Phase I Environmental Site Assessment

Waldo Zinc Smelter

Cerrillos, Santa Fe County, New Mexico

Prepared for:

New Mexico Environment Department
Groundwater Quality Bureau
1190 S St Francis Dr
Santa Fe, NM 87505

Prepared by:

INTERA Incorporated
2440 Louisiana Blvd NE Suite 700
Albuquerque, NM 87110
505.246.1600

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Executive Summary

This report documents the methods, findings, opinions, and conclusions of a Phase I Environmental Site Assessment (ESA) performed by INTERA Incorporated (INTERA) for the Waldo Zinc Smelter, Road 57, Santa Fe County, New Mexico (Site/Subject Property) (**Figure 1**). The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) (User) is using Professional Services Contract #24-667-2030-27724, Work Order Number INTE08-ROS-21, to contract the performance of a due diligence assessment of the Subject Property. The Phase I ESA was conducted to document current and former conditions relative to historical operations at the Site.

INTERA performed this Phase I ESA following the procedures of Standard Practice E1527-21 of ASTM International (ASTM), entitled *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM, 2021). The objective of the Phase I ESA was (1) to identify, to the extent possible, any *recognized environmental conditions* (RECs) as defined by ASTM and (2) to collect reasonably ascertainable information about the environmental condition of the Subject Property. Additionally, based on reviews of Subject Property, adjoining properties, and vicinity properties' findings within the default *area of concern* (AOC) as defined by ASTM Standard E2600-22, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions* (ASTM, 2022), *vapor encroachment conditions* (VECs) were also assessed for the migration potential of hazardous substances and/or petroleum products within or near the Subject Property.

In 1916, Carl and Victorina Grubnau built a zinc roaster and a 5-story smelter between the existing railroad and Galisteo Creek in Waldo, New Mexico (i.e., the Subject Property). The Waldo zinc smelter had a daily processing capacity of 15 tons of zinc oxide, beginning operations in 1917 and closing in 1922 (NMED, 2007). Now abandoned, the ruins of the facility are approximately 2 miles northwest of Los Cerrillos, New Mexico, on the eastern bank of Galisteo Creek and north-northwest of where the New Mexico Rail Runner Express (NM Rail Runner) runs parallel to Waldo Canyon Road (CR 57). The immediate vicinity of the Subject Property is depicted in **Figure 2**.

The Phase I ESA included:

- a review of the Subject Property and adjoining properties' historical and current land use records,
- review of standard environmental regulatory agency records,
- a limited visual site reconnaissance, and
- interviews with individual(s) having knowledge of past and/or present uses of the Subject Property.

These activities were performed to assess sources of potential surface and subsurface contamination that may exist at the Subject Property and within ASTM-specified distances from the Subject Property. This information was integrated with the physical setting data and future occupancy or development plans for the Subject Property to form an opinion concerning whether properties found to be a potential source of contamination may, in fact, be a REC with regard to the Subject Property as defined by ASTM.

The Phase I ESA was performed by environmental professional(s) as defined in 40 Code of Federal Regulations (CFR) §312.10 and as identified in this report.

INTERA has performed a Phase I ESA in conformance with the scope and limitations of ASTM Standard E1527-21 for the Subject Property. Based on the completion of the scope of services provided in support of this Phase I ESA, one REC was identified in connection with the Subject Property, as follows:

- Known metals contamination above NMED Soil Screening Levels (SSLs) in Site soils, as described in the 2007 Preliminary Assessment of the Site, is considered a **REC** in connection with the Subject Property.

Based on the conclusions of this Phase I ESA, INTERA recommends the following:

- Perform a Phase II site investigation to assess the potential impacts to environmental media, specifically ground water, from the REC identified in connection with the Subject Property.

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Acronyms and Abbreviations

AAI	All Appropriate Inquiry
AMSD	approximate minimum search distance
AOC	Area of Concern
ASTM	ASTM International
AUL	Activity and Use Limitation
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	CERCLA Information System
CFR	Code of Federal Regulations
CLP	Contract Laboratory Program
COC	chemical of concern
CR 57	Waldo Canyon Road
EPA	United States Environmental Protection Agency
ERIS	Environmental Risk Information Services
ESA	Environmental Site Assessment
°F	degrees Fahrenheit
FIM	Fire Insurance Map
ft	foot/feet
GWQB	Ground Water Quality Bureau
INTERA	INTERA Incorporated
msl	mean sea level
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environment Department
NMOSE	New Mexico Office of the State Engineer
NOAA	National Oceanic and Atmospheric Administration
PCB	polychlorinated biphenyl
POD	Point of Diversion
REC	Recognized Environmental Condition
Site or Subject Property	Waldo Zinc Smelter, Santa Fe County, New Mexico
SFCA	Santa Fe County Assessor

User	New Mexico Environment Department Ground Water Quality Bureau
SOS	Superfund Oversight Section
SSL	soil screening level
USGS	United States Geological Survey
VEC	Vapor Encroachment Condition
VES	Vapor Encroachment Screening
XRF	X-ray fluorescence

1.0 Introduction

INTERA Incorporated (INTERA) under contract with the New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) (User), was tasked to perform a Phase I Environmental Site Assessment (ESA) of the former Waldo Zinc Smelter in Santa Fe County, New Mexico, approximately 285 acres of rural land, hereafter referred to as the Site or Subject Property (Santa Fe County Assessor [SFCA], 2025). The location of the Subject Property is illustrated in **Figure 1.**

The User retained INTERA, under Professional Services Contract #24-667-2030-27724, Work Order Number INTE08-ROS-21, to document current and historical conditions relative to historical operations at the Site.

1.1 Purpose

This Phase I ESA was performed (1) to identify, to the extent possible, any recognized environmental conditions (RECs), defined below in **Section 1.2**, and (2) to collect all reasonably ascertainable information about the environmental condition of the Subject Property. This was performed, consistent with good commercial and customary practice, to allow potential future redevelopment of the Subject Property and to qualify the User for statutory limitations of potential liability under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a.k.a. Superfund.

This Phase I ESA was performed to meet the assessment and all appropriate inquiries (AAIs) requirements of ASTM International (ASTM) Standard E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM, 2021). In 2005, the United States Environmental Protection Agency (EPA) issued *Standards and Practices for All Appropriate Inquiries, Final Rule* (EPA final rule; EPA, 2005), and in 2021 ASTM issued ASTM Standard E1527-21 (ASTM, 2021). Both the EPA final rule and the 2021 ASTM Standard E1527-21 implement the CERCLA as amended by the Small Business Liability Relief and Brownfields Revitalization Act of 2002. Under the EPA final rule, effective November 1, 2006, satisfaction of the CERCLA AAI requirement for liability protection as an innocent landowner, a bona fide prospective purchaser, or a contiguous landowner is met by an assessment conducted in accordance with ASTM Standard E1527-21.

1.2 Detailed Scope of Services

In general, the Phase I ESA scope of services included the following four components:

- Records review;
- Site reconnaissance;
- Interviews; and
- Report.

INTERA has completed a Phase I ESA for the Subject Property in accordance with ASTM Standard E1527-21, with the exception of any deviations listed in **Section 1.4** or data gaps listed in **Section 7.5**.

For the purposes of this Phase I ESA report, the definition of the term "*Recognized Environmental Condition*" is as outlined in Section 3.2.73 of ASTM Standard E1527-21:

> "(1) the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to *release or likely release* to the *environment*; (2) the likely presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* to the *environment*; or (3) the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* under conditions that pose a *material threat* of a future *release* to the *environment.*" (ASTM, 2021, p. 8)

For the purposes of this Phase I ESA report, the definition of the term "*Historical Recognized Environmental Condition*" is as outlined in Section 3.2.39 of ASTM Standard E1527-21:

> "A previous *release* of any *hazardous substances* or *petroleum products* affecting the *subject property* that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the *subject property* to any controls (for example, *activity and use limitations* or other *property use limitations*). A *historical recognized environmental condition* is not a *recognized environmental condition*." (ASTM, 2021, p. 6)

For the purposes of this Phase I ESA report, the definition of the term "*Controlled Recognized Environmental Condition*" is as outlined in Section 3.2.17 of ASTM Standard E1527-21:

> "*A recognized environmental condition* affecting the *subject property* that has been addressed to the satisfaction of the applicable regulatory authority or authorities with *hazardous substances* or *petroleum products* allowed to remain in place subject to the implementation of required controls (for example, activity and use limitations or other property use limitations)." (ASTM, 2021, p. 4)

An additional term related to this Phase I ESA report is "*de minimis condition*". It is defined by Section 3.2.20 of ASTM Standard E1527-21 as:

> "a condition related to a *release* that generally does not present a threat to human health or the *environment* and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a *de minimis condition* is not a *recognized environmental condition* nor a *controlled recognized environmental condition.*" (ASTM, 2021, pp. 4-5)

1.2.1 Vapor Encroachment Considerations

ASTM Standard E1527-21 requires the assessment of the migration potential of hazardous substances and/or petroleum products within or near the Subject Property.

The definition of the term "*migrate/migration*" is outlined in Section 3.2.53 of ASTM Standard E1527-21:

> "…the movement of *hazardous substances* or *petroleum products* in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." (ASTM, 2021, p. 7)

Vapor migration in the subsurface is described in ASTM Standard E2600-22, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions* (ASTM, 2022); however, ASTM Standard E1527-21 does not require its application to achieve compliance with AAI (ASTM, 2021, p. 7).

In order to assess potential migration of hazardous substances and/or petroleum products that may migrate as vapors into the vadose zone as a result of contaminated soil and/or groundwater on or near the Subject Property, INTERA has completed a Tier 1 Vapor Encroachment Screening (VES) in accordance with ASTM Standard E2600-22 for the Subject Property. The objective of the VES is to determine if a vapor encroachment condition (VEC) exists at the Subject Property. For the purposes of this Phase I ESA report, the definition of the term "*Vapor Encroachment Condition*" is as outlined in Section 3.2.37 of ASTM Standard E2600-22:

> "[The] presence or likely presence of [chemical of concern (COC)] vapors in the vadose zone of the [Subject Property] caused by the release of vapors from contaminated soil and/or groundwater either on or near the [Subject Property]…" (ASTM, 2022, p. 4)

The results of the Tier 1 VES are presented in **Section 7.4.**

1.2.2 Non-Scope Environmental Considerations

Non-scope environmental considerations such as those identified in Section 13.1.5 of ASTM E1527-21 were not evaluated as part of this ESA. Non-scope considerations may include, but are not limited to: presence of potential asbestos-containing building materials unrelated to releases into the environment; biological agents; cultural and historic resources, ecological resources; endangered species; health and safety; indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment; industrial hygiene; lead-based paint unrelated to releases into the environment; presence of potential lead in drinking water; mold or microbial growth conditions; polychlorinated biphenyl (PCB)-containing building materials; naturally-occurring radon; regulatory compliance; substances not defined as hazardous substances (including some substances sometimes generally referred to as emerging contaminants) unless or until such substances are classified as a CERCLA hazardous substance; and wetlands (ASTM, 2021, p. 25).

1.3 Significant Assumptions

Significant assumptions pertaining to this Phase I ESA are briefly summarized as follows:

- Environmental database information (and facility locations) generated by Environmental Risk Information Services (ERIS) is accurate and complete,
- The User has provided INTERA with all the information in its possession that would help determine the presence of RECs,
- Interview information provided to INTERA by various parties and individuals is accurate and was provided without bias, and
- Publicly available reasonably ascertainable information accessed by INTERA is accurate and complete.

The significant assumptions underlying the preparation of any Phase I ESA are specified in the principles set forth by ASTM Standard E1527-21. The principles are presented in their entirety in Section 4.5 of ASTM Standard E1527-21 (ASTM, 2021, p. 10).

1.4 Limitations and Exceptions

Any Phase I ESA is by nature limited and qualitative in scope, being based predominantly on the examination of selected maps, agency records, interviews, and visual and/or physical observations made during the site reconnaissance. As such, this Phase I ESA should not be construed to be a complete characterization of environmental regulatory compliance of conditions above or below ground surface (bgs) at the Subject Property. Instead, the ESA process is designed to provide information regarding apparent existing or potential adverse environmental conditions related to the Subject Property in accordance with good commercial and customary practice. Any significant data gaps that would further limit the scope of the Phase I ESA are identified in **Section 7.5**.

This Phase I ESA is limited to the reasonably ascertainable information available or known to INTERA as of the date of this report. Consistent with ASTM Standard E1527-21, no intrusive testing or sampling of concealed or subsurface conditions was performed at the Subject Property as part of this Phase I ESA. The findings, opinions, and conclusions contained in this report are limited to those that could be identified during the Phase I ESA performed in accordance with ASTM Standard E1527-21. INTERA has accepted as true the information provided by interviewees on current and historical uses of the Subject Property and surrounding area. INTERA does not warrant or guarantee the accuracy or completeness of information provided by other sources.

INTERA represents that the Phase I ESA was performed in a competent manner by environmental professionals, consistent with the practices and procedures contemplated under ASTM E1527-21. However, even with proper application of the ASTM methodology, environmental conditions may be present that cannot be identified within the scope of the Phase I ESA or that may not be reasonably identifiable from the available information. As such, no warranty is expressed or implied as to the findings, conclusions, and/or recommendations presented in this Phase I ESA Report beyond matters amenable to empirical review and visual confirmation within the limits under ASTM E1527-21 and/or the specified scope of work.

1.5 Special Terms and Conditions

Since a property transaction was not part of the rationale for conducting the Phase I ESA, some of the discussion related to purpose, liability protection, and User reliance herein may not be relevant. This language is included for consistency and transparency of describing the intention of the Phase I ESA to meet the ASTM Standard.

1.6 User Reliance

This Phase I ESA has been prepared for the use of the User. There are no third-party rights or benefits conferred under this report. Use of or reliance on this Phase I ESA report by any third party is at the sole risk of that party.

This Phase I ESA is valid for 180 days prior to acquisition of the Site and/or transactions not involving acquisition of the Site. In accordance with the ASTM Standard, if the Phase I ESA is to be used by a different user other than the intended user within the 180 days, then the new user must satisfy the requirements in Section 6 of ASTM E1527-21. The Phase I ESA can be valid for longer if the Phase I ESA has been updated within one year of the date of acquisition or intended transaction, provided that the following components have been completed within 180 days of the acquisition or transaction: interviews; searches for recorded environmental cleanup liens; review of federal, tribal, state, and local government records; visual inspection of the property and of adjoining properties; and the declaration by the environmental professional responsible for the assessment or update (ASTM, 2021, p. 11).

2.0 Site Description

As required by ASTM Standard E1527-21, INTERA gathered information concerning the location, characteristics, current land uses, and physical improvements of the Subject Property, adjoining properties, and vicinity properties. Sources for this information were United States Geological Survey (USGS) 7.5-minute historical topographic maps, geologic and hydrologic publications, aerial photographs, observations made during the site reconnaissance, interviews, and consulting other publicly available information.

