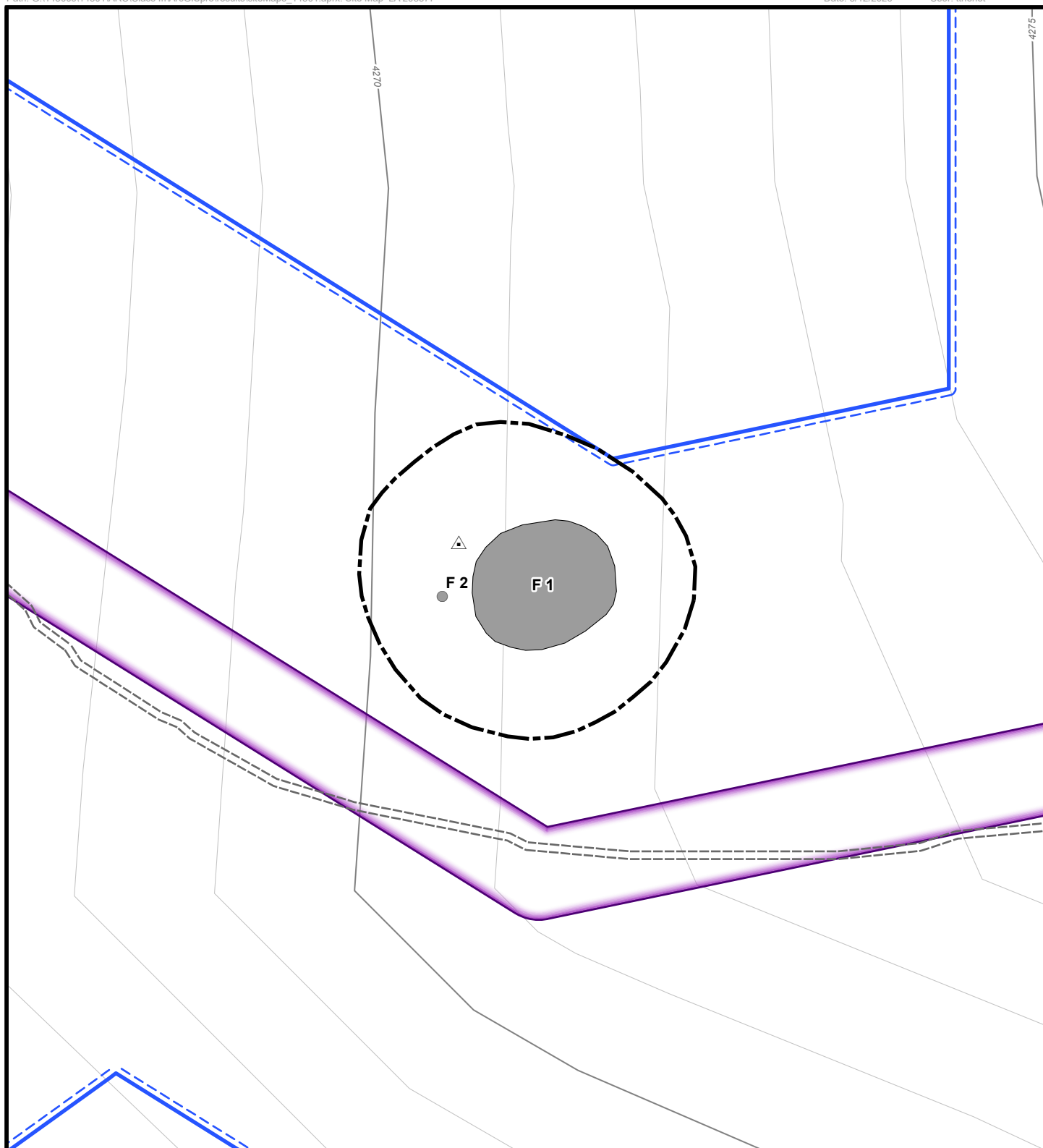
Land Jurisdiction: Bureau of Land Management-Las Cruces District Office

Identification Status: Newly recorded

National Register of Historic Places Eligibility Status: Recommended not eligible



Photo 33. Overview of LA 208577, view to the east



1-foot contours derived from USGS NED
 NMCRIS Activity No. 160933
 BLM Report No. BLM-NM-030-26-023

Legend

- Feature
- ▲ Primary Site Datum
- Access Road
- Feature
- Site Boundary
- APE
- Survey Area

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0 10 20 Feet
 0 3 6 Meters

Figure 11. LA 208577 site map

Site Description: Site LA 208577 is a newly identified historic site consisting of a prospect pit and cairn (see **Photo 33**; **Figure 11**). The site lacks a definitive associated artifact assemblage but is most likely contemporary with other early twentieth-century mineral exploration sites found in the local area.

Topographic and Environmental Setting: The site is located on an open flat which very gently grades down to the west. East–west flowing drainages are present both north and south of the site location. Sediments are alluvial and aeolian in character and consist of rocky brown sandy loam. Vegetation at the site includes creosote, ocotillo, cholla, catclaw, senna, prickly pear cactus, pepperweed, mesquite, fishhook barrel cactus, paperflower and grama grasses. Surface visibility ranges from 76 to 99 percent across the site. The site surface is partially obscured in areas by clustered patches of vegetation. The site is located just northeast of a three-way intersection where Still Ridge Road makes a hairpin turn and connects to an unimproved two-track road extending from the east.

Features: Two features were identified at the site. They are described in detail below.

Feature 1 – Prospect Pit

Dimensions (in meters): 2.7 L × 2 W × 0.5 D

Feature 1 is a roughly circular prospect pit (**Photo 34**). Spoils ring most of the feature, but the largest concentration is located on the southwest edge of the feature where they are piled up to 0.4 m high. The feature appears to have been manually excavated. No artifacts are present in association with the feature.

Feature 2 – Cairn

Dimensions (in meters): 2 L × 1.6 W × 0.3 H

Feature 2 is a partially collapsed cairn composed of an estimated 30 to 40 locally procured volcanic rocks (**Photo 35**). The largest of these rocks is 0.38 m maximum dimension. The feature is almost completely covered by a pack rat midden. No artifacts are present in association with the feature, and no artifacts were observed within the packrat midden.



Photo 34. Feature 1, a prospect pit at LA 208577, view to the south



Photo 35. Feature 2, a cairn at LA 208577, view to the northeast. Spoils from Feature 1 visible center right.

Material Culture: The surface assemblage at LA 208577 consists of a single sanitary food can.

Condition: LA 208577 is in fair condition. It has been impacted by water erosion, which has caused visible slumping in Feature 1. A pack rat midden covers much of Feature 2 and has likely dislodged elements of that feature. An unimproved two-track road merges onto Still Ridge Road, a graded and maintained dirt road, just west of the site location, though use of these roads does not appear to have impacted the site.

Interpretation: LA 208577 is a mineral exploration site which consists of a shallow test pit and marker. Use of the site was short-term, and it lacks any artifact assemblage to definitively date the site. The characteristics of the features are consistent with other exploratory mining sites found in the area which date to the early twentieth century.

National Register of Historic Places Eligibility Evaluation: LA 208577 has been impacted by water and bioturbation; however, the site still retains integrity of location, design, setting, and feeling. The site cannot be tied to any significant events or people (Criteria A and B), does not display a particular style or level of craftsmanship (Criterion C), and additional research and investigations are unlikely to enhance understanding of the site or mineral exploration in the area during the mid-twentieth century (Criterion D). For these reasons, WestLand recommends site LA 208570 not eligible for listing in the NRHP under any criteria.

Assessment of Project Impact: The proposed Project will not impact LA 208577. To avoid impacting the site, the Project proponent plans to utilize the existing roads which lie outside the site boundaries. Use of vehicles and equipment within the existing road grade poses no risk of damage to the site.

Treatment Recommendation: No further treatment is recommended for this resource.

HCPI 57486

Other Site Number: n/a

WestLand Field Site Number: WR 06

Cultural Affiliation: Anglo

Age: Recent (A.D. 1958 to Present)

Type: Structure (Windmill)

Dimensions: 85 × 47 m (2,770 m²)

Elevation: 4,257 feet amsl

Land Jurisdiction: Bureau of Land Management-Las Cruces District Office

Identification Status: Newly recorded

National Register of Historic Places Eligibility Status: Recommended not eligible



Photo 36. Overview of HCPI 57486, view is to the west



1-foot contours derived from USGS NED
 NMCRIIS Activity No. 160933
 BLM Report No. BLM-NM-030-26-023

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0 10 20 Feet

0 3 6 Meters

Legend

- Feature
- ▲ Primary Site Datum
- Site Boundary
- APE
- Survey Area

Figure 12. HCPI 57486 map

Site Description: HCPI 57486 is a windmill which likely dates from the 1950s to 1970s with an associated scatter of recent additions and accessories (see **Photo 36; Figure 12**). The shaft of the windmill is disconnected as the unit has been converted to a solar pump. The vane bears writing on both faces. The north face is labeled "The Aeromotor Co. Chicago". The south face is labeled "Momsen Dunnegan Ryan Co. El Paso Texas" (**Photos 37 and 38**). A large tank on rail ties is located southeast of the windmill, though the connecting hose is broken and it is unclear if the tank retains water, though cattle troughs on the side of the tank were full at the time of recording. The tank first appears in 1986 aerial imagery, seemingly replacing a different water holding structure which was previously near this location (historicaerials.com). It is unclear when the windmill was erected at this location as it cannot be accurately identified in aerial photography, but the roads leading to the property location and visible soil disturbance from cattle can be seen in the 1978 imagery. The windmill was potentially salvage relocated from elsewhere as it was not noted on any historical topographic or USGS quadrangle maps at any point, though the 1987 Vanar, Arizona-New Mexico USGS 1:24,000 quadrangle denotes the site location as a well.

Aermotor steel windmills have been manufactured since the 1880s and the windmill at this site appears to be a model 702 manufactured in Chicago, where these units were produced from 1933 until 1958 when manufacturing was shifted to other locations. Model 702 remained in production until being replaced by model 802 in 1981 (Baker 1985). The Momsen Dunnegan Ryan Company of El Paso, Texas, the distributor of the windmill, and all stock held by the company was purchased by Zork Hardware Company on January 1, 1978 (Albuquerque Journal 1977). The location has been severely impacted by livestock grazing and is still in use. The windmill itself stands between 20 and 30 feet tall and has an 11.5-foot base. A ladder is present on the west side of the frame. All blades are attached and the unit appears as if it would be fully functional, though the drive shaft has been removed rendering it decorative. Some fragments of the windmill's original wooden drive shaft are present, but no other historic materials are associated, though the site is scattered with modern refuse.

National Register of Historic Places Eligibility Evaluation: The property is not a unique or notable example of a particular style or craftsmanship (Criterion C). It also cannot be tied to any specific events or people of local or national importance (Criteria A and B). Additional research is unlikely to enhance understanding of twentieth-century ranching and land use strategies in southwestern New Mexico (Criteria D). For these reasons, WestLand recommends HCPI 57486 not eligible for listing in the NRHP under any criteria.

Assessment of Project Impact: The proposed Project will not impact HCPI 57486. To avoid impacting the resource, the Project proponent plans to utilize the existing improved road which lies north of the resource location. Use of vehicles and equipment within the existing road grade poses no risk of damage to the resource.

Treatment Recommendation: No further treatment is recommended for this resource.



Photo 37. HCPI 57486, a windmill, vane north face, view to the south



Photo 38. HCPI 57486, a windmill, vane south face, view to the north

Isolated Finds

A total of 31 isolated manifestations of cultural materials were documented in the survey area. These are split nearly evenly between prehistoric ($n = 15$) and historic ($n = 16$) materials. Raw materials observed as prehistoric lithic artifacts primarily consist of locally procured volcanics, mostly rhyolite and other fine-grained volcanic materials. Some less common materials including chert, chalcedony, quartzite and obsidian, were also identified and likely brought in from other locations. Historic isolates are primarily mining related and consist of cairns ($n = 10$), isolated mining features ($n = 3$), and metallic debris ($n = 3$; **Table 9**).

Table 9. Isolated manifestations

Isolate No.	Description
1	One crushed hole-in-top milk can
2	One collapsed cairn, which measures 3 × 3 feet with remnants of deteriorated wooden post
3	One crushed hole-in-top milk can
4	One collapsed cairn, which measures 6 × 6 feet
5	One collapsed cairn, which measures 6 × 6 feet
6	One cairn, which measures 3.5 × 4.25 feet
7	Isolated mining cut which measures 10 × 7.5 feet, spoils located on west side
8	One collapsed cairn, which measures 5.5 × 5.75 feet
9	One cairn with a juniper post
10	One distal tertiary obsidian flake, which measures 1 – 2 cm
11	One complete secondary fine-grained volcanic flake, which measures 7 – 8 cm
12	A 10 × 10-foot depression filled with rock. Possible abandoned shaft or well.
13	One cairn, which measures 3.3 × 3 feet
14	One collapsed cairn, which measures 3 × 3 feet
15	One fractured bifacial granitoid basin metate, which measures 45 × 21 × 13 cm
16	One rhyolite nodule core with multidirectional removal, 0% retained cortex and a maximum dimension of 6 – 7 cm
17	One complete tertiary rhyolite flake, which measures 3 – 4 cm
18	One rhyolite nodule core with multidirectional removal, 0% retained cortex and a maximum dimension of 14 – 15 cm
19	One complete primary quartzite flake, which measures 8 – 9 cm and has been utilized on a single margin
20	One rhyolite nodule core with multidirectional removal, 0% retained cortex and a maximum dimension of 10 – 11 cm
21	One medial tertiary chalcedony flake, which measures 2 – 3 cm

Isolate No.	Description
22	One complete tertiary basalt flake, which measures 2 – 3 cm
23	One complete tertiary chert flake, which measures 2 – 3 cm
24	One fine-grained volcanic nodule core with unidirectional removal, 50% retained cortex and a maximum dimension of 17 – 18 cm.
25	One complete secondary fine-grained volcanic flake, which measures 9 – 10 cm
26	Three rhyolite cores spread over a 15 × 15 m area
27	One collapsed cairn, which measures 4 × 5 feet
28	One collapsed cairn, which measures 2.5 × 2 feet
29	One simple external friction lid can. One pipe segment and threaded pipe union. One segment of rebar.
30	Isolated mining cut which measures 9 × 4 feet.
31	One fine-grained volcanic nodule core with multidirectional removal, 26 – 50% retained cortex and a maximum dimension of 9 – 10 cm. One complete tertiary basalt flake, which measures 2 – 3 cm. One complete secondary basalt flake, which measures 2 – 3 cm. Spread over 5 m area.

RESEARCH SYNTHESIS

Between March 23 and 26, and April 6 and 7, 2026, WestLand archaeologists completed a Class III inventory of 77.8 acres within BLM-LCDO and NMSLO-administered land and private land. Eight archaeological sites and one HCPI were documented, all of which are newly identified (LA 208570, LA 208571, LA 208572, LA 208573, LA 208574, LA 208575, LA 208576, LA 208577 and HCPI 57486). No previously recorded sites intersect the survey area. Of the newly recorded sites, LA 208576 is recommended as eligible for listing in the NRHP under Criteria A and D, LA 208574 is recommended eligible under Criterion D. Both LA 208573 and LA 208575 are recommended as unevaluated for eligibility. All other sites and the HCPI—LA 208570, LA 208571, LA 208572, LA 208577 and HCPI 57486—are recommended not eligible for listing in the NRHP under any criteria.

The cultural resources documented during this Project highlight the common presence of mineral exploration and extraction in the area; all sites documented on this Project have a historic component attributable to mining in some capacity. Most sites contain a limited artifact assemblage, but through analysis of historic records, photography, and documents, it appears that there were two main phases of mineral exploration that occurred in this portion of the western foothills of the Peloncillo Mountains. The earliest of these dates to the turn of the twentieth century, up to the 1920s. The more recent series of exploration likely dates to the 1960s.

Two prehistoric sites are present in the survey area, LA 208574 and LA 208576, both of which also have a later mining related occupation. These sites appear to be resource processing areas associated with temporary occupation, though use of the sites is intensive. Both have a proportionally high volume of cores and flake tools present and contain ground stone and diffuse fire-cracked rock while completely lacking ceramic artifacts. The sites are located in association with prominent natural features: LA 208574 is on top of a landform overlooking a large, established drainage while LA 208576 overlooks a natural pass which leads down into the San Simon basin. While prehistoric artifacts were observed elsewhere in the Project as isolates, these two areas are the only concentration which approaches site density. Nowhere in the Project area were prehistoric ceramic artifacts observed, indicating use of the survey area likely dates to the Archaic period.

MANAGEMENT SUMMARY

WestLand's cultural resources inventory of 77.8 acres of private land and BLM-LCDO and NMSLO-administered land resulted in the documentation of eight newly identified archaeological sites and one HCPI. In addition to these, 31 isolated manifestations of cultural materials were also discovered. Based on the findings of this Project, LA 208574 is recommended eligible for listing in the NRHP under Criterion D and LA 208576 is recommended eligible under Criteria A and D. Two sites, LA 208573 and LA 208575, are recommended as unevaluated pending additional archival research and formal testing beyond the scope of the current Project.

For the purposes of management, unevaluated sites should be treated as eligible. With those considerations, WestLand recommends sites LA 208573, LA 208574, LA 208575 and LA 208576 be avoided by all ground disturbing activities. All vehicle and equipment traffic should be confined to existing, established road grades. No additional blading or road improvements should be allowed within 50 feet of the site boundaries.

Sites LA 208570, LA 208571, LA 208572, LA 208577 and historic property HCPI 57486, along with all isolated manifestations, are recommended not eligible for listing in the NRHP. No further treatment is recommended for these resources.

The specific protection measures recommended for each site are detailed in each site description in the **Survey Findings** section, above, and summarized in **Table B.1** (Appendix B).

WestLand also offers the general recommendation that ground-disturbing activities have the potential to inadvertently disturb human remains and other cultural items. Should Native American human remains, associated funerary objects, unassociated funerary objects, objects of cultural patrimony, or sacred objects be encountered anywhere on federal lands during ground-disturbing activities, pursuant to the Native American Graves Protection and Repatriation Act of 1990 (Public Law 101-601; 25 U.S.C. 3001–3013), all activity shall cease in the area of the discovery and the appropriate land managing agency shall be immediately notified. The Native American Tribe or other groups affiliated with the remains must also be notified and engaged in discussions about the proper and respectful recovery and disposition of the remains.

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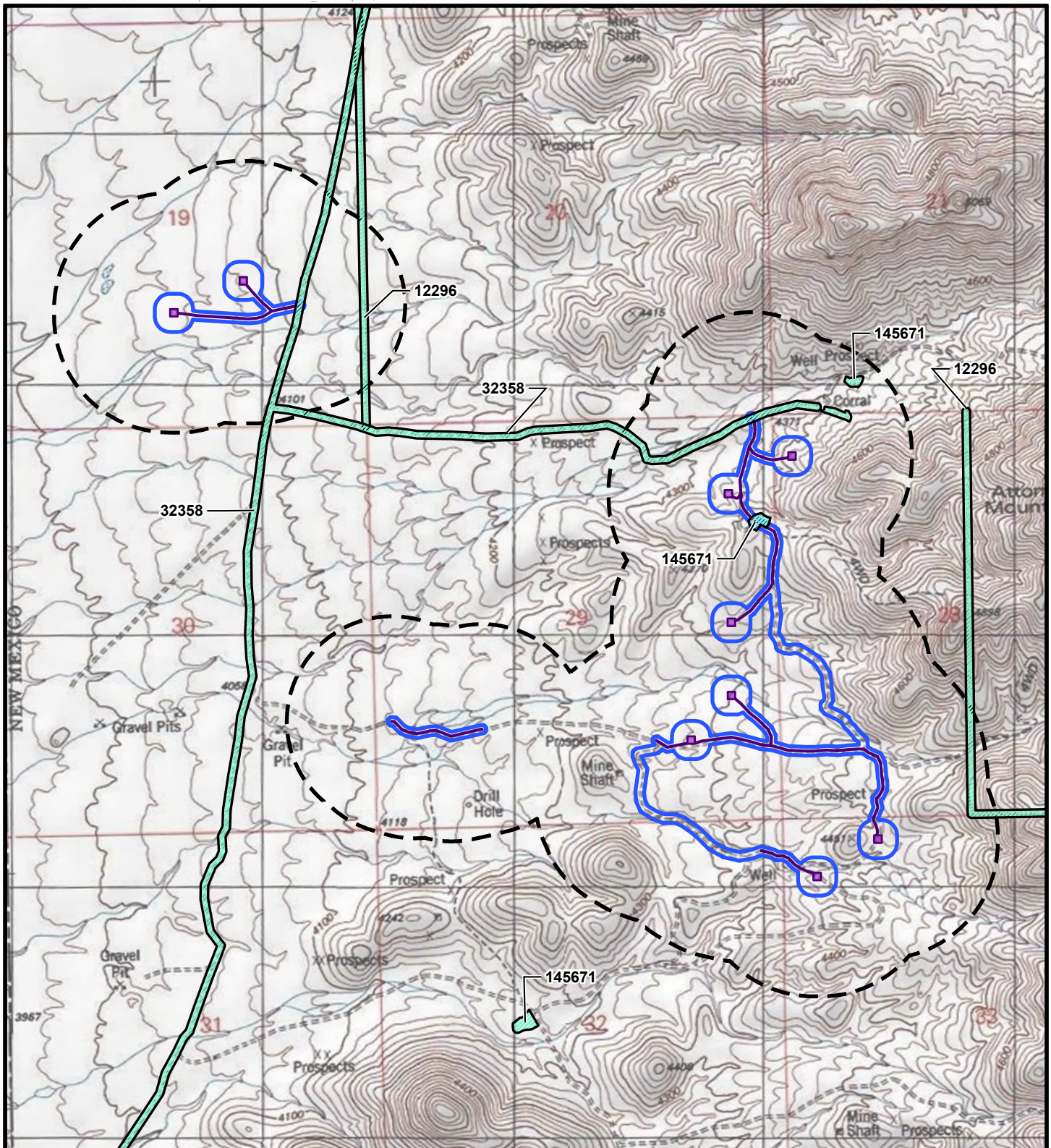
APPENDIX A

Archaeological Records Search

*The following information is considered sensitive;
may be protected under federal, state, and local
laws; and may be removed from the report.*

Table A.1. Previously conducted archaeological surveys intersecting the Project area plus a 500-meter cultural buffer

NMCRIS Activity No.	Project Name	Reference
SURVEYS CONDUCTED IN THE SURVEY AREA		
32358	1 An Archaeological Survey of the Proposed New Hidalgo County Road Near Steins, New Mexico	Malouf 1990
145671	2 Cultural Resources Inventory for Jeanette Pierce EQIP Project, Hidalgo County, New Mexico	Volf 2020
SURVEYS CONDUCTED IN THE 500 M CULTURAL BUFFER		
12269	8 An Archaeological Clearance Survey of One Fenceline, One Water Well, Two Pipelines, and Three Storage Tanks on Don Frazier's Allotment (No. 1048)	Smith 1986



T24S, R21W, Portions of Sections 19, 20,
28, 29, 32, and 33,
Hidalgo County, New Mexico
Vanar, AZ/NM USGS 7.5' Quadrangle
Projection: NAD 1983 UTM Zone 12N
NMCRIS Activity No. 160933
BLM Report No. BLM-NM-030-26-023

WestLand

Engineering &
Environmental
Services



0 1,000 2,000 Feet
0 300 600 Meters

Legend

- Survey Area
- APE
- Archaeological Survey
- Quarter-Mile Study Area

Figure A.1. Results of records search

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APPENDIX B

Results of the Archaeological Survey

*The following information is considered sensitive;
may be protected under federal, state, and local
laws; and may be removed from the report.*

APPENDIX B: Results of the Archaeological Survey

CRI for Steins Mineral Exploration Project, Hidalgo County, NM

Table B.1. Site management summary

Site or Property Number	New or Previously Recorded	Land Jurisdiction	Legal Description	Location NAD83, Zone 12N		Site Type	Age and Cultural Affiliation	National Register of Historic Places Eligibility Recommendation	Treatment Recommendation
				Northing	Easting				
LA 208570	Newly Recorded	BLM	T24S, R21W, S29	3562666	685532	Mining, Exploration/ Extraction	Statehood-WWII to Recent (A.D. 1935 to 1958), Anglo	Not eligible	No further work is recommended
LA 208571	Newly Recorded	Private	T24S, R21W, S29	3563805	686985	Mining, Exploration	Statehood-WWII to Recent (A.D. 1913 to 1960), Anglo	Not eligible	No further work is recommended
LA 208572	Newly Recorded	Private	T24S, R21W, S28+S29	3563070	687043	Mining, Exploration/ Extraction	Statehood-WWII to Recent (A.D. 1915 to 1977), Anglo	Not eligible	No further work is recommended
LA 208573	Newly Recorded	Private	T24S, R21W, S28	3562911	687218	Camp	US Territorial to Recent (A.D. 1904 to 1977)	Unevaluated	Avoidance and restricting vehicle traffic or maintenance to the existing road grade
LA 208574	Newly Recorded	Private	T24S, R21W, S28	3562555	687392	Resource Processing, Mining Exploration/ Extraction	Unspecified Archaic (5500 B.C. to A.D. 200), Unknown Archaic US Territorial to Statehood-WWII (ca. A.D. 1898 to A.D. 1921), Anglo	Eligible D	Avoidance and restricting vehicle traffic or maintenance to the existing road grade
LA 208575	Newly Recorded	BLM	T24S, R21W, S33	3562156	687418	Mining Exploration/ Extraction	Recent (A.D. 1958 to 1977)	Unevaluated	Avoidance and restricting vehicle traffic or maintenance to the existing road grade; erect high visibility construction fencing around the site boundary

APPENDIX B: Results of Archaeological Survey

CRI for Steins Mineral Exploration Project, Hidalgo County, NM

Table B.1. Site management summary

Site or Property Number	New or Previously Recorded	Land Jurisdiction	Legal Description	Location NAD83, Zone 12N		Site Type	Age and Cultural Affiliation	National Register of Historic Places Eligibility Recommendation	Treatment Recommendation
				Northing	Easting				
LA 208576	Newly Recorded	BLM	T24S, R21W, S29	3562380	686468	Resource Processing, Mining Exploration/ Extraction	Unspecified Archaic (5500 B.C. to A.D. 200), Unknown Archaic US Territorial to Recent (pre-A.D. 1946 to present), Anglo	Eligible A, D	Avoidance and restricting vehicle traffic or maintenance to the existing road grade
LA 208577	Newly Recorded	BLM	T24S, R21W, S29	3562567	686617	Mining Exploration/ Extraction	Statehood-WWII to Recent (A.D. 1912 to 1960), Anglo	Not eligible	No further work is recommended
HCPI 57486	Newly Recorded	BLM	T24S, R21W, S33	3562093	687088	Ranching	Recent (A.D. 1958 to Present), Anglo	Not eligible	No further work is recommended

APPENDIX B: Results of the Archaeological Survey

CRI for Steins Mineral Exploration Project, Hidalgo County, NM

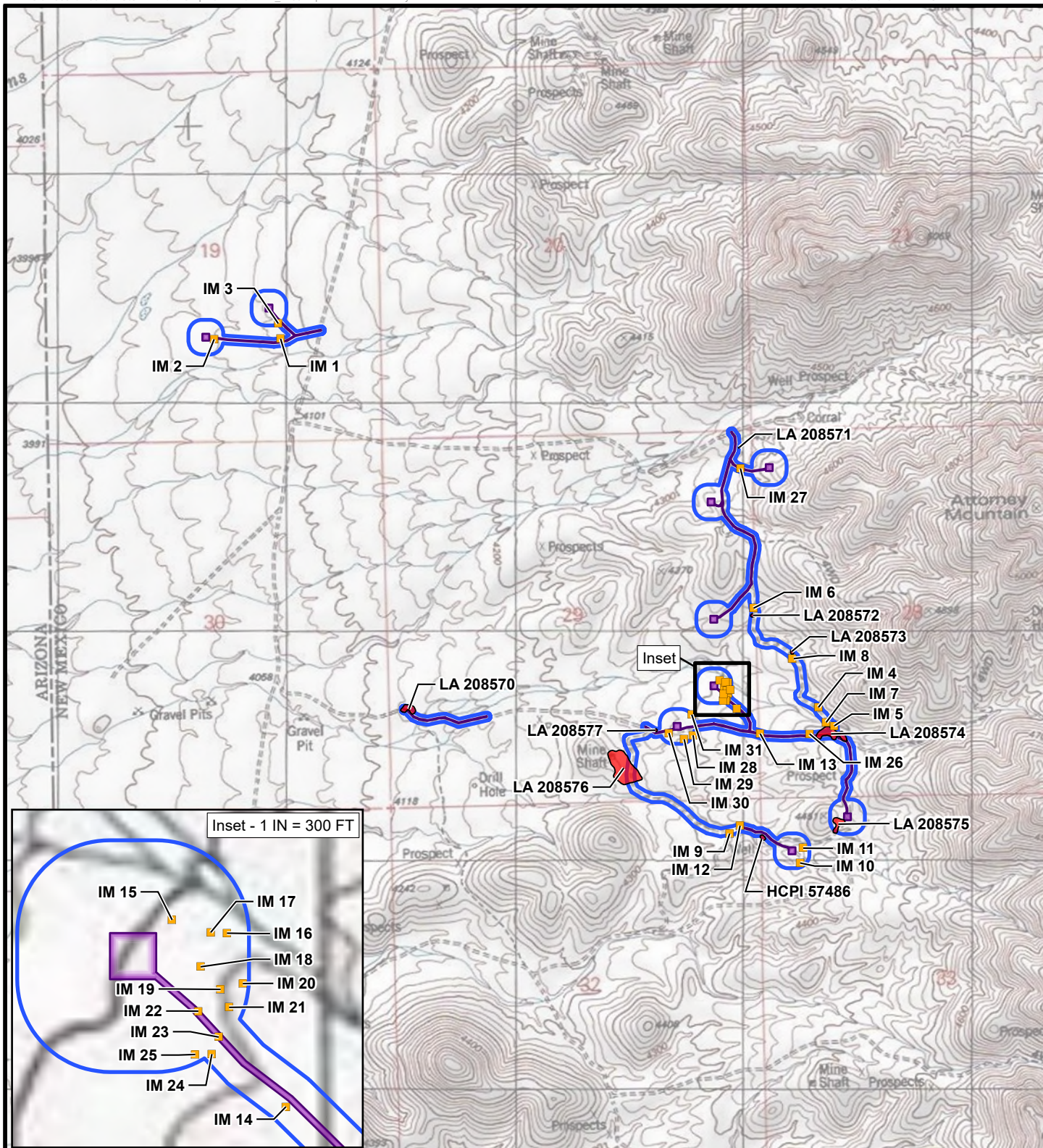
Table B.2. Isolated manifestations

Isolate No.	Description	Location NAD83, Zone 12	
		Northing	Easting
1	One crushed hole-in-top milk can	3564281	684977
2	One collapsed cairn, which measures 3 × 3 feet, with remnants of deteriorated wooden post	3564279	684687
3	One crushed hole-in-top milk can	3564348	684966
4	One collapsed cairn, which measures 6 × 6 feet	3562665	687335
5	One collapsed cairn, which measures 6 × 6 feet	3562584	687404
6	One cairn, which measures 3.5 × 4.25 feet	3563100	687050
7	Isolated mining cut which measures 10 × 7.5 feet, spoils located on west side	3562600	687368
8	One collapsed cairn, which measures 5.5 × 5.75 feet	3562878	687219
9	One cairn with a juniper post	3562113	686947
10	One distal tertiary obsidian flake, which measures 1 – 2 cm	3561983	687254
11	One complete secondary fine-grained volcanic flake, which measures 7 – 8 cm	3562049	687268
12	A 10 × 10-foot depression filled with rock. Possible abandoned shaft or well.	3562147	686991
13	One cairn, which measures 3.3 × 3 feet	3562550	687079
14	One collapsed cairn, which measures 3 × 3 feet	3562661	686977
15	One fractured bifacial granitoid basin metate, which measures 45 × 21 × 13 cm	3562783	686902
16	One rhyolite nodule core with multidirectional removal, 0% retained cortex and a maximum dimension of 6 – 7 cm	3562775	686938
17	One complete tertiary rhyolite flake, which measures 3 – 4 cm	3562775	686927
18	One rhyolite nodule core with multidirectional removal, 0% retained cortex and a maximum dimension of 14 – 15 cm	3562753	686921
19	One complete primary quartzite flake, which measures 8 – 9 cm and has been utilized on a single margin	3562738	686934
20	One rhyolite nodule core with multidirectional removal, 0% retained cortex and a maximum dimension of 10 – 11 cm	3562742	686949