In 1916, Carl and Victorina Grubnau built a zinc roaster and a 5-story smelter between the existing railroad and Galisteo Creek in Waldo, New Mexico (i.e., the Subject Property). The Waldo zinc smelter had a daily processing capacity of 15 tons of zinc oxide, beginning operations in 1917 and closing in 1922 (NMED, 2007). Now abandoned, the ruins of the facility are approximately 2 miles northwest of Los Cerrillos, New Mexico, on the eastern bank of Galisteo Creek and north-northwest of where the New Mexico Rail Runner Express (NM Rail Runner) runs parallel to Waldo Canyon Road (CR 57). The Site location is depicted in **Figure 1.** Adjoining properties are described in **Section 2.4.** The Site and immediate vicinity thereof are depicted in **Figure 2.**

2.1 Location and Legal Description

The ruins of the Waldo zinc smelter and the surrounding area are owned by the New Mexico Department of Transportation (NMDOT), obtained as part of their purchase of the NM Rail Runner from BNSF Railway in 2007 (**Section 6.1**). The former Waldo zinc smelter was also formerly located within three Santa Fe County land parcels according to the SFCA website. General real estate property tax information on the three parcels was gathered from the SFCA website, summarized below in **Table 1** (SFCA, 2026).

Table 1. Summary of Subject Property Tax Parcel(s) Information

Address	Parcel 1: 339 Rogersville Rd, Cerrillos, NM 87010 Parcel 2: 0 Cerrillos, Cerrillos, NM 87010 Parcel 3: Unassigned, Santa Fe, NM 87508
Owner Name	1: Rancho Gaucho LLC 2: Messer, Gregory Scott & Caroline 3: Cummings, Ernest & Barbara

Parcel No.	1: 910011138 2: 970003042 3: 99306456
Legal Description	1: T14N R7E S14, TRACT 2-4, 231.00 AC~ 2: T14N R 7E S12 53.796 AC LIVESTOCK ON 970001890 TRACT A 3: S34 T15N R7E
Size (acres)	1: 231 2: 53.796 3: 9,390.33
Deed Date	1: 12-9-2022 2: 3-2-2007 3: Unknown
Instrument	1: 2002855 2: 1473096 3: MB313/P316 (plat book/page)

An Environmental Lien and Activity and Use Limitation (AUL) search was performed for the Subject Property parcel for the current owner. No environmental liens or AULs were identified for the Subject Property in the Lien Search Report (ERIS, 2025a – **Appendix A**).

2.2 Site Vicinity and General Characteristics

ASTM Standard E1527-21 specifies that the only standard physical setting source that must be checked during the Phase I ESA is the current USGS 7.5-minute topographic map (or equivalent) (USGS, 2022). Other physical setting sources used for this Phase I ESA were historical topographic maps (ERIS, 2025b – **Appendix B**) and historical aerial photographs (ERIS, 2025c – **Appendix C**), discussed in **Section 4.**

2.3 Physical Setting

Several sources were reviewed to determine the physical setting of the Subject Property. Information from published physical settings maps (ERIS, 2024d – **Appendix D**) are discussed in the following subsections.

2.3.1 Topography and Watershed

The most recent (2022) USGS 7.5-minute topographic map of the site area was obtained and reviewed as specified in ASTM Standard E1527-21 Section 8.2.1 (ASTM, 2021). The USGS Madrid, NM quadrangle provides coverage of the Subject Property and vicinity (USGS, 2023). Historical topographic maps were reviewed for surface topography and drainage information in the vicinity of the Subject Property, and are provided in **Appendix B.**

The site is in the Cerillos Area, located southwest of the City of Santa Fe, in the Galisteo Basin of the Rio Grande trough, a lowland area along the Galisteo Creek underlain by Mesozoic and Tertiary sandstones and shales. The Galisteo Basin, approximately 5,600 feet (ft) mean sea level (msl) at the site, is southwest of the Cerrillos Hills that rise to approximately 7,000 ft msl, and north of the Ortiz Mountains at approximately 9,000 ft msl (Wilson, 1976).

Galisteo Creek is an ephemeral stream that drains to the Rio Grande and is the primary surface water within the Galisteo Basin. The site is located within the central portion of the watershed in the Galisteo Basin, which is characterized by complex hydrogeology due to significant tilting, faulting, and fracturing, with a variety of igneous and sedimentary rock types (EMNRD, 2008).

According to the topographic maps, the Subject Property includes varied terrain, with a surface elevation of approximately 5,600 ft msl. The topography at the Site generally slopes to the southwest, towards Galisteo Creek. Galisteo Creek continues to the southwest and eventually joins the Rio Grande approximately 13.5 miles downstream. The site topography was confirmed during the site reconnaissance (**Section 5**). Surface drainage at the Subject Property follows the surface topography (**Figure 1**).

2.3.2 Average Precipitation and Temperature

The average annual precipitation in Santa Fe, New Mexico is approximately 13.69 inches per year. Most of the precipitation historically occurs in July. The greatest average temperature historically is in July, at 72.2 degrees Fahrenheit (°F); the lowest average temperature historically is in January, at 31.6 °F (National Oceanic and Atmospheric Administration [NOAA], 2026).

2.3.3 Flood Plain

The Subject Property is within the 100-year floodplain, in Special Flood Hazard Area Zone A, denoting a lack of detailed data (ERIS, 2025d – **Appendix D**).

2.3.4 Soil Characterization

The soil map provided by ERIS was reviewed to identify local surface soils underlying the Site. Soils at the Subject Property are composed of three main soil units, which are described here from north to south. Complete maps of soil units in and around the Subject Property can be found in **Appendix D** (ERIS, 2025d).

- The north portion of the site, adjacent to the NM Rail Runner, is composed of the Arents-Urban land-Orthents complex, 1–60% slopes, a well-drained soil. Arents makes up approximately 50% and consists of road fill material derived from granite, gneiss, schist, sandstone, or siltstone. Urban land is a miscellaneous categorization for highly developed areas. Orthents makes up approximately 20% and is derived from material similar to Argents.
- The intermediate portion of the site where the former facility was located is composed of the Oelop-Charalito complex, 1–3% slopes, a well-drained soil. Oelop makes up approximately 70% and is found on stream terraces and basins. Charalito makes up approximately 20% and is found on floodplain steps on valley floors. Both components consist of alluvium derived from sandstone and shale.
- The south portion of the site along Galisteo Creek is composed of the Jaralosa-Chupe-Riverwash complex, 0–1% slopes, a moderately well-drained soil. The Jaralosa makes up approximately 45% and is found on point bars on valley floors and basins. The Jaralosa is alluvium derived from sandstone and shale over alluvium derived from granite, gneiss, schist, or monzonite. Chupe makes up approximately 30%, found on flood plains and valley floors, and is alluvium derived from sandstone, granite, gneiss, and schist.

2.3.5 Geology and Hydrogeology

The Subject Property is located near the Cerrillos Hills area between Santa Fe to the north and the Ortiz Mountains to the south. The immediate area around the Site features varied geology including Cretaceous sedimentary rocks, Oligocene volcanic intrusives, and Quaternary alluvial deposits. The geologic map provided by ERIS was reviewed to determine the general geologic setting at the Subject Property (ERIS 2025d – **Appendix D**). The geologic maps show that the majority of the Site, including the southern, higher-elevation portion of the Subject Property, is underlain by the Cretaceous Mesa Verde Group (Kmv). There are also other Cretaceous-age sedimentary units such as the Mancos Shale (Km) to the west and north. Some of the bluffs on the Subject Property are capped with Galisteo Creek terrace deposits of Quaternary age (Qts) and younger Quaternary valley alluvium (Qva) deposits in the bed of the modern-day Galisteo Creek running along the northeast boundary of the Subject Property. The Cerrillos Hills north of the Subject Property are made up of intermediate to felsic Oligocene volcanic intrusives (Ti) (Koning and Read, 2010).

The primary source of groundwater in the area of the Subject Property is the series of aquifers within the Alluvial deposits of Galisteo Creek, which is primarily unconsolidated silts, sands, and gravels. There are also minor aquifers in the fractured volcanic rocks and Cretaceous sedimentary rocks in the region. Groundwater in the area generally flows down from highland areas toward Galisteo Creek and then downgradient toward the Rio Grande (i.e., west). In the areas adjacent to Galisteo Creek, the valley alluvium composed of unconsolidated weathered material from the highlands may be as thick as 100 ft and produce well yields of up to 110 gallons per minute. Groundwater supply and production from wells in the alluvium are highly dependent on surface water volume and infiltration rates relative to the deposition and composition of the sediments (EMNRD, 2008). ERIS reports a total of 26 water wells within a one-mile radius of the Subject Property. There are no wells reported on the Subject Property itself. Sources queried included:

- Public Water Systems Violations and Enforcement Data,
- Safe Drinking Water Information System,
- USGS National Water Information System, and
- New Mexico Office of the State Engineer (NMOSE) Point of Diversion (POD) Database.

Of the wells listed within one mile of the Subject Property, depth to water varies greatly, from 22–235 ft bgs, tapping different water-bearing units (ERIS, 2025d).

2.4 Descriptions and Current Uses of Adjoining Properties

The Subject Property is bound by the following:

- To the north by the NM Rail Runner and CR 57, and SFCA parcel number 99306456, approximately 9,390 acres of mostly undeveloped rural land.
- To the southwest by SFCA parcel number 910011138, approximately 231 acres of undeveloped rural land.
- To the south and southeast by SFCA parcel number 970003042, 53 acres of undeveloped rural land.

The Site and immediate vicinity thereof are depicted in **Figure 2.**

3.0 User-Provided Information

During project initiation, the User provided a summary of their knowledge of the Subject Property and provided additional documentation, summarized below.

The NMED Superfund Oversight Section (SOS) completed a Pre–CERCLA Information System (CERCLIS) screening in 2003, the results of which recommended additional investigation including a sampling assessment. In 2004, the NMED SOS conducted sampling to investigate and characterize releases of hazardous substances from the site as a result of its operational history relative to the risk to human health and the environment. The NMED collected soil and surface water samples in 2004. Surface soils were analyzed using a field portable X-ray fluorescence (XRF) analyzer to estimate concentrations of heavy metals and also submitted confirmatory samples to a United States Environmental Protection Agency (U.S. EPA) Contract Laboratory Program (CLP) laboratory. The NMED SOS screened 13 grab surface soil samples with the XRF including two sediment samples and submitted two confirmatory surface soil samples to the EPA CLP laboratory plus a duplicate sample. Soil screening (i.e., XRF) samples and EPA CLP laboratory analyzed samples indicated concentrations of antimony, arsenic, cadmium, chromium, cobalt, iron, lead, manganese, mercury, and zinc above June 2022 NMED soil screening levels (SSLs) (NMED, 2007). The 2004 soil assessment activities were documented in the 2007 Preliminary Assessment Report prepared by NMED SOS, included as **Appendix E.**

Eight surface water samples were collected from Galisteo Creek, all analyzed by the EPA CLP laboratory. An additional surface water sample was collected by NMED in 2006 following citizen concerns about impacts from flooding in the area. Surface water samples did not exceed regulatory benchmarks (NMED, 2007) (**Appendix E**).

In 2005, the Army Corps of Engineers conducted a sediment characterization study at the Galisteo Reservoir (below the Galisteo Dam) approximately 3 miles downstream of the site. The study was unrelated to the Pre-CERCLIS determination, but included composite sampling of the drainage basin downstream of the site, with analysis of 22 metals analytes. The results of the composite sampling program indicated that metals concentrations in the Galisteo Reservoir were significantly lower than the soil screening criteria for commercial/industrial workers and that reservoir sediments were of low risk to human health and the aquatic environment (NMED, 2007) (**Appendix E**).

Groundwater has not been assessed at the site. There is an onsite well that was dry during previous NMED investigations (NMED, 2007).

Additionally, it is INTERA's understanding that the User has no additional knowledge of the Subject Property including those topics outlined in Section 6 of ASTM Standard E1527-21 as the User's responsibilities, summarized as follows:

- The User has no knowledge of any environmental liens or AULs for the Subject Property. However, INTERA has performed a review of land title records and performed a search for environmental liens and AULs on behalf of the User (**Section 4.1.1**).
- The User had no specialized knowledge or experience related to the Subject Property beyond what is summarized in this section.

- Since a property transaction is not part of the rationale for this Phase I ESA, INTERA did not inquire about the purchase price or fair market value of the Subject Property.
- The User was unaware of any commonly known or reasonably ascertainable information other than what is summarized in this section.
- The User was unaware of any obvious indicators of the presence or likely presence of releases at the Subject Property other than what is summarized in this section.

Supplemental information relative to the User's responsibilities as defined in Section 6 of ASTM Standard E1521-21 is provided in **Appendix E**.

4.0 Records Review

In accordance with ASTM requirements, INTERA reviewed historical topographic maps and aerial imagery, and standard federal, state, local, and tribal environmental regulatory agency documents. A discussion of records reviewed is provided in the following subsections.

4.1 Historical Use of the Site and Adjoining Properties

INTERA contracted ERIS to search for and provide historical topographic maps, historical aerial photographs, historical city directories, and historical fire insurance maps (FIMs) for the Subject Property and surrounding properties. ERIS also provided environmental lien and AUL search services. INTERA reviewed the historical sources of information to investigate the history of development and prior land uses associated with the Subject Property, adjoining properties, and surrounding area, and to identify past land uses that may indicate that hazardous substances or petroleum products were used. A summary of the historical records reviewed is provided below.

4.1.1 Chain of Title and Environmental Lien Search

INTERA contracted ERIS to perform historical chain of title and environmental lien and AUL search for the Subject Property. ERIS searched county, state, and federal records associated with the Subject Property parcel identifier (970001890) back to 1932 for the chain of title and back to 1980 for the lien and AUL search.

The Chain of Title Report identified 10 deed conveyances, with the earliest recorded being in 1930. The conveyance details indicate ownership by the Cherokee & Pittsburg Coal & Mining Company and/or the Cerrillos Coal & Iron Company between 1930 and 1947. The conveyance details did not otherwise indicate any new information related to the use or activities at the Subject Property, mining or smelting operations. No environmental liens and/or AULs were found (ERIS, 2025a). A copy of the combined Chain of Title Report and Environmental Lien Report is included in **Appendix A**.

4.1.2 Historical Topographic Maps

INTERA reviewed historical topographic maps provided by ERIS dated 1961, 1990, 2013, 2017, 2020, and 2023 (ERIS, 2025b), which are provided in **Appendix B**. A brief description of the Subject Property and the surrounding area derived from the review of historical and recent topographic maps is provided below.

- 1961:
  - The Subject Property and surrounding area are undeveloped. There is a railroad track running northwest-southeast along the north border of the Subject Property. There is a road parallel to the tracks to the north. “Waldo” is indicated southeast of the Subject Property adjacent a train depot.
- 1990:

  - The Subject Property appears undeveloped. The NW-SE railroad is still on the map, and the south-running tracks now appear to be out of use and are marked “old railroad grade.”
- 2013:
  - The Subject Property and vicinity appear relatively unchanged from the previous map. Some roads appear to the southwest, including Rogersville Road.
- 2017:
  - The Subject Property and vicinity appear relatively unchanged from the previous map. The road along the railroad tracks is labeled “Waldo Canyon Road” on this map.
- 2020:
  - The Subject Property and vicinity appear relatively unchanged from the previous map.
- 2023:
  - The Subject Property and vicinity appear relatively unchanged from the previous map.

4.1.3 Historical Aerial Photographs

INTERA reviewed historical aerial photographs provided by ERIS dated 1935, 1954, 1958, 1973, 1981, 1985, 1990, 1996, 2005, 2009, 2011, 2014, 2016, 2018, 2020, and 2022 (ERIS, 2025c – **Appendix C**). A brief description of each historical aerial photograph reviewed is provided below**.**

- 1935: Image Resolution – Poor
  - The structures associated with the onsite facility appear to be intact as shadows are visible in the areas known to have been process areas. The surrounding area is generally undeveloped. Train tracks and an unimproved road are visible running along the north boundary of the Subject Property. The Waldo train depot is observed to the southeast, with a set of tracks branching off to the south over a bridge across Galisteo Creek.
- 1954: Image Resolution – Good
  - The foundations of the former onsite facility are observed. Buildings appear to have been raised. Galisteo Creek meanders immediately adjacent to the facility.
- 1958: Image Resolution – Good
  - The flow pathway of Galisteo Creek near the Site has shifted to the southwest. The cut bank can still be observed immediately adjacent the facility.
- 1973: Image Resolution – Good
  - The Subject Property and vicinity appear relatively unchanged since the previous image.
- 1981: Image Resolution – Fair
  - The Subject Property and vicinity appear relatively unchanged since the previous image.
- 1985: Image Resolution – Poor
  - The Subject Property and vicinity appear relatively unchanged since the previous image.

- 1990: Image Resolution – Good
  - The path of Galisteo Creek appears to be stabilizing with significantly more vegetation along the banks southwest of the Subject Property. The vicinity appears relatively unchanged since the previous image.
- 1996: Image Resolution – Fair
  - The Subject Property and vicinity appear relatively unchanged since the previous image.
- 2005: Image Resolution – Good
  - The Subject Property and vicinity appear relatively unchanged since the previous image. Vegetation along the banks of the creek continues to increase.
- 2009: Image Resolution – Good
  - The Subject Property and vicinity appear relatively unchanged since the previous image.
- 2011: Image Resolution – Good
  - The Subject Property and vicinity appear relatively unchanged since the previous image.
- 2014: Image Resolution – Good
  - The Subject Property and vicinity appear relatively unchanged since the previous image.
- 2016: Image Resolution – Good
  - The Subject Property and vicinity appear relatively unchanged since the previous image.
- 2018: Image Resolution – Excellent
  - The Subject Property and vicinity appear relatively unchanged since the previous image.
- 2020: Image Resolution –Excellent
  - The Subject Property and vicinity appear relatively unchanged since the previous image.
- 2022: Image Resolution – Excellent
  - The Subject Property and vicinity appear relatively unchanged since the previous image.

4.1.4 Fire Insurance Maps

Historical FIMs can be used to identify historical uses of a property including the presence of hazardous substances and petroleum products. However, no information was found for the Subject Property or adjacent properties (ERIS, 2025e – **Appendix F**).

4.1.5 Historical City Directories

Historical city directories provide a method for researching historical uses of property. INTERA reviewed historical city directories obtained from ERIS to determine current and historical uses of the Subject Property and adjoining properties (ERIS, 2025f – **Appendix G**). ERIS provided historical City Directory Reports for all of Highway 57 and of SSB Trail. ERIS provided results for the years 1998, 2000, 2003, 2008, 2012, 2016, 2020, and 2024. No listings were identified.

4.2 Environmental Database Records Review

ERIS was contracted to provide a listing of standard environmental records within the ASTM-specified approximate minimum search distance (AMSD) from the Subject Property. ERIS also provides results from non-standard databases that may be relevant with respect to the objective of a Phase I ESA (i.e., without a specified AMSD). ERIS provided search results from 104 unique federal, state, and tribal databases using the ASTM-specified AMSD or otherwise relevant search distance for each database. For this Site, no database listings (plottable mapped locations) were found within one mile of the Subject Property. However, the Waldo Zinc Smelter (i.e., the Subject Property) was identified in the unplottable results of the database report due to the EPA's preliminary investigation into the facility in order to assess a Hazard Ranking System score for potential listing on the National Priorities List. The database information indicates that several vats and building foundations remain at the Site, but no standing structures. The database information also indicates that it was determined that the Site was not eligible for listing on the National Priorities List. The ASTM-compliant regulatory database report is included as **Appendix H.**

4.3 Regulatory Agency and Supplemental Records Review

If the Subject Property or a property adjoining the Subject Property is identified in a review of standard ASTM environmental records resources, supplemental records review must be conducted (Section 8.2.3.1 of ASTM E1527-21). INTERA reviewed supplemental information provided by the User (**Section 3**), which is included in **Appendix E**. No other supplemental information was obtained; therefore, **Appendix I** is "reserved."

5.0 Site Reconnaissance

In general, the following was observed during the site reconnaissance to obtain information for the evaluation of RECs in connection with the Subject Property:

- The Subject Property.
- Adjoining properties from the Subject Property boundary and/or the public right-of-way.
- General topography and surface drainage in the vicinity of the Subject Property.

INTERA personnel conducted the site reconnaissance on April 1, 2026. It should be noted that access to the Site was not provided by the property owner (NMDOT), so observations from Site reconnaissance are from the public right-of-way on CR 57, a significant distance from the former site operations. Photographic documentation of the site visit is included in **Appendix J.** Findings documented during the site reconnaissance are summarized in **Section 7** of this report.

Conditions observed are presented below; a check mark in any box indicates that INTERA observed evidence of the item during the Site reconnaissance.

☐ Hazardous substances and/ or petroleum products	☐ Unidentified substance containers	☐ Stressed vegetation
☐ Storage tanks	☐ PCBs	☐ Solid waste
☐ Odors	☐ Drains and Sumps	☐ Utilities/Pipelines
☐ Pools of liquid	☐ Pits, ponds, or lagoons	☐ Wastewater
☐ Drums/Containers	☐ Stained soil or pavement	☐ Wells
☐ Hazardous substance and/or petroleum product containers	☐ Stains or Corrosion	☐ Septic systems

Relevant discussion of the conditions observed, including but not limited to the items identified above, is discussed in the following subsections.

5.1 Methodology and Limiting Conditions

The methodology for the site reconnaissance was based on ASTM Standard E1527-21 (ASTM, 2021). INTERA physically inspected the Subject Property, adjoining properties to the extent possible from the right-of-way, and the general site vicinity, to identify RECs or evidence of RECs as specified in Section 9 of ASTM Standard E1527-21 (ASTM, 2021).

5.2 Subject Property

Access to the Subject Property was not obtained. Now abandoned, the ruins of the former Waldo Zinc Smelter are approximately 2 miles northwest of Los Cerrillos, New Mexico, on the eastern bank of Galisteo Creek and north-northwest of where the NM Rail Runner runs parallel to CR 57. The Subject

Property is located in a rural setting with very little development in the general vicinity. The Site and immediate vicinity thereof are depicted in **Figure 2.**

Generally, the limited visual Site reconnaissance identified the former facility foundations and stockpiles of potential slag material potentially remnant of the former operations.

Photographs taken during the site reconnaissance are included in **Appendix J.**

5.3 Adjoining Properties

INTERA observed properties from the public right-of-way on CR 57 to the extent possible. Evidence of petroleum products or hazardous substances was not directly observed. The areas adjoining the Subject Property were rural and undeveloped.

5.4 Surrounding Properties

Surrounding properties were rural residential areas, ranching land, and/or vacant.

6.0 Interviews

In accordance with requirements of Sections 10 and 11 of ASTM Standard E1527-21 (ASTM, 2021, pp. 21-23), INTERA interviewed the *key site manager* and *local government officials* for knowledge of any past or present RECs in connection with the Subject Property.

Any findings associated with these interviews are indicated in **Section 7.**

6.1 Key Site Manager

Mr. Matt Hubbard of INTERA had several conversations with Mr. Robert Fine, Rail Bureau Chief with NMDOT, regarding access and ownership of the Subject Property. Mr. Fine indicated that although the SFCA records do not identify NMDOT's ownership of the former Waldo Zinc Smelter ruins and surrounding land, NMDOT purchased the property from BNSF Railway in 2007. Mr. Fine provided maps and deed records corroborating NMDOT's ownership. Corroborating records obtained from Mr. Fine are provided in **Appendix K**.

It is INTERA's understanding that although NMDOT is aware of the presence of the former Waldo Zinc Smelter on their property, that is the extent of NMDOT's knowledge of the process history of the facility.

6.2 Local Government Officials

NMED provided available information for the Subject Property during project initiation as described in **Section 3**. The information provided is considered satisfactory to meet the requirements of the Standard. No additional information from local government officials was obtained.

7.0 Findings and Opinions

This section presents the findings of the Phase I ESA Report for the Subject Property and summarizes the results of the Phase I ESA records review, site reconnaissance, and interviews as they relate to the potential presence of RECs. A discussion of Subject Property findings related to the use, storage, and disposal of hazardous substances and petroleum products is presented in **Section 7.1.** A discussion of the findings for adjoining and surrounding vicinity properties is included in **Sections 7.2** and **7.3,** respectively. **Section 7.4** discusses the results of the Tier 1 VES. This section also presents INTERA's opinions concerning the potential of the findings to contaminate Subject Property environmental media and whether the finding is considered a REC. The findings presented in this section are the basis for the Phase I ESA conclusions presented by INTERA in **Section 8** of this Phase I ESA Report.

7.1 Subject Property Findings and Opinions

In 1916, Carl and Victorina Grubnau built a zinc roaster and a 5-story smelter between the existing railroad and Galisteo Creek in Waldo, New Mexico (i.e., the Subject Property). The Waldo zinc smelter had a daily processing capacity of 15 tons of zinc oxide, beginning operations in 1917 and closing in 1922 (NMED, 2007). Now abandoned, the ruins of the facility are approximately 2 miles northwest of Los Cerrillos, New Mexico, on the eastern bank of Galisteo Creek and north-northwest of where the NM Rail Runner runs parallel to CR 57. The ruins of the Waldo zinc smelter and the surrounding area are owned by NMDOT, obtained as part of their purchase of the NM Rail Runner from BNSF Railway in 2007.

Previous investigation conducted at the Subject Property indicated concentrations of antimony, arsenic, cadmium, chromium, cobalt, iron, lead, manganese, mercury, and zinc above June 2022 NMED SSLs (NMED, 2007).

Based on the information available, a **REC** exists at the Subject Property due to the known contaminant impacts to environmental media.

7.2 Adjoining Property Findings and Opinions

No relevant findings were identified associated with adjoining properties.

7.3 Vicinity Findings and Opinions

No relevant findings were identified associated with vicinity properties.

7.4 Tier 1 Vapor Encroachment Screening

ASTM Standard E2600-22 defines the default area of concern (AOC) based on $^{1}/_{3}$-mile for hazardous substances and $^{1}/_{10}$-mile for petroleum hydrocarbon contaminants. The AOC is measured from the Subject Property boundary to a contaminated property with known or suspected contamination of soil and/or groundwater (ASTM, 2022).

Based on review of Subject Property, adjoining property, and vicinity property findings within the default AOC, the metals contaminants impact to site soil are not considered a VEC.

7.5 Data Gaps

A *data gap* exists in connection with the Subject Property due to the environmental professional not being able to observe all areas of the Subject Property because access to the Subject Property was not obtained. It is our professional opinion that this is a *significant data gap* as the environmental professional was unable to make any conclusions based on the current condition of the property.

8.0 Conclusions

INTERA has performed a Phase I ESA in conformance with the scope and limitations of ASTM Standard E1527-21 for the Subject Property. Any exceptions to or deletions from this practice are described in **Section 7.5**. Based on the completion of the scope of services provided in support of this Phase I ESA, one REC was identified in connection with the Subject Property, as follows:

- Known metals contamination above NMED SSLs in Site soils, as described in the 2007 Preliminary Assessment of the Site, is considered a **REC** in connection with the Subject Property.

9.0 Recommendations

Based on the AAIs performed by the environmental professional in conformance with 40 Code of Federal Regulations (CFR) 312.31(a) and (b), this Phase I ESA has revealed evidence of one or more RECs/VECs or *significant data gaps* in connection with the Subject Property. Based on the conclusions of this Phase I ESA, INTERA recommends the following:

- Perform a Phase II site investigation to assess the potential impacts to environmental media, specifically ground water, from the REC identified in connection with the Subject Property.

10.0 References

ASTM International (ASTM). 2021. *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* Standard E1527-21. West Conshohocken, Pennsylvania: ASTM International.

———. 2022. *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*. Standard E2600-22. West Conshohocken, Pennsylvania. May 18.

Environmental Risk Information Services (ERIS). 2026a. Chain of Title Report and Environmental Lien Search.

———. 2025b. Topographic Maps.

———. 2025c. Historical Aerials.

———. 2025d. Physical Setting Report.

———. 2025e. Fire Insurance Maps.

———. 2025f. City Directory.

———. 2025g. Database Report.

National Oceanic and Atmospheric Administration (NOAA). 2026. National Weather Service Climate Data. https://www.weather.gov/wrh/Climate?wfo=hgx. Accessed March 31, 2026.

New Mexico Energy, Minerals and Natural Resources Department (EMNRD). 2008. Report on the Galisteo Basin. Chapter 5. Office of the State Engineer.

New Mexico Environment Department (NMED). 2007. Preliminary Assessment Report, Waldo Zinc Smelter, CERCLIS # NM0000605582, Santa Fe County, New Mexico.

Santa Fe County Assessor (SFCA) Parcel Viewer. 2026. https://www.santafecountynm.gov/assessor/tools. Accessed January 6, 2026.

United States Environmental Protection Agency (EPA). 2005. *Standards and Practices for All Appropriate Inquiries*, Final Rule. 40 CFR Part 312. Washington, D.C.: Government Printing Office. Federal Register 70(210): November 1.

United States Geological Survey (USGS). 2023. *Madrid, New Mexico 7.5-Minute Series*. U.S. Department of the Interior, U.S. Geological Survey.

Wilson, Lee. 1976. ROMCOE-Oxymin Cerillos Study Report 2. Geology and Geohydrology.

11.0 Disclaimer

The findings and conclusions contained in this report were derived using the methodologies provided in ASTM Standard E1527-21 (ASTM, 2021). The findings and conclusions contain all limitations inherent in these methodologies. There is the possibility that even with proper application of these methodologies, conditions may exist at the Subject Property that could not be identified within the scope of the Phase I ESA or that were not reasonably identifiable from the available information.