APPENDIX B: Results of Archaeological Survey

CRI for Steins Mineral Exploration Project, Hidalgo County, NM

Isolate No.	Description	Location NAD83, Zone 12	
		Northing	Easting
21	One medial tertiary chalcedony flake, which measures 2 – 3 cm	3562726	686940
22	One complete tertiary basalt flake, which measures 2 – 3 cm	3562723	686919
23	One complete tertiary chert flake, which measures 2 – 3 cm	3562706	686933
24	One fine-grained volcanic nodule core with unidirectional removal, 50% retained cortex and a maximum dimension of 17 – 18 cm.	3562695	686928
25	One complete secondary fine-grained volcanic flake, which measures 9 – 10 cm	3562695	686917
26	Three rhyolite cores spread over a 15 × 15 m area	3562549	687296
27	One collapsed cairn, which measures 4 × 5 feet	3563712	686993
28	One collapsed cairn, which measures 2.5 × 2 feet	3562543	686785
29	One simple external friction lid can. One pipe segment and threaded pipe union. One segment of rebar.	3562525	686746
30	Isolated mining cut which measures 9 × 4 feet.	3562553	686679
31	One fine-grained volcanic nodule core with multidirectional removal, 26 – 50% retained cortex and a maximum dimension of 9 – 10 cm. One complete tertiary basalt flake, which measures 2 – 3 cm. One complete secondary basalt flake, which measures 2 – 3 cm. Spread over 5 m area.	3562634	686779



T24S, R21W, Portions of Sections 19, 20, 28, 29, 32, and 33,
Hidalgo County, New Mexico
Vanar, AZ/NM USGS 7.5' Quadrangle
Projection: NAD 1983 UTM Zone 12N
NMCRIIS Activity No. 160933
BLM Report No. BLM-NM-030-26-023

WestLand

Engineering &
Environmental
Services



0 1,000 2,000
Feet

0 300 600
Meters

Legend

- Isolated Manifestation
- Site Boundary
- APE
- Survey Area

Figure B.1. Results of survey

APPENDIX C

Historical Maps



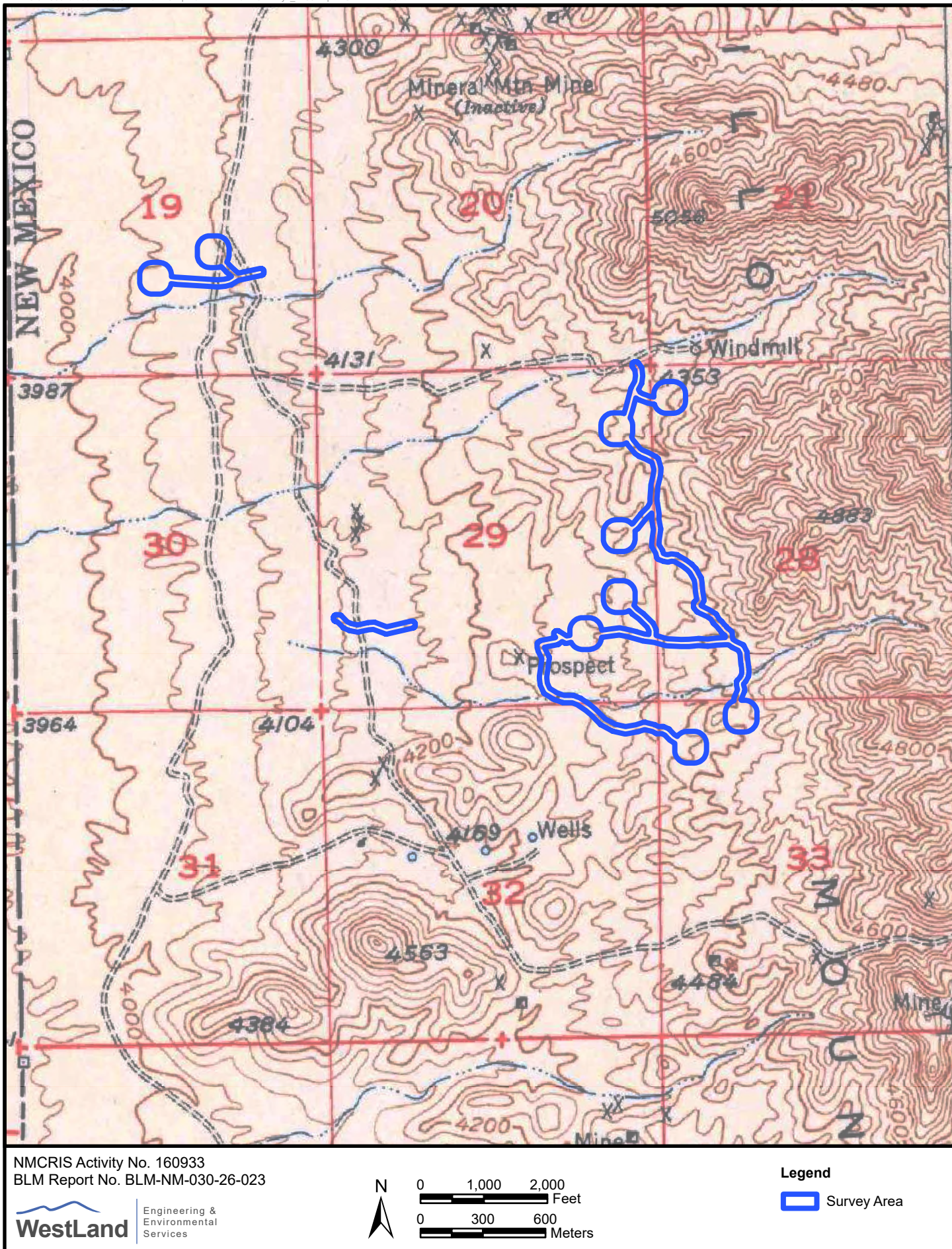


Figure C.2. Overlay of the survey area on the 1951 Vanar, Arizona 1:62,500 USGS topographic quadrangle

APPENDIX D
Bureau of Land Management
Fieldwork Authorization

FIELDWORK AUTHORIZATION REQUEST

For BLM Use Only

To Conduct Specific Cultural Resource Work under the Authority of a
Cultural Resource Use Permit Issued by the Bureau of Land Management
Pursuant to Sec. 302 (b) of P. L. 94-579, October 21, 1976, 43 USC 1732
Sec. 4 of P. L. 96-95, October 31, 1979, 16 USC, 470cc

BLM Project No.: 030-26-023

1. Permit Number and Date Issued **278-2920-24-K**

2. Name of Permittee **WestLand Resources, Inc.**

3. Mailing Address and Telephone Number

Address: **4001 E. Paradise Falls Dr.
Tucson, AZ 85712**

Telephone [(xxx) xxx-xxxx]: **(720) 381-9590**

4. Nature of Cultural Resources Work Proposed (if Consultation Work, Identify Client and Project)

KoBold seeks to complete preliminary drilling activities under a notice to determine the mineral resource quality and quantity at the Stein site located. As part of this initial effort, KoBold is seeking authorization for drilling within eight new drilling pads (approximately 100 ft x 100 ft; 1.84 acres of disturbance), approximately 1 mile of new access roads (13 ft; 11-ft-wide blade plus 1 ft spoil either side of road; 1.00 acre of disturbance), and maintenance on approximately 2.75 miles of existing access roads, with widening where needed from approximately 10 ft to 13 ft (1.58 acres of disturbance), a total of approximately 4.42 acres of disturbance. The cultural resources survey is partially being conducted in advance of FOMDD MMD requirements. The survey will cover the disturbance areas.

5. Location of Proposed Work (Include Map)

a. Description of Public Lands Involved

The project area crosses BLM-LCDO, NMSLO, and private lands in T 24S, R 21W, Sections 19, 28, 29, 32, 33

b. Identification of Cultural Resource(s) Involved (if applicable)

No previously recorded cultural resources are documented in NMCRIS.

6. Period During Which Work Will Be Conducted

From [mm/dd/yy]: **3/10/26**

To [mm/dd/yy]: **4/30/26**

7. Name of Individual(s) Responsible for Planning and Supervising Fieldwork and Approving Report, Evaluations, and Recommendations

Jeremy Loven and Alex Hutton

8. Signature

Jeremy Loven

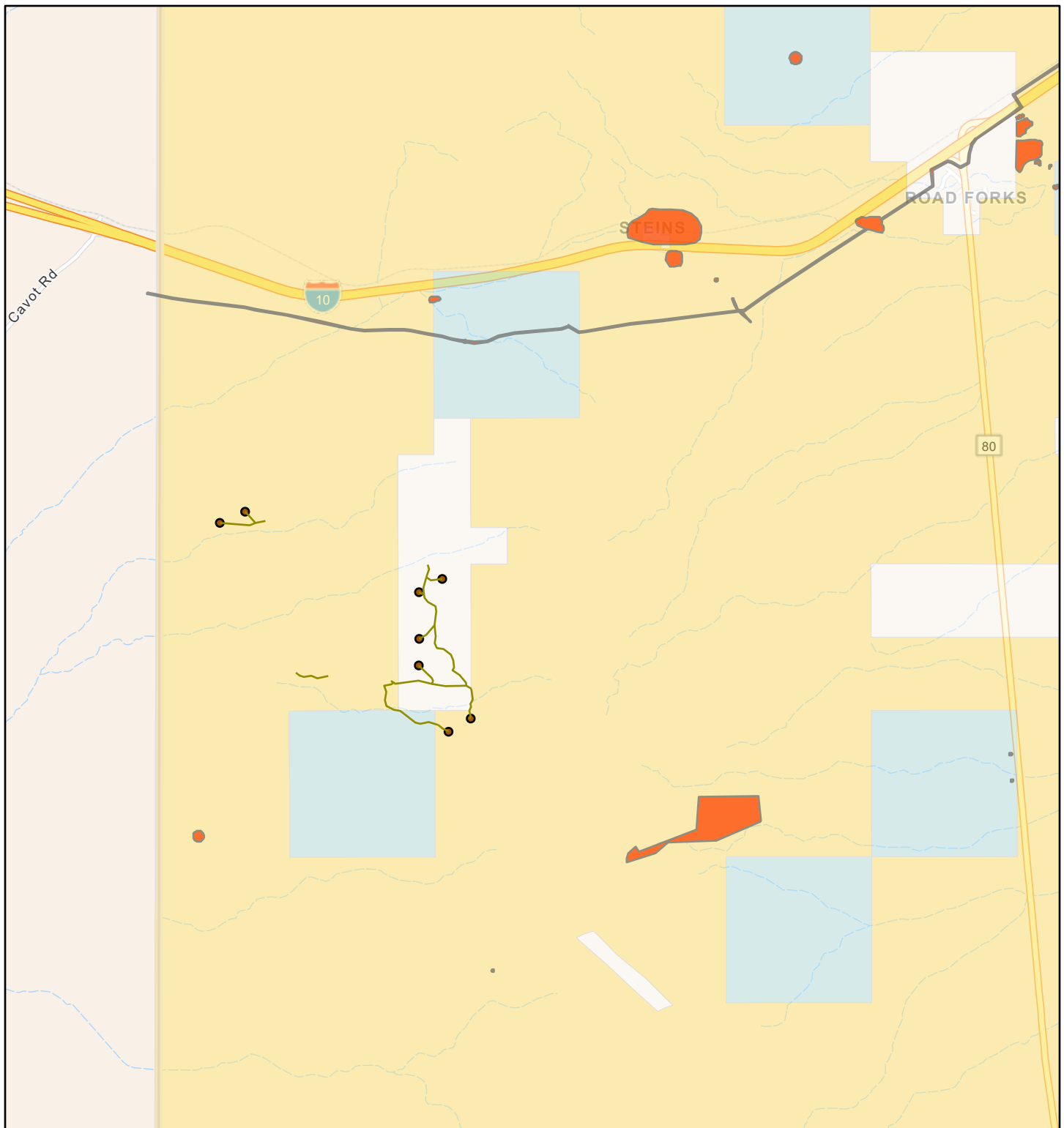
9. Date [mm/dd/yy]: **3/5/26**

10. Approved

(Authorized Officer)

11. Date [mm/dd/yy]:

Submit one copy of each request, by mail, FAX, or in person to the Field Office Manager in the BLM
Field Office with administrative jurisdiction over the public lands involved.



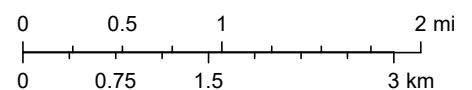
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- Survey Area (access roads)
- Survey Area (drill pad locations)

Site Boundaries

- Approved
- BLM Surface Ownership
- Private
- State



CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/
NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, USFWS

NMCRIS

ATTACHMENT E

Biological Evaluation

Biological Evaluation Steins Exploratory Drilling Project

Prepared for:

Curiosity Exploration LLC
2021 Shattuck Avenue, Suite 210 – Berkely, California 94704

Prepared by:

WestLand Engineering & Environmental Services
4001 E. Paradise Falls Drive – Tucson, Arizona 85712
+1 520-206-9585

WestLand Project Number: 14301

May 22, 2026



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1. INTRODUCTION

On behalf of Curiosity Exploration LLC (Curiosity), WestLand Engineering & Environmental Services (WestLand) prepared this Biological Evaluation (BE) for the Steins Exploratory Drilling Project in Hidalgo County, New Mexico (the Project; **Figure 1**). The Project will assess mineral resources quality and quantity through exploration drilling activities at nine 100-by-100-foot (ft) drilling locations and the construction and maintenance of their associated access roads (the Project Area; **Figures 1 and 2**) to assess mineral resource quality and quantity (**Figures 1 and 2**).

This BE analyzes the potential for special-status species to occur within the Project Area and vicinity and the potential effects of the Project on such species. For the purposes of this BE, special-status species are defined as:

- Species listed, proposed, or candidate for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA),
- Species protected under the Bald and Golden Eagle Protection Act (BGEPA),
- Bureau of Land Management (BLM) Sensitive species as identified by the Las Cruces District Office (LCDO), and
- New Mexico State endangered species, as listed under the New Mexico Wildlife Conservation Act (NMWCA), identified by the New Mexico Department of Game and Fish (NMDGF) to occur in Hidalgo County.

Additionally, the BE will determine whether any ESA designated or proposed critical habitat occurs within the Project Area and vicinity for special-status species, and potential Project effects on their habitat.

This document is organized as follows: Project location and description (**Section 2**), Analysis Area (**Section 3**), Project-specific environmental protection measures that will be implemented for special-status species (**Section 4**), methods used in both the potential to occur and effects analyses (**Section 5**), and results of these analyses (**Section 6**). References cited are provided in **Section 7**.

2. PROJECT LOCATION AND DESCRIPTION

The Project is located in the eastern portion of Hidalgo County, New Mexico, on lands managed by the BLM LCDO (2.21 acres), private land owned by the Hooper family (2.13 acres), and New Mexico State Trust Lands managed by the New Mexico State Land Office (NMSLO; 0.01 acres) in Township (T) 24 South (S), Range (R) 21 West (W), Sections 19, 28, 29, 32, and 33, New Mexico Principal Meridian and Baseline (**Figures 1 and 2**). Curiosity seeks to complete preliminary drilling activities to assess the mineral resource quality and quantity in the Project Area.

2.1. PROJECT LOCATION

The Project Area includes four non-contiguous areas, referred to as northwest, northeast, southeast, and southwest areas. All areas can be accessed off the Interstate 10 (I-10) and Cavot Road interchange located just over the border in Arizona, approximately 4 miles west of Steins, New Mexico, a railroad ghost town in Steins Pass. Lordsburg is on I-10 approximately 20 miles east of Steins. From the interchange, 0.2 miles south on Cavot Road intersects Chato Road on the east (**Figure 2**). The northwest area is located 1.5 miles south of I-10 entirely on land managed by the BLM LCDO and includes two exploration pads. Approximately 0.25 miles farther south on Chato Road, turn east on Stagecoach Road for approximately 1.25 miles to access the northeast area, which is entirely on Hooper private lands and includes three exploration pads. On Chato Road another 0.75 miles south of Stagecoach Road, Still Ridge Road provides access to the southwest area and the southeast area. Approximately 0.4 miles to the east on Still Ridge Road is the southwest area, which consists of 0.25 miles of the road. Approximately 0.5 miles east of the southwest area on Still Ridge Road is the southeast area, which includes four exploration pads. The southeast area includes two pads on Hooper private lands and two pads on BLM lands. One of the pads is accessed off an existing road that crosses approximately 0.25 miles of State Trust lands. Chato Road and all other access roads are unpaved.

2.2. PROJECT DESCRIPTION

Curiosity will complete exploratory drilling operations on nine 100-ft by 100-ft drill pads (approximately 2.07 acres of disturbance), clear and grade approximately 0.93 miles of new access roads measuring 15 ft wide (approximately 1.69 acres of disturbance), and conduct maintenance, including road widening, on approximately 1.22 miles of existing access roads (approximately 0.59 acres of disturbance). In total, the Steins Exploratory Drilling Project will result in approximately 4.34 acres of disturbance.

Site preparation and drilling operations are anticipated to occur from August through December 2026, with reclamation activities being initiated within 30 days and completed within 90 days following the cessation of drilling operations at each drill pad location.

2.2.1. Site Preparation and Exploration Activities

The proposed exploration program consists of diamond core and/or reverse circulation drilling to evaluate subsurface mineral resources at the nine drill locations within the Project Area. The entire Project is within T24S, R21W. Four drill pads (ST25P-6, ST25P-7, ST25P-8, and ST25P-9) are situated on BLM-administered lands in Sections 19 and 33. Five drill pads (ST25P-1, ST25P-2, ST25P-4, ST25P-5, and ST-PP-009) are situated in Sections 28 and 29 on the Hooper private land, for which Curiosity holds executed surface access and exploration agreements from the landowner. Each location will accommodate drilling to a maximum depth of 3,500 ft using a track-mounted CT14 Atlas Copco or equivalent drill rig unit. The drilling method will be selected based on site-specific geological conditions and may alternate between

diamond core drilling for detailed geological logging and reverse circulation drilling for efficient sampling at depth. All drill holes will be geologically logged, with samples collected for assay and metallurgical testing to evaluate mineralization and associated metals.

Site preparation will include construction of nine drill pads, each measuring approximately 100 ft by 100 ft (approximately 0.23 acres per pad, totaling 2.07 acres). Pads will be constructed using a D6 bulldozer or equivalent equipment and sized to accommodate the drill rig, support vehicles, water storage, core storage facilities, and ancillary equipment. Each pad will include adequate working space for safe equipment operation and material handling, including sumps for drill cuttings management, a driller's shed, portable toilet facilities, and designated areas for pipe storage, water trucks, and support equipment.

Access to drill locations will require construction of new access roads (approximately 0.93 miles) and other roadwork on existing access roads (approximately 1.22 miles of 4-ft widening, and 0.82 miles of regrade). New roads will be constructed to 15-ft wide (13-ft blade width plus 1-ft spoil on either side) to accommodate drill rigs and support vehicles. Existing roads will be widened or reggraded as needed to achieve a consistent 15-ft running surface. Access routes traverse a combination of BLM-administered surface, Hooper private lands, and approximately 0.25 miles of New Mexico State Trust lands administered by the NMSLO. All new road disturbance will be designed to follow natural contours to minimize cut and fill requirements and reduce erosion potential.

2.2.2. Water Management and Support Facilities

Water for drilling operations will be supplied through commercial water hauling from permitted sources, with an estimated daily usage of 500 to 1,000 gallons depending on drilling method and geological conditions encountered. Water will be transported in a 2,000-gallon capacity water truck and stored temporarily on drill pads. Support facilities at each drill location will include portable sanitation facilities serviced weekly by a licensed contractor, temporary core storage areas for geological logging and sampling, and equipment staging areas. All facilities will be removed upon completion of drilling at each location.

2.2.3. Reclamation

Following exploratory drilling operations, reclamation activities will be implemented with the goal of returning disturbed areas to a condition suitable for the land's pre-disturbance use in accordance with the performance standards specified in 43 CFR 3809.420 and requirements established by the BLM LCDO. Reclamation will incorporate concurrent reclamation during operations and final reclamation following completion of drilling.

Drill pads will be reggraded to blend with surrounding topography and eliminate sharp angles or unnatural landforms. Roads will be reclaimed by pulling berms, installing water bars on slopes greater than 5 % at 50- to 100-ft intervals, and restoring natural drainage patterns. Compacted surfaces will be scarified to a minimum depth of 6 inches on drill pads and 8 inches on roads to restore soil permeability and provide

suitable seedbed conditions for revegetation. Sumps will be filled with excavated materials and compacted in 12-inch lifts.

Topsoil will be salvaged from drill pad and road locations prior to construction and stockpiled separately from subsoil and rock materials. Stockpiles will be clearly marked and protected from erosion throughout operations. Salvaged topsoil will be respread across all disturbed areas during final reclamation to restore nutrient-rich growing medium and seed bank for native plant establishment.

All reclaimed areas will be seeded with native plant species appropriate for Chihuahuan Desert plant communities native to Hidalgo County, New Mexico. Seed mixes will be selected in consultation with the BLM LCDO personnel to ensure species composition is consistent with the surrounding vegetation community and meets BLM reclamation standards. Seeding will be performed using hydroseeding or broadcast seeding with crimped straw mulch applied immediately following seeding operations to improve moisture retention and seed-to-soil contact. Noxious weed monitoring and control will be implemented throughout operations and the post-reclamation monitoring period using methods approved by the BLM and the New Mexico Department of Agriculture.

All equipment, materials, supplies, and facilities associated with exploration operations will be removed from the Project Area within 30 days of completing operations at each location. All drill holes will be plugged, except on Hooper private land, should it be practicable and legally feasible to convert boreholes into wells for the Hooper family. Core boxes and geological samples will be transported to secure storage facilities. Any concrete pads or equipment footings will be removed and resulting excavations properly backfilled and restored to grade. No materials will be buried on site unless specifically approved by the BLM.

3. ANALYSIS AREA

The Analysis Area, as defined for this BE, consists of the maximum geographic extent at which anticipated Project-associated effects have the potential to impact special-status species. Based on the Project's description, it is anticipated that the Project has the potential to result in surface disturbance, noise production, vibration, projected light, traffic, and dust distribution. Of these effects, noise production is anticipated to have the greatest geographic extent of impacts, with noise from the operation of drill rigs, backhoes, or bulldozers reaching level of 84 A-weighted decibels (dBA)¹ at 50 ft from their sources (**Section 6.4**; Federal Highway Administration [FHWA] 2006) before reducing to maximum permissible noise levels of 50 dBA (New Mexico Energy 2014). This results in an Analysis Area for the Project that includes the drill

¹ dBA is an expression of the relative loudness of sounds as perceived by the human ear. Auditory thresholds vary widely among different animals (Forinash and Christian 2026, Louisiana State University Veterinary Medicine 2026); dBA is not an appropriate scale to use for animal species with substantially different audiograms than humans (Pater, Grubb, and Delaney 2009) but species-specific decibel weighting is available for a limited number of species.

pad locations and their associated access roads with a 3,200-ft buffer, equating to approximately 3,478 acres (**Figure 2**).

4. ENVIRONMENTAL SETTING

The following sections describe the environmental characteristics of the Analysis Area. These descriptions, where appropriate, include data collected during WestLand's site visits to the Analysis Area in February and April of 2026. Representative photos of the Analysis Area are provided in **Appendix A**.

4.1. PHYSIOGRAPHIC

The Analysis Area lies within the Basin and Range geographic province, an area in the southwestern United States characterized by north/south trending mountain ranges with arid valleys in between them (Bartley 2024). It sits at the western base of the Peloncillo Mountains, at elevations between approximately 4,000 and 5,100 ft above mean sea level (amsl) in the Chihuahuan Desert and Madrean Archipelago Ecoregions (Griffith et al. 2006). Geology in the Analysis Area is mapped as Piedmont alluvial deposits originating from the Holocene to lower Pleistocene, Lower Middle Tertiary and Tertiary-Cretaceous andesitic to dacitic lavas and pyroclastic flow breccias, which are volcanic in origin and originate from the Lower to Middle Tertiary andesitic to Upper to Middle Eocene, Upper Cretaceous sedimentary rocks which originated from the Maastrichtian to Cenomanian, and Mancos Shale and Beartooth and Sartan Formations which originated from Cenomanian and Albian (New Mexico Bureau of Geology and Mineral Resources 2022).²

4.2. CLIMATIC

Temperatures within the Analysis Area range from an average of 43.5 degrees Fahrenheit (°F) during the coldest month of the year (December) to an average of 80.3 F° during the warmest month of the year (July) (PRISM Group 2026).² The Analysis Area receives an average of 10.09 inches of precipitation each year, with the most precipitation falling in July (2.04 inches) and the least falling in May (0.16 inches) (PRISM Group 2026),² a pattern which is influenced by the North American Monsoon (Adams and Comrie 1997).

4.3. SURFACE WATER

The National Hydrography Dataset (NHD; USGS 2026)² identifies multiple ephemeral features, two "lake/ponds", and two wells that intersect and/or are within portions of the Analysis Area (**Figure 3**). The ephemeral features flow in a general westerly to southwesterly direction before discharging into the San Simon River approximately 3 miles from the Analysis Area (USGS 2026).²

During WestLand's site visit, surveyors observed multiple ephemeral features distributed throughout the Analysis Area, many of which fed into earthen tanks or were braided throughout the landscape. None of

² NMGBMR Interactive Resources Map, PRISM Weather Data, and NHD National Map Download Viewer accessed online March 26, 2026.

these features contained surface water during the site visit, and all lacked riparian vegetation. Two cisterns were observed, one of which was feeding into a filled stock drinker, which is assumed to be utilized by grazing cattle in the portion of the Analysis Area that is privately owned. Photographs of these features are provided in **Appendix A**.

4.4. SOIL

Soils in the Analysis Area primarily consist of Eba very gravelly loam, 1% to 15% slopes (approximately 40% of the Analysis Area), Lehman's extremely rocky loam, 10% to 25% slopes (approximately 30% of the Analysis Area), Nickel gravelly sandy loam, 3% to 9% slopes (approximately 10% of the Analysis Area), and other units each comprising less than 10% of the Analysis Area (**Appendix B**). These well drained soils are sourced from well mixed alluvium derived from igneous and sedimentary rock, have no frequency of flooding or ponding and no hydric rating, and are not considered prime farmland (**Appendix B**).

4.5. VEGETATION

Vegetation in the Analysis Area is mapped as Chihuahuan desertscrub (Brown and Lowe 1980). This vegetation community is typically dominated by whitethorn acacia (*Vachellia constricta*), viscid acacia (*Vachellia vernicosa*), tarbush (*Flourensia cernua*), and creosotebush (*Larrea tridentata*).

During WestLand's site visit, surveyors observed the following native vegetation species: six-weeks gramma (*Bouteloua barbata*), common stork's-bill (*Erodium cicutarium*), tarbush, crucifixion thorn (*Koeberlinia spinosa*), honey mesquite (*Prosopis glandulosa*), southwestern barrel cactus (*Ferocactus wislizenii*), cholla (*Cylindropuntia spinosior*), creosotebush, black grama (*Bouteloua eriopoda*), Palmer's agave (*Agave palmeri*), wait-a-minute bush (*Senegalia greggii*), and other plant species consistent with the mapped vegetation community. Additionally, African rue (*Peganum harmala*), classified a Class B noxious weed, was found around the livestock drinker near proposed drill pad 6. Non-native, potentially invasive red brome (*Bromus rubens*) was found near proposed drill pad 5 and probable natal grass (*Melinis repens*) was found near proposed drill pad 4.

4.6. WILDLIFE

Mammals observed during WestLand's site visit included jackrabbit (*Lepus* spp.), woodrat (*Neotoma* spp.), Harris' antelope squirrel (*Ammospermophilus harrisi*), and coyote (*Canis latrans*). In addition, the skull of a bobcat (*Lynx rufus*) was found and a burrow with no sign of recent activity, believed to be that of a badger (*Taxidea taxus*) but possibly of a coyote, was found.

Bird species recorded included Gambel's quail (*Callipepla gambelii*), common raven (*Corvus corax*), mourning dove (*Zenaidura macroura*), cactus wren (*Campylorhynchus brunneicapillus*), black-throated sparrow (*Amphispiza bilineata*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus*

polyglottos), and rock wren (*Salpinctes obsoletus*). Numerous active mourning dove nests were detected during cactus survey in March.

5. ENVIRONMENTAL PROTECTION MEASURES

The Project will implement comprehensive environmental protection measures (EPMs) designed to prevent unnecessary or undue degradation of public lands and resources in accordance with the performance standards specified in 43 CFR 3809.420. These EPMS are described as follows.

EPM 1—Site Access and Traffic Control

Access to Project areas will be strictly limited to designated roads and pad locations. Surface disturbance will be confined to the minimum area necessary to safely conduct drilling operations. Equipment access will be restricted to approved road corridors to prevent unnecessary compaction and disturbance of undisturbed surfaces. Roads will be maintained throughout operations to minimize fugitive dust through periodic grading and, when necessary, water application. All work on Hooper private lands will be conducted in accordance with the executed surface access and exploration agreement, and access routes crossing New Mexico State Trust lands will be used only in accordance with any authorizations obtained from the NMSLO. Traffic speeds will be restricted to 25 miles per hour (mph).

EPM 2—Erosion and Sediment Control

Comprehensive erosion and sediment control measures will be implemented to protect soil resources and prevent off-site sedimentation. Water bars, berms, and drainage controls will be installed on all roads following construction and maintained throughout operations to direct runoff into natural drainage patterns and prevent concentrated flow that could cause erosion. Silt fencing or straw wattles will be installed downslope of disturbed areas where there is potential for sediment transport to drainage features or sensitive areas. Storm water will be directed away from drill pads through proper pad grading and installation of perimeter berms. Any disturbed areas not actively in use will be immediately stabilized through mulching, seeding, or other appropriate stabilization techniques. All erosion control features will be inspected regularly and maintained throughout operations to ensure continued effectiveness, with particular attention following precipitation events.

EPM 3—Air Quality Management

Fugitive dust generation will be minimized through implementation of dust suppression measures on roads and work areas, including water application as needed based on site conditions, weather, and traffic levels. Equipment idling time will be minimized to reduce exhaust emissions. All operations will comply with applicable New Mexico Environment Department air quality requirements and any additional measures required to protect air quality through the duration of the Project.

EPM 4—Waste Management

All solid waste generated during operations will be collected in designated containers and removed from the site at regular intervals for disposal at licensed facilities. Drill cuttings will be stockpiled on drill pads in designated areas and used beneficially for pad reclamation and revegetation activities. Portable sanitation facilities will be provided at each active drill location and serviced at a minimum weekly frequency by a licensed contractor. Any petroleum products stored at the site will be maintained in appropriate containers with secondary containment systems to prevent spills. Spill prevention and response equipment will be maintained on-site and readily available for immediate response to any releases. All waste materials will be removed to licensed disposal facilities in accordance with applicable federal, state, and local regulations.

EPM 5—Biological Resource Protection

Biological resource surveys were completed in February and April 2026 to identify special-status species and habitats within the Project Area. Therefore, a 10-meter (32-ft) buffer will be placed between areas of new disturbance and the locations of special-status plants that were observed in the Project Area. In areas where special-status plants were found within 10 meters (m) of an existing road intended for widening, widening will occur on the side of the road opposite the plants' locations.

Additional pre-activity wildlife surveys will be conducted as determined appropriate in coordination with the BLM. Work timing restrictions will be followed to avoid special-status species breeding seasons as specified in this document, with particular attention to migratory bird nesting seasons. All work will be conducted in compliance with the Migratory Bird Treaty Act and the ESA.

EPM 6—Drill Hole Abandonment

All exploration drill holes will be permanently abandoned upon completion of drilling in accordance with New Mexico Statute 69-3-6 and applicable regulations administered by the New Mexico Oil Conservation Division or other applicable state regulatory authority. Prior to abandonment, each drill hole will be plugged using approved materials and methods to prevent groundwater contamination and ensure long-term stability. Abandonment procedures will be documented and reported to the applicable state regulatory authority in accordance with New Mexico requirements. Curiosity will obtain all necessary permits or approvals required for drill hole abandonment prior to commencing plugging operations.

EPM 7—Fire Prevention

Comprehensive fire prevention measures will be implemented throughout Project operations. Fire extinguishers will be maintained on all vehicles and at each drill pad. Flammable materials will be stored in appropriate containers away from ignition sources. Smoking will be prohibited except in designated areas. All equipment will be equipped with spark arrestors as required. Curiosity will comply with any fire restrictions in effect in Hidalgo County during operations and will immediately notify appropriate authorities in the event of a fire.

EPM 8—Light Shields

Light shields will be installed on all light-emitting infrastructure utilized during Project activities to reduce the areas affected by projected light.

EPM 9—Traffic

All Project-associated traffic will adhere to reduced speed limits (25 mph) in the Analysis Area.

6. METHODS

Two screening analyses were completed to evaluate the potential for special-status species presence in the Analysis Area: one for federal special-status species and one for both BLM Sensitive species and New Mexico State Endangered species. Following these analyses, a desktop review was completed to evaluate the potential for these species to occur within the Analysis Area. For species determined to have a potential to occur in the Analysis Area, an additional analysis was completed to evaluate the effects of the Project to these species.

6.1. SPECIAL-STATUS SPECIES SCREENING ANALYSIS

The USFWS Information for Planning and Consultation (IPaC) tool was used to identify federal special-status species with potential to occur, as well as designated or proposed critical habitat, within the Analysis Area (**Appendix C**).

An initial list of BLM Sensitive species and New Mexico State Endangered species was created using the BLM Sensitive species list for BLM New Mexico and the New Mexico Rare Plant Website's rare plant list for Hidalgo County (**Appendix D**). This initial list was reduced to only include wildlife and plant species with a potential to occur within 1 mile of the Analysis Area using the New Mexico Department of Wildlife's Biota Information System of New Mexico (BISON-M) tool for Hidalgo County (**Appendix E**) and the NMDGF New Mexico Environmental Review Tool (ERT) (**Appendix F**).

6.2. POTENTIAL TO OCCUR

A desktop review was completed to evaluate the potential for the special-status species identified in the screening analysis to occur within the Analysis Area. These determinations were based on a review of:

- The natural history and known geographical and elevational ranges of the species.
- Other occurrence records in published or grey literature, including citizen science data, and unpublished data.
- Presence of suitable habitat based on available information and WestLand's February and March 2026 field evaluations.

The criteria used to determine the potential of occurrence of each species identified in the screening analysis are defined as follows:

Present: The species has been observed to occur within the Analysis Area, the Analysis Area is within the known range and distribution of the species, and habitat characteristics required by the species are present.

Possible: There are no known records of the species within the Analysis Area or the records that exist cannot be verified,³ but the current, known distribution of the species includes the Analysis Area, and the Analysis Area contains habitat considered suitable for all or some of the life stages of the species.

Unlikely: The known, current distribution of the species does not include the Analysis Area, but the distribution of the species is close enough such that the Analysis Area may be within the dispersal or foraging distance of the species, and they may show up as transients or it occurs within the range but habitat characteristics are marginal or not suitable.

None: The Analysis Area is outside of the known distribution of the species, or the habitat characteristics required by the species are not present.

6.3. SPECIAL-STATUS SPECIES EFFECTS ANALYSIS

Potential effects of the Project on special-status species were evaluated by considering the results of the screening analysis alongside the Project's possible impacts related to noise, dust, surface disturbance, traffic, and light within the Analysis Area. Different effects determination categories are defined for species included under different regulatory categories. Effects determination categories are defined and a brief discussion of each of the potential effects factors are provided as follows.

ESA Listed Species

A subset of the special-status species evaluated are listed under the ESA and effects to these species were analyzed per the Endangered Species Consultation Handbook guidance for ESA consultation.

- **No effect** – the Project would not affect a listed species or designated critical habitat.
- **May affect, not likely to adversely affect** – potential Project effects on listed species are expected to be discountable and insignificant.
- **May affect, likely to adversely affect** – adverse effects to a listed species may occur as a direct or indirect result of the Project that are not insignificant, discountable, or beneficial.
- **May affect, beneficial affect** – potential Project effects on listed species are expected to be contemporaneous positive effects without any adverse effects to the listed species.

³ Given the difficulty that can be associated with species identification, the varying skill sets of citizen scientists, and errors and precision of location information from various sources such as eBird and other citizen science databases, these observations may be classified as evidence that the occupancy of the Project Area and vicinity is Possible and not Present.

ESA Proposed and Candidate Species

- **No effect/Not likely to jeopardize the continued existence** – the Project would not directly or indirectly affect the species and is not likely to jeopardize the continued existence of this species.
- **Is likely to jeopardize the continued existence** – the Project is likely to jeopardize the continued existence of the species.

BGEPA-Listed

Bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) are protected under the BGEPA. Effects to BGEPA-listed species were analyzed to determine whether “take” would occur due to Project activities. The BGEPA prohibits unpermitted activities to “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or in any manner any bald eagle commonly known as the American eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof of the foregoing eagles...” Under the BGEPA, “take” is defined as to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb” (16 U.S.C. 668c). Disturb is further defined as “...to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.” Permits may be granted for eagle takes that are “associated with, but not the purpose of, the activity; and cannot practicably be avoided” (50 C.F.R. 22.26). Species protected under the BGEPA were analyzed for take per the USFWS guidance for BGEPA consultation (USFWS 2007), which includes three potential take determinations:

- **No take** – the Project would not cause take.
- **Not likely to result in take** – the Project or its environmental consequences are not expected to result in take, as defined BGEPA of 1940 (as amended), due to the location and nature of the Project. However, take is not inconceivable.
- **Likely to result in take** – the Project or its environmental consequences would in all probability result in take.

BLM Sensitive Species

For BLM Sensitive species, effects were analyzed to determine whether the Project is expected to result in the loss of viability or a trend towards listing under the ESA (**Appendix C**). Three potential effects determinations were considered:

- **No impact**
- **May impact individuals, but unlikely to result in a loss of viability or result in a trend toward federal listing**
- **Likely to result in a loss of viability or result in a trend toward federal listing**

New Mexico State Listed Species

A subset of the special-status species evaluated are listed under NM Stat § 75-6-1 (2025) for plants and NM Stat § 17-2-41 (2025) for wildlife and effects to these species were analyzed per their respective statutes.

Per NM Stat § 75-6-1 (2025), "endangered plant species means any plant species whose prospects of survival within the state are in jeopardy or are likely, within the foreseeable future, to become jeopardized."

Per NM Stat § 17-2-38 (2025), "endangered species means any species of fish or wildlife whose prospects of survival or recruitment within the state are in jeopardy due to any of the following factors:

- (1) the present or threatened destruction, modification or curtailment of its habitat;
- (2) overutilization for scientific, commercial or sporting purposes;
- (3) the effect of disease or predation;
- (4) other natural or man-made factors affecting its prospects of survival or recruitment within the state; or
- (5) any combination of the foregoing factors."

Additionally "threatened species means any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range in New Mexico."

Three potential effects determinations were considered:

- **No impact**
- **May impact individuals, but unlikely to result in a loss of viability**
- **Likely to result in a loss of viability**

6.4. POTENTIAL EFFECTS TO SPECIAL-STATUS SPECIES

Potential effects of the proposed Project on special-status species were evaluated by considering the results of the screening analysis alongside the possible direct and indirect impacts from surface disturbance, noise, light, and traffic.

Fugitive dust may be generated during construction and reclamation of the drill pads and access roads; however, with implementation of **EPM 3**, dust emissions are not anticipated to result in effects to special-status species within the Analysis Area. As a result, dust is not included in the effects analysis of this BE.

Surface Disturbance

Surface disturbance results in the temporary or permanent removal of topsoil and vegetation and can result in erosion and sedimentation in nearby drainages and the fragmentation of habitat. It also can provide opportunities for the introduction and spread of nonnative plant species and may result in behavioral changes in wildlife (Armbruster 1983, Forbes 1995, Northrup and Wittemyer 2013, White and Gregovich 2017).

The surface disturbance footprint equates to approximately 3.83 acres in the Analysis Area. Surface disturbance during the Project activities will only include construction of the drill pads and their associated access roads, the grading and widening of existing access roads, where necessary, and through vehicle and equipment travel within the Analysis Area. All drill pads will be reclaimed following the completion of the exploratory drilling activities. They will be seeded with native plant species appropriate for Chihuahuan Desert plant communities native to Hidalgo County, New Mexico. Therefore, effects from surface disturbance on special-status species are anticipated to be localized to the disturbance footprint and temporary in nature.

Noise

Noise can cause changes in species behavior (foraging, communication, and reproductive behavior), morphology, range/habitat use, and species interactions (Duquette, Loss, and Hovick 2021, Foster et al. 2019, Injaian, Poon, and Patricellia 2018, Shannon et al. 2016) and prolonged exposure to noise can result in behavioral and physiological adaptations (Knight and Gutzwiller 1995). Noise associated with the Project will be produced during the construction and reclamation of the drill pads, as well as during exploratory drilling, 24 hours per day. A single piece of construction equipment is expected to be operating at pads at any one time. These noise disturbances will not extend beyond the Analysis Area and are expected to be short-term and localized at each pad, further attenuating with distance.

The operation of a drill rig produces noise emissions that reach up to 84dBA, as measured at 50 ft (15 m), the maximum noise emissions produced by backhoes reaches 78 dBA at 50 ft, and the maximum noise emissions produced by bulldozers reaches 82 dBA at 50 ft. (FHWA 2006). This results in the maximum noise emissions from Project activities to reach estimated at 84 dBA. In New Mexico, the maximum permissible noise levels for rural areas is 50 dBA (New Mexico Energy 2014). Because noise attenuates with distance (for every doubling of distance dBA decreases by 6) (FHWA 2006), peak noise levels will reach 50 dBA at approximately 3,200 ft from the drilling pad locations. The sound pressure level attenuation equation only accounts for attenuation due to geometric spreading (-6 dB per doubling distance) and does not account for attenuation due to atmospheric, ground attenuation, and intervening topography, and therefore will overpredict the sound level at distances greater than those used within the calculation. Based on these calculations, it is assumed that noise emissions have the potential to result in effects to special-status species within this 3,200 ft buffer.

Light

Artificial light at night (ALAN) can result in changes to activity and behavior for nocturnal species, increased predator/prey interactions, and may alter community compositions with a greater impact on specialist species (Sanders et al. 2021). It also has the potential to impact the circadian system in migratory birds, cause disorientation, reduce the quality of stopover habitat, and in some cases cause mortality (Falcón et al. 2020).

Drilling will occur 24 hours per day and 7 days a week on one pad at a time. During hours of darkness, each site with active drilling will be lit to allow safe operation of drilling equipment. Light emissions from

night-time drilling operations will be minimized through implementation of EPMs regarding lighting designs. With the implementation of light shields, the effects of light emissions on special-status species are anticipated to be limited to drill pad locations.

Traffic

In addition to producing noise, traffic could affect biological resources by increasing the probability of animal-vehicle collisions (AVCs), causing changes in species communication and behavior, and decreasing habitat quality and increasing its fragmentation (Ament et al. 2008, Fahrig and Rytwinski 2009, Jacobson et al. 2016). Traffic can also affect the abundance and diversity of insect species (Muñoz, Megias, and Torres 2014). Heavily trafficked roads can negatively impact wildlife populations due to increased rates of mortality (Ament et al. 2008, Jacobson et al. 2016).

Project related traffic will be composed of a backhoe/excavator for drill pad and road construction, a single drill rig for drilling operations, support equipment, and pickup trucks for the conveyance of employees. Traffic will occur during the site preparation, mineral exploration, and reclamation. The maximum traffic volumes resulting from the Project are expected to occur during construction, when the most vehicles would be traveling to and from the drill pad. During mineral exploration and reclamation, traffic is expected to be limited to the pickup for the conveyance of employees. Reduced vehicle speeds (**EPM 9**) will be enforced within the Analysis Area for Project-associated activities to the effects of traffic on special-status species. Therefore, effects from traffic on special-status species are anticipated to be localized to drill pad and access road locations and will be minimized with the implementation of EPMs.

7. RESULTS

Nine ESA, two BGEPA, 17 BLM, and 21 New Mexico State Endangered species were identified for inclusion in the potential to occur and effects analysis. Detailed results are summarized as follows, and the rationale for the potential to occur for each special-status species within the Analysis Area including a determination of Project effects or impacts, is provided in **Tables 1-3**.

7.1. ESA LISTED SPECIES

The USFWS IPaC report identified seven species classified as endangered or threatened by the ESA (jaguar [*Panthera onca*], Mexican spotted owl [MSO; *Strix occidentalis lucida*], yellow-billed cuckoo [YBC; *Coccyzus americanus*], Gila topminnow [*Poeciliopsis occidentalis*], Gila trout [*Oncorhynchus gilae*], and swale paintbrush [*Castilleja ornata*]), one species proposed as threatened by the ESA (monarch butterfly [*Danaus plexippus*]), and one non-essential, experimental population of a species (northern Aplomado falcon [*Falco femoralis septentrionalis*]) to consider for potential to occur in the Analysis Area and for potential for the Project to affect (**Appendix C**). No critical habitat for these species intersects the Analysis Area.

Of these species, six were determined to have a potential to occur of **None**, one was determined to have a potential to occur of **Unlikely**, and two were determined to have a potential to occur of **possible** in the Analysis Area. The results of this evaluation and the effects analysis for species with a potential to occur in the Analysis Area are provided in **Table 1**.

7.2. BGEPA LISTED SPECIES

Bald eagle (*Haliaeetus leucocephalus*) was determined to have a potential to occur in the Analysis Area of **None**, while golden eagle (*Aquila chrysaetos*) was determined to have a potential to occur of **Unlikely**. The results of this evaluation and the effects analysis for these species are provided in **Table 2**.

7.3. BLM SENSITIVE SPECIES AND NEW MEXICO STATE ENDANGERED SPECIES

There are 57 plants and 64 wildlife species classified as “Sensitive” by the BLM throughout the state of New Mexico (**Appendix D**). Using BISON-M (**Appendix E**), New Mexico ERT occurrence records (**Appendix F**), and the New Mexico Rare Plant Website’s rare plant list for Hidalgo County, it was determined that 17 of these BLM Sensitive species and 21 New Mexico State endangered or threatened species have potential to occur within 1 mile of the Analysis Area (**Table 3**). An effects analysis for these species is detailed in **Table 3**.

Table 1. ESA Listed Species Potential to Occur and Effects Analysis

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur	Effects Analysis
MAMMALS						
<i>Panthera onca</i> Jaguar	Endangered (USFWS 1997); designated critical habitat (USFWS 2014a).	Range wide this species uses wide variety of habitat types. Jaguars use lowland wet vegetative communities, including marshy savanna and tropical rainforest. This species is also found in arid regions where it is found in tropical dry forest, thornscrub, desertscrub, chaparral, semi-desert grassland, Madrean evergreen woodland, deciduous forest, and conifer forest (USFWS 2018).	Occurs in southern Arizona, southern New Mexico and southern Texas, U.S. Range extends southward through Mexico to northern Argentina (USFWS 2018).	This species was last recorded in New Mexico in 1997 in the Peloncillo Mountains in Hidalgo County (New Mexico Department of Game and Fish).	Unlikely. Though the Analysis Area is within this species known range and distribution in New Mexico and contains suitable habitat in the form of desertscrub and there are New Mexico ERT records for this species within 1 mile of the Analysis Area (Appendix F), the last known occurrence record for this species in New Mexico was in 1997. There is no critical habitat for this species in the Analysis Area.	No Effect. While there are no known construction noise thresholds for jaguar that result in modifications to its natural behavior (USFWS 2018), noise from site preparation and exploratory drilling operations, could cause this species to avoid portions of the Analysis Area impacted by noise as drilling operations move from drill pad to drill pad. However, this species has not been observed in New Mexico in almost 50 years, and it is unlikely that this species persists in the state. Additionally, with the implementation of EPMs 8 and 9 , Project-associated effects are not anticipated to have an effect on this species.
BIRDS						
<i>Coccyzus americanus</i> (western Distinct Population Segment) Yellow-billed cuckoo	Threatened (USFWS 2014b); designated critical habitat (USFWS 2021).	Utilizes drier woodlands including mesquite bosques, drainages in desert scrub and desert grassland with a tree component, and Madrean evergreen woodlands in perennial, intermittent or ephemeral drainages (USFWS 2020). Western yellow-billed cuckoos may migrate along riparian corridors and surrounding upland vegetation (Hughes 2020).	This species is a long-distance neotropical migrant (Hughes 2020). At the species level, breeds throughout temperate North America south to Mexico and the Greater Antilles (Hughes 2020). The western DPS breeds west of the Continental Divide and the watershed boundary between the Rio Grande and Pecos River and the Chihuahuan Desert. The USFWS considers the historical breeding range to include southern British Columbia, Canada and in Washington, Idaho, Nevada, Oregon, Utah, western Colorado, southwestern Wyoming, California, Arizona, western New Mexico, and Texas, U.S. Breeding range extends into the Cape Region of Baja California Sur, Sonora, Sinaloa, western Chihuahua and northwestern Durango, Mexico (USFWS 2014b). Winters in South America, east of the Andes and typically south of the Amazon Basin in southern Brazil, Paraguay, Uruguay, eastern Bolivia and northern Argentina (USFWS 2014b).	Yellow-billed cuckoos breed along the major river valleys, including the San Juan, Rio Grande, Pecos, Canadian, San Francisco, and Gila Rivers. This species also occurs in smaller drainages and isolated wetlands, isolated woodlands, and suburban plantings. It is found throughout the state, but is more common in the southern half of New Mexico (New Mexico Avian Conservation Partners n.d.-e).	None. While the Analysis Area is within the current range and distribution of this species in New Mexico, it does not contain any suitable habitat for this species in the form of drier woodlands including mesquite bosques, drainages in desert scrub and desert grassland with a tree component, and Madrean evergreen woodlands in perennial, intermittent or ephemeral drainages. Additionally, there are no New Mexico ERT records for this species within 1 mile of the Analysis Area (Appendix F). There is no critical habitat for this species in the Analysis Area.	No Effect. This species is not anticipated to occur within the Analysis Area.

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur	Effects Analysis
<i>Falco femoralis septentrionalis</i> Northern aplomado falcon	Endangered (USFWS 1986); no critical habitat; non-essential experimental population (USFWS 2006a).	Within the U.S., this species uses coastal prairies, desert grasslands, oak woodlands and riparian gallery forest (Keddy-Hector, Pyle, and Pattern 2017). This species has historically occurred in relatively flat and open habitats (USFWS 2014c). Builds nests in large trees, cliffs, utility poles, artificial platforms or on the ground when elevated nest sites are not available (Keddy-Hector, Pyle, and Pattern 2017). This species is expected to use similar habitat year-round (Keddy-Hector, Pyle, and Pattern 2017).	This species is mostly non-migratory, although local nomadic movement may occur (Keddy-Hector, Pyle, and Pattern 2017). The <i>septentrionalis</i> subspecies occurs in New Mexico and Texas, U.S. and the Mexican states of Chihuahua, northwestern Chiapas, western Campeche, Oaxaca, San Luis Potosi, Tabasco, and Vera Cruz (USFWS 2014c).	This species occurs in Gray Ranch and Animas Valley, Hidalgo County, Separ and Hachita, Grant County, Carlsbad, Eddy County, San Antonio, Socorro County, and in Dona Ana and Otero Counties, New Mexico. Successful nesting was observed in Luna County in 2002 (New Mexico Avian Conservation Partners n.d.-b).	Possible. The Analysis Area is within this species known range and distribution in New Mexico and contains its suitable habitats. There are New Mexico ERT records for this species within 1 mile of the Analysis Area (Appendix F).	No Effect. With the limited spatial extent and temporary nature of Project activities, the Project is not anticipated to result in take to this species.
<i>Strix occidentalis lucida</i> Mexican spotted owl	Threatened (USFWS 1993); designated critical habitat (USFWS 2004).	Prefers old-growth mixed conifer or pine-oak forests, or such forests with complex structure. Also uses narrow canyons with cliffs and conifer or riparian woodlands (Gutiérrez, Franklin, and Lahaye 2020). In Arizona, canyon habitats typically contain Madrean evergreen oak or Madrean pine-oak woodlands (Wise-Gervais 2005). In forested areas, nests in large trees whereas in canyon habitats, will nest in trees, caves or on rocky ledges (USFWS 2012). Primarily forages for rodents in a range of forest or woodland habitats, but diet also includes lagomorphs, bats, birds, reptiles and arthropods (AZGFD 2023, Gutiérrez, Franklin, and Lahaye 2020, USFWS 2012) . Migration is variable within areas and among years (AZGFD 2023, Gutiérrez, Franklin, and Lahaye 2020). When winter movements do occur, this species may move locally, primarily to lower elevations and more open sites with pinyon pine-juniper woodlands, open mountain shrub habitat, conifer forests or deciduous riparian trees (AZGFD 2023, Gutiérrez, Franklin, and Lahaye 2020).	This species is primarily non-migratory, although there may be some short distance (12 to 30 miles) or altitudinal movement (Gutiérrez, Franklin, and Lahaye 2020). Occurs patchily in Colorado, Utah, Arizona, New Mexico, and western Texas. Range extends from the international border southward along the Sierra Madre Occidental and Oriental to Michoacán (Gutiérrez, Franklin, and Lahaye 2020, USFWS 2012).	Occurs patchily in most mountain ranges and canyon systems throughout the state (New Mexico Avian Conservation Partners n.d.-a).	None. MSO or their required habitats are not known to occur on any state-administered lands in New Mexico (USFWS 2012), and the other portions of the Analysis Area do not contain any suitable habitat for this species in the form of old-growth mixed conifer or pine-oak forests or narrow canyons with cliffs and conifer or riparian woodlands and there are no New Mexico ERT records for this species within 1 mile of the Analysis Area (Appendix F). There is no critical habitat for this species in the Analysis Area.	No Effect. This species is not anticipated to occur within the Analysis Area.

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur	Effects Analysis
FISH						
<i>Poeciliopsis occidentalis</i> Gila topminnow (including Yaqui)	Endangered (USFWS 1967); no critical habitat.	Occurs in springs, cienegas, permanent and intermittent streams and the margins of large rivers. Prefers warm, shallow, and slow-moving water but can occur in lentic habitats or lotic habitats with moderate current. Additionally, favors areas with algal mats or debris along stream margins (USFWS 1998).	Occurs in the Gila, Concepción and Yaqui river basins of Arizona and New Mexico, U.S. and Sonora, Mexico (USFWS 1998, Cobble 1995).	This species occurs in the Gila River and Yaqui River basins in the Gila and San Simon Rivers (USGS 2019b).	None. There is no suitable aquatic habitat for this species in the Analysis Area.	No Effect. This species is not anticipated to occur within the Analysis Area.
<i>Oncorhynchus gilae</i> Gila trout	Threatened (USFWS 1967, USFWS 2006b); no critical habitat.	Inhabits perennial montane streams in coniferous and mixed woodland, montane coniferous forest, and subalpine forests (USFWS 2003). These streams area characterized by high flow variability but with low turbidity and high dissolved oxygen. Spawns in areas with flow over substrates of coarse sand or gravel. Juveniles likely use areas with slow current such as stream margins, side channels or shallow bars. Subadults favor riffle habitats whereas adults prefer pool habitats (USFWS 2003).	Arizona and New Mexico, U.S. (USFWS 2003).	This species was introduced into McKnight Creek, New Mexico, a tributary of the Mimbres River in the Guzman Basin (USGS 2019a).	None. There is no suitable aquatic habitat for this species in the Analysis Area.	No Effect. This species is not anticipated to occur within the Analysis Area.
INSECTS						
<i>Danaus plexippus plexippus</i> Monarch butterfly	Proposed Threatened with a 4d rule and proposed critical habitat (USFWS 2024)	Monarch caterpillars feed exclusively on plants in the subfamily Asclepiadoideae (milkweed) and adults forage for nectar on a wide variety of flowers. This species can be found wherever milkweed occurs. Overwintering populations use the leaves, branches, and trunks of large trees within forested groves. In California, both native tree species and eucalyptus trees are utilized (Jepsen et al. 2015).	<i>D. plexippus</i> occurs in North America, Central America, the Caribbean south to South America, Hawaii, Australia, some Pacific Islands, parts of Asia, Africa, and southern Europe. Populations outside of the Americas may be non-native (Zhan et al. 2014). Most populations of the <i>plexippus</i> subspecies are migratory and breed in southern-most portions of all Canadian provinces except Newfoundland and Labrador, the conterminous U.S. states and the Mexican states of Baja California, Chihuahua, Coahuila, Nuevo León, Sonora, and Tamaulipas. The wintering range of migratory populations includes coastal California and southern Florida, U.S. and the Mexican states of Baja California, Mexico and Michoacán (Jepsen et al. 2015).	Breeding and migratory populations occur throughout the state, with concentrated migration occurring along river pathways such as the Rio Grande (Dingle et al. 2005).	Possible. There are no occurrence records from the state of New Mexico for this species within 1 mile of the Analysis Area (Appendix F), no citizen science records for this species in the Analysis Area (cite iNaturalist), and no suitable habitat in the form of milkweed plant species was identified during surveys of the Project Area (WestLand 2026). However, suitable habitat for this species may be present in the greater Analysis Area, and the Analysis Area is within this species' current range and distribution (Dingle et al. 2005).	Not likely to result in a trend towards federal listing. Traffic from the Project has the potential to affect this species by resulting in individual mortality following vehicular collisions. However, the Project is not expected to significantly increase the number of vehicles in the Analysis Area, and by restricting speed limits for vehicles associated with Project activity (EPM 9), the risk of this effect is significantly reduced. Therefore, the Project is not anticipated to result in a trend towards federal listing for this species.

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur	Effects Analysis
PLANTS						
<i>Eryngium sparganophyllum</i> Arizona eryngo	Endangered; designated critical habitat (USFWS 2022).	Found in organic muck or wet silty clay-loam soils in riparian zones or marshes in Pinyon-Juniper or Madrean evergreen woodlands and cienegas in desertscrub (AZGFD 2019).	Found in Hidalgo County, New Mexico, Pima and Cochise Counties in Arizona, in Chihuahua, northwest of Casas Grandes, Mexico, in Sonora east of Esqueda, and in the Sierra Madre of Durango, Jalisco, Nayarit, and Zacatecas (New Mexico Rare Plant Technical Council 1999b).	At Las Playas Springs in Hidalgo County (New Mexico Rare Plant Technical Council 1999b).	None. The Analysis Area is outside of this species highly restricted range and distribution in New Mexico. There is no critical habitat for this species in the Analysis Area.	No Effect. This species is not anticipated to occur in the Analysis Area.
<i>Castilleja ornata</i> Swale paintbrush	Endangered	Plants occur in semi-desert grasslands in swales and seasonally wetted areas between elevations of 5,200 and 6,900 ft (New Mexico Rare Plant Technical Council 1999a)	A single population location exists in the Animas Valley of Hidalgo County, New Mexico (USFWS 2023).	The Animas Valley of Hidalgo County, New Mexico (USFWS 2023).	None. The Analysis Area is outside of this species known range and distribution and does not contain suitable habitat for this species in the form of semi-desert grasslands with seasonally wetted areas. Additionally, this species does not have the potential to occur within 1 mile of the Analysis Area (Appendix F).	No Effect. This species is not anticipated to occur in the Analysis Area.

Table 2. BGEPA Species Potential to Occur and Effects Analysis

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur	Take Analysis
<i>Aquila chrysaetos</i> Golden eagle	Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c)	Range-wide, breeds in a wide variety of open habitats, with nests typically on cliffs, and avoids heavily forested areas (Katzner et al. 2020). Constructs large nests on cliff ledges, rock outcrops, tall trees or, rarely, transmission towers (Corman and Wise-Gervais 2005). Golden eagles are known to forage within 4.4 miles of the nest (Tesky 1994), generally in open habitats where prey is available (Katzner et al. 2020). Primarily feeds on small mammals (greater than 80% of prey items) but also consumes birds, reptiles and fish (Katzner et al. 2020). In the western U.S. average territory size ranges from 22 to 55 square miles (AZGFD 2002a).	This species is a short to medium-distance partial migrant with a Holarctic distribution (Katzner et al. 2020). In North America, primarily breeds in western portion of the continent from Alaska to central Mexico. Northernmost populations are typically migratory. Year-round and non-breeding populations occur from central Saskatchewan to British Columbia, Canada and south throughout its range and sparsely in the eastern U.S. (Katzner et al. 2020).	Found in suitable habitat throughout the state (BISON-M 2021a).	Unlikely While there are no New Mexico ERT occurrence records for this species within 1-mile of the Analysis Area (Appendix E) and there are no citizen science records for this species in the Analysis Area (iNaturalist 2026; accessed on April 21, 2026), there is potentially suitable breeding habitat for this species in the eastern portion of the Analysis Area with foraging habitat occurring towards the western extent.	No Take. While there is potentially suitable breeding habitat for this species in the eastern portion of the Analysis Area and suitable foraging habitat throughout its western extent, there are no known nest locations within the Analysis Area or within 4.4 miles of the Analysis Area (Tesky 1994). Additionally, effects from the Project are anticipated to be localized to the disturbance footprint and temporary in nature. Therefore, the Project is not anticipated to result in take to this species.
<i>Haliaeetus leucocephalus</i> Bald Eagle	Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c)	Breeding is concentrated in coastal areas, along rivers, lakes or reservoirs. Typically breeds in forested areas with edge habitat within 1.3 miles of aquatic habitats suitable for foraging. Prefers areas of shallow water and shorelines for fishing and hunting wide variety of waterfowl, and small aquatic and terrestrial mammals. Fish are preferred prey, but carrion is used extensively whenever encountered. Nests away from human disturbance in large trees and rarely on cliff ledges or on the ground when trees are absent. Winters primarily in coastal areas or along major river systems with adequate prey availability and large trees for perching (Buehler 2022).	Migratory behavior varies among populations and age groups (Buehler 2022). Breeds south of the tundra throughout Canada and the U.S., excluding Hawaii. Additionally, small breeding populations occur in Baja California, Sonora and Chihuahua, Mexico (Buehler 2022). Winter range appears to be expanding as populations increase in size. Most populations are year-round residents with only the northern most populations in Alaska, U.S. and Canada withdrawing southward or to coastal areas (Fink et al. 2025).	Occurs locally in summer at several locations throughout the state, including primarily Colfax and Sierra Counties. This species is relatively common in the winter and during migration along watercourses and reservoirs (BISON-M 2019b).	None. There is no suitable foraging or breeding habitat for this species in the Analysis Area and there are no New Mexico ERT (Appendices F) or citizen science occurrence records for this species in the Analysis Area (iNaturalist 2026; accessed on April 21, 2026).	No Take. This species is not anticipated to occur in the Analysis Area.

Table 3. BLM Sensitive Species and New Mexico State Listed Species Potential to Occur and Effects Analysis

Species Name	Status	Known Suitable Habitat	Potential to Occur	Effects Analysis
WILDLIFE				
<i>Incilius alvarius</i> Colorado River Toad	New Mexico State Threatened	Arid grasslands, wooden scrubland, and inland water sources. Semi-aquatic and tend to stay near water sources (Arizona-Sonora Desert Museum 2025).	Unlikely. While there are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F) and potentially suitable inland water sources for this species along Stein Creek (0.18 miles north of the Analysis Area) and along the San Simon River (approximately 3 miles downgradient of the Analysis Area), there is no suitable inland water sources for this species within the Analysis Area. Though this species may travel overland into the Analysis Area, it is unlikely that its presence within it would be more than temporary due to the lack of suitable habitat.	No Impact. The effects from the Project are not anticipated to reach the potentially suitable habitat for this species along Stein Creek or the San Simon River. Therefore, the Project is not expected to impact this species.
<i>Falco peregrinus</i> Peregrine falcon	New Mexico State Threatened	Typically occupy mountain and canyon habitats, while breeding areas are associated with water. May utilize urban areas, where they nest on tall buildings instead of cliffs (New Mexico Avian Conservation Partners).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix E), and there is potentially suitable nesting habitat for this species in the Peloncillo Mountains.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Peloncillo Mountains, this temporary effect is not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Megascops trichopsis</i> Whiskered screech-owl	New Mexico State Threatened	Occupy canyon areas in montane forests. In the Peloncillo Mountains, this species occupies habitats dominated by gray oak, Chihuahuan pine, alligator juniper, border pinyon, and Emory oak (New Mexico Avian Conservation Partners).	Unlikely. While there are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), habitat in the portion of the Peloncillo Mountains that intersects the Analysis Area is not continuously dense enough to provide suitable habitat for this species.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Peloncillo Mountains, this temporary effect is not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Athene cunicularia hypugaea</i> Western burrowing owl	BLM Sensitive	They breed in grasslands, prairies, or open areas near human habitation, especially golf courses, and airports (BISON-M 2018a).	Unlikely. While there are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), there are no grasslands, prairies, or other open areas suitable for breeding for this species in the Analysis Area. There is potentially suitable habitat for this species approximately 2.5 miles west of the Analysis Area, and it is possible, though unlikely, that individuals of this species may incidentally occur within the Analysis Area while flying over or accessing this suitable habitat.	No Impact. The effects from the Project are not anticipated to reach the potentially suitable habitat for this species 2.5 miles west of the Analysis Area. Therefore, the Project is not expected to impact this species.
<i>Amazilia violiceps</i> Violet-crowned hummingbird	New Mexico State Threatened	Riparian woodlands at lower elevations (AZGFD 2002b).	Unlikely. While there are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and the nearest intermittent water source with potentially suitable riparian woodland habitat to the Analysis Area is the San Simon River, which lies approximately 3 miles downgradient of the Analysis Area.	No Impact. The closest suitable habitat for this species to the Analysis Area is the San Simon River, which lies approximately 3 miles downgradient from it. Effects from the Project are not anticipated to reach this habitat. Therefore, the Project is not expected to impact this species.

Species Name	Status	Known Suitable Habitat	Potential to Occur	Effects Analysis
<i>Calothorax lucifer</i> Lucifer hummingbird	New Mexico State Threatened	Can be found in canyon habitats in arid montane regions, particularly where there are flowering agaves (BISON-M 2018d).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species within and adjacent to the Peloncillo Mountains.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Peloncillo Mountains, this temporary effect is not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Calypte costae</i> Costa's hummingbird	New Mexico State Threatened	Desert and semi-desert, arid brushy foothills and chaparral, in migration and winter also in adjacent mountains and in open meadows and gardens (USFWS).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix E), and there is potentially suitable habitat for this species present throughout the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that effects from the Project are unlikely to result in a trend towards federal listing for this species.
<i>Trogon elegans</i> Elegant trogon	New Mexico State Endangered	Occurs from arid shrubland up into pine-oak woodland (BISON-M 2017b).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix E), and there is potentially suitable habitat for this species present throughout the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that effects from the Project are unlikely to result in a trend towards federal listing for this species.
<i>Camptostoma imberbe</i> Northern beardless-tyrannulet	New Mexico State Endangered	Typically occurs at lower elevations in dense stands of mesquite and associated along stream courses (BISON-M 2017c).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present along the ephemeral riparian features in the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species along the ephemeral riparian features in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Tyrannus crassirostris</i> Thick-billed kingbird	New Mexico State Endangered	Inhabit riparian habitats such as arroyos, floodplains, riparian woodlands and wetlands, and lowland riparian shrubland (BISON-M 2017e).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present along the ephemeral riparian features in the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species along the ephemeral riparian features in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Gymnorhinus cyanocephalus</i> Pinyon jay	BLM Sensitive	This species is closely associated with pinyon-juniper woodlands but also breeds in sagebrush, scrub oak, chaparral, and Jeffrey pine forests (BISON-M 2018g).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the eastern portion of the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.