INTERA has prepared this report in accordance with the generally accepted environmental professional practices in use at the time of our study. This report may be used only by the User(s) and only for the purposes stated within a reasonable time from its issuance as outlined in ASTM Standard E1527-21 (ASTM, 2021). Land use, Site conditions (both onsite and offsite), or other factors may change over time, and additional work may be required with the passage of time. Any party other than the User(s) who wishes to use this report shall notify the User(s) of the intended use. Non-compliance with any of these requirements will release INTERA from any liability resulting from the use of this report.

INTERA does not warrant or guarantee in any manner, expressed or implied, that the conclusions and findings reported in this Phase I ESA, or the information obtained for this Phase I ESA from the records review or from other sources, including site reconnaissance observations, personal interviews, and correspondence, are accurate or complete beyond the limits of the methods applied. The methodologies of this Phase I ESA assessment are intended to meet the scope of a Phase I ESA in accordance with ASTM Standard E1527-21 (ASTM, 2021).

INTERA conducted this Phase I ESA and AAI into previous property ownership and uses in a manner consistent with ASTM Standard E1527-21 and the EPA AAI Final Rule (EPA, 2005) definitions of good commercial and customary ESA and AAI practices in the United States of America.

This Phase I ESA report is intended for use solely by the User(s). Any party other than the User(s) is explicitly denied any rights to rely on the findings, opinions, and conclusions of this Phase I ESA report.

12.0 Qualifications and Signatures of Environmental Professionals

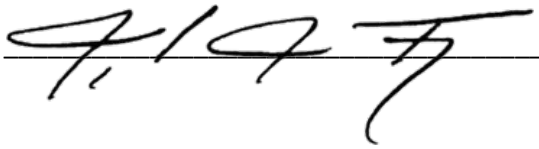
Complete copies of resumes outlining the qualifications of the individuals completing this Phase I ESA report are included as **Appendix L.**

"I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in Section 312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR part 312."

Matt Hubbard, Senior Environmental Scientist/Environmental Professional

Signature: 

Joeseph Tracy, P.G., Principal Geologist/Environmental Professional

Signature: 

FIGURES

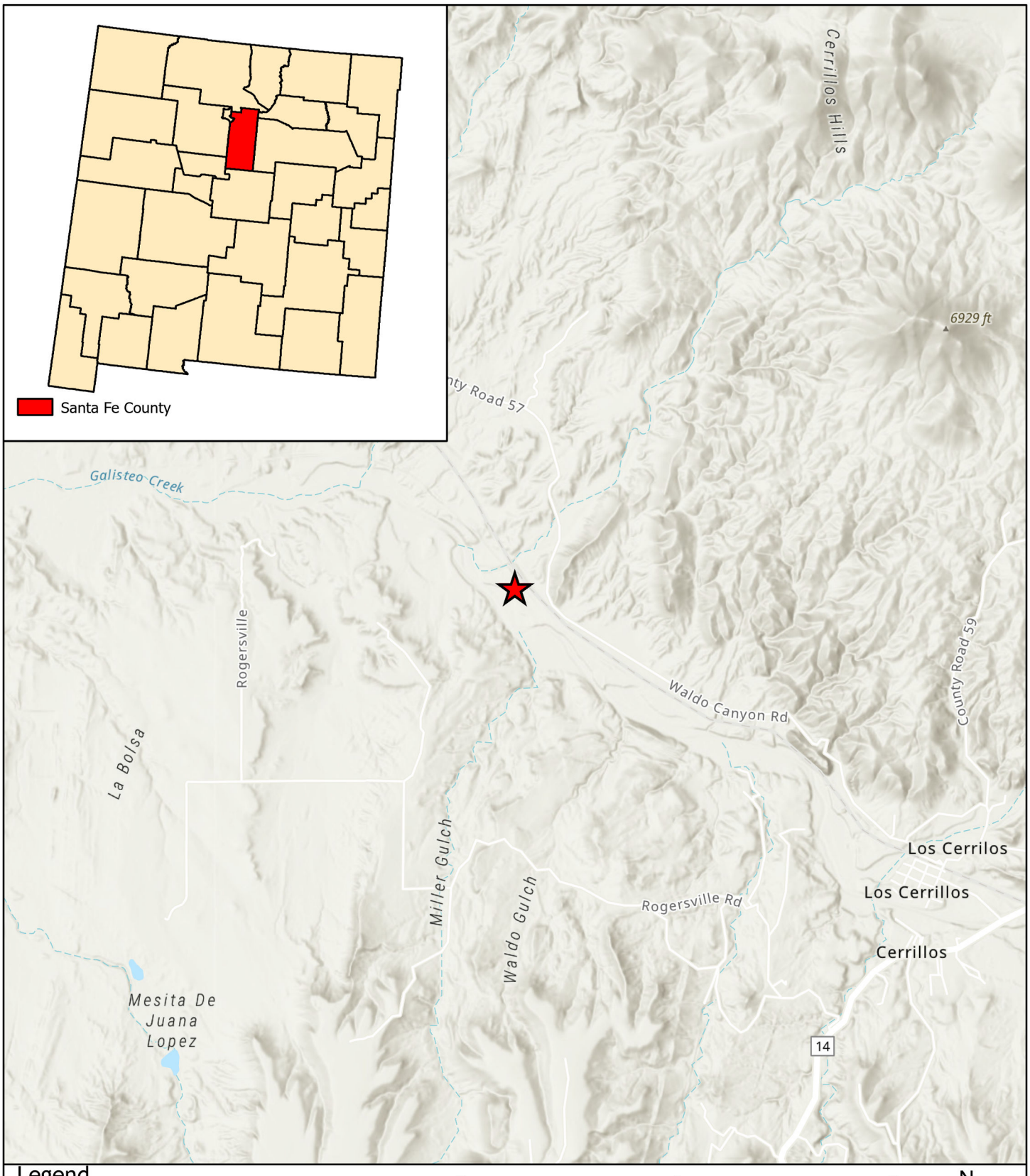


Figure 1
Site Location
Waldo Zinc Smelter
Santa Fe County, New Mexico

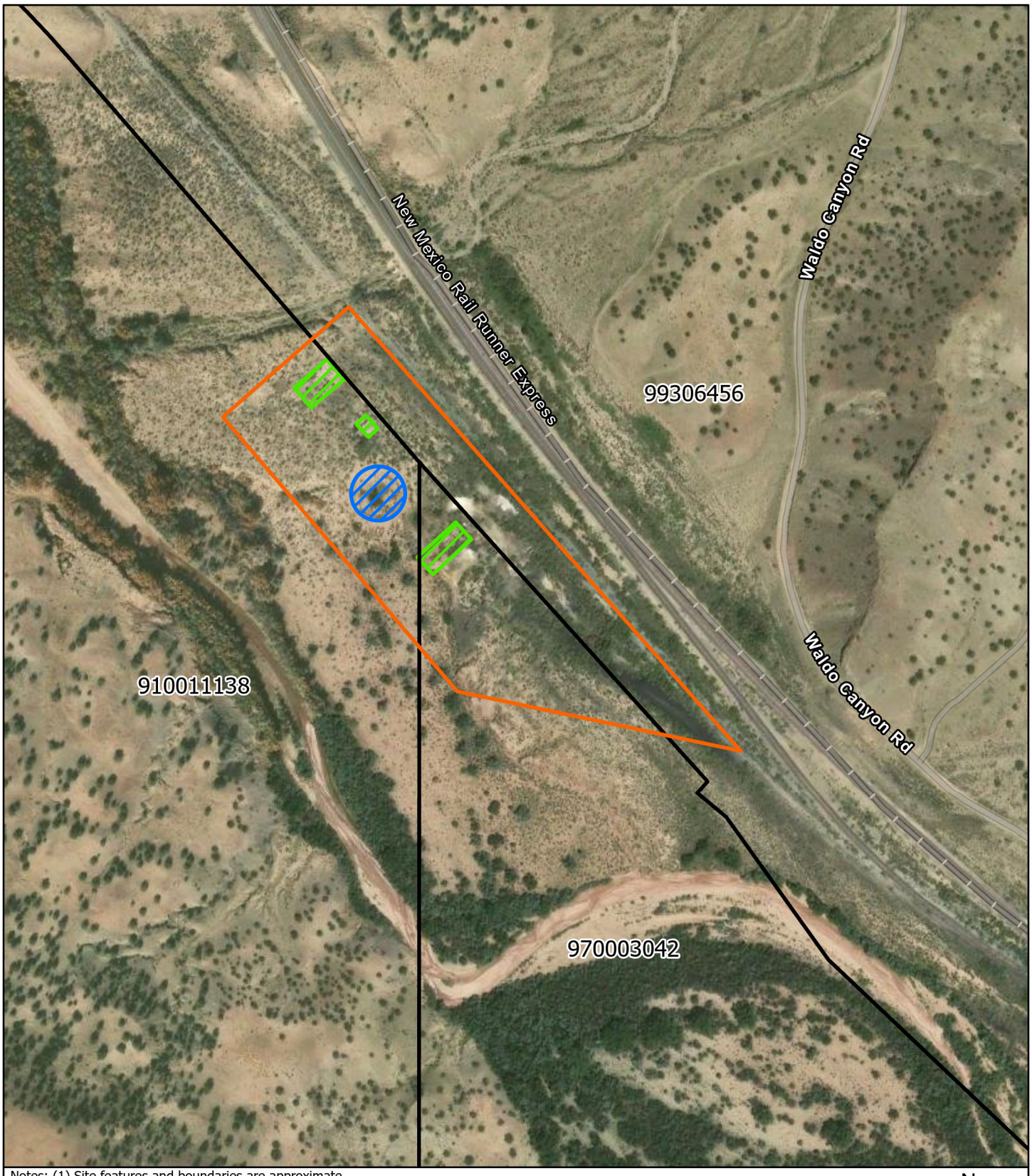
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User: mhubbard

Layout: Figure 1 - Waldo

INTERA



Notes: (1) Site features and boundaries are approximate.

Legend

- Subject Property
- Santa Fe County Parcels
- Building Foundation
- Pond

0 250 500

US Feet

N

Figure 2
Site Plan
Waldo Zinc Smelter
Santa Fe County, New Mexico

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User: mhubbard

Layout: Figure 2 - Waldo

INTERA

APPENDIX A

Chain of Title Report and Environmental Lien and Activity and Use Limitation Search

CHAIN OF TITLE

Project Property: *ROAD 57*
WALDO, NM 87010
Order No: *25121700731-COT1*
Date Completed: *01/08/2026*

ERIS – Environmental Risk Information Services hereby submits the following historical chain-of-title to the land described below.

Title to the estate or interest covered by this report appears to be vested in:

GREGORY SCOTT MESSER AND CAROLINE MESSER

The following is the current property legal description (See deed for full legal description):

T14N R 7E S12 53.796 AC LIVESTOCK ON 970001890 TRACT A

Assessor's Parcel Number(s): 970003042 AND 1-042-083-086-084

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

CHAIN OF TITLE REPORT

Order No: *25121700731-COT1*

HISTORICAL CHAIN OF TITLE

Public Records were searched at the SANTA FE COUNTY Assessor's office and the SANTA FE COUNTY Clerk's office back to 1932. The following conveyances were found of record.

1.	Deed Type:	WARRANTY DEED
	Deed Date:	02/28/2007
	Recorded:	03/02/2007
	Grantor:	SIDNEY S. BRYAN
	Grantee:	GREGORY SCOTT MESSER AND CAROLINE MESSER
	Instrument:	1473096
	Notes:	NA
2.	Deed Type:	DEED
	Deed Date:	08/14/1997
	Recorded:	08/14/1997
	Grantor:	GOLDEN TRIANGLE PROPERTIES
	Grantee:	SIDNEY S. BRYAN
	Instrument:	993245
	Notes:	NA
3.	Deed Type:	DEED
	Deed Date:	09/21/1978
	Recorded:	09/21/1978
	Grantor:	NICK KAPNISON AND NATALYN KAPNISON
	Grantee:	GOLDEN TRIANGLE PROPERTIES
	Instrument:	427214
	Notes:	NA

4. Deed Type: DEED
   Deed Date: 02/04/1974
   Recorded: 02/04/1974
   Grantor: GOLDEN TRIANGLE RANCH PROPERTIES
   Grantee: NICK KAPNISON AND NATALYN KAPNISON
   Instrument: BOOK 308 / PAGE 507
   Notes: NA

5. Deed Type: DEED
   Deed Date: 06/04/1973
   Recorded: 06/04/1973
   Grantor: MESITA VILLAGE, INC
   Grantee: GOLDEN TRIANGLE RANCH
   Instrument: BOOK 301 / PAGE 783
   Notes: NA

6. Deed Type: DEED
   Deed Date: 10/05/1970
   Recorded: 10/05/1970
   Grantor: THE LAND COMPANY, INC
   Grantee: MESITA VILLAGE, INC
   Instrument: BOOK 275 / PAGE 746
   Notes: NA

7. Deed Type: DEED
   Deed Date: 06/06/1960
   Recorded: 06/06/1960
   Grantor: SOUTHWEST GRAZING CO NM CORP
   Grantee: THE LAND COMPANY, INC
   Instrument: 240898
   Notes: NA

8. Deed Type: DEED
   Deed Date: 12/07/1959
   Recorded: 12/07/1959
   Grantor: JAMES HENRY & LOUISE BAKER TRIGG
   Grantee: SOUTHWEST GRAZING CO NM CORP
   Instrument: 237777
   Notes: NA

9. Deed Type: DEED
   Deed Date: 06/13/1947
   Recorded: 06/13/1947
   Grantor: CHEROKEE & PITTSBURG COAL & MINING COMPANY
   Grantee: JAMES HENRY & LOUISE BAKER TRIGG
   Instrument: 85632
   Notes: NA

10. Deed Type: DEED
    Deed Date: 10/15/1930
    Recorded: 10/15/1930
    Grantor: CERRILLOS COAL & IRON COMPANY
    Grantee: CHEROKEE & PITTSBURG COAL & MINING COMPANY
    Instrument: 40611
    Notes: NA

LEASES AND MISCELLANEOUS

Comments: NONE IDENTIFIED.

Thank You for Your Business
Please contact ERIS at **416-510-5204** or **info@erisinfo.com**
with any questions or comments

LIMITATION

This report is neither a guarantee of title, a commitment to insure, or a policy of title insurance. ERIS – Environmental Risk Information Services does not guarantee nor include any warranty of any kind whether expressed or implied, about the validity of all information included in this report since this information is retrieved as it is recorded from various agencies that make it available. The total liability is limited to the fee paid for this report.

(2)

SFC CLERK RECORDED 03/02/2007

Return to First American Title Insurance Company
File No. 960136-SF02 RMT

WARRANTY DEED

Sidney S. Bryan, a single man, for consideration paid, grant(s) to Gregory Scott Messer and Caroline Messer, husband and wife as joint tenants with right of survivorship whose address is 141 Glen Vista, Scotts Valley, CA 95066, the following described real estate in Santa Fe County, New Mexico:

Tract A and Lot 1 within Section 13, T14N, R7E, NMPM, as shown on "Boundary Survey Plat requested by Sidney S. Bryan...", filed in the office of the County Clerk, Santa Fe County, New Mexico on February 29, 2007, in Plat Book 647, page 045 as Instrument No. 1472419.

Subject to patent reservations, restrictions, and easements of record and taxes for the year 2007 and subsequent years.

with warranty covenants.

WITNESS my/our hand(s) and seal(s) this Twenty-eighth day of February, 2007.

Sidney S. Bryan

Individual Capacity

State of New Mexico)
) §
County of Santa Fe)

This instrument was acknowledged before me on the Twenty-eighth day of February, 2007, by Sidney S. Bryan.

My commission expires: 10/8/10 Notary Public

ROSELAINN TALAMANTE NOTARY PUBLIC STATE OF NEW MEXICO

WARRANTY DEED
PAGES: 1

)UNTY OF SANTA FE)
TATE OF NEW MEXICO) ss

Hereby Certify That This Instrument Was Filed for
ecord On The 2ND Day Of March, A.D., 2007 at 11:16
nd Was Duly Recorded as Instrument # 1473096
f The Records Of Santa Fe County

Witness My Hand And Seal Of Office
Valerie Espinoza
eput County Clerk, Santa Fe, NM

COUNTY CLERK SANTA FE COUNTY NEW MEXICO

CHAIN OF TITLE & LIEN SEARCHES

Project Property: *ROAD 57*
WALDO, NM 87010
Order No: *25121700731-COTEL1*
Date Completed: *01/05/2026*

Title to the estate or interest covered by this report appears to be vested in:
GREGORY SCOTT MESSER AND CAROLINE MESSER

The following is the current property legal description (See deed for full legal description):
T14N R 7E S12 53.796 AC LIVESTOCK ON 970001890 TRACT A

Assessor's Parcel Number(s):
970003042 AND 1-042-083-086-084

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

TARGET PROPERTY INFORMATION

ADDRESS

ROAD 57
WALDO, NM 87010

RESEARCH SOURCES

RECORDER:	SANTA FE COUNTY RECORDER'S OFFICE
ASSESSOR:	SANTA FE COUNTY ASSESSOR'S OFFICE
STATE:	NEW MEXICO ENVIRONMENT DEPARTMENT
FEDERAL:	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OTHER:	JUDICIAL RECORDS NOT SEARCHED. BASED ON AVAILABLE INFORMATION EVALUATED BY THE TITLE SEARCH PROFESSIONAL, THE JURISDICTION DOES NOT REQUIRE A SEARCH OF JUDICIAL RECORDS IN ORDER TO IDENTIFY ENVIRONMENTAL LIENS.
NOTES:	PUBLIC RECORDS OF SANTA FE COUNTY, NM WERE SEARCHED FROM JANUARY 1, 1980 TO DECEMBER 29, 2025, AND NO OTHER DEEDS VESTING TITLE IN THE SUBJECT PROPERTY WERE FOUND OF RECORD DURING THE PERIOD SEARCHED.

ENVIRONMENTAL LIENS

Environmental Lien: [X] NOT FOUND

ACTIVITY AND USE LIMITATIONS (AULs)

AULs: [X] NOT FOUND

CHAIN OF TITLE TO 1980

1. Deed Type: WARRANTY DEED
   Deed Date: 02/28/2007
   Recorded: 03/02/2007
   Grantor: SIDNEY S. BRYAN
   Grantee: GREGORY SCOTT MESSER AND CAROLINE MESSER
   Instrument: 1473096
   Notes:

2. Deed Type: DEED
   Deed Date: 08/14/1997
   Recorded: 08/14/1997
   Grantor: GOLDEN TRIANGLE PROPERTIES
   Grantee: SIDNEY S. BRYAN
   Instrument: 993245
   Notes:

3. Deed Type: DEED
   Deed Date: 09/21/1978
   Recorded: 09/21/1978
   Grantor: NICK KAPNISON AND NATALYN KAPNISON
   Grantee: GOLDEN TRIANGLE PROPERTIES
   Instrument: 427214
   Notes: RESEARCH CONDUCTED BACK TO 1980. THIS IS THE OLDEST DEED OF RECORD FOUND WITHIN SCOPE OF SEARCH.

LEASES AND MISCELLANEOUS

Comments: NONE IDENTIFIED.

The ERIS Environmental Lien Search Report to 1980 provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied property information to:

- Search for parcel information and / or legal description
- Search for ownership information
- Research official land title documents recorded at jurisdictional agencies such as recorder's' office, registries of deeds, county clerks' offices, etc.
- Access copies of deeds to 1980
- Search for environmental encumbrance(s) associated with the deeds
- Provide a copy of any environmental encumbrance(s) based upon a review of keywords in the instrument(s) (title, parties involved and description)
- Provide a copy of the deeds or cite documents reviewed

Thank You for Your Business
Please contact ERIS at **416-510-5204** or **info@erisinfo.com**
with any questions or comments

LIMITATION

This report is neither a guarantee of title, a commitment to insure, or a policy of title insurance. ERIS – Environmental Risk Information Services does not guarantee nor include any warranty of any kind whether expressed or implied, about the validity of all information included in this report since this information is retrieved as it is recorded from various agencies that make it available. The total liability is limited to the fee paid for this report.

DEED EXHIBIT

(2)

SFC CLERK RECORDED 03/02/2007

Return to First American Title Insurance Company
File No. 960136-SF02 RMT

WARRANTY DEED

Sidney S. Bryan, a single man, for consideration paid, grant(s) to Gregory Scott Messer and Caroline Messer, husband and wife as joint tenants with right of survivorship whose address is 141 Glen Vista, Scotts Valley, CA 95066, the following described real estate in Santa Fe County, New Mexico:

Tract A and Lot 1 within Section 13, T14N, R7E, NMPM, as shown on "Boundary Survey Plat requested by Sidney S. Bryan...", filed in the office of the County Clerk, Santa Fe County, New Mexico on February 29, 2007, in Plat Book 647, page 045 as Instrument No. 1472419.

Subject to patent reservations, restrictions, and easements of record and taxes for the year 2007 and subsequent years.

with warranty covenants.

WITNESS my/our hand(s) and seal(s) this Twenty-eighth day of February, 2007.

Sidney S. Bryan

Individual Capacity

State of New Mexico)
) §
County of Santa Fe)

This instrument was acknowledged before me on the Twenty-eighth day of February, 2007, by Sidney S. Bryan.

My commission expires: 10/8/10 Notary Public

ROSELAINN TALAMANTE NOTARY PUBLIC STATE OF NEW MEXICO

WARRANTY DEED
PAGES: 1

)UNTY OF SANTA FE)
TATE OF NEW MEXICO) ss

Hereby Certify That This Instrument Was Filed for
ecord On The 2ND Day Of March, A.D., 2007 at 11:16
nd Was Duly Recorded as Instrument # 1473096
f The Records Of Santa Fe County

Witness My Hand And Seal Of Office
Valerie Espinoza
eput County Clerk, Santa Fe, NM

COUNTY CLERK SANTA FE COUNTY NEW MEXICO

APPENDIX B

Historical Topographic Maps

TOPOGRAPHIC MAPS

Project Property:	Waldo Zinc Smelter
	Road 57
	Waldo NM 87010
Project No:	NMENV.M007.SF-WALDO
Requested By:	INTERA Incorporated
Order No:	25121700731
Date Completed:	December 17, 2025

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2023	7.5
2020	7.5
2017	7.5
2013	7.5
1990	7.5
1961	15

Topographic Map Symbology for the maps may be available in the following documents:

Pre-1947

Page 223 of 1918 Topographic Instructions

Page 130 of 1928 Topographic Instructions

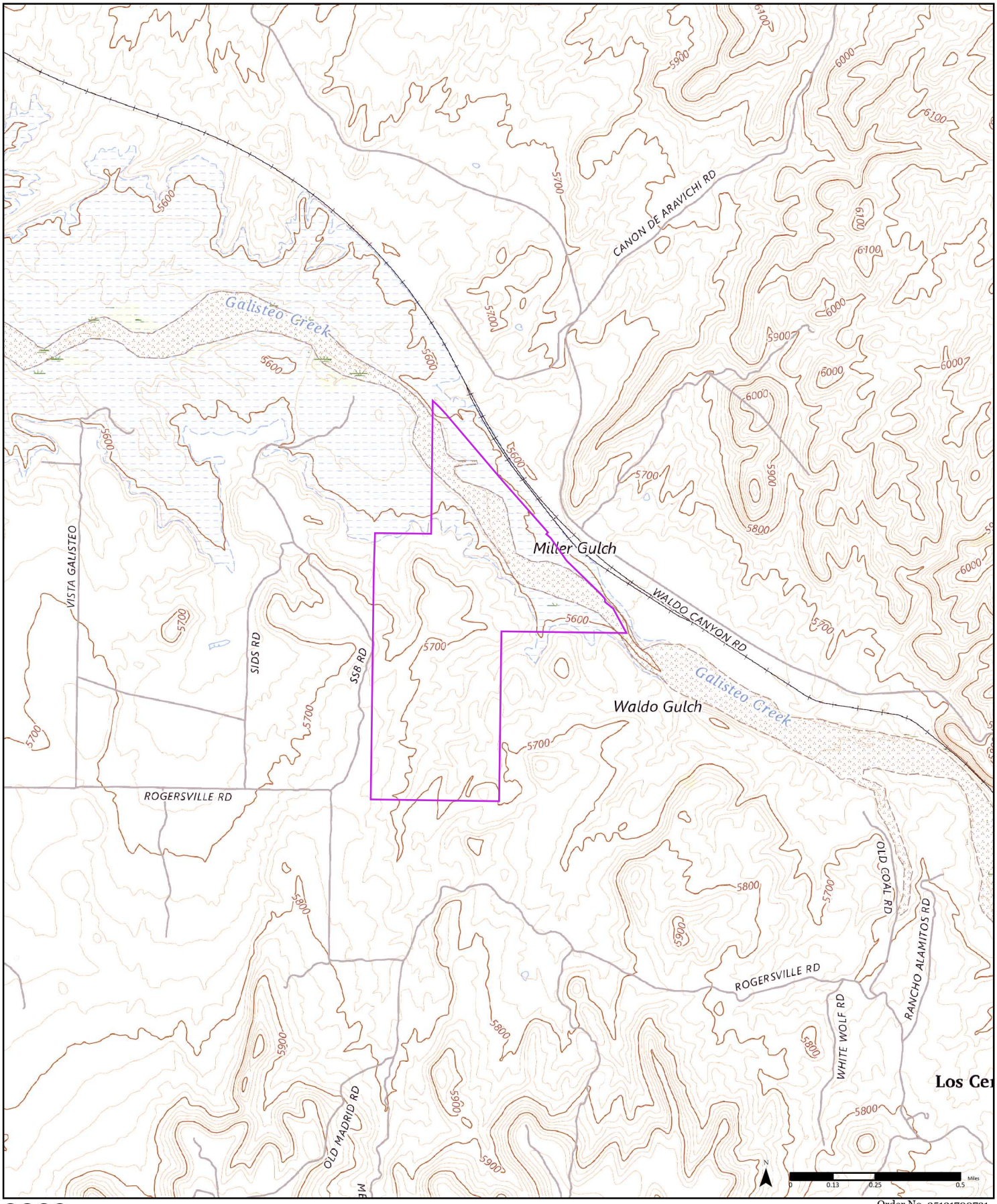
1947-2009

Topographic Map Symbols

2009-present

US Topo Map Symbols

Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.
No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc.(in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS', using Topographic Maps produced by the USGS. This maps contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present you with information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.