Species Name	Status	Known Suitable Habitat	Potential to Occur	Effects Analysis
<i>Toxostoma bendirei</i> Bendire's thrasher	BLM Sensitive	Found in Sonoran desertscrub, Chihuahuan desertscrub, desert riparian deciduous woodlands, marshes, annual grasslands, and farms (BISON-M 2019d).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that effects from the Project are unlikely to result in a trend towards federal listing for this species.
<i>Anthus spragueii</i> Sprague's pipit	BLM Sensitive	Associated with desert grassland and scrubland habitat, plains-mesa grasslands, and rocky mountain subalpine-high montane meadows. Breeds in shortgrass prairies (BISON-M 2018h).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the eastern portion of the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Vireo bellii</i> Bell's vireo	BLM Sensitive New Mexico State Threatened	Occurs in dense shrubland or woodland along lowland stream courses, with willows, mesquite, and seepwillows (BISON-M 2019c).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the eastern portion of the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Leiothlypis virginiae</i> Virginia's warbler	BLM Sensitive	Typically associated with pinyon-juniper and oak woodlands with a shrubby understory (BISON-M 2020b).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the western portion of the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Ammodramus bairdii</i> Baird's sparrow	BLM Sensitive New Mexico State Threatened	Breeds in shortgrass prairies, but is found in a variety of habitats, ranging from desert grasslands in the south of New Mexico to prairies in the northeast and mountain meadows in the San Juan and Sangre de Cristo Mountains (BISON-M 2019a).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that noise, surface disturbance, traffic, and light from the Project will not result in a trend towards federal listing for this species.
<i>Rhynchophanes mccownii</i> Thick-billed longspur	BLM Sensitive	Found in Sonoran desertscrub, Chihuahuan desertscrub, annual grasslands, on farms, in mountain and alpine meadows (BISON-M 2020a).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that effects from the Project are unlikely to result in a trend towards federal listing for this species.

Species Name	Status	Known Suitable Habitat	Potential to Occur	Effects Analysis
<i>Calcarius ornatus</i> Chestnut-collared longspur	BLM Sensitive	Occupies areas of desertscrub/rocky slopes and juniper savannas near montane regions (BISON-M 2017a).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the eastern portion of the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Choeronycteris mexicana</i> Mexican long-tongued bat	BLM Sensitive	Inhabit deep canyons where they use caves and mine tunnels as day roosts. Vegetation associated with their occupancy is dominated by ocotillo, yucca, agave, manzanita, evergreen oak, and juniper (BISON-M 2018f).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the eastern portion of the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Leptonycteris nivalis</i> Mexican long-nosed bat	New Mexico State Endangered	This species inhabits upper desert scrub-pine oak woodlands in or near mountainous areas. Vegetation in these areas is typically dominated by agave, junipers, oaks, and Mexican pinyon (BISON-M 2018e).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the eastern portion of the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Leptonycteris yerbabuenae</i> Lesser long-nosed bat	BLM Sensitive New Mexico State Threatened	Found in desertscrub habitat featuring sycamore, rabbitbrush, and cottonwood riparian areas, and are dependent on the availability of abandoned or inactive mines (BISON-M 2018c).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that effects from the Project are unlikely to result in a trend towards federal listing for this species.
<i>Lasiurus xanthinus</i> Western yellow bat	BLM Sensitive New Mexico State Threatened	Found in sycamore, rabbitbrush, and cottonwood riparian areas (BISON-M 2019e).	Unlikely. While there are New Mexico ERT records for this species within 1 mile of the Analysis Area (Appendix F), the Analysis Area does not contain suitable habitat in the form of sycamore, rabbitbrush, and cottonwood riparian areas.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that effects from the Project are unlikely to result in a trend towards federal listing for this species.
<i>Euderma maculatum</i> Spotted bat	BLM Sensitive New Mexico State Threatened	Recorded in a wide variety of habitats, from riparian and pinyon-juniper woodlands to ponderosa pine and spruce-fir forest (BISON-M 2017d).	Unlikely. While there are New Mexico ERT records for this species within 1 mile of the Analysis Area (Appendix F), the Analysis Area does not contain suitable riparian, woodland, or forest habitat.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that effects from the Project are unlikely to result in a trend towards federal listing for this species.

Species Name	Status	Known Suitable Habitat	Potential to Occur	Effects Analysis
<i>Lepus callotis gaillardia</i> White-sided jackrabbit	BLM Sensitive New Mexico State Threatened	Dependent on well-developed grasslands that have low shrub density and level terrain (BISON-M 2021b).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the western portion of the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the Analysis Area, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.
<i>Heloderma suspectum</i> Gila monster	BLM Sensitive New Mexico State Endangered	Occurs in desert and mesquite-grassland, but also occurs in pine-oak forests, in rocky foothill regions, and avoids open flats (BISON-M 2025).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that effects from the Project are unlikely to result in a trend towards federal listing for this species.
<i>Aspidoscelis tessellates</i> Gray-checkered whiptail	BLM Sensitive New Mexico State Endangered	Occurs at elevations between 1300 and 1450 m, in predominantly desert grassland habitat (BISON-M 2018b).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and there is potentially suitable habitat for this species present throughout the Analysis Area.	May impact individuals, but unlikely to result in a trend toward federal listing. With the limited scale of the Project and the implementation of EPMs, it is anticipated that effects from the Project are unlikely to result in a trend towards federal listing for this species.
<i>Senticolis triaspis</i> Green rat snake	New Mexico State Threatened	Found in the vicinity of streams in wooded rocky canyon bottoms in mountainous areas. Occurs in woodland, thornscrub, and chaparral. It has an association with sycamore, walnut, cottonwood, wild grape, and willow (Rorabaugh 2019).	Possible. There are New Mexico ERT occurrence records for this species within 1 mile of the Analysis Area (Appendix F), and the Steins Creek riparian corridor (0.18 miles north of the Analysis Area) may provide suitable habitat for this species. It is possible that this species may occur in the portions of the Analysis Area that are within the vicinity of Steins Creek.	May impact individuals, but unlikely to result in a trend toward federal listing. Project-associated surface disturbance, light, and traffic are anticipated to be localized to the disturbance footprint of the Project, and therefore not anticipated to impact this species. While noise emissions may reach potentially suitable habitat for this species in the vicinity of Steins Creek, these temporary effects are not anticipated to jeopardize the persistence of this species or result in a trend towards a federal listing.

PLANTS

<i>Peniocereus greggii</i> var. <i>greggii</i> Night-blooming cereus	BLM Sensitive New Mexico State Endangered	Found in shrublands, grasslands, and Chihuahuan desertscrub, often supported by creosote bush or honey mesquite. Soils are often gravelly (New Mexico Rare Plant Technical Council 1998).	Present. This species was observed in the Analysis Area (WestLand 2026).	No Impact. Pre-design surveys were completed for this species within the Analysis Area, and the surface disturbance footprint was designed to avoid individuals of this species with a 10-m buffer between disturbance and plants. As such, this species in not anticipated to be affected by Project activities.
<i>Coryphantha robustispina</i> ssp. <i>scheeri</i> Scheer's beehive cactus	BLM Sensitive	Grows in flat plains or on hill slopes in semidesert grassland and open woodlands in the Chihuahua Desert.	Present. This species was observed in the Analysis Area (WestLand 2026).	No Impact. Pre-design surveys were completed for this species within the Analysis Area, and the surface disturbance footprint was designed to avoid individuals of this species with a 10-m buffer between disturbance and plants. As such, this species in not anticipated to be affected by Project activities.

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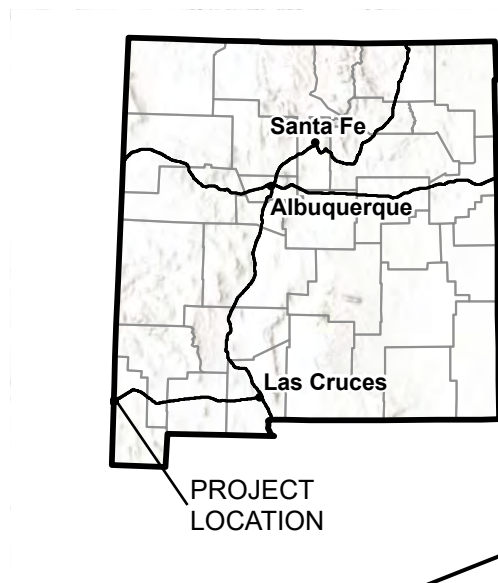
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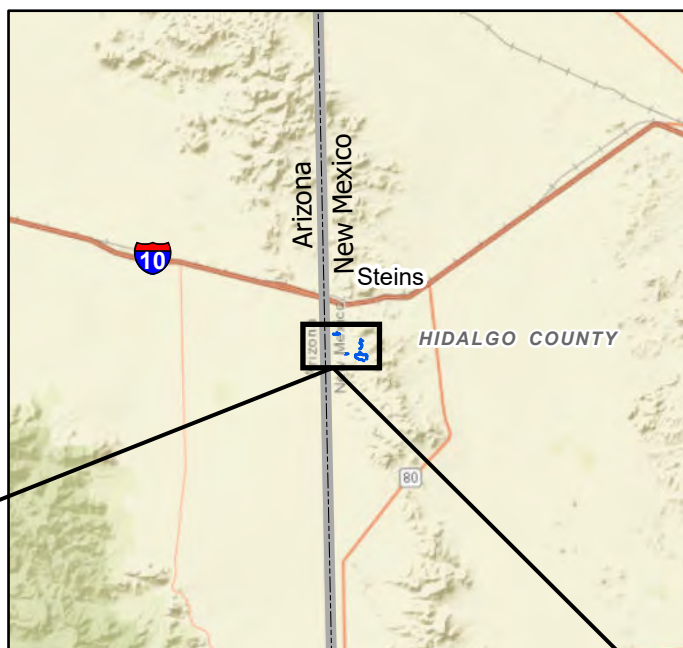
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FIGURES

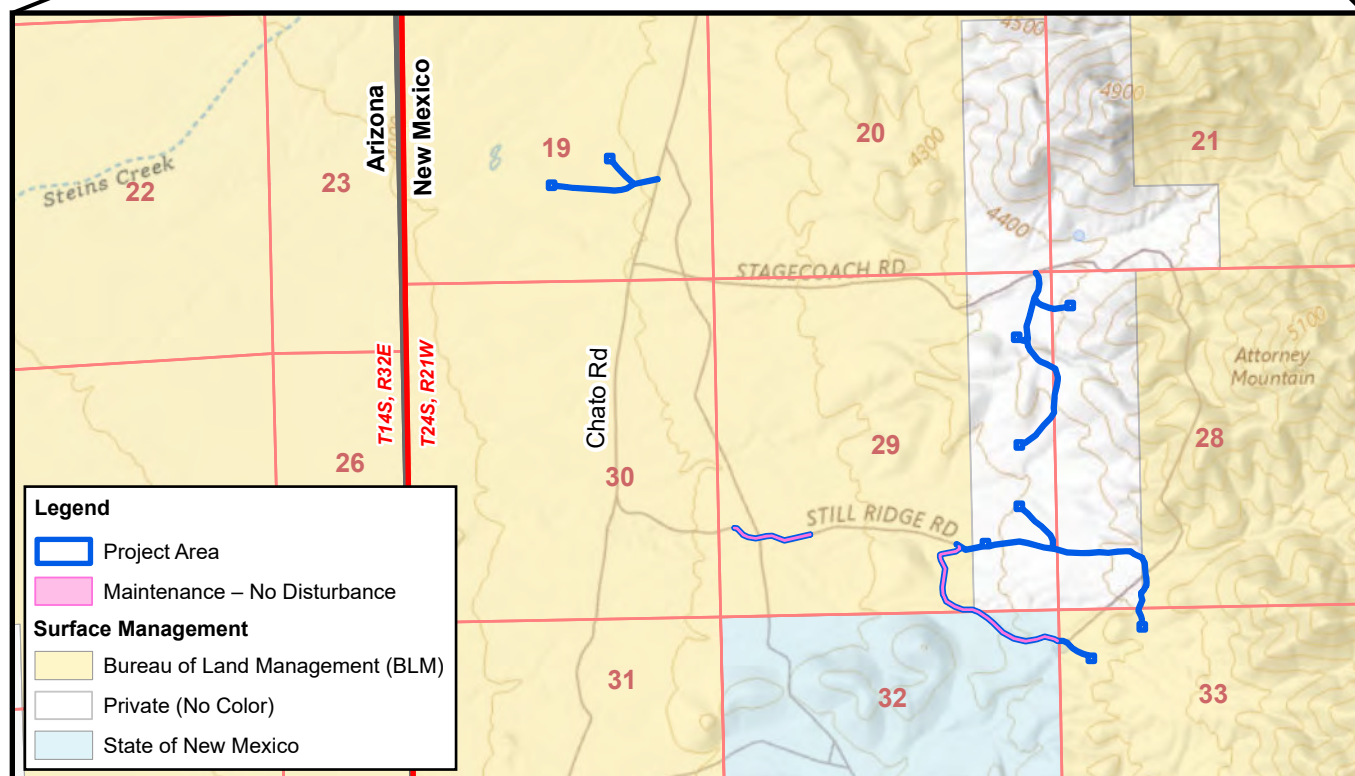
NEW MEXICO



PROJECT VICINITY



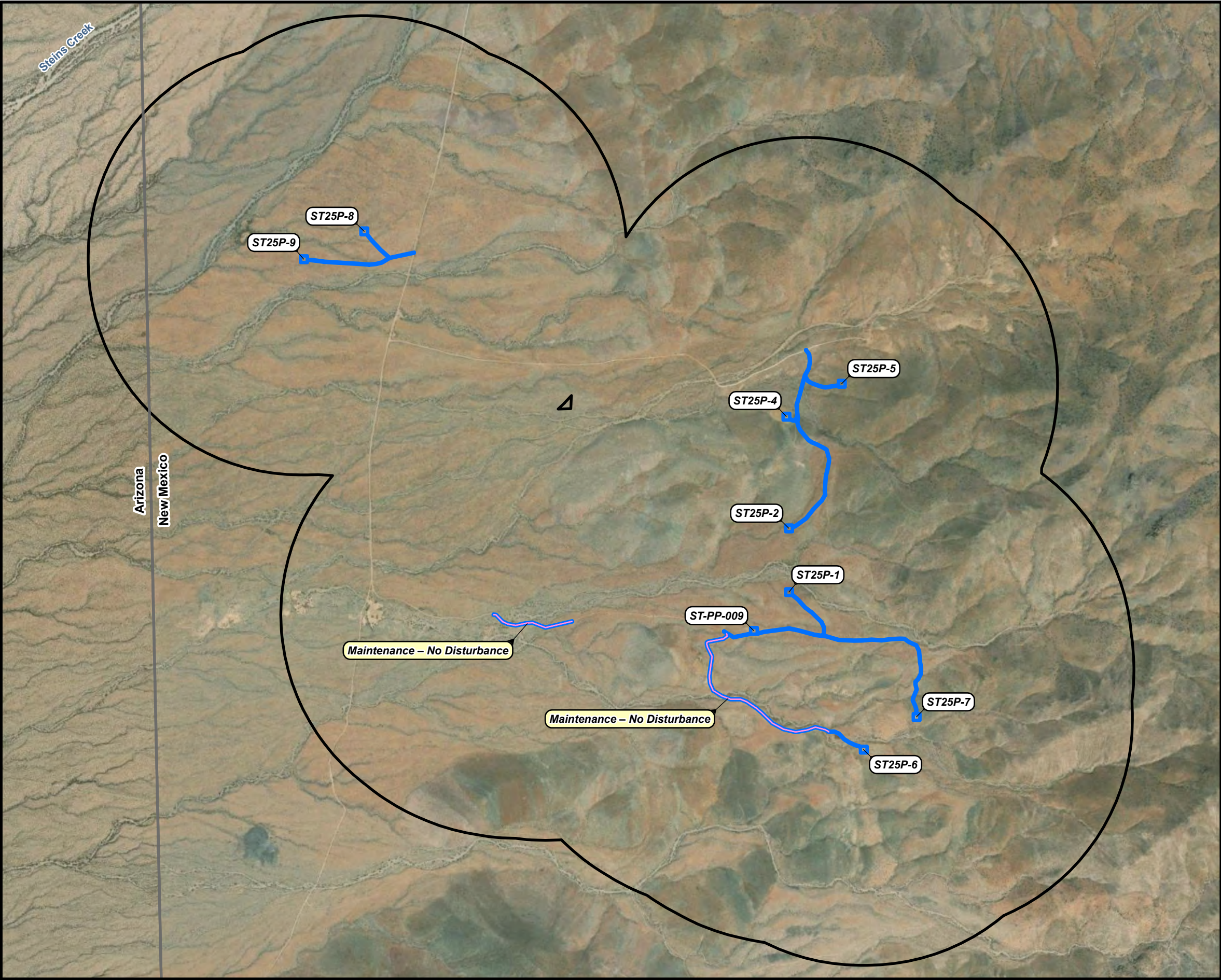
Approximate Scale 1 inch equals 10 miles



T24S, R21W, Portions of Sections 19, 28, 29, 32, and 33,
Hidalgo County, New Mexico
Projection: NAD 1983 UTM Zone 12N
Surface Management: BLM ArcGIS service accessed 05/18/2026
Image Source: ArcGIS Online, World Street Map
and USGS TNM Topo Base Map

CURIOSITY EXPLORATION LLC Steins Exploratory Drilling Project Biological Evaluation

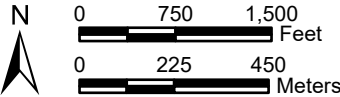
VICINITY MAP
Figure 1



T24S, R21W, Portions of Sections 19, 28, 29, 32, and 33,
Hidalgo County, New Mexico
Projection: NAD 1983 UTM Zone 12N
Image Source: Vivid 5/16/2025

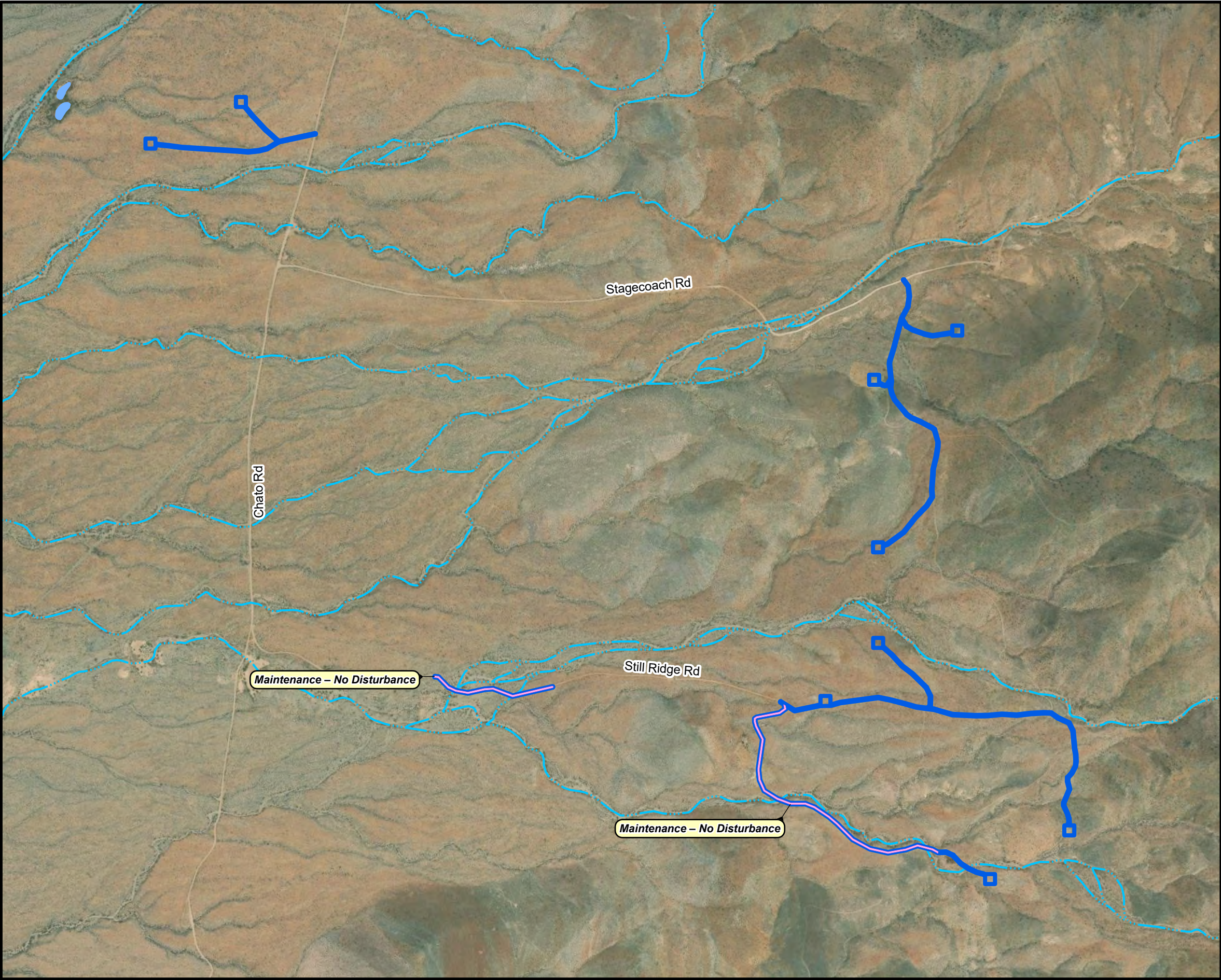
Legend

- Analysis Area
- Project Area
- Maintenance – No Disturbance



CURIOSITY EXPLORATION LLC
Steins Exploratory Drilling Project
Biological Evaluation

AERIAL OVERVIEW
Figure 2

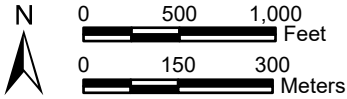


T24S, R21W, Portions of Sections 19, 28, 29, 32, and 33,
Hidalgo County, New Mexico
Projection: NAD 1983 UTM Zone 12N
Data Source: USGS National
Hydrography Dataset (NHD Plus)
Image Source: Vivid 5/16/2025

Legend

National Hydrography Dataset

- Ephemeral
- Pond
- Project Area
- Maintenance – No Disturbance



CURIOSITY EXPLORATION LLC
Steins Exploratory Drilling Project
Biological Evaluation

SURFACE WATER RESOURCES
Figure 3

APPENDIX A

Representative Ground Photos



Photo 1. Overview of the northern section of the Project Area.



Photo 2. Overview of the northern section of the Project Area.



Photo 3. Overview of the southern section of the Project Area.



Photo 4. Overview of the southern section of the Project Area.



Photo 5. Surface water features in the northern section of the Analysis Area.



Photo 6. Surface water features in the northern section of the Analysis Area.



Photo 7. Surface water features in the southern section of the Project Area.



Photo 8. Surface water features in the southern section of the Project Area.



Photo 9. Vegetation representative of the northern section of the Project Area.



Photo 10. Night-blooming cereus (*Peniocereus greggii*; New Mexico State Endangered species) in the northern section of the Project Area.



Photo 11. Vegetation representative of the southern section of the Project Area.



Photo 12. Vegetation representative of the southern section of the Project Area.

APPENDIX B
Natural Resources Conservation Service
Custom Soil Report



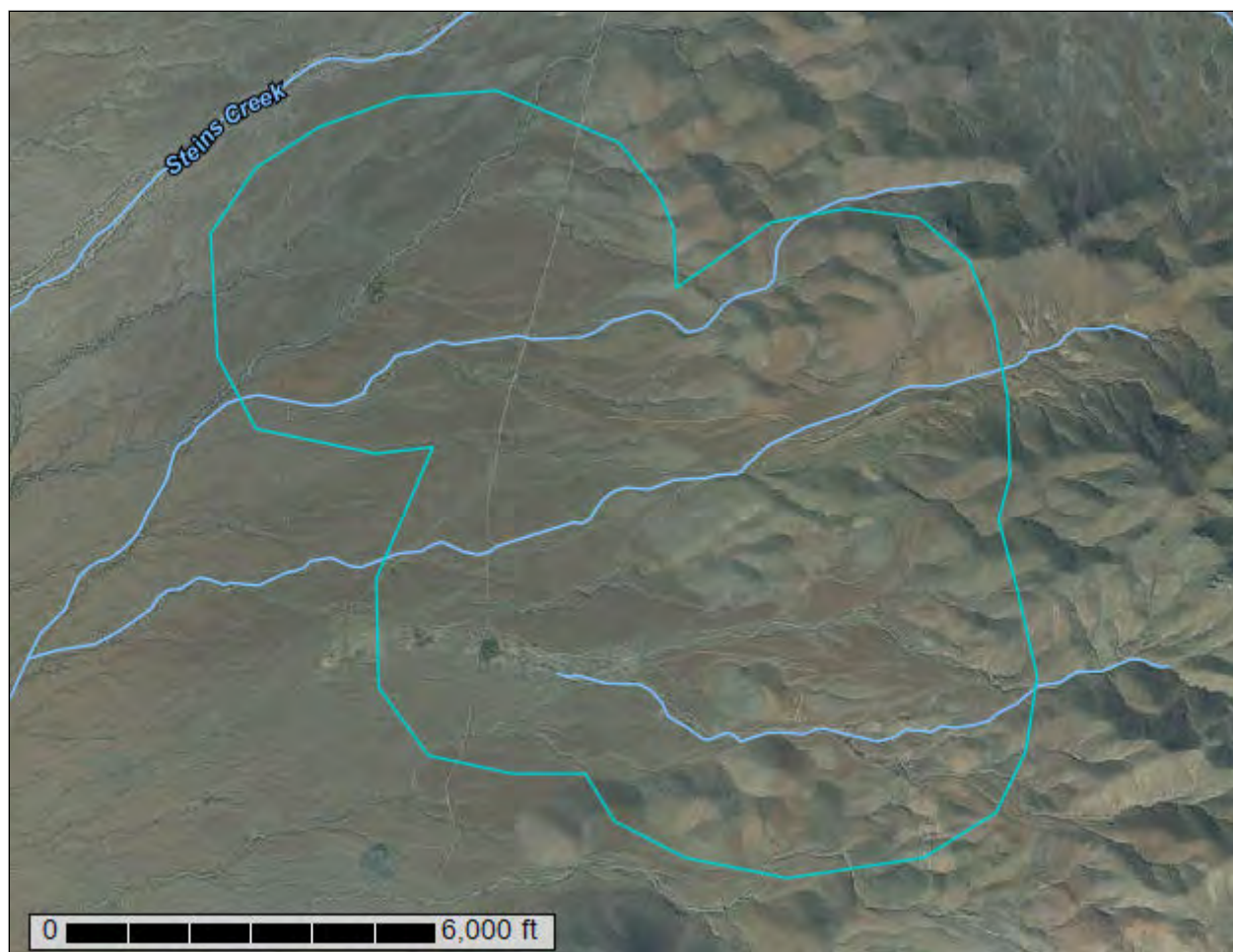
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Hidalgo County, New Mexico, and San Simon Area Parts of Cochise Graham and Greenlee Counties, Arizona



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

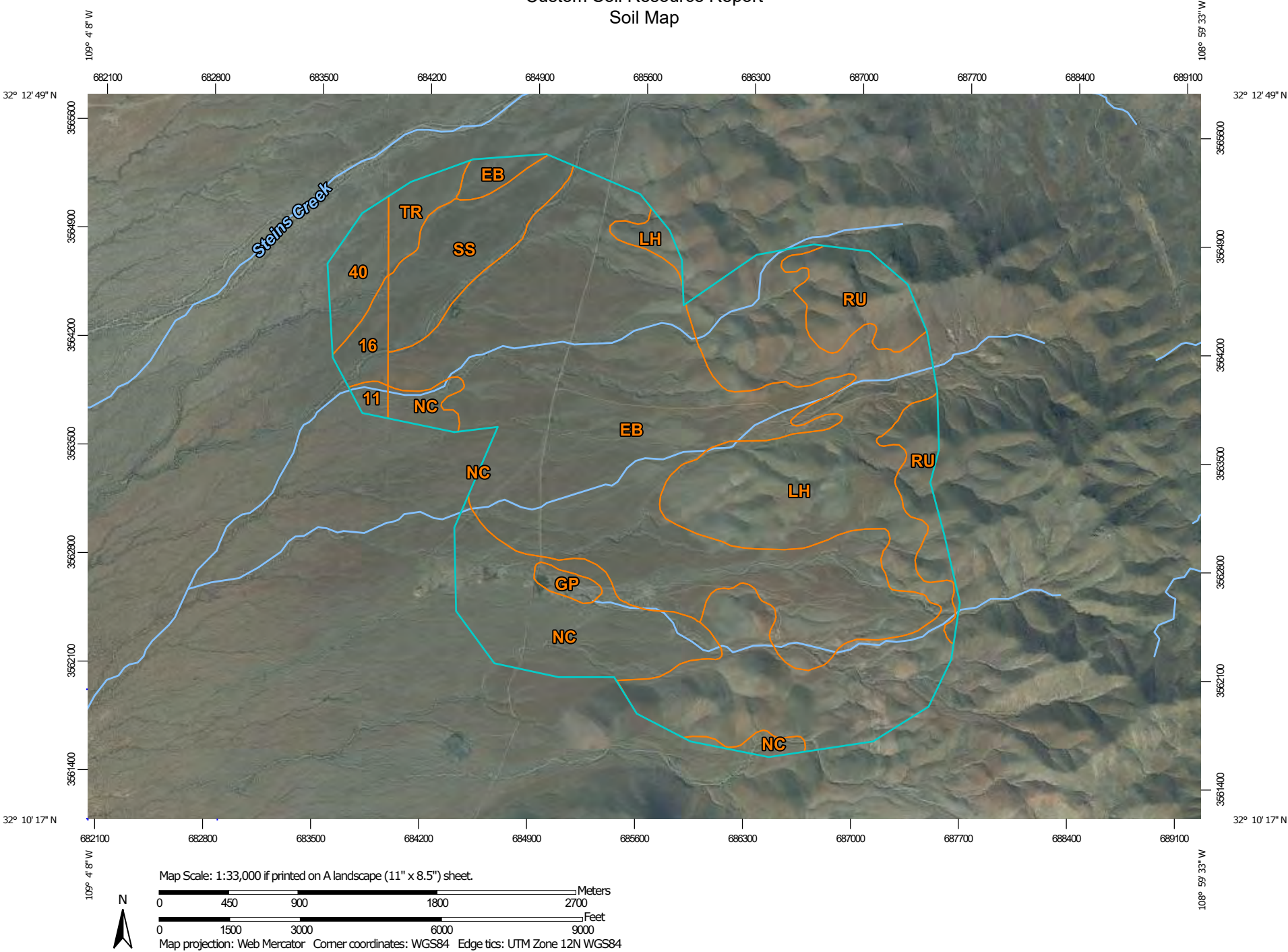
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:24,000 to 1:31,700.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hidalgo County, New Mexico

Survey Area Data: Version 22, Sep 9, 2025

Soil Survey Area: San Simon Area Parts of Cochise Graham and Greenlee Counties, Arizona

Survey Area Data: Version 18, Aug 27, 2025

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 13, 2020—Feb 15, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

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MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EB	Eba very gravelly loam, 1 to 15 percent slopes	1,131.0	41.7%
GP	Gravel pit	16.1	0.6%
LH	Lehmans extremely rocky loam, 10 to 25 percent slopes	824.0	30.4%
NC	Nickel gravelly sandy loam, 3 to 9 percent slopes	279.6	10.3%
RU	Rough broken land and Rock land	169.8	6.3%
SS	Stellar sandy clay loam	144.6	5.3%
TR	Tres Hermanos gravelly clay loam	40.6	1.5%
Subtotals for Soil Survey Area		2,605.7	96.1%
Totals for Area of Interest		2,711.4	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
11	Cave-Durorthids complex	11.0	0.4%
16	Eba gravelly sandy loam	35.5	1.3%
40	Tres Hermanos gravelly loam	59.3	2.2%
Subtotals for Soil Survey Area		105.8	3.9%
Totals for Area of Interest		2,711.4	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

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Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion

Custom Soil Resource Report

of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Custom Soil Resource Report

Hidalgo County, New Mexico

EB—Eba very gravelly loam, 1 to 15 percent slopes

Map Unit Setting

National map unit symbol: 1x9s
Landscape: Mountains
Elevation: 1,800 to 6,000 feet
Mean annual precipitation: 7 to 17 inches
Mean annual air temperature: 57 to 62 degrees F
Frost-free period: 160 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Eba and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eba

Setting

Landscape: Mountains
Landform: Mountain slopes
Landform position (three-dimensional): Upper third of mountainflank, center third of mountainflank, lower third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Well mixed alluvium derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 6 inches: very gravelly loam
H2 - 6 to 29 inches: very gravelly clay
H3 - 29 to 60 inches: very gravelly clay loam

Properties and qualities

Slope: 1 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R041XC314AZ - Loamy Slopes 12-16" p.z.
Hydric soil rating: No

Custom Soil Resource Report

Minor Components

Yturbide

Percent of map unit: 5 percent

Ecological site: R042BB011NM - Deep Sand, Desert Shrub

Hydric soil rating: No

Forrest

Percent of map unit: 5 percent

Ecological site: R041XC313AZ - Loamy Upland 12"-16" p.z.