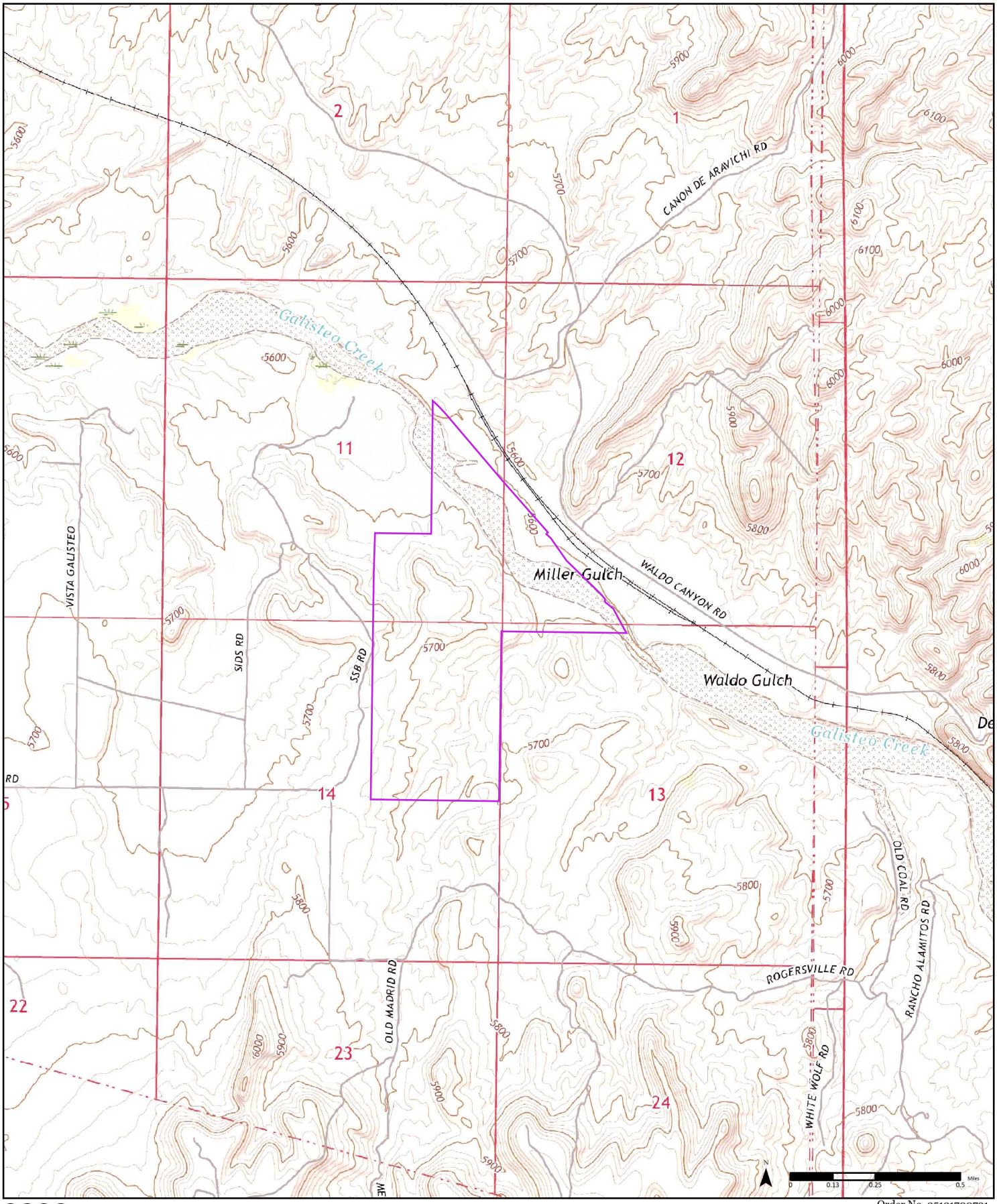
2023

Order No. 25121700731

Available Quadrangle(s): Madrid, NM

Madrid

Source: USGS 7.5 Minute Topographic Map



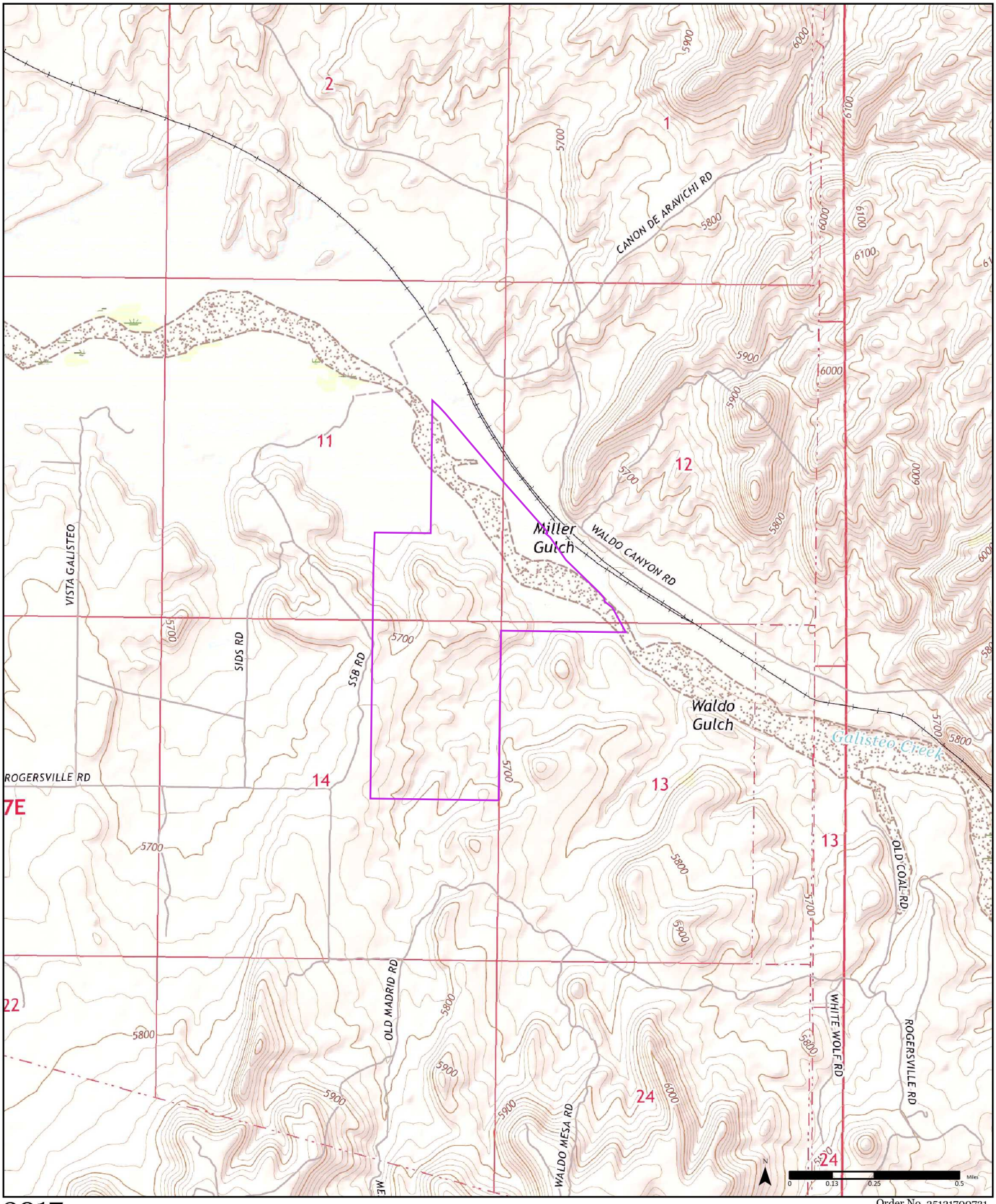
2020

Order No. 25121700731

Available Quadrangle(s): Madrid, NM



Source: USGS 7.5 Minute Topographic Map



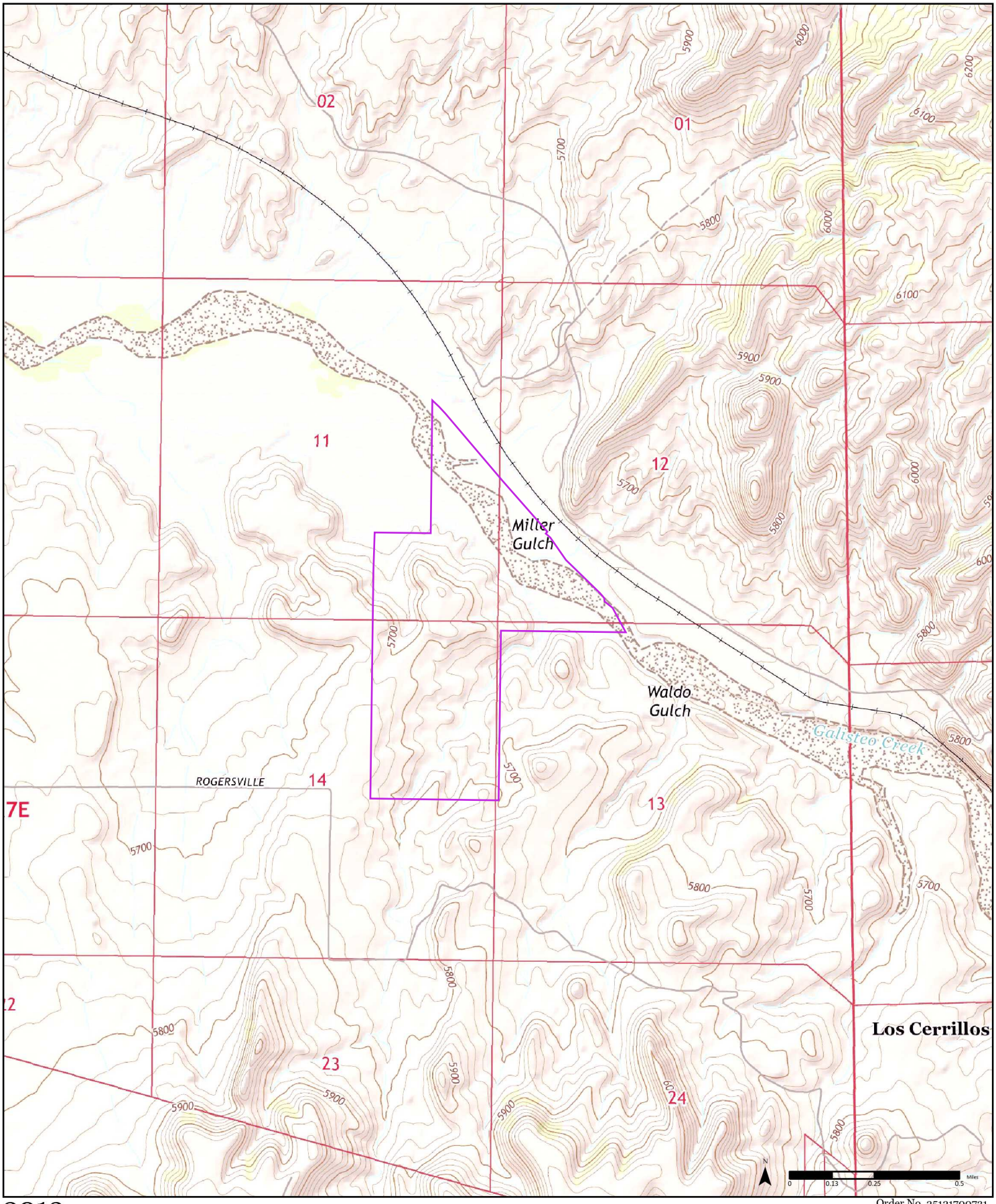
2017

Order No. 25121700731

Available Quadrangle(s): Madrid, NM



Source: USGS 7.5 Minute Topographic Map



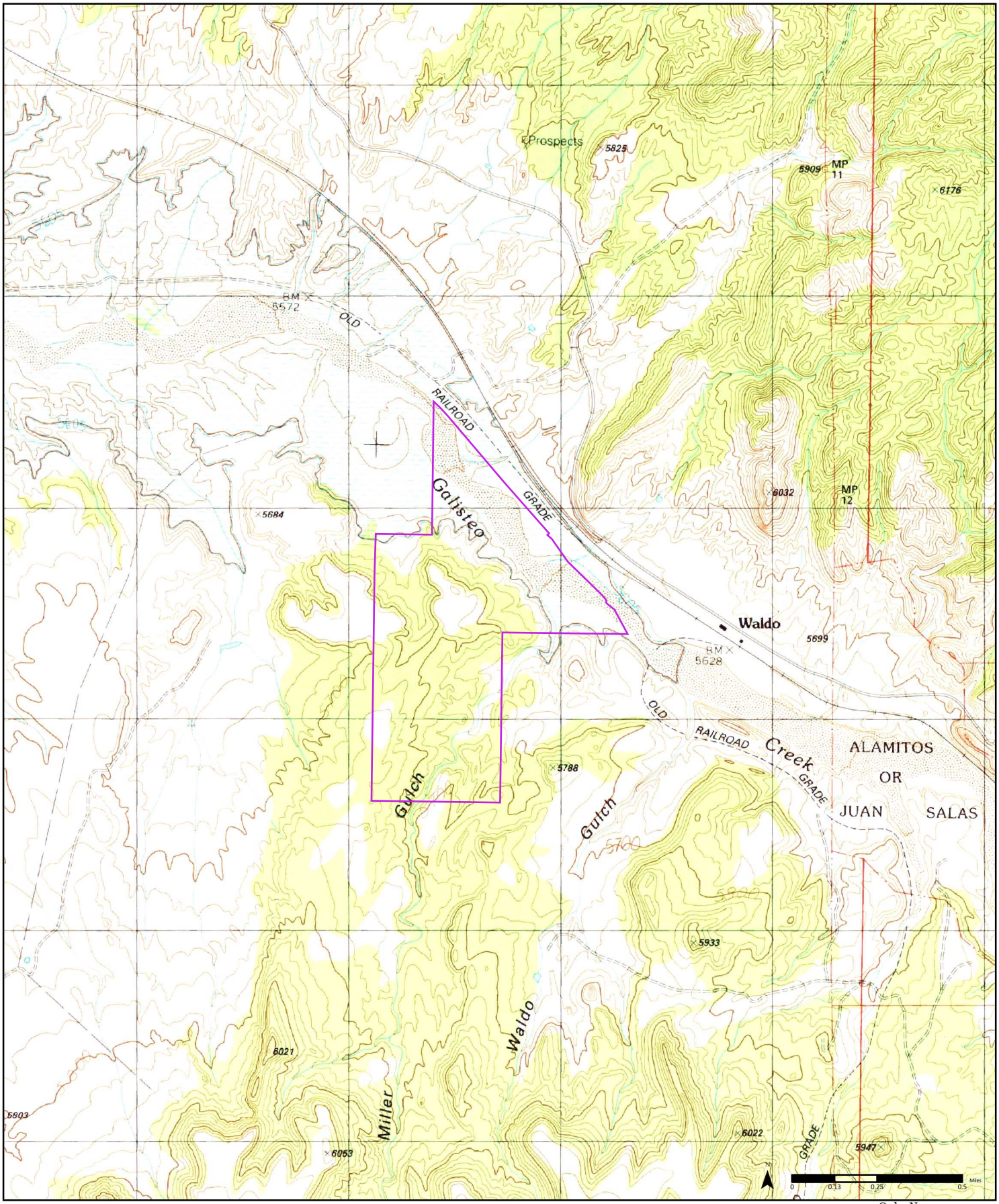
2013

Order No. 25121700731

Available Quadrangle(s): Madrid, NM



Source: USGS 7.5 Minute Topographic Map



1990 (1-1990)

Aerial Photo Year: 1985

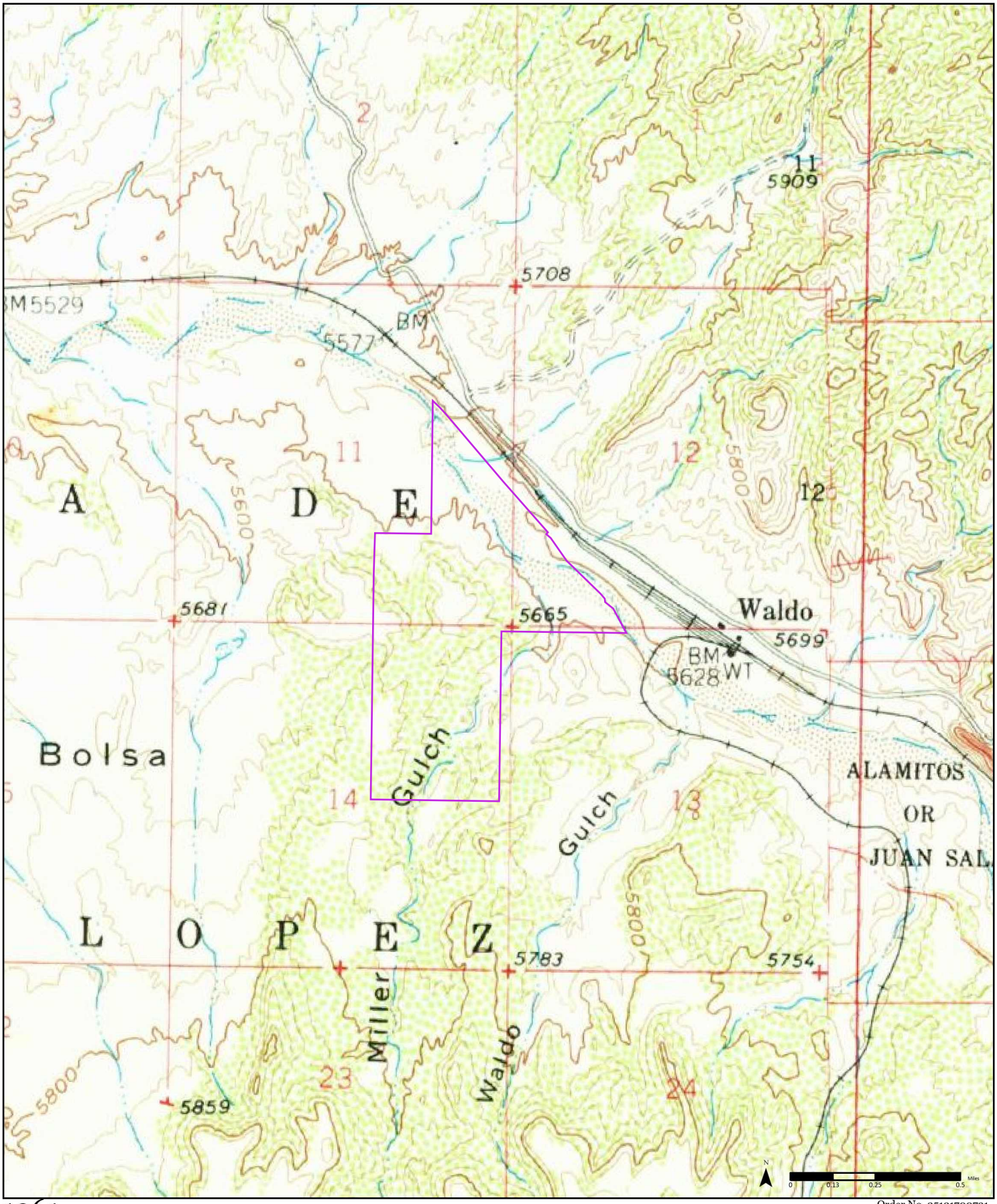
Order No. 25121700731

Available Quadrangle(s): Madrid, NM(1-1990)