Hydric soil rating: No

Mohave

Percent of map unit: 5 percent

Ecological site: R042BB014NM - Loamy, Desert Shrub

Hydric soil rating: No

GP—Gravel pit

Map Unit Setting

National map unit symbol: 131nh

Landscape: Uplands

Farmland classification: Not prime farmland

Map Unit Composition

Gravel pit: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gravel Pit

Setting

Landscape: Uplands

Landform: Depressions

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Mixed alluvium

LH—Lehmans extremely rocky loam, 10 to 25 percent slopes

Map Unit Setting

National map unit symbol: 1xbn

Landscape: Hills

Elevation: 2,500 to 6,000 feet

Mean annual precipitation: 7 to 14 inches

Mean annual air temperature: 57 to 62 degrees F

Frost-free period: 170 to 230 days

Custom Soil Resource Report

Farmland classification: Not prime farmland

Map Unit Composition

Lehmans and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lehmans

Setting

Landscape: Hills

Landform: Hillslopes

Landform position (two-dimensional): Shoulder, backslope, footslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Well mixed alluvium derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 4 inches: stony loam

H2 - 4 to 18 inches: stony clay loam

H3 - 18 to 22 inches: bedrock

Properties and qualities

Slope: 10 to 25 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: R042BB027NM - Hills, Desert Shrub

Hydric soil rating: No

Minor Components

Nickel

Percent of map unit: 4 percent

Ecological site: R042BB010NM - Gravelly, Desert Shrub

Hydric soil rating: No

Tres hermanos

Percent of map unit: 4 percent

Ecological site: R042BB014NM - Loamy, Desert Shrub

Hydric soil rating: No

Custom Soil Resource Report

Rock outcrop

Percent of map unit: 4 percent

Hydric soil rating: No

Forrest

Percent of map unit: 3 percent

Ecological site: R041XC313AZ - Loamy Upland 12"-16" p.z.

Hydric soil rating: No

NC—Nickel gravelly sandy loam, 3 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1xc0

Landscape: Uplands

Elevation: 1,800 to 6,000 feet

Mean annual precipitation: 7 to 14 inches

Mean annual air temperature: 57 to 62 degrees F

Frost-free period: 180 to 300 days

Farmland classification: Not prime farmland

Map Unit Composition

Nickel and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nickel

Setting

Landscape: Uplands

Landform: Fan piedmonts

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Well mixed alluvium derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 3 inches: gravelly sandy loam

H2 - 3 to 14 inches: gravelly loam

H3 - 14 to 60 inches: very gravelly loam

Properties and qualities

Slope: 3 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Custom Soil Resource Report

Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: R042BB010NM - Gravelly, Desert Shrub
Hydric soil rating: No

Minor Components

Stellar

Percent of map unit: 4 percent
Ecological site: R042BB023NM - Clayey, Desert Shrub
Hydric soil rating: No

Tres hermanos

Percent of map unit: 4 percent
Ecological site: R042BB014NM - Loamy, Desert Shrub
Hydric soil rating: No

Mohave

Percent of map unit: 4 percent
Ecological site: R042BB014NM - Loamy, Desert Shrub
Hydric soil rating: No

Forrest

Percent of map unit: 3 percent
Ecological site: R041XC313AZ - Loamy Upland 12"-16" p.z.
Hydric soil rating: No

RU—Rough broken land and Rock land

Map Unit Setting

National map unit symbol: 1xc9
Landscape: Mountains
Elevation: 4,200 to 6,400 feet
Mean annual precipitation: 8 to 13 inches
Mean annual air temperature: 58 to 60 degrees F
Frost-free period: 170 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Rough broken land: 45 percent
Rock land (rock outc): 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Custom Soil Resource Report

Description of Rough Broken Land

Setting

Landscape: Mountains

Landform: Mountain slopes

Landform position (three-dimensional): Upper third of mountainflank, center third of mountainflank, lower third of mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Igneous, metamorphic and sedimentary rock

Description of Rock Land (rock Outc

Setting

Landscape: Breaks

Parent material: Igneous, metamorphic and sedimentary rock

Typical profile

H1 - 0 to 60 inches: bedrock

Properties and qualities

Slope: 25 to 75 percent

Depth to restrictive feature: 0 inches to lithic bedrock

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydric soil rating: No

Minor Components

Lehmans

Percent of map unit: 20 percent

Ecological site: R042BB027NM - Hills, Desert Shrub

Hydric soil rating: No

SS—Stellar sandy clay loam

Map Unit Setting

National map unit symbol: 2sprv

Landscape: Uplands

Elevation: 1,800 to 6,000 feet

Mean annual precipitation: 7 to 16 inches

Mean annual air temperature: 57 to 62 degrees F

Frost-free period: 160 to 300 days

Farmland classification: Farmland of statewide importance

Custom Soil Resource Report

Map Unit Composition

Stellar and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Stellar

Setting

Landscape: Uplands

Landform: Alluvial fans

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Well mixed residuum weathered from igneous and sedimentary rock

Typical profile

H1 - 0 to 5 inches: sandy clay loam

H2 - 5 to 23 inches: clay

H3 - 23 to 60 inches: gravelly clay loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0

Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): 2s

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C

Ecological site: R042BB023NM - Clayey, Desert Shrub

Hydric soil rating: No

Minor Components

Cloverdale

Percent of map unit: 5 percent

Ecological site: R041XC305AZ - Clay Loam Upland 12-16" p.z.

Hydric soil rating: No

Forrest

Percent of map unit: 5 percent

Ecological site: R041XC313AZ - Loamy Upland 12"-16" p.z.

Hydric soil rating: No

Mohave

Percent of map unit: 4 percent

Custom Soil Resource Report

Ecological site: R042BB014NM - Loamy, Desert Shrub

Hydric soil rating: No

Mimbres

Percent of map unit: 1 percent

Landscape: Valleys

Landform: Swales, Alluvial fans, Stream terraces

Landform position (three-dimensional): Tread, rise

Down-slope shape: Linear

Across-slope shape: Convex, linear

Ecological site: R070BC033NM - Salty Bottomland

Hydric soil rating: Yes

TR—Tres Hermanos gravelly clay loam

Map Unit Setting

National map unit symbol: 1xcl

Landscape: Uplands

Elevation: 1,800 to 6,000 feet

Mean annual precipitation: 7 to 14 inches

Mean annual air temperature: 57 to 62 degrees F

Frost-free period: 180 to 300 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Tres hermanos and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tres Hermanos

Setting

Landscape: Uplands

Landform: Alluvial fans

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Well mixed residuum weathered from igneous and sedimentary rock

Typical profile

H1 - 0 to 3 inches: gravelly clay loam

H2 - 3 to 27 inches: gravelly clay loam

H3 - 27 to 60 inches: very gravelly loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0

Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C

Ecological site: R042BB014NM - Loamy, Desert Shrub

Hydric soil rating: No

Minor Components

Nickel

Percent of map unit: 5 percent

Ecological site: R042BB010NM - Gravelly, Desert Shrub

Hydric soil rating: No

Forrest

Percent of map unit: 5 percent

Ecological site: R041XC313AZ - Loamy Upland 12"-16" p.z.

Hydric soil rating: No

Mohave

Percent of map unit: 5 percent

Ecological site: R042BB014NM - Loamy, Desert Shrub

Hydric soil rating: No

Custom Soil Resource Report

San Simon Area Parts of Cochise Graham and Greenlee Counties, Arizona

11—Cave-Durorthids complex

Map Unit Setting

National map unit symbol: 1stp
Elevation: 3,500 to 4,500 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 63 to 72 degrees F
Frost-free period: 210 to 305 days
Farmland classification: Not prime farmland

Map Unit Composition

Cave and similar soils: 50 percent
Durorthids and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cave

Setting

Landform: High old alluvial fans
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mixed old alluvium

Typical profile

A - 0 to 11 inches: gravelly loam
Bkm - 11 to 14 inches: cemented material
Ck - 14 to 48 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 4 to 20 inches to petrocalcic
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 15.0
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R041XC309AZ - Limy Upland 12-16" p.z.
Hydric soil rating: No

Custom Soil Resource Report

Description of Durorthids

Setting

Landform: High old alluvial fans
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Mixed old alluvium

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: 20 to 40 inches to duripan
Drainage class: Well drained
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Ecological site: R041XC309AZ - Limy Upland 12-16" p.z.
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 20 percent
Hydric soil rating: No

16—Eba gravelly sandy loam

Map Unit Setting

National map unit symbol: 1stv
Elevation: 3,500 to 5,200 feet
Mean annual precipitation: 7 to 12 inches
Mean annual air temperature: 63 to 72 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Eba and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eba

Setting

Landform: Terraces, High alluvial fans
Landform position (two-dimensional): Summit

Custom Soil Resource Report

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Mixed old alluvium

Typical profile

A - 0 to 3 inches: gravelly sandy loam

Bt - 3 to 15 inches: very gravelly sandy clay loam

Btk - 15 to 33 inches: very gravelly clay

Bk - 33 to 56 inches: very gravelly loam

Properties and qualities

Slope: 2 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Gypsum, maximum content: 2 percent

Maximum salinity: Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum: 13.0

Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Ecological site: R041XB204AZ - Clay Loam Upland 8-12" p.z.

Hydric soil rating: No

40—Tres Hermanos gravelly loam

Map Unit Setting

National map unit symbol: 1svq

Elevation: 3,100 to 5,000 feet

Mean annual precipitation: 7 to 12 inches

Mean annual air temperature: 63 to 72 degrees F

Frost-free period: 210 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Tres hermanos and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tres Hermanos

Setting

Landform: Alluvial terraces

Landform position (two-dimensional): Summit

Custom Soil Resource Report

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Old alluvium derived from igneous rock

Typical profile

A - 0 to 3 inches: gravelly loam

Btk - 3 to 11 inches: gravelly clay loam

Bk1 - 11 to 25 inches: gravelly loam

Bk2 - 25 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 13.0

Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 5c

Hydrologic Soil Group: C

Ecological site: R041XB206AZ - Limy Fan 8-12" p.z.

Hydric soil rating: No

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Custom Soil Resource Report

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APPENDIX C

USFWS IPaC Report



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
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In Reply Refer To:
Project Code: 2026-0077157
Project Name: Steins/KoBold

04/15/2026 21:05:14 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 *et seq.*), the Migratory Bird Treaty Act as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act as amended (16 USC 668-668(c)). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area, and to recommend some conservation measures that can be included in your project design.

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the ESA is to provide a means whereby threatened and endangered species and

the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA; 42 USC 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico State agencies. These lists, along with species information, can be found at the following websites.

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program:
<https://www.emnrd.nm.gov/sfd/rare-plants/>

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html, integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

In addition to responsibilities to protect threatened and endangered species under the ESA, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 CFR 10.12 and 16 USC 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a Federal nexus) or a Bird/Eagle Conservation Plan (when there is no Federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>. We also recommend review of the Birds of Conservation Concern list (<https://www.fws.gov/media/birds-conservation-concern-2021>) to fully evaluate the effects to the birds at your site. This list identifies migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent top conservation priorities for the Service, and are potentially threatened by disturbance, habitat impacts, or other project development activities.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 thereby provides additional protection for both migratory birds and migratory bird habitat. Please visit <https://www.fws.gov/partner/council-conservation-migratory-birds> for information regarding the implementation of Executive Order 13186.

We suggest you contact the New Mexico Department of Game and Fish, and the New Mexico

Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State protected and at-risk species fish, wildlife, and plants.

For further consultation with the Service we recommend submitting inquiries or assessments electronically to our incoming email box at nmesfo@fws.gov, where it will be more promptly routed to the appropriate biologist for review.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Mexico Ecological Services Field Office

2105 Osuna Road Ne

Albuquerque, NM 87113-1001

(505) 346-2525

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

Project code: 2026-0077157

04/15/2026 21:05:14 UTC

Arizona Ecological Services Field Office

9828 North 31st Ave

#c3

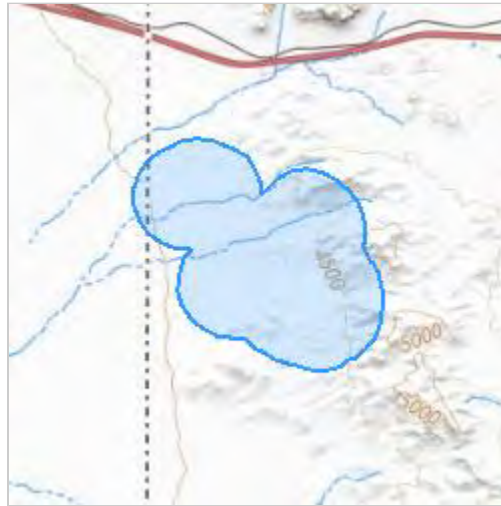
Phoenix, AZ 85051-2517

(602) 242-0210

PROJECT SUMMARY

Project Code: 2026-0077157
Project Name: Steins/KoBold
Project Type: Subsurface Exploration - Non Energy Materials
Project Description: Steins/KoBold exploratory drilling
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@32.190268950000004,-109.022392975,14z>



Counties: Arizona and New Mexico

ENDANGERED SPECIES ACT SPECIES

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Jaguar <i>Panthera onca</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3944 General project design guidelines: https://ipac.ecosphere.fws.gov/project/5QCEUWIOUNDPKWT45NNDCD5QI/documents/generated/9060.pdf	Endangered

BIRDS

NAME	STATUS
Mexican Spotted Owl <i>Strix occidentalis lucida</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8196 General project design guidelines: https://ipac.ecosphere.fws.gov/project/5QCEUWIOUNDPKWT45NNDCD5QI/documents/generated/9489.pdf	Threatened
Northern Aplomado Falcon <i>Falco femoralis septentrionalis</i> Population: U.S.A (AZ, NM) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1923 General project design guidelines: https://ipac.ecosphere.fws.gov/project/5QCEUWIOUNDPKWT45NNDCD5QI/documents/generated/8928.pdf	Experimental Population, Non-Essential
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911 General project design guidelines: https://ipac.ecosphere.fws.gov/project/5QCEUWIOUNDPKWT45NNDCD5QI/documents/generated/9183.pdf	Threatened

FISHES

NAME	STATUS
Gila Topminnow (incl. Yaqui) <i>Poeciliopsis occidentalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1116	Endangered
Gila Trout <i>Oncorhynchus gilae</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/781 General project design guidelines: https://ipac.ecosphere.fws.gov/project/5QCEUWIOUNDPKWT45NNDCD5QI/documents/generated/9029.pdf	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Arizona Eryngo <i>Eryngium sparganophyllum</i> Population: There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/10705	Endangered
Swale Paintbrush <i>Castilleja ornata</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10121 General project design guidelines: https://ipac.ecosphere.fws.gov/project/5QCEUWIOUNDPKWT45NNDCD5QI/documents/generated/9179.pdf	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

-
- 1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 - 2. The [Migratory Birds Treaty Act](#) of 1918.
 - 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act (MBTA). Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

-
- 1. The [Migratory Birds Treaty Act](#) of 1918.
 - 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 - 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Cactus Wren <i>Campylorhynchus brunneicapillus guttatus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8834	Breeds Mar 5 to Sep 30

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

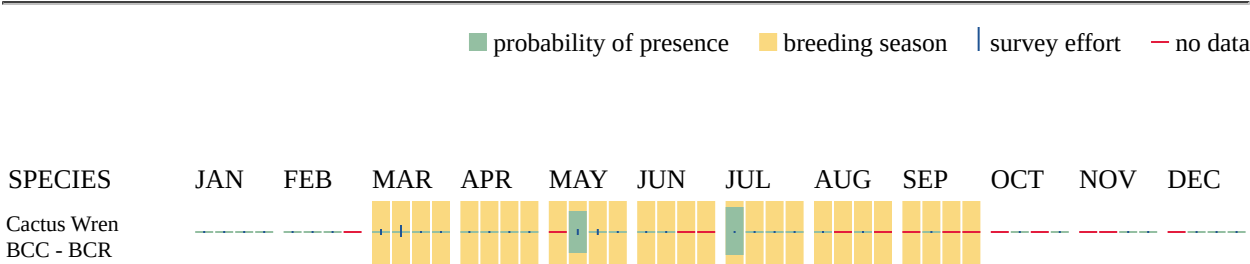
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R4SBC
- R4SB3J

FRESHWATER POND

- PUSCh
- PUSAx
- PUSAh

IPAC USER CONTACT INFORMATION

Agency: WestLand
Name: Natalie Senini
Address: 2020 N Central Ave
City: Phoenix
State: AZ
Zip: 85004
Email: natalie.c.senini@gmail.com
Phone: 6028887000

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Bureau of Land Management

APPENDIX D
BLM Sensitive Species
Las Cruces District Office

2024 BLM NM Sensitive Species Update: amphibians, birds, clams, crustaceans, fish, insects, mammals, mollusks, and reptiles

2024 BLM NM Sensitive Species Update: amphibians, birds, clams, crustaceans, fish, insects, mammals, mollusks, and reptiles (** denote status change since 2019 revision)

Group	Species	Common Name	Farmington	Taos	Rio Puerco	Socorro	Las Cruces	Roswell	Carlsbad	OK, TX or KS	Natureserve Global rank	NHNM State rank	FWS Status	NM Status	BLM Status
Amphibians	<i>Anaxyrus (Bufo) microscaphus</i>	Southwestern (Arizona) toad	None	None	Potential	Verified	Verified	None	None	None	G3G4	S3	Under Review	SGCN	BLM Sensitive
Amphibians	<i>Lithobates (Rana) pipiens</i>	Northern leopard frog	Verified	Verified	Verified	Verified	None	None	None	TX & OK	G5	S3	None	SGCN	BLM Sensitive
Amphibians	<i>Craugastor (Eleutherodactylus) augusti latrans</i>	Eastern barking frog	None	None	None	None	Verified	Verified	Verified	TX	G5T4	S2	None	SGCN	Watch
Amphibians	<i>Gastrophryne olivacea</i>	Western narrowmouth toad	None	Verified	None	None	Verified	None	Verified	All	G5	S1	None	Endangered SGCN	Watch
Amphibians	<i>Incilius (Bufo) alvarius</i>	Sonoran desert toad	None	None	None	None	Potential	None	None	None	G5	S2	None	Threatened SGCN	**Watch
Amphibians	<i>Lithobates (Rana) blairi</i>	Plains leopard frog	Verified	Verified	None	None	Verified	Verified	Verified	All	G5	S4	Former FWS Species of Concern	SGCN	Watch
Birds	<i>Ammodramus savannarum ammolegus</i>	Arizona Grasshopper Sparrow	None	None	None	None	Verified	None	None	None	G5TU	S2B,S2N	None	Endangered SGCN	BLM Sensitive
Birds	<i>Anthus spragueii</i>	Sprague's Pipit	None	None	None	Potential	Verified	Verified	Verified	All	G3G4	S2N	None	SGCN	BLM Sensitive
Birds	<i>Antrostomus arizonae</i>	Mexican Whip-poor-will	Potential	Verified	Verified	Verified	Verified	Potential	Potential	West TX	G4G5	SNR	None	SGCN	BLM Sensitive
Birds	<i>Calcarius ornatus</i>	Chestnut-collared Longspur	Potential	Verified	None	Verified	Verified	Verified	Verified	TX	G5	S3N	None	SGCN	BLM Sensitive
Birds	<i>Centronyx bairdii</i>	Baird's Sparrow	None	None	None	None	Verified	None	None	TX	G4	S1N	None	Threatened SGCN	BLM Sensitive
Birds	<i>Charadrius montanus</i>	Mountain Plover	Verified	Verified	Verified	Verified	None	None	None	All	G3	S2B,S4N	None	SGCN	**BLM Sensitive
Birds	<i>Gymnorhinus cyanocephalus</i>	Pinyon Jay	Verified	Verified	Verified	Verified	Verified	Verified	Potential	OK	G3	S2S3	Under Review	SGCN	BLM Sensitive
Birds	<i>Lanius ludovicianus</i>	Loggerhead Shrike	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G4	S3	None	SGCN	**BLM Sensitive
Birds	<i>Leiothylpis virginiae</i>	Virginia's Warbler	Verified	Verified	Verified	Verified	Verified	Verified	Verified	None	G5	S3B,S4M	None	SGCN	BLM Sensitive
Birds	<i>Peucaea botterii</i>	Botteri's Sparrow	None	None	None	None	Verified	None	None	TX	G4	S1B,S1N	None	SGCN	BLM Sensitive
Birds	<i>Rhynchophanes mccownii</i>	Thick-billed Longspur	None	Potential	None	Potential	Verified	Verified	Verified	All	G4	S3N	None	SGCN	BLM Sensitive
Birds	<i>Spizella atragularis evura</i>	Black-chinned Sparrow	None	None	Verified	Verified	Verified	Verified	Verified	west TX	G5	S3B,S3N	None	SGCN	**BLM Sensitive
Birds	<i>Toxostoma bendirei</i>	Bendire's Thrasher	Verified	Potential	Verified	Verified	Verified	Potential	None	None	G4	S3B,S3N	None	SGCN	BLM Sensitive
Birds	<i>Aquila chrysaetos</i>	Golden Eagle	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G4	S83, S4N	None	None	Watch
Birds	<i>Aphelocoma woodhouseii</i>	Woodhouse's Scrub-Jay	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Western edge of all	G5	S3	None	None	Watch
Birds	<i>Athene cunicularia hypugaea</i>	Western Burrowing Owl	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G4T4	S3	None	SGCN	Watch
Birds	<i>Baeolophus ridgwayi</i>	Juniper Titmouse	Verified	Verified	Verified	Verified	Verified	Potential	Potential	Western edge of OK	G5	S4B	None	SGCN	Watch
Birds	<i>Botaurus lentiginosus</i>	American Bittern	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G4	S2	None	SGCN	Watch
Birds	<i>Buteogallus anthracinus</i>	Common Black-Hawk	Potential	Potential	Verified	Verified	Verified	Verified	Verified	None	G4G5	S2B,S3N	None	Threatened SGCN	Watch
Birds	<i>Calamospiza melanocorys</i>	lark bunting	Verified	Verified	Potential	Verified	Verified	Verified	Verified	TX & OK	G5	S3B, S5N	None	None	**Watch
Birds	<i>Callipepla squamata</i>	Scaled Quail	Verified	Verified	Verified	Verified	Verified	Verified	Verified	West TX, OK, & KS	G5	S3	None	None	Watch
Birds	<i>Carpodacus cassinii</i>	Cassin's Finch	Verified	Verified	Verified	Verified	Verified	Verified	Verified	West TX	G5	S3B,S5N	None	SGCN	Watch
Birds	<i>Camptostoma imberbe</i>	Northern Beardless-Tyrannulet	None	None	None	None	Verified	None	None	Southern tip of TX	G5	S1B,S1N	None	Endangered SGCN	Watch
Birds	<i>Columbina passerina</i>	Common Ground Dove	None	None	None	Potential	Verified	Potential	Verified	TX	G5	S1B,S1N	None	Endangered SGCN	Watch
Birds	<i>Falco peregrinus</i>	Peregrine Falcon	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G4	S2B, S3N	Delisted 1999	Threatened SGCN	Watch
Birds	<i>Meleagris gallopavo mexicana</i>	Gould's Wild Turkey	None	None	None	None	Verified	None	None	None	G5T3	S2B S2N	None	SGCN	Watch
Birds	<i>Melanerpes lewis</i>	Lewis's Woodpecker	Verified	Verified	Verified	Verified	Verified	Verified	Verified	None	G4	S3B,S3N	None	SGCN	Watch
Birds	<i>Micrathene whitneyi</i>	Elf Owl	None	None	Verified	Verified	Verified	None	None	TX	G5	S3B,S3N	None	SGCN	Watch
Birds	<i>Numenius americanus</i>	Long- billed Curlew	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G4	S3B, S4M	None	SGCN	Watch
Birds	<i>Oreoscoptes montanus</i>	Sage Thrasher	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Western edge of all	G4	S3B,S4N	None	None	Watch
Birds	<i>Passerina ciris</i>	Painted Bunting	None	None	None	None	Verified	Potential	Verified	TX	G5	S4B,S4N	None	None	Watch
Birds	<i>Psiloscoops flammeolus</i>	Flammulated Owl	Verified	Verified	Verified	Verified	Verified	Verified	Verified	TX	G4	S3B, S3N	None	SGCN	Watch
Birds	<i>Setophaga graciae</i>	Grace's Warbler	Verified	Verified	Verified	Verified	Verified	Verified	None	TX	G5	S3B, S4N	None	SGCN	Watch
Birds	<i>Setophaga nigrescens</i>	Black-throated Gray Warbler	Verified	Verified	Verified	Verified	Verified	Verified	None	TX	G5	S3B,S4N	None	SGCN	Watch
Birds	<i>Spizella breweri</i>	Brewer's sparrow	Verified	Verified	Verified	Verified	Verified	Verified	Verified	west TX	G5	S3B	None	None	**Watch
Birds	<i>Sternula antillarum athalassos</i>	Least Tern	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G4T3Q	S1	Delisted 2021	SGCN	**Watch
Birds	<i>Sturnella lilianae</i>	Chihuahuan meadowlark	Potential	Verified	Verified	Verified	Verified	Verified	Verified	TX & OK	GNR	S4	None	None	**Watch
Birds	<i>Tyrannus crassirostris</i>	Thick-billed Kingbird	None	None	None	Verified	Verified	None	Verified	None	G5	S1	None	Endangered SGCN	**Watch
Birds	<i>Vermivora luciae</i>	Lucy's Warbler	None	None	None	Verified	Verified	None	None	west TX	G5	S3B,S4N	None	SGCN	Watch
Birds	<i>Vireo bellii arizonae</i>	Bell's Vireo	None	Verified	None	Verified	Verified	Verified	Verified	All	G5	S2B,S3N	None	Threatened SGCN	Watch
Birds	<i>Vireo vicinior</i>	Gray Vireo	Verified	Verified	Verified	Verified	Verified	Verified	Verified	west TX	G5	S4B S3N	None	Threatened SGCN	Watch
Crustaceans	<i>Eulimnadia foliisimilis</i>	Clam Shrimp	None	None	None	Verified	None	Verified	None	None	G3G4	SNR	None	SGCN	BLM Sensitive

2024 BLM NM Sensitive Species Update: amphibians, birds, clams, crustaceans, fish, insects, mammals, mollusks, and reptiles

Group	Species	Common Name	Farmington	Taos	Rio Puerco	Socorro	Las Cruces	Roswell	Carlsbad	OK, TX or KS	Natureserve Global rank	NHNM State rank	FWS Status	NM Status	BLM Status
Crustaceans	<i>Phallocryptus sublettei</i>	Salt Playa (Sublette's) Fairy Shrimp	None	None	None	None	Verified	None	None	None	G2	SNR	None	SGCN	BLM Sensitive
Crustaceans	<i>Streptocephalus moorei</i>	Moore's Fairy Shrimp	None	None	None	None	Verified	None	None	None	G1	SNR	None	SGCN	BLM Sensitive
Crustaceans	<i>Streptocephalus thomasbowmani</i>	Bowman's Fairy Shrimp	None	None	None	None	Verified	None	None	None	G1	SNR	None	SGCN	BLM Sensitive
Crustaceans	<i>Eocyzicus concavus</i>	Sway-backed Clam Shrimp	None	None	None	None	None	Potential	None	TX	G1G3Q	SNR	None	SGCN	Watch
Crustaceans	<i>Lepidurus lemmoni</i>	Lynch's Tadpole Shrimp	None	None	None	None	Verified	None	None		G4	SNR	None	SGCN	Watch
Crustaceans	<i>Thamnocephalus mexicanus</i>	Mexican Beavertail Fairy Shrimp	None	None	None	None	Potential	None	None	TX	G3	SNR	None	SGCN	Watch
Fish	<i>Astyanax mexicanus</i>	Mexican Tetra	None	None	None	None	None	Verified	Verified	OK & TX	G5	S2	None	SGCN	BLM Sensitive
Fish	<i>Catostomus clarkii</i>	Desert Sucker	None	None	None	Potential	Verified	None	None	None	G3G4	S2	Former FWS Species of Concern	SGCN	BLM Sensitive
Fish	<i>Catostomus insignis</i>	Sonora Sucker	None	None	None	Potential	Verified	None	None	None	G3G4	S2	Former FWS Species of Concern	SGCN	BLM Sensitive
Fish	<i>Catostomus plebeius</i>	Rio Grande Sucker	None	Verified	Potential	Potential	Verified	Potential	Potential	None	G3G4	S2	None	SGCN	BLM Sensitive
Fish	<i>Cycleptus elongatus</i>	Blue Sucker	None	None	None	None	None	Potential	Verified	All	G3G4	S1	None	Endangered SGCN	BLM Sensitive
Fish	<i>Cyprinodon pecosensis</i>	Pecos Pupfish	None	None	None	None	None	Verified	Verified	TX	G2	S1	Former FWS Species of Concern	SGCN	BLM Sensitive
Fish	<i>Etheostoma lepidum</i>	Greenthroat Darter	None	None	None	None	None	Verified	Verified	TX	G3G4	S2	Former FWS Species of Concern	Threatened SGCN	BLM Sensitive
Fish	<i>Gila pandora</i>	Rio Grande Chub	None	Verified	Potential	Potential	Potential	Verified	Verified	TX	G3	S3	None	SGCN	BLM Sensitive
Fish	<i>Gila robusta</i>	Roundtail Chub	Potential	Potential	Potential	Potential	Verified	None	None	None	G3	S2	None	Endangered SGCN	BLM Sensitive
Fish	<i>Macrhybopsis aestivalis</i>	Speckled Chub	None	Potential	None	None	None	Verified	Verified	TX	G3G4	S2	None	None	**BLM Sensitive
Fish	<i>Moxostoma congestum</i>	Gray Redhorse	None	None	None	None	None	None	Verified	TX	G4	S1	Former FWS Species of Concern	Endangered SGCN	BLM Sensitive
Fish	<i>Percina macrolepida</i>	Bigscale Logperch	None	Introduced	None	None	None	Verified	Verified	OK & TX	G5	S2	None	Threatened SGCN	BLM Sensitive
Fish	<i>Phenacobius mirabilis</i>	Suckermouth Minnow	None	Verified	None	None	None	Verified	None	All	G5	S2	None	SGCN	BLM Sensitive
Fish	<i>Agosia chrysogaster</i>	Longfin Dace	None	None	None	Potential	Verified	Verified	None	None	G4	S3S4	Former FWS Species of Concern	None	Watch
Fish	<i>Catostomus discobolus discobolus</i>	Bluehead Sucker	Verified	None	None	None	None	None	None	None	G4T4	S2	None	None	Watch
Fish	<i>Catostomus latipinnis</i>	Flannelmouth Sucker	Verified	Potential	None	None	Potential	None	None	None	G3G4	S1	Former Category 2 Candidate	None	Watch
Fish	<i>Ictalurus lupus</i>	Headwater Catfish	None	None	None	None	None	Verified	Verified	TX	G3	S1	Former FWS Species of Concern	Former SGCN	Watch
Fish	<i>Ictiobus bubalus</i>	Smallmouth Buffalo	None	None	None	Potential	Verified	Verified	Verified	All	G5	S3	None	None	Watch
Fish	<i>Notropis jemezanus</i>	Rio Grande Shiner	None	None	None	Potential	None	Verified	Verified	TX	G3	S2	Under Review	None	Watch
Fish	<i>Oncorhynchus clarkii virginalis</i>	Rio Grande Cutthroat Trout	None	Potential	Potential	Potential	Potential	Potential	None	None	G5T3	S2	Candidate	None	Watch
Insects	<i>Bombus occidentalis</i>	Western Bumble Bee	Verified	Verified	Verified	Verified	Verified	Verified	Verified	None	G3	SNR	Under Review	None	**BLM Sensitive
Insects	<i>Bombus pensylvanicus</i>	American Bumble Bee	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G3G4	SNR	Under Review	None	**BLM Sensitive
Insects	<i>Danaus plexippus plexippus</i>	Monarch Butterfly	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G4T3	SNR	Candidate	None	BLM Sensitive
Insects	<i>Lytta mirifica</i>	Anthony Blister Beetle	None	None	None	None	Verified	None	None	None	G2	SH	Former Category 2 Candidate	Former (2006) SGCN	BLM Sensitive
Insects	<i>Ochlodes yuma anasazi</i>	Yuma Skipper	None	Verified	None	None	None	None	None	None	G4T2	SNR	None	None	BLM Sensitive
Insects	<i>Agathymus neumoegeni carlsbadensis</i>	Carlsbad Agave Borer	None	None	None	None	Potential	Potential	Verified	Potential	T2	SNR	None	None	**Watch
Insects	<i>Anthophora chihuahua</i>	a digger bee	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	G2	SNR	None	None	**Watch
Insects	<i>Anthophora vallorum</i>	a digger bee	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	G2	SNR	None	None	**Watch
Insects	<i>Bombus fraternus</i>	Southern Plains Bumble Bee	Potential	Verified	Potential	Potential	Potential	Verified	Potential	All	G3	SNR	None	None	**Watch
Insects	<i>Bombus morrisoni</i>	Morrison's Bumble Bee	Verified	Verified	Verified	Verified	Verified	Potential	Potential	Potential	G3	SNR	Petitioned	None	**Watch
Insects	<i>Callophrys henrici solatus</i>	Trans-Pecos Henry's Elfin	None	None	None	Potential	Verified	Potential	Verified	None	T2	SNR	None	None	**Watch
Insects	<i>Chrysina woodii</i>	Wood's Jewel Beetle	None	None	None	None	None	Verified	Verified	None	GNR	SNR	None	None	**Watch
Insects	<i>Euhyparpax rosea</i>	a notodontid moth	None	None	None	None	Potential	None	None	None	G2	SNR	None	None	**Watch
Insects	<i>Megachile fortis</i>	Robust Sunflower Leafcutter Bee	Potential	Potential	Verified	Potential	Potential	Potential	Potential	Potential	G2	SNR	None	None	**Watch
Insects	<i>Megachile melanderi</i>	a leafcutter bee	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	G2	SH	None	None	**Watch
Insects	<i>Mystonectes (Deronectes) neomexicanus</i>	Bonita Diving Beetle	None	None	None	None	None	Potential	None	TX	G2	SNR	Former Category 2 Candidate	Former (2006) SGCN	Watch
Insects	<i>Osmia watsoni</i>	a mason bee	Potential	Potential	Potential	Potential	Potential	Potential	Potential	Potential	G2	SNR	None	None	**Watch
Insects	<i>Papilio indra minori</i>	Minor's Swallowtail	Verified	Verified	Potential	None	None	None	None	None	T1	None	None	None	**Watch
Insects	<i>Pygarcia lorula</i>	Spiny Sandbur	None	None	None	None	None	Potential	Potential	Potential	G2G3	SNR	None	None	Watch
Mammals	<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	None	None	None	None	Verified	None	Potential	south TX	G3G4	S2S3	None	SGCN	BLM Sensitive
Mammals	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	Verified	Verified	Verified	Verified	Verified	Verified	Verified	western OK, TX & KS	G4	S3	None	SGCN	BLM Sensitive
Mammals	<i>Cynomys gunnisoni</i>	Gunnison's prairie dog	Verified	Verified	Verified	Verified	None	None	None	None	G3	S2	None	SGCN	BLM Sensitive
Mammals	<i>Cynomys ludovicianus</i>	Black-tailed prairie dog	None	Verified	Potential	Potential	Verified	Verified	Verified	All	G4	S2	None	SGCN	BLM Sensitive
Mammals	<i>Euderma maculatum</i>	Spotted bat	Verified	Verified	Verified	Verified	Verified	Verified	Potential	west TX	G4	S3	None	Threatened SGCN	BLM Sensitive

2024 BLM NM Sensitive Species Update: amphibians, birds, clams, crustaceans, fish, insects, mammals, mollusks, and reptiles

Group	Species	Common Name	Farmington	Taos	Rio Puerco	Socorro	Las Cruces	Roswell	Carlsbad	OK, TX or KS	Natureserve Global rank	NHNM State rank	FWS Status	NM Status	BLM Status
Mammals	<i>Lasiurus cinereus</i>	Hoary bat	Verified	Verified	Verified	Verified	Verified	Verified	Verified	All	G3G4	S4	None	None	**BLM Sensitive
Mammals	<i>Lasiurus xanthinus</i>	Western yellow bat	None	None	None	None	Verified	None	None	TX	G4G5	S1S2	None	Threatened SGCN	BLM Sensitive
Mammals	<i>Leptonycteris yerbabuenae</i>	Lesser long-nosed bat	None	None	None	None	Verified	None	None	TX	G3	S3	Delisted 2018	Threatened SGCN	BLM Sensitive
Mammals	<i>Lepus callotis</i>	White-sided jack rabbit	None	None	None	None	Verified	None	None	None	G4	S1	None	Threatened SGCN	BLM Sensitive
Mammals	<i>Neotamias quadrivittatus australis</i>	Organ Mountains Colorado chipmunk	None	None	None	None	Verified	None	None	None	G5T1	S1	None	Threatened SGCN	**BLM Sensitive
Mammals	<i>Ovis canadensis mexicana (excluding hunted population in Peloncillos)</i>	Desert bighorn sheep	None	None	None	Verified	Verified	None	None	TX	T3	S3	None	Former SGCN	**BLM Sensitive
Mammals	<i>Perimyotis subflavus</i>	Tri-colored bat	None	Potential	None	None	None	Verified	Verified	All	G3G4	S3	Proposed Endangered 2022	None	**BLM Sensitive
Mammals	<i>Sorex arizonae</i>	Arizona shrew	None	None	None	None	Verified	None	None	None	G3	S1	None	Endangered SGCN	BLM Sensitive
Mammals	<i>Cratogeomys castanops</i>	Yellow-faced pocket gopher	None	Verified	Verified	Verified	Verified	Verified	Verified	All	G5	S3	None	None	Watch
Mammals	<i>Cryptotis parva</i>	Least shrew	None	Potential	None	None	None	Verified	Verified	All	G5	S2	None	Threatened SGCN	Watch
Mammals	<i>Dipodomys spectabilis</i>	banner-tailed kangaroo rat	Verified	None	Verified	Verified	Verified	Verified	Verified	Potential TX	G5	S4	None	None	**Watch
Mammals	<i>Geomys arenarius</i>	desert pocket gopher	None	None	Potential	Verified	Verified	Verified	Potential	west TX	G3G4	S3	None	None	**Watch
Mammals	<i>Idionycteris phyllotis</i>	Allen's lappet-browed bat	None	None	Potential	Verified	Verified	None	None	west TX?	G4	S3	None	None	Watch
Mammals	<i>Lasionycteris noctivagans</i>	silver-haired bat	Verified	Verified	Verified	Verified	Verified	Verified	Verified	west TX	G3G4	S4	None	None	**Watch
Mammals	<i>Lasiurus borealis</i>	eastern red bat	None	None	None	None	None	Potential	Verified	Potential	G3	S3N	None	None	**Watch
Mammals	<i>Lasiurus blossevillii</i>	Western red bat	None	None	None	Verified	Verified	Potential	None	west TX	G4	S3	None	None	Watch
Mammals	<i>Lepus townsendii campanius</i>	White-tailed jack rabbit	Potential	Verified	None	None	None	None	None	northwest KS	G5	S2	None	None	Watch
Mammals	<i>Nasua narica</i>	White-nosed coati	None	None	Potential	Verified	Verified	None	Potential	None	G5	S2	None	None	Watch
Mammals	<i>Neogale frenata</i>	long-tailed weasel	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	G5	S4	None	None	**Watch
Mammals	<i>Neotamias minimus atristriatus</i>	Peñasco least chipmunk	None	None	None	None	Potential	Potential	None	None	G5T1	S1	Proposed Endangered 2021	Endangered SGCN	**Watch
Mammals	<i>Nyctinomops femorosaccus</i>	Pocketed free-tailed bat	None	None	None	None	Verified	None	Verified	south TX	G5	S1S2	None	None	Watch
Mammals	<i>Thomomys umbrinus</i>	Southern pocket gopher	None	None	None	Potential	Verified	None	None	None	G5	S1	None	Threatened SGCN	Watch
Mammals	<i>Reithrodontomys fulvescens canus</i>	Fulvous harvest mouse	None	None	None	None	Verified	None	None	All	G5	S1	None	None	Watch
Mammals	<i>Sigmodon ochrognathus</i>	Yellow-nosed cotton rat	None	None	None	None	Verified	None	None	Southwest TX	G4G5	S2	None	None	Watch
Mollusks	<i>Ashmunella hebardi</i>	Hacheta Grande Woodlandsnail	None	None	None	None	Verified	None	None	None	G1	S1	None	Threatened SGCN	BLM Sensitive
Mollusks	<i>Ashmunella macromphala</i>	Cooke's Peak Woodlandsnail	None	None	None	None	Verified	None	None	None	G1	S1	None	Threatened SGCN	BLM Sensitive
Mollusks	<i>Gastrocopta dalliana dalliana</i>	Shortneck Snaggletooth Snail	None	None	None	None	Potential	None	None	None	T2	S1	None	Threatened SGCN	BLM Sensitive
Mollusks	<i>Holospira crossei</i>	Cross Holospira Snail	None	None	None	None	Verified	None	None	None	G2	S1	None	SGCN	BLM Sensitive
Mollusks	<i>Holospira metcalfi</i>	Metcalf Holospira Snail	None	None	None	None	Verified	None	None	None	G1	S1	None	SGCN	BLM Sensitive
Mollusks	<i>Pyrgulopsis pecosensis</i>	Pecos Springsnail	None	None	None	None	None	None	Potential	None	G1	S1	None	Threatened SGCN	BLM Sensitive
Mollusks	<i>Radiocentrum ferrissi</i>	Fringed Mountainsnail	None	None	None	None	Potential	None	None	None	G1	S1	None	SGCN	BLM Sensitive
Mollusks	<i>Sonorella hachitana</i>	New Mexico Talussnail	None	None	None	None	Verified	None	None	None	G2	S2	None	SGCN	BLM Sensitive
Mollusks	<i>Sonorella hachitana flora</i>	New Mexico Talussnail (Florida Mountains)	None	None	None	None	Verified	None	None	None	G2T1	S1	None	SGCN	BLM Sensitive
Mollusks	<i>Sonorella todseni</i>	Doña Ana Talussnail	None	None	None	None	Verified	None	None	None	G1	S1	Former Category 2 Candidate	Threatened SGCN	BLM Sensitive
Mollusks	<i>Ashmunella amblya cornudasensis</i>	Woodlandsnail	None	None	None	None	Potential	None	None	None	G3T3	S3	None	SGCN	Watch
Mollusks	<i>Holospira animasensis</i>	Animas Mountains Holospira Snail	None	None	None	None	Potential	None	None	None	G1G2	S1	None	SGCN	Watch
Reptiles	<i>Aspidoscelis (dixonii) tessellatus</i>	Gray-checkedered Whiptail	None	None	None	None	Verified	None	None	TX	G5	S1	None	Endangered SGCN	BLM Sensitive
Reptiles	<i>Heloderma suspectum</i>	Gila Monster	None	None	None	None	Verified	None	None	None	G4	S2	None	Endangered SGCN	BLM Sensitive
Reptiles	<i>Pseudemys gorzugi</i>	Western River (Rio Grande) Cooter	None	None	None	None	None	Verified	Verified	TX	G3G4	S2	Not Listed 2022	Threatened SGCN	BLM Sensitive
Reptiles	<i>Trachemys gaigeae</i>	Big Bend Slider	None	None	None	Verified	Verified	None	None	TX	G3	S2	None	SGCN	BLM Sensitive
Reptiles	<i>Aspidoscelis stictogrammus</i>	Giant Spotted Whiptail	None	None	None	None	Verified	None	None	None	G4	S1	None	Threatened SGCN	Watch
Reptiles	<i>Crotalus lepidus lepidus</i>	Mottled Rock Rattlesnake	None	None	None	None	Verified	Potential	Verified	TX	G5T4T5	S2	None	Threatened SGCN	Watch
Reptiles	<i>Lampropeltis alterna</i>	Gray-banded Kingsnake	None	None	None	None	None	None	Verified	TX	G5	S1	None	Endangered SGCN	Watch
Reptiles	<i>Sceloporus slevini</i>	Slevin's Bunchgrass Lizard	None	None	None	None	Verified	None	None	None	G4	S1	None	Threatened SGCN	Watch
Reptiles	<i>Sistrurus tergeminus (catenatus) edwardsii</i>	Western massasauga	None	None	Verified	Verified	Verified	Verified	Verified	All	T3	S3	None	SGCN	**Watch

2024 BLM NM Sensitive Species Update: plants

2024 BLM NM Sensitive Species Update: plants (** denote status change since 2019 revision)

Group	Species	Common Name	Farmington	Taos	Rio Puerco	Socorro	Las Cruces	Roswell	Carlsbad	Natureserve Global rank	NHNM State rank	FWS Status	NM Status	BLM Status
Plants	<i>Abronia bigelovii</i>	Galisteo sand verbena	None	Potential	Verified	None	None	None	None	G2	S3	None	Strategy species	BLM Sensitive
Plants	<i>Acarospora clauzadeana</i>	small teasel lichen	None	None	None	None	None	Verified	Verified	G1G2	S1	Petitioned / negative 90 day finding	Strategy species	BLM Sensitive
Plants	<i>Agastache pringlei</i> var. <i>verticillata</i>	Organ Mountains giant hyssop	None	None	None	None	Verified	None	None	G3G4T2	S2	None	None	BLM Sensitive
Plants	<i>Aliciella formosa</i>	Aztec gilia	Verified	None	None	None	None	None	None	G2	S2	Petitioned / negative 90 day finding	Endangered	BLM Sensitive
Plants	<i>Amsonia fugatei</i>	Fugate's bluestar	None	None	None	Verified	None	None	None	G2	S1	None	None	BLM Sensitive
Plants	<i>Amsonia tharpii</i>	Tharp's bluestar	None	None	None	None	None	None	Verified	G1	S1	Petitioned - positive 90 day finding	Endangered	BLM Sensitive
Plants	<i>Anulocaulis leiosolenus</i> var. <i>howardii</i>	Howard's gyp ringstem	None	None	None	None	Verified	None	None	G4T1	S1	None	None	BLM Sensitive
Plants	<i>Aquilegia chrysantha</i> var. <i>chaplinei</i>	Chapline's columbine	None	None	None	None	Verified	None	Verified	G4T2	S2	None	None	BLM Sensitive
Plants	<i>Asclepias sanjuanensis</i>	San Juan milkweed	Verified	None	None	None	None	None	None	G2G3	S2	None	None	BLM Sensitive
Plants	<i>Astragalus gypsodes</i>	gypsum milkvetch	None	None	None	None	None	None	Verified	G3	S2	None	None	BLM Sensitive
Plants	<i>Astragalus knightii</i>	Knight's milkvetch	None	None	Verified	None	None	None	None	G2	S2	None	None	BLM Sensitive
Plants	<i>Astragalus nutriosensis</i>	Apache milkvetch	None	None	Potential	Verified	None	None	None	G2	S1	None	None	**BLM Sensitive
Plants	<i>Astragalus puniceus</i> var. <i>gertrudis</i>	Taos milkvetch	None	Verified	None	None	None	None	None	G4T3?Q	S2	None	None	**BLM Sensitive
Plants	<i>Astragalus ripleyi</i>	Ripley's milkvetch	None	Verified	Potential	None	None	None	None	G3	S3	None	None	BLM Sensitive
Plants	<i>Atriplex griffithsii</i>	Griffiths's saltbush	None	None	None	None	Verified	None	None	G2G3	S2	None	None	**BLM Sensitive
Plants	<i>Boechera zephyra</i>	Wind Mountain rockcress	None	None	None	None	Verified	None	Verified	G1	S1	None	None	BLM Sensitive
Plants	<i>Castilleja organorum</i>	Organ Mountains paintbrush	None	None	None	None	Verified	None	None	G1G2	S1	None	None	BLM Sensitive
Plants	<i>Coryphantha robustispina</i> subsp. <i>scheeri</i>	Scheer's beehive cactus	None	None	None	None	Verified	None	Verified	G4T3	S3	None	Endangered	BLM Sensitive
Plants	<i>Cylindropuntia viridiflora</i>	Santa Fe cholla	None	Verified	None	None	None	None	None	G1Q	S1	None	Endangered	BLM Sensitive
Plants	<i>Cymopterus spellenbergii</i>	Taos springparsley	None	Verified	None	None	None	None	None	G2	S2	None	Endangered	BLM Sensitive
Plants	<i>Dermatophyllum guadalupense</i>	Guadalupe mescalbean	None	None	None	None	Verified	None	Verified	G2	S1	Petitioned / negative 90 day finding	Species of Concern	BLM Sensitive
Plants	<i>Erigeron acomanus</i>	Acoma fleabane	Potential	None	Verified	None	None	None	None	G1G2	S1	None	Species of Concern	BLM Sensitive
Plants	<i>Eriogonum lachnogynum</i> var. <i>colobum</i>	clipped wild buckwheat	Potential	Verified	Potential	None	None	None	None	G4?T2	S2	None	Species of Concern	BLM Sensitive
Plants	<i>Escobaria duncanii</i>	Duncan's pincushion cactus	None	None	None	None	Verified	None	None	G3T2T3	S1	None	Endangered	BLM Sensitive
Plants	<i>Escobaria villardii</i>	Villard's pincushion cactus	None	None	None	None	Verified	None	None	G2Q	S2	None	Endangered	BLM Sensitive
Plants	<i>Hymenoxys ambigens</i> var. <i>neomexicana</i>	New Mexico bitterweed	None	None	None	None	Verified	None	None	G3?T2	S2	None	Species of Concern	BLM Sensitive
Plants	<i>Ipomopsis wrightii</i>	leafy skyrocket	None	None	None	None	Verified	None	None	G2G3	SNR	None	None	**BLM Sensitive
Plants	<i>Justicia wrightii</i>	Wright's water-willow	None	None	None	None	None	None	Verified	G2	S1	None	Species of Concern	BLM Sensitive
Plants	<i>Lepidospartum burgessii</i>	gypsum scalebroom	None	None	None	None	Verified	None	None	G2	S1	None	Endangered	BLM Sensitive
Plants	<i>Linum allredii</i>	Allred's flax	None	None	None	None	None	None	Verified	G1?	S1	None	Endangered	BLM Sensitive
Plants	<i>Mentzelia conspicua</i>	Rio Chama blazingstar	None	Verified	None	None	None	None	None	G2	S2	None	Species of Concern	BLM Sensitive
Plants	<i>Mentzelia filifolia</i>	threadleaf blazingstar	Potential	None	None	None	None	None	None	G3	S1?	None	Species of Concern	**BLM Sensitive
Plants	<i>Mentzelia humilus</i> var. <i>guadalupensis</i>	Guadalupe stickleaf	None	None	None	None	Verified	None	None	G4T1T2	S1S2	None	Species of Concern	BLM Sensitive
Plants	<i>Mentzelia sivinskii</i>	Sivinski's blazingstar	Verified	None	None	None	None	None	None	G3	S3	None	Species of Concern	BLM Sensitive
Plants	<i>Mentzelia todiltoensis</i>	Todilto stickleaf	None	Potential	Verified	Verified	None	None	None	G3	S3	None	Species of Concern	BLM Sensitive
Plants	<i>Muilla lordsburgana</i>	Lordsburg noino	None	None	None	None	Verified	None	None	GNR	SNR	None	None	**BLM Sensitive
Plants	<i>Neoparrya lithophila</i>	Bill's neoparrya	None	Verified	None	None	None	None	None	G3	S1	None	None	**BLM Sensitive

2024 BLM NM Sensitive Species Update: plants

Group	Species	Common Name	Farmington	Taos	Rio Puerco	Socorro	Las Cruces	Roswell	Carlsbad	Natureserve Global rank	NHNM State rank	FWS Status	NM Status	BLM Status
Plants	<i>Nerisyrenia hypercorax</i>	Crow Flats fan-mustard	None	None	None	None	Verified	None	None	G1G2	S1S2	None	Species of Concern	BLM Sensitive
Plants	<i>Oenothera organensis</i>	Organ Mountains evening primrose	None	None	None	None	Verified	None	None	G2	S2	None	Species of Concern	**BLM Sensitive
Plants	<i>Opuntia arenaria</i>	sandy prickly-pear	None	None	None	None	Verified	None	None	G2	S2	None	Endangered	BLM Sensitive
Plants	<i>Paronychia "leucochthonicola"</i>	Taos nailwort	None	Verified	None	None	None	None	None	GNR	SNR	None	None	**BLM Sensitive
Plants	<i>Paronychia wilkinsonii</i>	Wilkinson's nailwort	None	None	None	None	Verified	None	None	G2G3	S1	None	Species of Concern	BLM Sensitive
Plants	<i>Pedimelum pentaphyllum</i>	Chihuahua scurfpea	None	None	None	None	Verified	None	None	G1G2	S1	Petitioned - positive 90 day finding	Endangered	BLM Sensitive
Plants	<i>Peniocereus greggii</i> var. <i>greggii</i>	night-blooming cereus	None	None	None	None	Verified	None	None	G3G4T3	S3	None	Endangered	BLM Sensitive
Plants	<i>Penstemon alamosensis</i>	Alamo beardtongue	None	None	None	None	Verified	None	None	G3	S3	None	Species of Concern	BLM Sensitive
Plants	<i>Perityle cernua</i>	Organ Mountain rockdaisy	None	None	None	None	Verified	None	None	G2G3	S2	None	Species of Concern	BLM Sensitive
Plants	<i>Phacelia serrata</i>	cinder scorpionweed	None	None	Verified	None	None	None	None	G3	S2	None	Species of Concern	**BLM Sensitive
Plants	<i>Physaria navajoensis</i>	Navajo bladderpod	Potential	None	None	None	None	None	None	G2	S1	Petitioned / positive 90 day finding	Species of Concern	**BLM Sensitive
Plants	<i>Physaria newberryi</i> var. <i>yesicola</i>	Yeso twinpod	None	None	Verified	Potential	None	None	None	G3G4T2	S1	None	Species of Concern	BLM Sensitive
Plants	<i>Proatriplex pleiantha</i>	Mancos saltbush	Verified	None	Verified	None	None	None	None	G3	S3	None	Species of Concern	BLM Sensitive
Plants	<i>Puccinellia parishii</i>	Parish's alkaligrass	Potential	None	Verified	Potential	Verified	None	None	G2G3	S1	None	Endangered	BLM Sensitive
Plants	<i>Sclerocactus cloverae</i>	Clover's cactus	Verified	None	Potential	None	None	None	None	G3	S3	None	Endangered	BLM Sensitive
Plants	<i>Scrophularia laevis</i>	Organ Mountains figwort	None	None	None	None	Verified	None	None	G2	S2	None	Species of Concern	BLM Sensitive
Plants	<i>Scrophularia macrantha</i>	Mimbres figwort	None	None	None	None	Verified	None	None	G2	S2	None	Endangered	BLM Sensitive
Plants	<i>Spermolepis organensis</i>	Organ Mountains scaleseed	None	None	None	None	Verified	None	None	G1	S1	None	Species of Concern	BLM Sensitive
Plants	<i>Streptanthus sparsiflorus</i>	Guadalupe jewelflower	None	None	None	None	None	None	Verified	G2Q	S2	None	Species of Concern	BLM Sensitive
Plants	<i>Townsendia gypsophila</i>	gypsum Townsend's daisy	None	None	Verified	None	None	None	None	G2	S2	None	Endangered	BLM Sensitive
Plants	<i>Abronia nealleyi</i>	Nealley's sand verbena	None	None	None	None	Verified	Potential	Verified	GNR	SNR	None	None	Watch
Plants	<i>Adenophyllum wrightii</i> var. <i>wrightii</i>	Wright's dogweed	None	None	None	Potential	Verified	None	None	G4T3	SNR	Petitioned / negative 90 day finding	None	Watch
Plants	<i>Agalinis calycina</i>	Leoncita false foxglove	None	None	None	None	None	Potential	Potential	G1	S1	Petitioned / negative 90 finding	Endangered	Watch
Plants	<i>Agastache cana</i>	grayish-white giant hyssop	None	None	None	None	Verified	None	None	G3	S3	None	None	Watch
Plants	<i>Anulocaulis leiosolenus</i> var. <i>gypsogenus</i>	Pecos gyp ringstem	None	None	None	None	None	Verified	Verified	G4T4	S4	None	None	Watch
Plants	<i>Arida blepharophylla</i>	gypsum hotspring aster	None	None	None	None	Potential	None	None	G1	SH	Petitioned / negative 90 day finding	None	Watch
Plants	<i>Astragalus accumbens</i>	Zuni milkvetch	None	None	Verified	Potential	None	None	None	G3	S3	None	None	Watch
Plants	<i>Astragalus castetteri</i>	Castetter's milkvetch	None	None	None	None	Verified	None	None	G3	S3	None	None	Watch
Plants	<i>Astragalus cliffordii</i>	Clifford's milkvetch	Potential	None	Verified	None	None	None	None	GNR	S1	None	None	Watch
Plants	<i>Astragalus cobrensis</i> var. <i>maguirei</i>	Maguire's milkvetch	None	None	None	None	Verified	None	None	G4T1	S1	None	None	**Watch
Plants	<i>Astragalus cottamii</i>	Cottam's milkvetch	Verified	None	None	None	None	None	None	G4T4	S3	None	None	Watch
Plants	<i>Astragalus cyaneus</i>	cyanic milkvetch	None	Verified	Potential	None	None	None	None	G4	S4	None	None	Watch
Plants	<i>Astragalus feensis</i>	Santa Fe milkvetch	None	None	Verified	None	Verified	None	None	G3	S3	None	None	Watch
Plants	<i>Astragalus heilii</i>	Heil's milkvetch	Potential	None	None	None	None	None	None	G1	S1	None	None	Watch
Plants	<i>Astragalus humistratus</i> var. <i>crispulus</i>	villous groundcover milkvetch	None	None	None	Potential	None	None	None	G4G5T3?	S2	None	None	Watch
Plants	<i>Astragalus kerrii</i>	Kerr's milkvetch	None	None	None	None	None	Potential	None	G2	S2	None	None	Watch
Plants	<i>Astragalus micromerius</i>	Chaco milkvetch	Potential	None	Potential	None	None	None	None	G3	S3	None	None	Watch
Plants	<i>Astragalus missouriensis</i> var. <i>humistratus</i>	Pagosa milkvetch	Potential	Potential	None	None	None	None	None	G5T2	S1	None	None	Watch

2024 BLM NM Sensitive Species Update: plants

Group	Species	Common Name	Farmington	Taos	Rio Puerco	Socorro	Las Cruces	Roswell	Carlsbad	Natureserve Global rank	NHNM State rank	FWS Status	NM Status	BLM Status
Plants	<i>Astragalus naturitensis</i>	Naturita milkvetch	Potential	None	None	None	None	None	None	G3	S1	None	None	Watch
Plants	<i>Astragalus neomexicanus</i>	New Mexico milkvetch	None	None	None	None	None	Potential	None	G3	S3	None	None	Watch
Plants	<i>Astragalus oocalycis</i>	Arboles milkvetch	Verified	None	None	None	None	None	None	G4	S3	None	None	Watch
Plants	<i>Astragalus siliceus</i>	Flint Mountains milkvetch	None	Verified	None	None	None	None	None	G3	S3	None	None	Watch
Plants	<i>Astragalus wittmannii</i>	one-flowered milkvetch	None	Potential	None	None	None	None	None	G2G3	S2S3	None	None	Watch
Plants	<i>Castilleja ornata</i>	swale paintbrush	None	None	None	None	Potential	None	None	G1	S1	None	Endangered	Watch
Plants	<i>Castilleja tomentosa</i>	tomentose paintbrush	None	None	None	None	Potential	None	None	G1Q	S1	None	Endangered	Watch
Plants	<i>Chaetopappa hersheyi</i>	Guadalupe least-daisy	None	None	None	None	None	None	Verified	G3	S2	None	None	Watch
Plants	<i>Cuscuta warneri</i>	Warner's dodder	None	None	None	None	Potential	Potential	None	G1	S1	None	Species of Concern	Watch
Plants	<i>Dalea scariosa</i>	Albuquerque prairie clover	None	None	Potential	Potential	None	None	None	G3	S3	None	Species of Concern	Watch
Plants	<i>Delphinium robustum</i>	robust larkspur	None	Potential	None	None	None	None	None	G2G3	S2	None	Species of Concern	Watch
Plants	<i>Draba smithii</i>	Smith's whitlowgrass	None	Potential	None	None	None	None	None	G3	S1	None	Species of Concern	Watch
Plants	<i>Ephedra coryi</i>	Cory's joint-fir	None	None	None	None	None	Verified	Verified	G3	SNR	None	None	Watch
Plants	<i>Ericameria nauseosa</i> var. <i>texensis</i>	Guadalupe rabbitbrush	None	None	None	None	Verified	None	Potential	G5T2T3	S2	None	Species of Concern	Watch
Plants	<i>Eriogonum aliquantum</i>	Cimarron wild buckwheat	None	Potential	None	None	None	None	None	G3	S2	None	Species of Concern	Watch
Plants	<i>Eriogonum lachnogynum</i> var. <i>sarahiae</i>	Sarah's wild buckwheat	Potential	None	Potential	Potential	None	None	None	G4?T1	S1	None	Species of Concern	Watch
Plants	<i>Escobaria guadalupensis</i>	Guadalupe pincushion cactus	None	None	None	None	None	None	Verified	G1	S1	Petitioned / negative 90 day finding	Species of Concern	Watch
Plants	<i>Escobaria organensis</i>	Organ Mountains pincushion cactus	None	None	None	None	Verified	None	None	G2	S2	None	Endangered	Watch
Plants	<i>Euphorbia rayturneri</i>	Ray Turner's spurge	None	None	None	None	Potential	None	None	G1	S1	None	None	Watch
Plants	<i>Fissidens littlei</i>	Little's fissidens moss	None	None	None	None	Potential	None	None	G1?	S1	Petitioned / negative 90 day finding	None	Watch
Plants	<i>Grindelia arizonica</i> var. <i>neomexicana</i>	New Mexico gumweed	None	None	None	None	Potential	None	None	G4T3?	S3	None	Species of Concern	Watch
Plants	<i>Hedeoma apiculata</i>	McKittrick pennyroyal	None	None	None	None	None	None	Verified	G3	S3	None	Species of Concern	Watch
Plants	<i>Helianthus arizonensis</i>	Arizona sunflower	None	None	None	Potential	None	None	None	G2G4	S1	None	Species of Concern	Watch
Plants	<i>Helianthus neglectus</i>	neglected sunflower	None	None	None	None	None	None	Verified	G2Q	SNR	None	None	Watch
Plants	<i>Hexalectris arizonica</i>	Arizona coralroot	None	None	None	None	Potential	None	Potential	G5T3	S1	None	Endangered	Watch
Plants	<i>Hexalectris nitida</i>	shining coralroot	None	None	None	None	Potential	None	Potential	G3	S1	None	Endangered	Watch
Plants	<i>Hexalectris revoluta</i>	Chisos Mountains coralroot	None	None	None	None	Potential	None	Potential	G2	S1	Petitioned - positive 90 day finding	None	Watch
Plants	<i>Hymenoxys vaseyi</i>	Vasey's bitterweed	None	None	None	None	Verified	None	None	G2	S2	None	Species of Concern	Watch
Plants	<i>Ipomoea gilana</i>	Gila morning-glory	None	None	None	None	Potential	None	None	G1	S1	None	None	Watch
Plants	<i>Limosella pubiflora</i>	Chiricahua mudwort	None	None	None	None	Potential	None	None	G1Q	S1	None	Species of Concern	Watch
Plants	<i>Mentzelia springeri</i>	Springer's blazingstar	None	Potential	Potential	None	None	None	None	G3	S3	None	Species of Concern	Watch
Plants	<i>Nama xylopodum</i>	cliff nama	None	None	None	None	Verified	None	Verified	G4?	S4	None	Species of Concern	Watch
Plants	<i>Packera spellenbergii</i>	Spellenberg's groundsel	None	Potential	None	None	None	None	None	G3	S2	None	Species of Concern	Watch
Plants	<i>Panicum mohavense</i>	Mojave panicgrass	None	None	None	Potential	Potential	None	None	G2	S1	Petitioned / negative 90 day finding	Species of Concern	Watch
Plants	<i>Penstemon cardinalis</i> subsp. <i>regalis</i>	Gudalupe penstemon	None	None	None	None	None	None	Verified	G3T2T3	S2	None	Species of Concern	**Watch
Plants	<i>Peritoma multicaulis</i>	slender spiderflower	None	Potential	None	None	Potential	None	None	G2G3	SH	None	Endangered	Watch
Plants	<i>Perityle quinqueflora</i>	five-flowered rockdaisy	None	None	None	None	Verified	None	Verified	G4	S3	None	Species of Concern	Watch
Plants	<i>Perityle staurophylla</i> var. <i>staurophylla</i>	New Mexico rockdaisy	None	None	None	None	Verified	None	None	G4T3T4	S3	None	Species of Concern	Watch