Source: USGS 7.5 Minute Topographic Map

ERIS



1961 (1-1961)

Aerial Photo Year: 1958

Order No. 25121700731

Available Quadrangle(s): Madrid, NM(1-1961)

Madrid

Source: USGS 15 Minute Topographic Map

APPENDIX C

Historical Aerial Photographs

HISTORICAL AERIALS

Project Property: Waldo Zinc Smelter
Road 57
Waldo NM 87010

Project No: NMENV.M007.SF-WALDO

Requested By: INTERA Incorporated

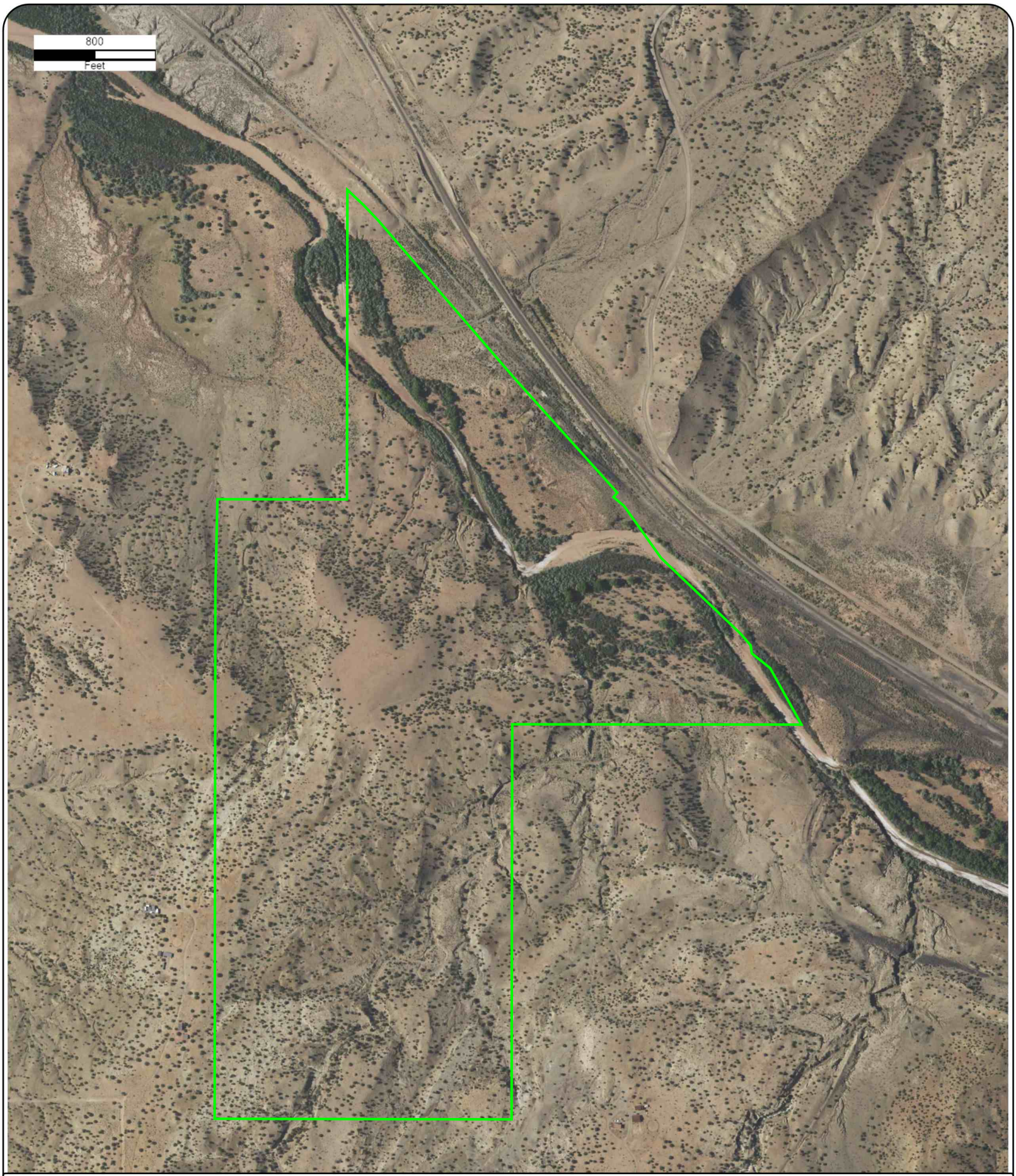
Order No: 25121700731

Date Completed: April 27,2026

Aerial Maps included in this report are produced by the sources listed above and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property. ERIS provides no warranty of accuracy or liability. The information contained in this report has been produced using aerial photos listed in above sources by ERIS Information Inc. (in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS'. The maps contained in this report do not purport to be and do not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

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Date	Source	Scale	Comments
2022	United States Department of Agriculture	1" = 800'	
2020	United States Department of Agriculture	1" = 800'	
2018	United States Department of Agriculture	1" = 800'	
2016	United States Department of Agriculture	1" = 800'	
2014	United States Department of Agriculture	1" = 800'	
2011	United States Department of Agriculture	1" = 800'	
2009	United States Department of Agriculture	1" = 800'	
2005	United States Geological Survey	1" = 800'	
1996	United States Geological Survey	1" = 800'	
1990	Bureau of Land Management	1" = 800'	
1985	United States Geological Survey	1" = 800'	
1981	United States Geological Survey	1" = 800'	
1973	Bureau of Land Management	1" = 800'	
1958	United States Geological Survey	1" = 800'	
1954	Army Mapping Service	1" = 800'	
1935	Agricultural Stabilization & Conserv. Service	1" = 800'	

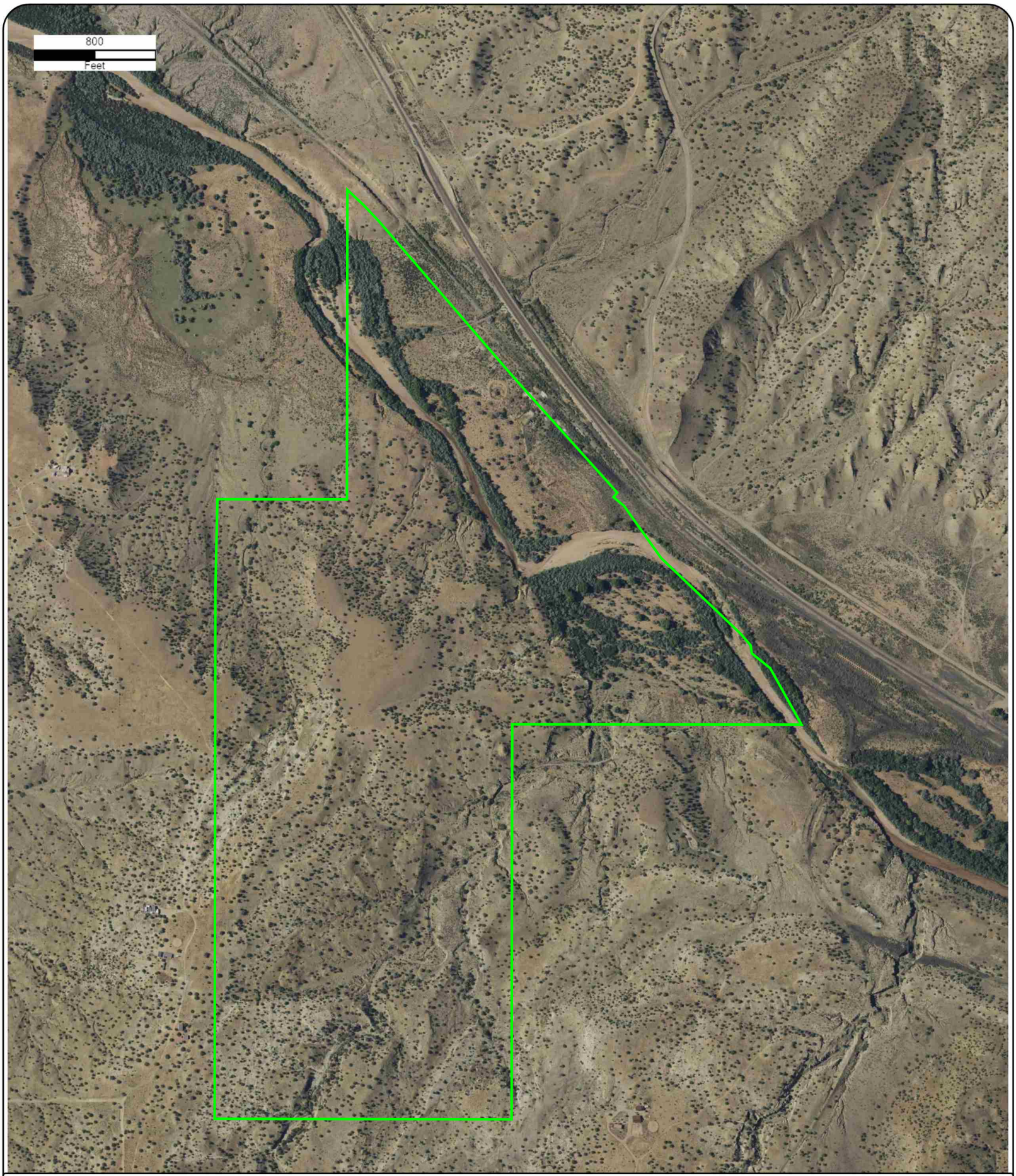


Year: 2022
Source: USDA
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

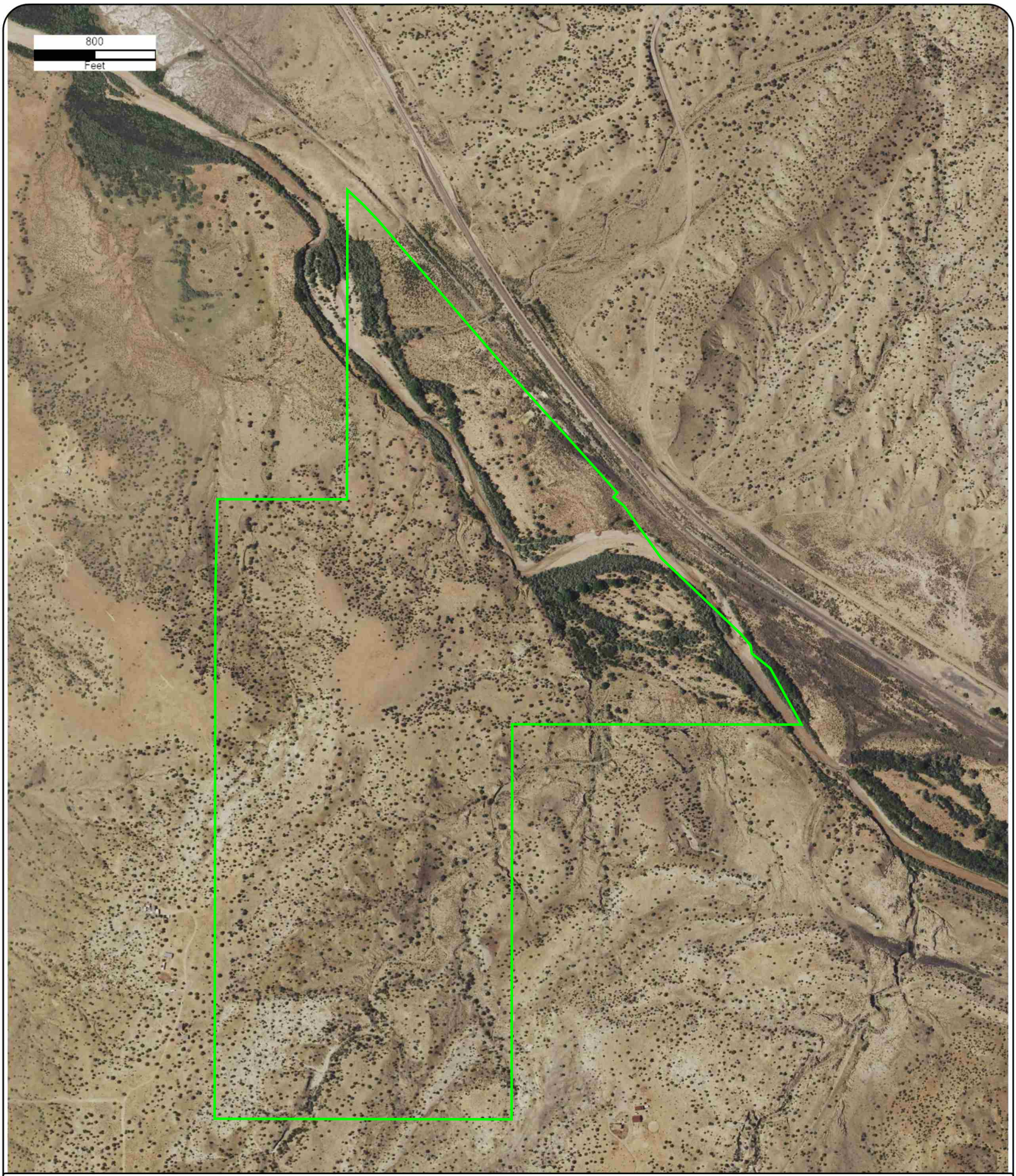


Year: 2020
Source: USDA
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Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