2024 BLM NM Sensitive Species Update: plants

Group	Species	Common Name	Farmington	Taos	Rio Puerco	Socorro	Las Cruces	Roswell	Carlsbad	Natureserve Global rank	NHNM State rank	FWS Status	NM Status	BLM Status
Plants	<i>Phacelia cloudcroftensis</i>	Cloudcroft scorpionweed	None	None	None	None	Potential	None	None	G1	S1	None	Species of Concern	Watch
Plants	<i>Phacelia sivinskii</i>	Sivinski's scorpionweed	None	None	Verified	Verified	Verified	None	None	G3	S3	None	Species of Concern	Watch
Plants	<i>Phemeranthus brachypodius</i>	Laguna fameflower	None	None	Potential	Potential	None	None	None	GNRQ	S1	None	Species of Concern	Watch
Plants	<i>Phemeranthus humilis</i>	Pinos Altos fameflower	None	None	None	None	Potential	None	None	G2	S2	None	Species of Concern	Watch
Plants	<i>Phlox caryophylla</i>	Pagosa phlox	Potential	Potential	None	None	None	None	None	G3	S2	None	Species of Concern	Watch
Plants	<i>Physaria pruinosa</i>	Pagosa Springs bladderpod	Potential	Potential	None	None	None	None	None	G2	S1	None	Species of Concern	Watch
Plants	<i>Polygala rimulicola</i> var. <i>rimulicola</i>	Guadalupe milkwort	None	None	None	None	None	None	Verified	G3T3	S2	None	Species of Concern	Watch
Plants	<i>Sclerocactus papyracanthus</i>	grama grass cactus	Potential	Verified	Verified	Verified	Verified	Potential	None	G4	S4	None	None	Watch
Plants	<i>Senecio cliffordii</i>	Clifford's groundsel	Potential	None	None	None	None	None	None	GNR	S2	None	Species of Concern	Watch
Plants	<i>Senecio warnockii</i>	Warnock's ragwort	None	None	None	None	Verified	None	Verified	G3Q	S2	Species of Concern	Species of Concern	Watch
Plants	<i>Sicyos glaber</i>	smooth bur cucumber	None	None	None	None	Verified	None	None	G3	S1S2	None	Species of Concern	Watch
Plants	<i>Silene plankii</i>	Plank's catchfly	None	None	None	Verified	Potential	None	None	G2	S2	None	Species of Concern	Watch
Plants	<i>Silene thurberi</i>	Thurber's campion	None	None	None	None	Potential	None	None	G4	S2	None	Species of Concern	Watch
Plants	<i>Silene wrightii</i>	Wright's catchfly	None	None	None	Potential	Verified	None	None	G2	S3	None	Species of Concern	Watch
Plants	<i>Stellaria porsildii</i>	Porsild's starwort	None	None	None	None	Potential	None	None	G1	S1	None	Species of Concern	Watch
Plants	<i>Valeriana texana</i>	Guadalupe valerian	None	None	None	None	None	None	Verified	G2	S2	None	Species of Concern	Watch
Plants	<i>Viola calcicola</i>	limestone violet	None	None	None	None	Potential	None	Verified	G3	S1	None	Species of Concern	Watch

APPENDIX E

BISON-M Report for Hidalgo County



Species of Greatest Conservation Need

Hidalgo

<u>Taxonomic Group</u>	<u># Species</u>	<u>Taxonomic Group</u>	<u># Species</u>
Amphibians	6	Mammals	11
Birds	61	Molluscs	12
Crustaceans	7	Reptiles	12
Fish	5		

TOTAL SPECIES: 114

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGE</u>	<u>US FWS</u>	<u>Critical Habitat</u>	<u>SGCN</u>	<u>Photo</u>
White-sided Jackrabbit	Lepus callotis	T			Y	View
Arizona Shrew	Sorex arizonae	E			Y	No Photo
Mexican Long-tongued Bat	Choeronycteris mexicana				Y	View
Mexican Long-nosed Bat	Leptonycteris nivalis	E	E		Y	View
Lesser Long-nosed Bat	Leptonycteris yerbabuenae	T			Y	View
Pale Townsend's Big-eared Bat	Corynorhinus townsendii				Y	View
Western Yellow Bat	Dasypterus xanthinus	T			Y	View
Mexican Gray Wolf	Canis lupus baileyi	E	E		Y	View
Jaguar	Panthera onca		E		Y	View
Southern Pocket Gopher	Thomomys umbrinus intermedius	T			Y	View
Black-tailed Prairie Dog	Cynomys ludovicianus ludovicianus				Y	View
Gould's Wild Turkey	Meleagris gallopavo mexicana				Y	View
Eared Grebe	Podiceps nigricollis				Y	View
Common Ground Dove	Columbina passerina	E			Y	View
Yellow-billed Cuckoo (western pop)	Coccyzus americanus occidentalis		T	Y	Y	View
Common Nighthawk	Chordeiles minor				Y	View
Mexican Whip-poor-will	Antrostomus arizonae				Y	View
Black Swift	Cypseloides niger				Y	View
Lucifer Hummingbird	Calothorax lucifer	T			Y	View
Costa's Hummingbird	Calypte costae	T			Y	View
Broad-billed Hummingbird	Cynanthus latirostris	T			Y	View
Violet-crowned Hummingbird	Leucolia violiceps	T			Y	View
Mountain Plover	Charadrius montanus				Y	View

Species of Greatest Conservation Need

Hidalgo

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGF</u>	<u>US FWS</u>	<u>Critical Habitat</u>	<u>SGCN</u>	<u>Photo</u>
Long-billed Curlew	Numenius americanus				Y	View
Neotropic Cormorant	Phalacrocorax brasilianus	T			Y	View
American Bittern	Botaurus lentiginosus				Y	View
Bald Eagle	Haliaeetus leucocephalus	T			Y	View
Common Black Hawk	Buteogallus anthracinus	T			Y	View
Flammulated Owl	Psilosops flammeolus				Y	View
Whiskered Screech-Owl	Megascops trichopsis	T			Y	View
Elf Owl	Micrathene whitneyi				Y	View
Burrowing Owl	Athene cunicularia				Y	View
Mexican Spotted Owl	Strix occidentalis lucida		T	Y	Y	View
Elegant Trogon	Trogon elegans	E			Y	View
Lewis's Woodpecker	Melanerpes lewis				Y	View
Gila Woodpecker	Melanerpes uropygialis	T			Y	View
Williamson's Sapsucker	Sphyrapicus thyroideus				Y	View
Aplomado Falcon	Falco femoralis	E	E		Y	View
Peregrine Falcon	Falco peregrinus	T			Y	View
Northern Beardless-Tyrannulet	Camptostoma imberbe	E			Y	View
Thick-billed Kingbird	Tyrannus crassirostris	E			Y	View
Olive-sided Flycatcher	Contopus cooperi				Y	View
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	E	Y	Y	View
Loggerhead Shrike	Lanius ludovicianus				Y	View
Bell's Vireo	Vireo bellii	T			Y	View
Gray Vireo	Vireo vicinior	T			Y	View
Pinyon Jay	Gymnorhinus cyanocephalus				Y	View
Bank Swallow	Riparia riparia				Y	View
Juniper Titmouse	Baeolophus ridgwayi				Y	View
Pygmy Nuthatch	Sitta pygmaea				Y	View
Western Bluebird	Sialia mexicana				Y	View
Bendire's Thrasher	Toxostoma bendirei				Y	View
Sprague's Pipit	Anthus spragueii				Y	View
Cassin's Finch	Haemorhous cassinii				Y	View

Species of Greatest Conservation Need

Hidalgo

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGF</u>	<u>US FWS</u>	<u>Critical Habitat</u>	<u>SGCN</u>	<u>Photo</u>
Chestnut-collared Longspur	Calcarius ornatus				Y	View
Thick-billed Longspur	Rhynchophanes mccownii				Y	View
Botteri's Sparrow	Peucaea botterii				Y	View
Cassin's Sparrow	Peucaea cassinii				Y	View
Arizona Grasshopper Sparrow	Ammodramus savannarum ammolegus	E			Y	View
Black-chinned Sparrow	Spizella atrogularis				Y	View
Yellow-eyed Junco	Junco phaeonotus	T			Y	View
Sagebrush Sparrow	Artemisiospiza nevadensis				Y	View
Vesper Sparrow	Poocetes gramineus				Y	View
Baird's Sparrow	Centronyx bairdii	T			Y	View
Abert's Towhee	Melozona aberti	T			Y	View
Lucy's Warbler	Leiothlypis luciae				Y	View
Virginia's Warbler	Leiothlypis virginiae				Y	View
Grace's Warbler	Setophaga graciae				Y	View
Black-throated Gray Warbler	Setophaga nigrescens				Y	View
Red-faced Warbler	Cardellina rubrifrons				Y	View
Painted Redstart	Myioborus pictus				Y	View
Varied Bunting	Passerina versicolor	T			Y	View
Sonora Mud Turtle	Kinosternon sonoriense sonoriense				Y	View
Slevin's Bunchgrass Lizard	Sceloporus slevini	T			Y	View
Gray-checked Whiptail	Aspidoscelis dixonii	E			Y	View
Giant Spotted Whiptail	Aspidoscelis stictogramma	T			Y	View
Mountain Skink	Plestiodon callicephalus	T			Y	View
Gila Monster	Heloderma suspectum	E			Y	View
Green Rat Snake	Senticolis triaspis	T			Y	View
Northern Mexican Gartersnake	Thamnophis eques	E	T	Y	Y	View
Narrow-headed Gartersnake	Thamnophis rufipunctatus	E	T	Y	Y	View
Banded Rock Rattlesnake	Crotalus lepidus klauberi				Y	View
New Mexico Ridge-nosed Rattlesnake	Crotalus willardi obscurus	E	T	Y	Y	View
Western Massasauga	Sistrurus tergeminus				Y	View

Species of Greatest Conservation Need

Hidalgo

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGF</u>	<u>US FWS</u>	<u>Critical Habitat</u>	<u>SGCN</u>	<u>Photo</u>
Arizona Toad	Anaxyrus microscaphus				Y	View
Sonoran Desert Toad	Incilius alvarius	T			Y	View
Boreal Chorus Frog	Pseudacris maculata				Y	View
Chiricahua Leopard Frog	Lithobates chiricahuensis		T	Y	Y	View
Northern Leopard Frog	Lithobates pipiens				Y	View
Lowland Leopard Frog	Lithobates yavapaiensis	E			Y	View
Roundtail Chub (lower Colorado River populations)	Gila robusta	E	C		Y	View
Spikedace	Meda fulgida	E	E	Y	Y	View
Loach Minnow	Rhinichthys cobitis	E	E	Y	Y	View
Desert Sucker	Catostomus clarkii				Y	View
Sonora Sucker	Catostomus insignis				Y	View
Fringed Mountainsnail	Radiocentrum ferrissi				Y	No Photo
Animas Mountains Holospira Snail	Holospira animasensis				Y	No Photo
Cross Holospira Snail	Holospira crossei				Y	No Photo
Metcalf Holospira Snail	Holospira metcalfi				Y	No Photo
Shortneck Snaggletooth Snail	Gastrocopta dalliana	T			Y	View
Vallonia Snail	Vallonia sonorana				Y	No Photo
Animas Peak Woodlandsnail	Ashmunella animasensis				Y	No Photo
Hacheta Grande Woodlandsnail	Ashmunella hebardi	T			Y	View
Animas Talussnail	Sonorella animasensis				Y	View
New Mexico Talussnail (Big Hatchet Mtns.)	Sonorella hachitana				Y	No Photo
New Mexico Talussnail (Peloncillo Mtns.)	Sonorella hachitana peloncillensis				Y	No Photo
Lang Canyon Talussnail	Sonorella painteri				Y	View
Dumont's Fairy Shrimp	Streptocephalus henridumontis				Y	No Photo
Bowman's Fairy Shrimp	Streptocephalus thomasbowmani				Y	No Photo
Beavertail Fairy Shrimp	Thamnocephalus platyurus				Y	View
Lynch Tadpole Shrimp	Lepidurus lemmoni				Y	View
Straightbacked Clam Shrimp	Eocyclus digueti				Y	No Photo
Texan Clam Shrimp	Eulimnadia texana				Y	No Photo

Species of Greatest Conservation Need

Hidalgo

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Short Finger Clam Shrimp	Lynceus brevifrons				Y	No Photo

APPENDIX F NMDGF ERT Report



PROJECT INFORMATION

Project Title: Steins/KoBold

Project Type: MINING, Minimal Impact

Latitude/Longitude (DMS): 32.190354 / -109.024934

County(s): HIDALGO

Project Description: Steins/Kobold is planning to conduct exploratory drilling within the Analysis Area. This project will include drilling at 9 drill-hole locations, the construction and maintenance of access roads and project-associated facilities, and following the completion of the project, reclamation of the land. Anticipated start dates for the project are August 2026. Preliminary surveys have been completed to evaluate biological and cultural resources in the area, and to plan for their avoidance. Site preparation will include construction of nine drill pads, each measuring approximately 100 feet by 100 feet (approximately 0.23 acres per pad, totaling 2.07 acres). Pads will be constructed using a D6 bulldozer or equivalent equipment and sized to accommodate the drill rig, support vehicles, water storage, core storage facilities, and ancillary equipment. Each pad will include adequate working space for safe equipment operation and material handling, including sumps for drill cuttings management, a driller's shed, portable toilet facilities, and designated areas for pipe storage, water trucks, and support equipment. Access to drill locations will require construction of approximately 1.02 miles of new access roads and work on approximately 1.52 miles of existing access roads, consisting of approximately 0.78 miles of widening, 0.47 miles of 2-foot widening, and 0.28 miles of regrade. New roads will be constructed to a 13-foot width (11-foot blade width plus 1-foot spoil on either side) to accommodate drill rigs and support vehicles. Existing roads will be widened or regraded as needed to achieve a consistent 13-foot running surface. Access routes traverse a combination of BLM-administered surface, Hooper private lands, and approximately 0.25 mile of New Mexico State Trust lands administered by the NMLO. All work on private lands will be conducted pursuant to the executed surface access and exploration agreement with the Hooper family. All roads will be designed to follow natural contours to minimize cut and fill requirements and reduce erosion potential. Water for drilling operations will be supplied through commercial water hauling from permitted sources, with an estimated daily usage of 500 to 1,000 gallons depending on drilling method and geological conditions encountered. Water will be transported in a 2,000-gallon capacity water truck and stored temporarily on drill pads. Support facilities at each drill location will include portable sanitation facilities serviced weekly by a licensed contractor, temporary core storage areas for geological logging and sampling, and equipment staging areas. All facilities will be removed upon completion of drilling at each location. Following exploratory drilling operations, all disturbed areas will be returned to a condition suitable for the land's pre-disturbance use in accordance with the performance standards specified in 43 CFR 3809.420 and requirements established by the BLM Las Cruces District Office. Reclamation will incorporate concurrent reclamation during operations and final reclamation following completion of drilling. Drill pads will be regraded to blend with



surrounding topography and eliminate sharp angles or unnatural landforms. Roads will be reclaimed by pulling berms, installing water bars on slopes greater than 5 percent at 50- to 100-ft intervals, and restoring natural drainage patterns. Compacted surfaces will be scarified to a minimum depth of 6 inches on drill pads and 8 inches on roads to restore soil permeability and provide suitable seedbed conditions for revegetation. Sumps will be filled with excavated materials and compacted in 12-inch lifts. Topsoil will be salvaged from drill pad and road locations prior to construction and stockpiled separately from subsoil and rock materials. Stockpiles will be clearly marked and protected from erosion throughout operations. Salvaged topsoil will be respread across all disturbed areas during final reclamation to restore nutrient-rich growing medium and seed bank for native plant establishment. All reclaimed areas will be seeded with native plant species appropriate for Chihuahuan Desert plant communities native to Hidalgo County, New Mexico. Seed mixes will be selected in consultation with BLM Las Cruces District Office personnel to ensure species composition is consistent with the surrounding vegetation community and meets BLM reclamation standards. Seeding will be performed using hydroseeding or broadcast seeding with crimped straw mulch applied immediately following seeding operations to improve moisture retention and seed-to-soil contact. Noxious weed monitoring and control will be implemented throughout operations and the post-reclamation monitoring period using methods approved by BLM and the New Mexico Department of Agriculture. All equipment, materials, supplies, and facilities associated with exploration operations will be removed from the Project Area within 30 days of completing operations at each location. Core boxes and geological samples will be transported to secure storage facilities. Any concrete pads or equipment footings will be removed and resulting excavations properly backfilled and restored to grade. No materials will be buried on site unless specifically approved by the BLM.

REQUESTOR INFORMATION

Project Organization:

Contact Name: Natalie Senini
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Organization: Westland Engineering and Environmental Services
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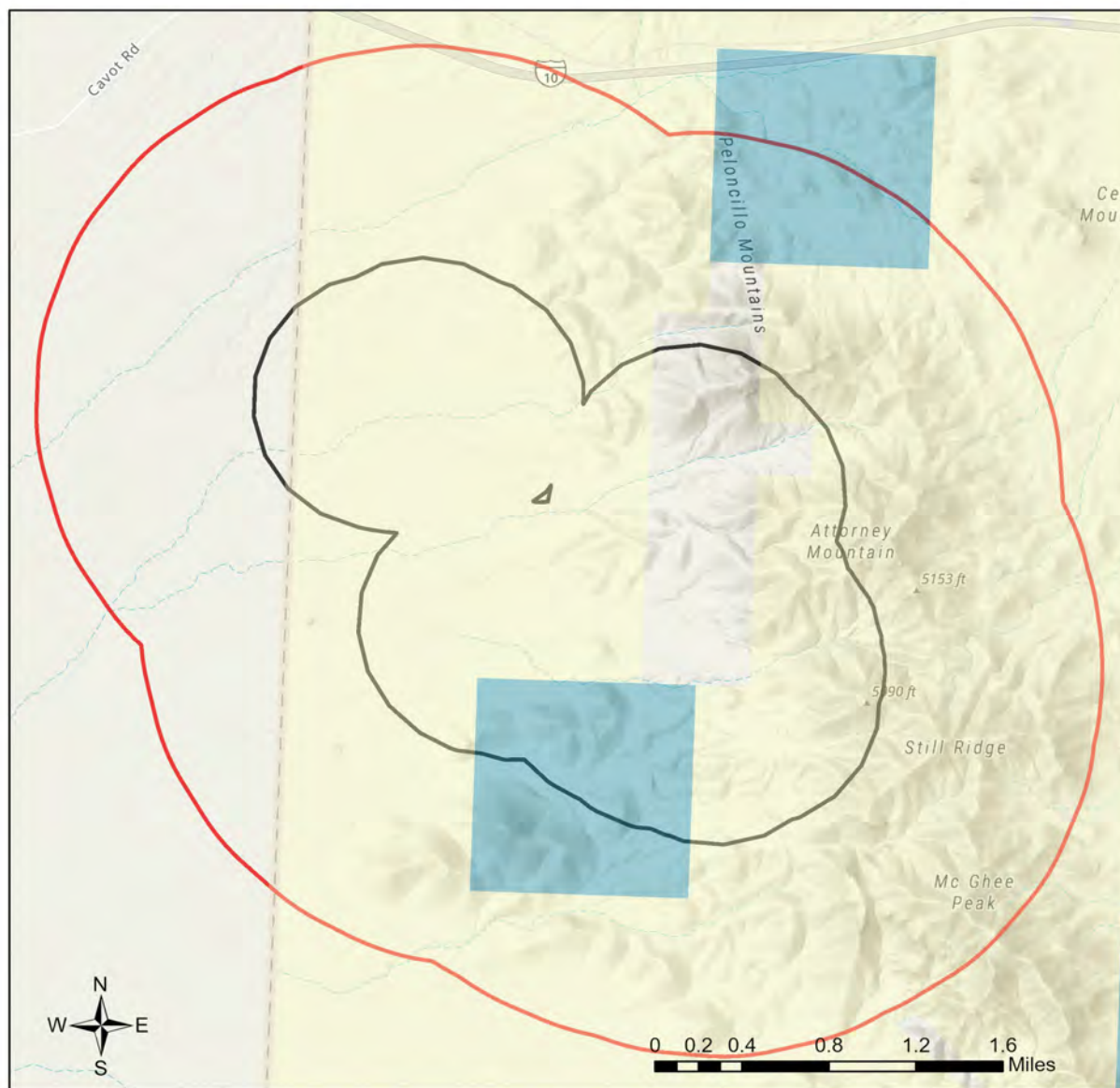
OVERALL STATUS

The information contained within this report comprises the recommendations of the New Mexico Department of Wildlife (Department) for management and mitigation of proposed project impacts to wildlife and habitat resources; see the Project Recommendations section below for further details. No further consultation with the Department is required based on the project's location and, with implementation of mitigation measures described in the Project Recommendations section below, no adverse effects to wildlife or important habitats are anticipated. However, a Department biologist may be in touch within 30 days if they determine that further review is required.

About this report:

- This environmental review is based on the project description and location that was entered. The report must be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is not a substitute for the potential wildlife knowledge gained by having a biologist conduct a field survey of the project area. Federal status and plant data are provided as a courtesy to users. The review is also not intended to replace consultation required under the federal Endangered Species Act (ESA), including impact analyses for federal resources from the U.S. Fish and Wildlife Service (USFWS) using their [Information for Planning and Consultation tool](#).
- This report contains information on wildlife species protected under the ESA and the [Wildlife Conservation Act \(WCA\)](#), [Species of Greatest Conservation Need \(SGCN\)](#) (page 18, table 5), and Species of Economic and Recreational Importance (SERI). Species listed under the ESA are protected from take at the federal level and under the WCA are protected from take at the state level. SGCN are identified in the [State Wildlife Action Plan \(SWAP\) for New Mexico](#); all of these species are considered to be of conservation concern but not all of them are protected from take at the state or federal level. The harvest of all SERI is regulated at the state level. The Department has no authority to designate critical habitat for species listed under the WCA; only the USFWS can designate critical habitat for species listed under the ESA.
- The New Mexico Environmental Review Tool (ERT) utilizes species observation locations and species habitat suitability models, both of which are subject to ongoing change and refinement. Inclusion or omission of a species within a report cannot guarantee species presence or absence within your project area. To determine occurrence of any species listed in this report, or other wildlife that may be present within your project area, onsite surveys conducted by a qualified biologist during appropriate, species-specific survey timelines may be necessary.
- The Department encourages use of the ERT to modify proposed projects for avoidance, minimization, or mitigation of wildlife impacts. However, the ERT is not intended to be used in a repeatedly iterative fashion to adjust project attributes until a previously determined recommendation is generated. The ERT serves to assess impacts once project details are developed. The [New Mexico Crucial Habitat Assessment Tool](#), the data layers from which are included in the ERT, is the appropriate system for advising early-stage project planning and design to avoid areas of anticipated wildlife concerns and associated regulatory requirements.

Steins/KoBold



NHNM, USGS, USFS, US Census Bureau, NMDGF
Esri, NASA, NGA, USGS
CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, USFWS

Special Status Animal Species Potentially within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI	USFS	USFS SCC	BLM
Colorado River Toad	Incilius alvarius		T	SGCN			
Plains Leopard Frog	Lithobates blairi			SGCN			BLM WATCH
Chiricahua Leopard Frog	Lithobates chiricahuensis	LT		SGCN	Sensitive Species		
Applomado Falcon	Falco femoralis		E	SGCN			
Peregrine Falcon	Falco peregrinus		T	SGCN			BLM WATCH
Flammulated Owl	Psilosops flammeolus			SGCN			BLM WATCH
Whiskered Screech-Owl	Megascops trichopsis		T	SGCN	Sensitive Species		
Elf Owl	Micrathene whitneyi			SGCN			BLM WATCH
Western Burrowing Owl	Athene cunicularia hypugaea			SGCN	Sensitive Species	USFS R3 SCC	BLM SENSITIVE
Common Nighthawk	Chordeiles minor			SGCN			
Black Swift	Cypseloides niger			SGCN		USFS R3 SCC	
Violet-Crowned Hummingbird	Amazilia violiceps		T	SGCN	Sensitive Species		
Lucifer Hummingbird	Calothorax lucifer		T	SGCN	Sensitive Species		
Costa's Hummingbird	Calypte costae		T	SGCN	Sensitive Species		
Elegant Trogon	Trogon elegans		E	SGCN	Sensitive Species		
Northern Beardless-Tyrannulet	Camptostoma imberbe		E	SGCN	Sensitive Species		BLM WATCH
Thick-Billed Kingbird	Tyrannus crassirostris		E	SGCN	Sensitive Species		
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN		USFS R3 SCC	BLM SENSITIVE
Pygmy Nuthatch	Sitta pygmaea			SGCN			
Western Bluebird	Sialia mexicana			SGCN			
Mountain Bluebird	Sialia currucoides			SGCN			

Special Status Animal Species Potentially within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI	USFS	USFS SCC	BLM
Bendire's Thrasher	Toxostoma bendirei			SGCN		USFS R3 SCC	BLM SENSITIVE
Sprague's Pipit	Anthus spragueii			SGCN			BLM SENSITIVE
Loggerhead Shrike	Lanius ludovicianus			SGCN		USFS R3 SCC	BLM WATCH
Bell's Vireo	Vireo bellii		T	SGCN			BLM SENSITIVE
Virginia's Warbler	Leiothlypis virginiae			SGCN			BLM SENSITIVE
Lucy's Warbler	Leiothlypis luciae			SGCN			BLM WATCH
Black-Throated Gray Warbler	Setophaga nigrescens			SGCN			BLM WATCH
Black-Chinned Sparrow	Spizella atrogularis			SGCN			BLM WATCH
Vesper Sparrow	Poocetes gramineus			SGCN			
Baird's Sparrow	Ammodramus bairdii		T	SGCN	Sensitive Species		BLM SENSITIVE
Thick-billed Longspur	Rhynchophanes mccownii			SGCN			BLM SENSITIVE
Chestnut-Collared Longspur	Calcarius ornatus			SGCN			BLM SENSITIVE
Cassin's Finch	Haemorhous cassinii			SGCN			BLM WATCH
Evening Grosbeak	Coccothraustes vespertinus			SGCN			
Mexican Long-Tongued Bat	Choeronycteris mexicana			SGCN	Sensitive Species		BLM SENSITIVE
Mexican Long-Nosed Bat	Leptonycteris nivalis	LE	E	SGCN			
Lesser Long-Nosed Bat	Leptonycteris verbabuenae	DL	T	SGCN 2025		USFS R3 SCC	BLM SENSITIVE
Western Yellow Bat	Lasiurus xanthinus		T	SGCN	Sensitive Species		BLM SENSITIVE
Spotted Bat	Euderma maculatum		T	SGCN	Sensitive Species	USFS R3 SCC	BLM SENSITIVE
White-Sided Jackrabbit	Lepus callotis gaillardi		T	SGCN			BLM SENSITIVE

Special Status Animal Species Potentially within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI	USFS	USFS SCC	BLM
Mountain Lion	Puma concolor			SERI			
Mule Deer	Odocoileus hemionus			SERI			
Pronghorn	Antilocapra americana			SERI			
Desert Bighorn Sheep	Ovis canadensis mexicana			SERI			
Sonoran Mud Turtle	Kinosternon sonoriense			SGCN			
Gila Monster	Heloderma suspectum		E	SGCN			BLM SENSITIVE
Gray-checked Whiptail	Aspidoscelis tessellatus		E	SGCN			BLM SENSITIVE
Green Rat Snake	Senticolis triaspis		T	SGCN	Sensitive Species		
Rock Rattlesnake	Crotalus lepidus			SGCN			
Desert Massasauga	Sistrurus catenatus edwardsii			SGCN			

Common Name hyperlink takes you to species account in [bison-m.org](#); Scientific Name hyperlink takes you to information in [NatureServe Explorer](#); ESA = Endangered Species Act, C = Candidate, LE = Listed Endangered, LT = Listed Threatened, XN = Non-essential Experimental Population, for other ESA codes see this [website](#); WCA = Wildlife Conservation Act, E = Endangered, T = Threatened; SERI = Species of Economic and Recreational Importance; SGCN = Species of Greatest Conservation Need; USFS = U.S. Forest Service, Sensitive Species = A species likely to occur on USFS lands that is of concern for a potential reduction in population viability; SCC = Species of Conservation Concern; BLM = Bureau of Land Management, BLM SENSITIVE = A species that occurs on BLM lands and whose viability is at risk, BLM WATCH = Species that may be added to the sensitive species list in future pending new information regarding species status.

Special Status Plant Species Potentially within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS	USFS	USFS SCC	BLM
Standley's Whitlow-Grass	Draba standleyi						
Night-Blooming Cereus	Peniocereus greggii var. greggii		E	SS			BLM SENSITIVE

NMAC = New Mexico Administrative Code, E = Endangered; NMRPCS = [New Mexico Rare Plant Conservation Strategy](#), SS = NM Rare Plant Conservation Strategy Species; USFS = U.S. Forest Service, Sensitive Species = A species likely to occur on USFS lands that is of concern for a potential reduction in population viability; SCC = Species of Conservation Concern; BLM = Bureau of Land Management, BLM SENSITIVE = A species that occurs on BLM lands and whose viability is at risk, BLM WATCH = Species that may be added to the sensitive species list in future pending new information regarding species status.

Project Recommendations

Burrowing owl (*Athene cunicularia*) may occur within your project area. Burrowing owls are protected from take by the Migratory Bird Treaty Act and under New Mexico state statute. Before any ground disturbing activities occur, the Department recommends that a preliminary burrowing owl survey be conducted by a qualified biologist using the Department's [Burrowing Owl Survey Protocol](#). Should burrowing owls be documented in the project area, please contact the Department or USFWS for further recommendations regarding relocation or avoidance of impacts.

Your project area intersects an Important Plant Area (IPA) that contains one or more species of plants listed as threatened or endangered by the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) under New Mexico Statutes Annotated (NMSA) 75-6-1 or by the USFWS under the federal ESA. Although IPAs have no legal designation, they have been identified as areas that support either a high diversity of sensitive plant species or contain the last remaining locations of New Mexico's most endangered plants. The Department recommends that you consult with EMNRD's [Endangered Plant Program Coordinator](#) regarding any state-listed plants and the USFWS's [Information for Planning and Consultation \(IPAC\)](#) system for any federally-listed plants and reaching out to the appropriate federal species lead(s) with the [New Mexico Ecological Services Office of USFWS](#). The Department does not have any authority to designate or advise on state- or federally-listed plants.

The current project area appears to contain one or more wetland types as classified by the New Mexico Environment Department's [Wetland Map](#). Information on wetlands in your project area can also be viewed on the ERT's [Create Project/Map](#) page. This [key](#) can assist in interpreting Landscape Position, landform, water flow path, and waterbody type (LLWW) codes in the ERT's wetland data. Wetlands provide important habitat for numerous species of wildlife and pollinators and provide ecosystem services, such as water filtration and storage, to downstream users. The Department recommends avoiding disturbance of wetlands whenever possible, avoiding actions or infrastructure installment that may disrupt natural wetland hydrological processes, and reseeding or replanting areas where disturbance cannot be avoided with native wetland plant species appropriate to the local wetland type. For a list of native seed providers, please see the Department's habitat handbook guideline for [Restoration and Management of Native and Non-native Trees in Southwestern Riparian Ecosystems](#). For projects involving filling wetlands under federal jurisdiction, please contact the [Army Corps of Engineers](#) for more information on permits required under the Clean Water Act.

Disclaimers regarding recommendations:

- The Department provides technical guidance to support the persistence of all protected species of native fish and wildlife, including game and nongame wildlife species. Species listed within this report include those that have been documented to occur within the project area, and others that may not have been documented but are projected to occur within the project vicinity.
- Recommendations are provided by the Department under the authority of § 17-1-5.1 New Mexico Statutes Annotated 1978, to provide "communication and consultation with federal and other state agencies, local governments and communities, private organizations and affected interests responsible for habitat, wilderness, recreation, water quality and environmental protection to ensure comprehensive conservation services for hunters, anglers and nonconsumptive wildlife users".
- The Department has no authority for management of plants or Important Plant Areas. The [New Mexico Endangered Plant Program](#), under the Energy, Minerals, and Natural Resources Department's Forestry Division, identifies and develops conservation measures necessary to ensure the survival of plant species within New Mexico. Plant status information is provided within this report as a courtesy to users. Recommendations provided within the ERT may not be sufficient to preclude impacts to rare or sensitive plants, unless conservation measures are identified in coordination with the Endangered Plant Program.
- Additional coordination and/or consultation may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific mitigation recommendations may be proposed during ESA consultation and/or NEPA analyses or through coordination with affected federal agencies.
- Unless a project is marked as confidential in the title or description by the project proponent and if a ERT-generated report is the only response that the project proponent receives from the Department, then the report will be made publicly accessible via the [Public Comment Letters](#) page on the ERT website.

ATTACHMENT F
Special-Status Plant Species Survey Report

Special-Status Plant Species Survey Report for the Steins Exploratory Drilling Project in Hidalgo County, New Mexico

Prepared for: Curiosity Exploration LLC
Prepared by: WestLand Engineering & Environmental Services
Date: May 18, 2026
Project Number: 14301

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Figures

(follow text)

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Figure 2. Aerial Overview

Appendix

- Appendix A. Representative Photographs

1. INTRODUCTION

WestLand Engineering & Environmental Services (WestLand) was retained by Curiosity Exploration LLC (Curiosity) to complete a pedestrian survey for two species of plants of the access road corridors and drill pad footprints for the Steins Exploratory Drilling Project (the Project) in Hidalgo County, New Mexico (**Figure 1**). The Project will consist of surface disturbance for exploratory drilling activities at nine 100-by-100-foot drilling locations and the construction and maintenance of their associated access roads (the Project Area). In the process of completing field evaluations in support of a biological evaluation (BE) for the Project, night-blooming cereus (*Peniocereus greggii*) and *Coryphantha robustispina* subsp. *uncinata*¹ (special-status species) were observed in the Project Area. Night-blooming cereus is classified New Mexico State Endangered and *C. r.* subsp. *uncinata* is classified Bureau of Land Management (BLM) Las Cruces District Office (LCDO) Sensitive. Curiosity coordinated with the New Mexico Mining and Minerals Department (NMMMD), the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), and the BLM regarding recommendations for survey of the two species. Based on recommendations from the departments, Curiosity engaged WestLand to conduct pedestrian clearance surveys for the two species in the Project Area, with a 30-meter (98-foot) buffer around the proposed pads and new roads and a 10-meter (33-foot) buffer around existing roads (the Survey Area). At the completion of survey, proposed new disturbance would be adjusted as needed to create a buffer of at least 10 meters between new disturbance and any of the target plants found. Any widening of existing roads, which are no more than 2 feet of additional width, would be conducted on the side of the road opposite to any plants found. This report documents the results of this survey.

The following sections provide the natural history and distribution of night-blooming cereus and Scheer's beehive cactus (**Section 2**), a description of the Survey Area (**Section 3**), the methods used during the pedestrian survey (**Section 4**), and the results of the survey (**Section 5**). References cited are provided in **Section 6**. Representative photos of habitat and plants observed are in **Appendix A**.

2. FOCAL SPECIES

During WestLand's February 2026 field evaluations, two special-status plant species and their suitable habitat were observed within the boundaries of the Project Area: night-blooming cereus and Scheer's beehive cactus. The natural history and distribution of these species in New Mexico is described as follows.

2.1. NATURAL HISTORY AND DISTRIBUTION OF NIGHT-BLOOMING CEREUS

Night-blooming cereus is a slender-stemmed cactus native to the Sonoran and Chihuahuan Deserts (Institute for Applied Ecology [IAE] 2023). It is known to co-occur with "nurse plants" such as creosotebush (*Larrea tridentata*) and honey mesquite (*Prosopis [=Neltuma] glandulosa*) and can be difficult to observe in the wild

¹ Because of the confusing taxonomic history and current status regarding both scientific and common names of the *Coryphantha robustispina* complex, only the scientific name is used in this memo.

as it blends in with these and the other species with which it is associated (IAE 2023). It blooms for a single night once a year in late spring to early summer, producing large, white, scented flowers (Center for Plant Conservation [CPC] 2020, IAE 2023). Fruits are red, oblong, spiny, and contain flesh and many seeds (CPC 2020). This species has a known history of religious, medicinal, and ornamental uses (CPC 2020).

This species is listed as Endangered by the state of New Mexico and Sensitive by the New Mexico BLM. Though it is widespread throughout the two deserts it is found in, it occurs sparsely within areas of suitable habitat (IAE 2023). Threats to this species include collection and herbicide treatments (CPC 2020, IAE 2023).

2.2. NATURAL HISTORY AND DISTRIBUTION OF *CORYPHANTHA ROBUSTISPINA* SUBSP. *UNCINATA*

Coryphantha robustispina has a complicated taxonomic history with consensus in the botanical community still lacking, due in part to only minor morphological and genetic differences. The EMNRD recognizes three subspecies in the United States. *Coryphantha robustispina* subsp. *robustispina* is found only in Arizona and Mexico and is geographically isolated from the other two subspecies (Baker and Butterworth 2013). It is the only subspecies that is listed under the Endangered Species Act, as *Coryphantha scheeri* var. *robustispina* (Pima pineapple cactus). *C. r.* subsp. *scheeri* and *C. r.* subsp. *uncinata* are geographically isolated from each other in New Mexico but are geographically adjacent in northern Mexico. *C. r.* subsp. *scheeri* is classified Endangered by New Mexico EMNRD and is found in southeastern New Mexico and adjacent western Texas (Baker and Butterworth 2013, New Mexico Rare Plant Technical Council 1999). *C. r.* subsp. *uncinata* is not listed by New Mexico EMNRD but is a BLM Sensitive species found in southeastern Arizona, southwestern New Mexico, and northern Mexico (Baker and Butterworth 2013).

Cacti in *C. robustispina* are small, low-growing, and hemispherical shaped, that occur in low densities on flat plains, valley floors, hill slopes in Sonoran and Chihuahuan Desert semidesert grassland, open woodlands, oak-juniper savannas, *Larrea* and *Atriplex* associations, grassy (or formerly grassy) hills and valley floors with deep, sandy or silty soils in Arizona, New Mexico, Texas, and Mexico (Benson 1969, eFloras 1923, U.S. Fish and Wildlife [USFWS] 2018). Flowering for all three species is in spring or summer (April to September) with fruiting in fall to winter (eFloras 1923). Spine clusters at the ends of tubercles have approximately 10 radial spines with one to multiple central spines. The main central spine ranges from hooked in western populations, in young plants, to straight in eastern plants (Benson 1969, eFloras 1923); in *c. r.* subsp. *uncinata* it is often curved down and occasionally hooked (New Mexico Rare Plant Technical Council 1999).

3. SURVEY AREA DESCRIPTION

The Survey Area consists of nine drill pad locations and their associated access roads located in the eastern portion of Hidalgo County, New Mexico (**Figures 1 and 2**). The Survey Area includes private land, land managed by the State of New Mexico, and land managed by the BLM LCDO.

Vegetation in the Survey Area is mapped as Chihuahuan desertscrub (The Nature Conservancy 2012). This vegetation community is typically dominated by whitethorn acacia (*Vachellia constricta*), viscid acacia (*Vachellia vernicosa*), tarbush (*Flourensia cernua*), and creosotebush (*Larrea tridentata*). The Survey Area sits at the western base of the Peloncillo Mountains, at elevations between approximately 4,000 and 5,100 feet above mean sea level (amsl) in the Chihuahuan Desert and Madrean Archipelago Ecoregions (Griffith et al. 2006). Geology in the Survey Area is mapped as Piedmont alluvial deposits originating from the Holocene to lower Pleistocene, Lower Middle Tertiary and Tertiary-Cretaceous andesitic to dacitic lavas and pyroclastic flow breccias, which are volcanic in origin and originate from the Lower to Middle Tertiary andesitic to Upper to Middle Eocene, Upper Cretaceous sedimentary rocks which originated from the Maastrichtian to Cenomanian, and Mancos Shale and Beartooth and Sarten Formations which originated from Cenomanian and Albian (New Mexico Bureau of Geology and Mineral Resources 2026). Soils in the Survey Area consist of Eba very gravelly loam, 1 to 15 percent slopes and Lehman extremely rocky loam, 10% to 25% slopes (Soil Survey Staff 2026).

4. SURVEY METHODS

WestLand botanists, familiar with the two species and their habitats, conducted pedestrian belt transect surveys in the Survey Area following the guidelines outlined in *Roller's Pima Pineapple Cactus Three Tier Survey Methods* (Roller 1996) modified to a single-pass method. The survey included a 30-meter (98-foot) buffer around the nine proposed pads and their associated new roads and a 10-m (33-foot) buffer around existing roads. Surveyors walked transects at up to 6-meter parallel spacing per Roller (1996) guidelines which allowed thorough visibility of the ground. If an individual cactus was detected, surveyors would complete an extensive search of the immediate area for additional individuals. Surveyors would also collect covariates on identified individuals including locational data, collected with a high-resolution Bad-Elf GPS device; photographs of the habitat where the plant was observed; and close-up photographs of each plant. Surveys were completed between April 7-11, 2026.

5. RESULTS

Twenty-nine special-status cactus species were observed in the Survey Area, 22 night-blooming cereus and seven *C. r.* subsp. *uncinata*. All cactus locations are provided in Universal Transverse Mercator (UTM), North American Datum of 1983 (NAD 83) (**Table 1**).

Table 1. Special-status Cactus Locations (UTM NAD 83) in the Survey Area

Species	Easting	Northing
Night-Blooming Cereus	686929	3563774
	684998	3564297
	686959	3563830
	686946	3563839
	686954	3563829
	686939	3562756
	687043	3562650
	686627	3562255
	686739	3562197
	686501	3562390
	686701	3562616
	686835	3562781
	686907	3562698
	687332	3562659
	687289	3562678
	686894	3563099
	686827	3563591
	686827	3563593
	686953	3563833
	686945	3563761
	684916	3564295
	684949	3564274
<i>Coryphantha robustispina</i> subsp. <i>uncinata</i>	684731	3564249
	685873	3562613
	686809	3563592
	686953	3563729
	685181	3564317
	686938	3562575
	686511	3562312

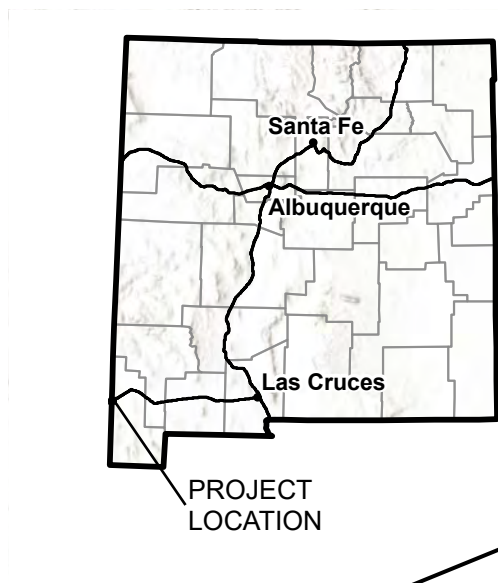
6. REFERENCES

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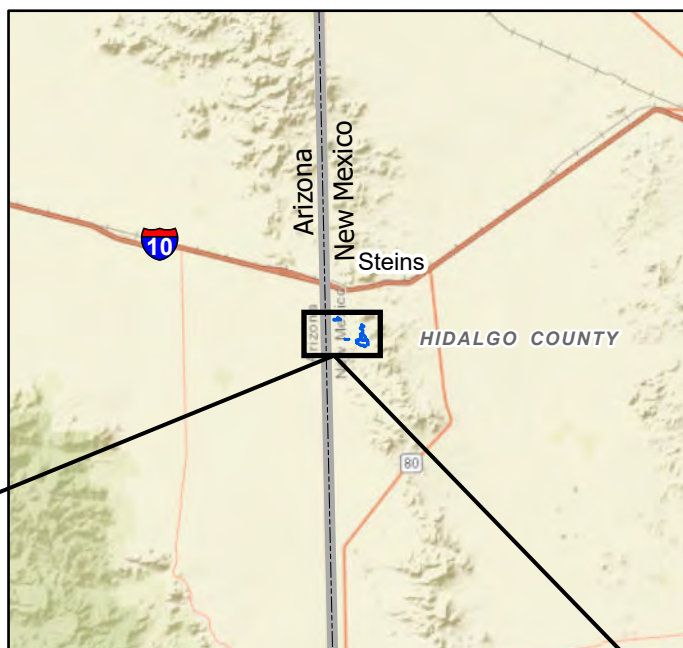
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FIGURES

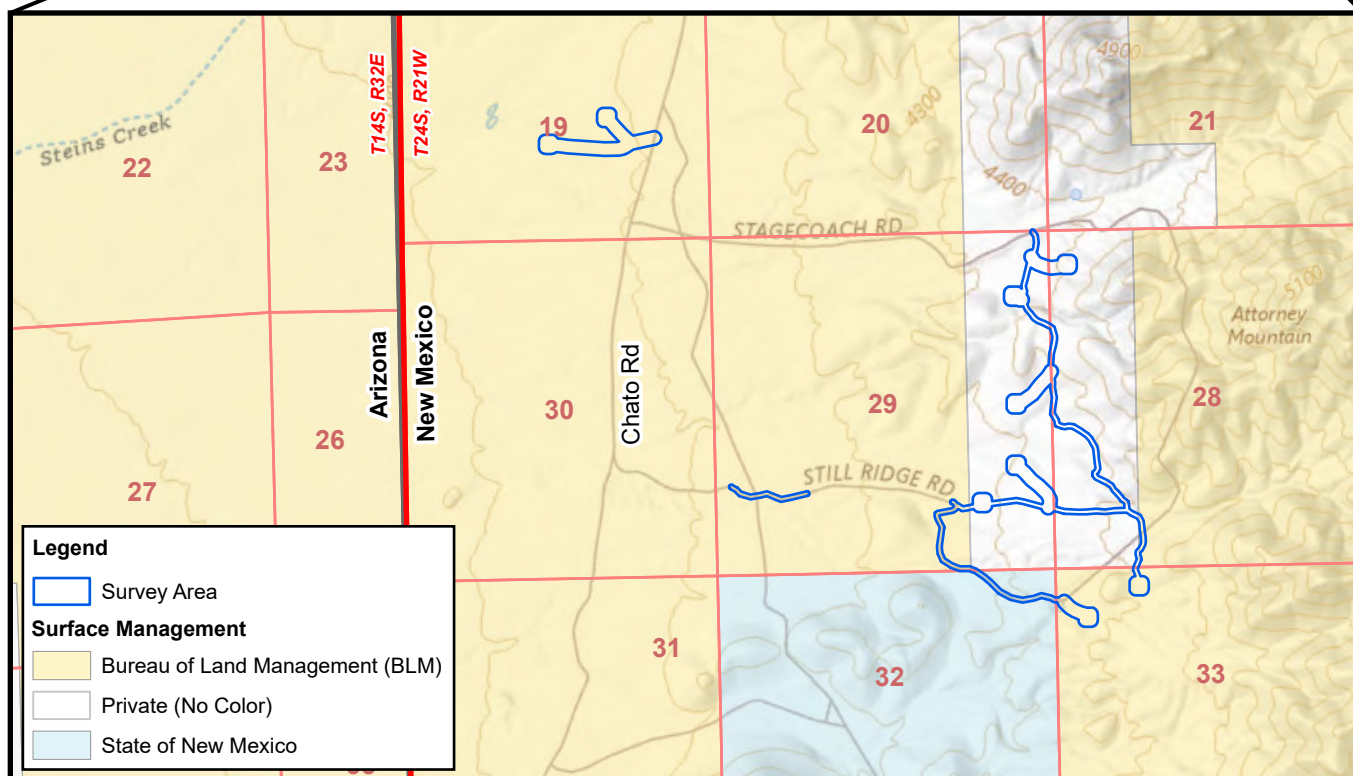
NEW MEXICO



PROJECT VICINITY



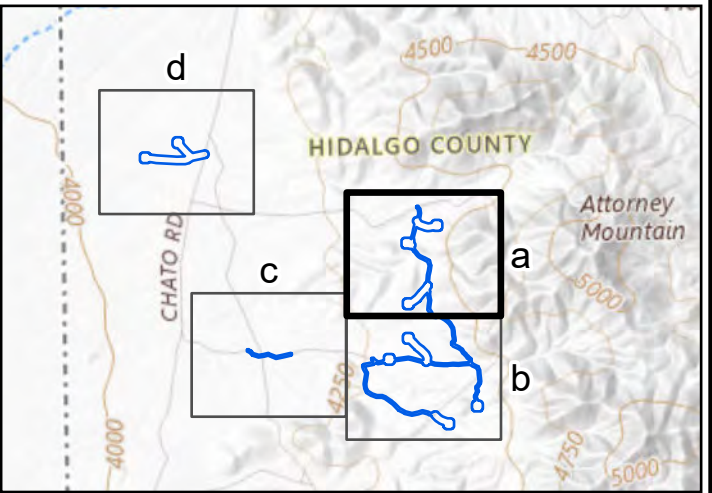
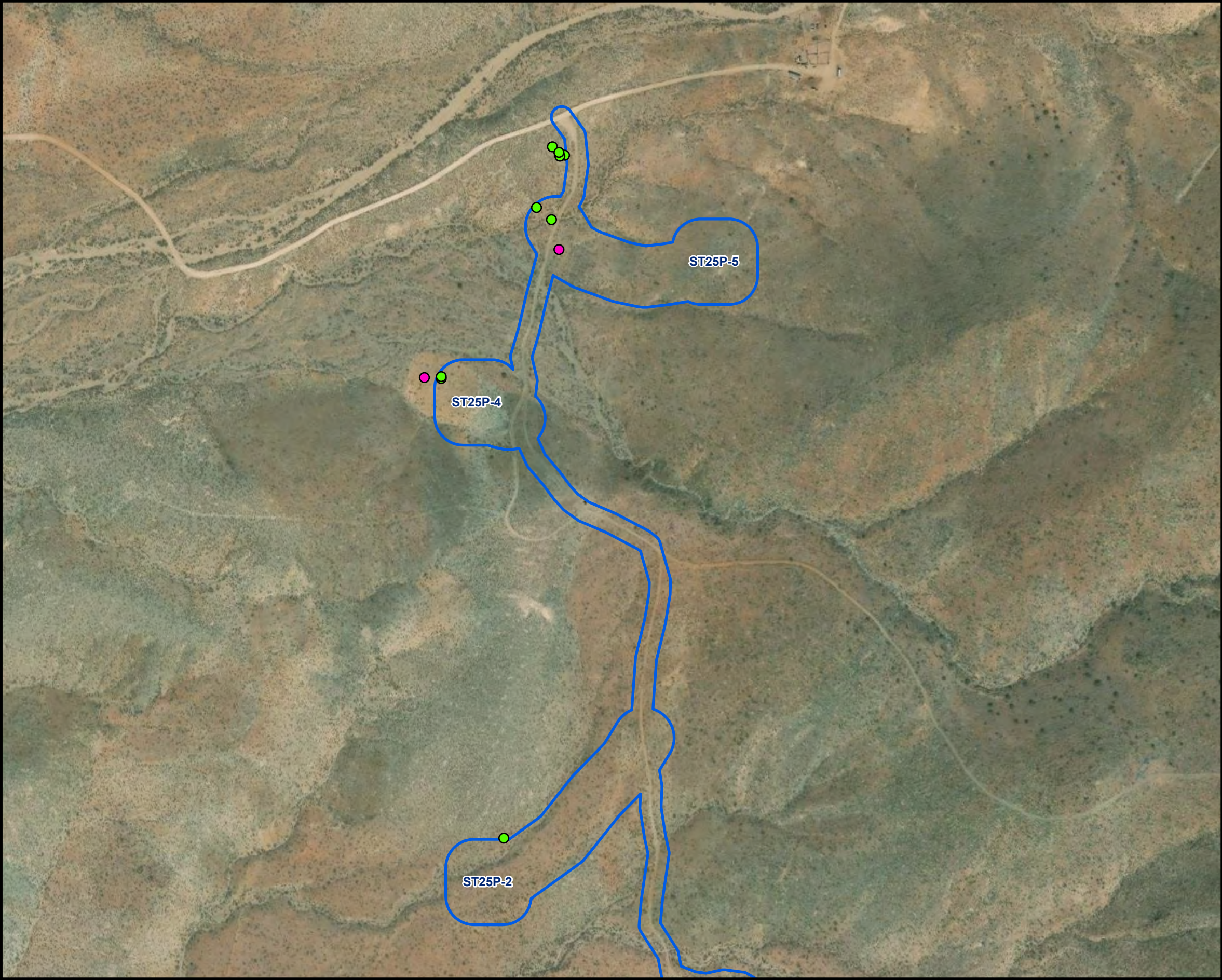
Approximate Scale 1 inch equals 10 miles



T24S, R21W, Portions of Sections 19, 20, 28, 29, 32, and 33,
Hidalgo County, New Mexico
Projection: NAD 1983 UTM Zone 12N
Surface Management: BLM ArcGIS service accessed 05/12/2026
Image Source: ArcGIS Online, World Street Map
and USGS TNM Topo Base Map

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Special-Status Plant Species Survey

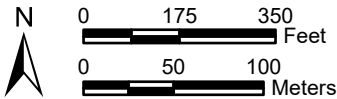
VICINITY MAP
Figure 1



T24S, R21W, Portions of Sections 20, 28, and 29,
Hidalgo County, New Mexico
Projection: NAD 1983 UTM Zone 12N
Image Source: Vivid 5/16/2025
and USGS TNM Topo Base Map

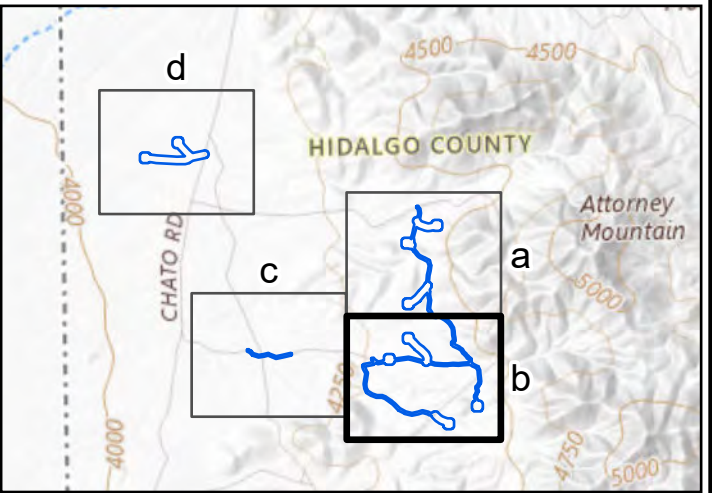
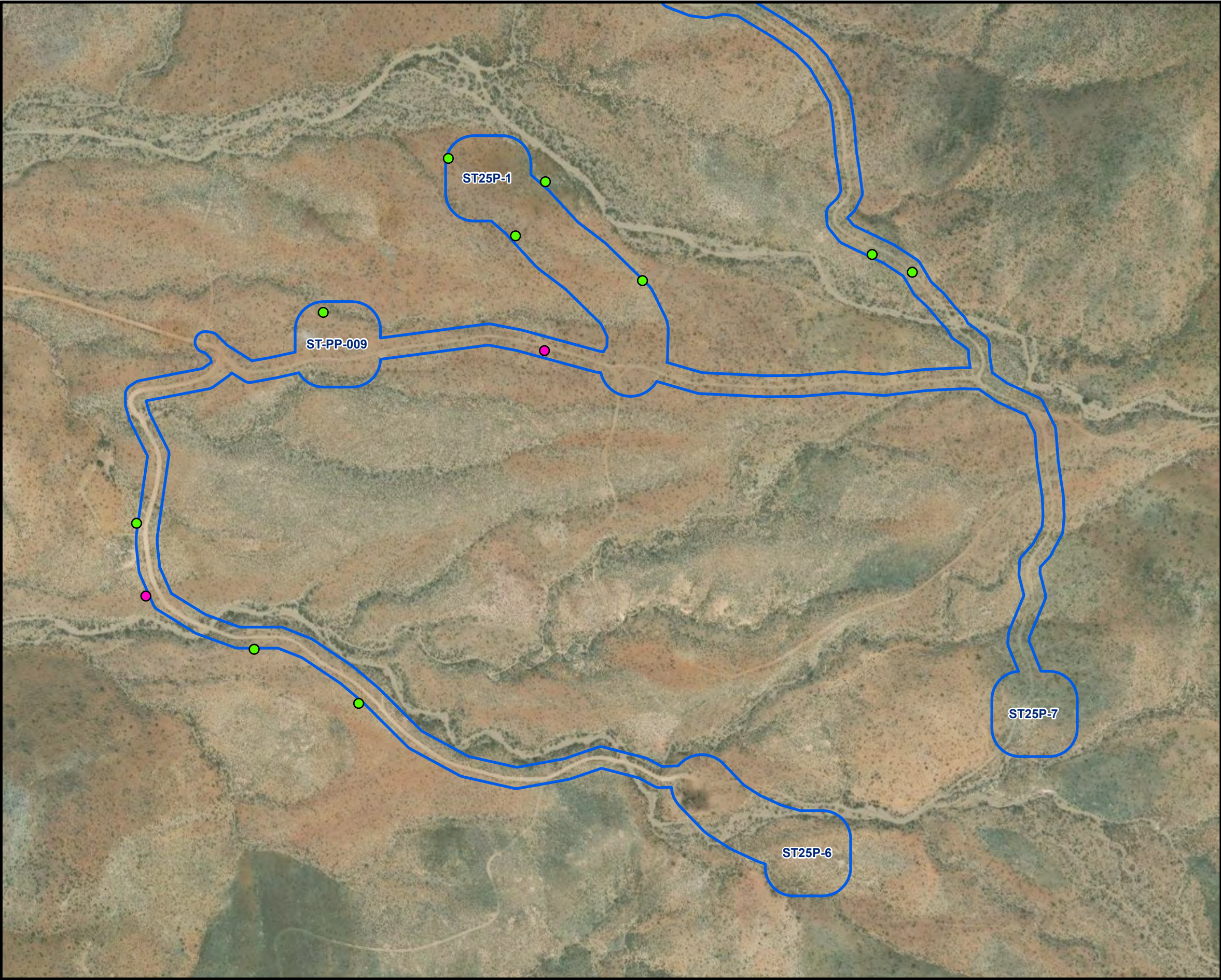
Legend

-  *Coryphantha robustispina*
subsp. *uncinata*
-  Night Blooming *Cereus*
-  Survey Area



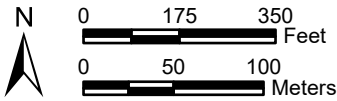
CURIOSITY EXPLORATION LLC
Steins Exploratory Drilling Project
Special-Status Plant Species Survey

AERIAL OVERVIEW
Figure 2a



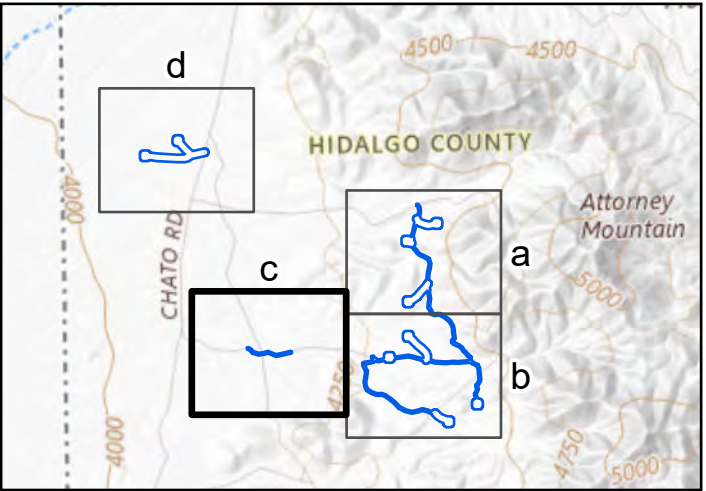
T24S, R21W, Portions of Sections 28, 29, 32, and 33,
Hidalgo County, New Mexico
Projection: NAD 1983 UTM Zone 12N
Image Source: Vivid 5/16/2025
and USGS TNM Topo Base Map

- Legend**
- Coryphantha robustispina* subsp. uncinata
 - Night Blooming Cereus
 - Survey Area



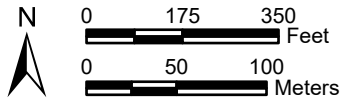
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AERIAL OVERVIEW
Figure 2b



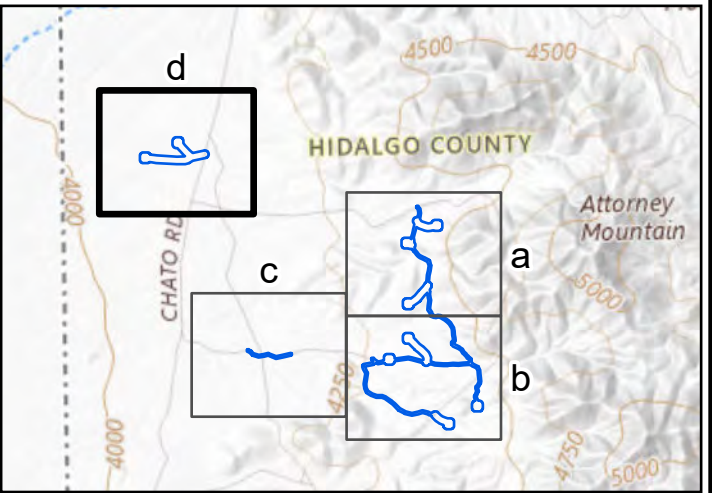
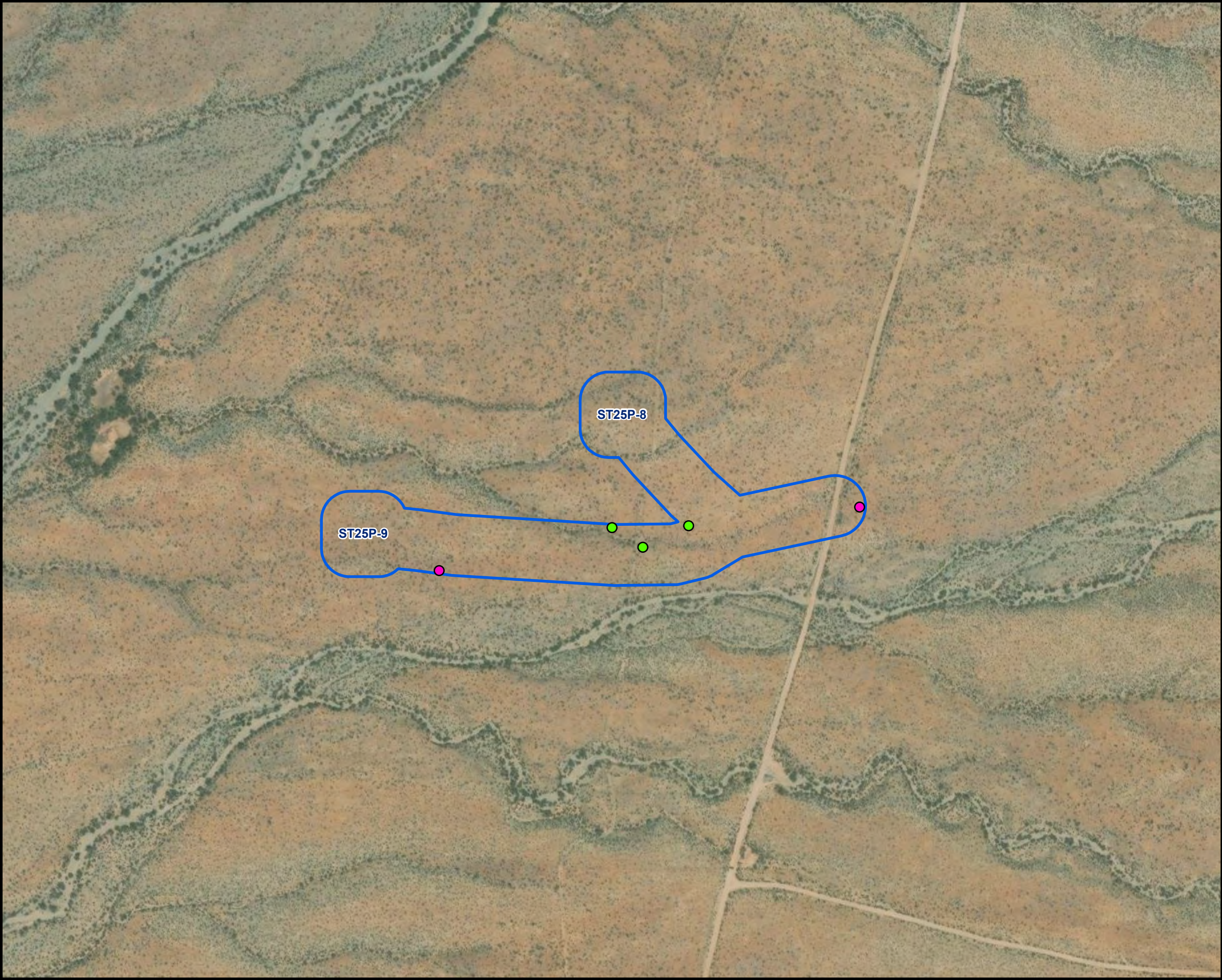
T24S, R21W, a Portion of Section 29,
Hidalgo County, New Mexico
Projection: NAD 1983 UTM Zone 12N
Image Source: Vivid 5/16/2025
and USGS TNM Topo Base Map

- Legend**
-  *Coryphantha robustispina*
subsp. *uncinata*
 -  Survey Area



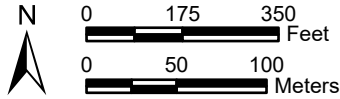
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AERIAL OVERVIEW
Figure 2c



T24S, R21W, a Portion of Section 19,
Hidalgo County, New Mexico
Projection: NAD 1983 UTM Zone 12N
Image Source: Vivid 5/16/2025
and USGS TNM Topo Base Map

- Legend**
- Coryphantha robustispina subsp. uncinata
 - Night Blooming Cereus
 - Survey Area



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AERIAL OVERVIEW
Figure 2d

APPENDIX A

Representative Photographs



Photo 1.

General Habitat in the vicinity of the Survey Area.



Photo 2.

General Habitat in the vicinity of the Survey Area.



Photo 3.

General Habitat in the vicinity of the Survey Area.



Photo 4.

General Habitat in the vicinity of the Survey Area.



Photo 5.

Night-blooming cereus
(*Peniocereus greggii* var.
greggii) in the Survey Area.



Photo 6.

Night-blooming cereus in the
Survey Area.



Photo 7.

Coryphantha robustispina
subsp. *uncinata* in the Survey
Area.



Photo 8.

Coryphantha robustispina
subsp. *scheeri* in the Survey
Area.