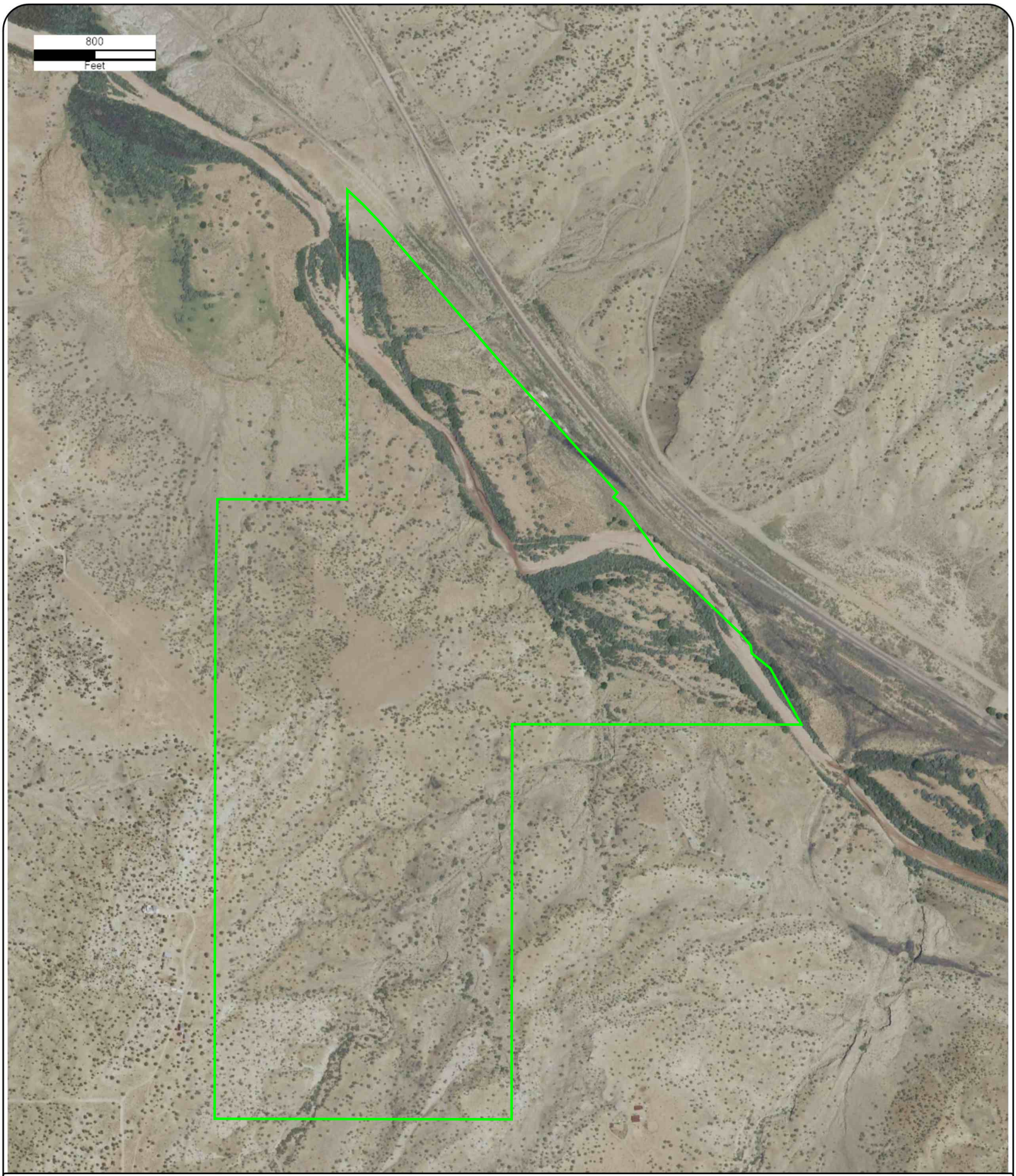


Year: 2018
Source: USDA
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

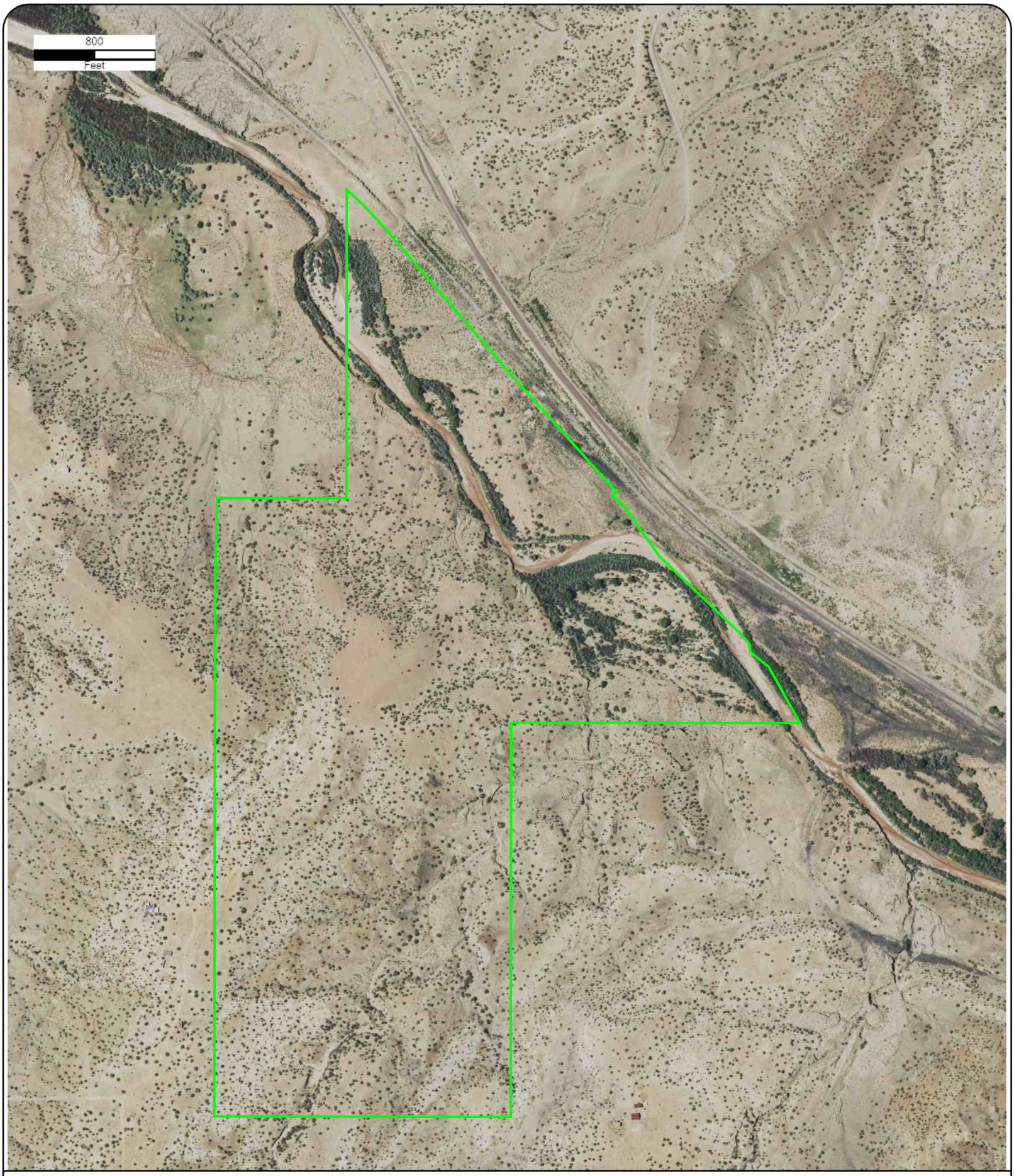


Year: 2016
Source: USDA
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Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

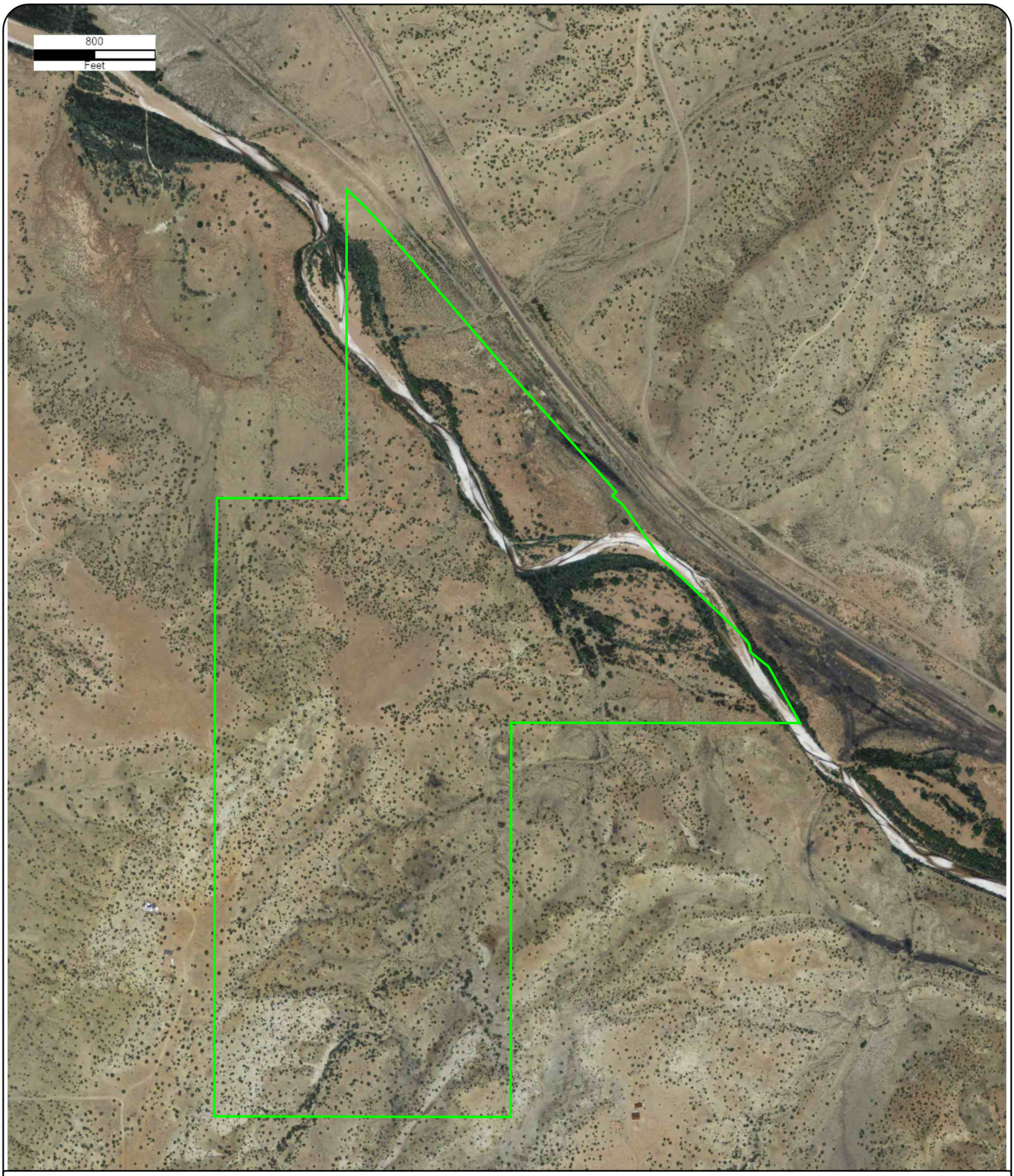


Year: 2014
Source: USDA
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

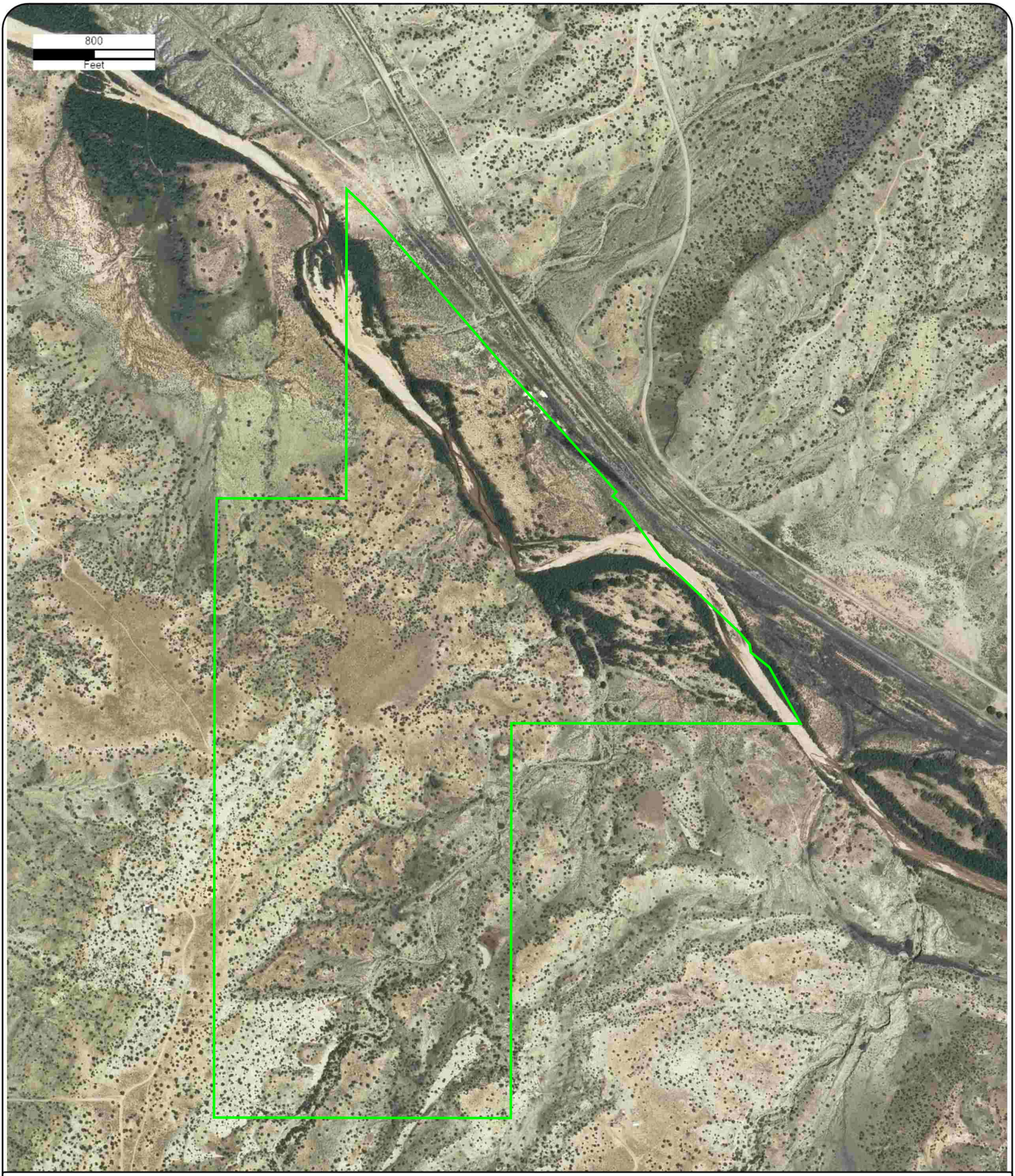


Year: 2011
Source: USDA
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

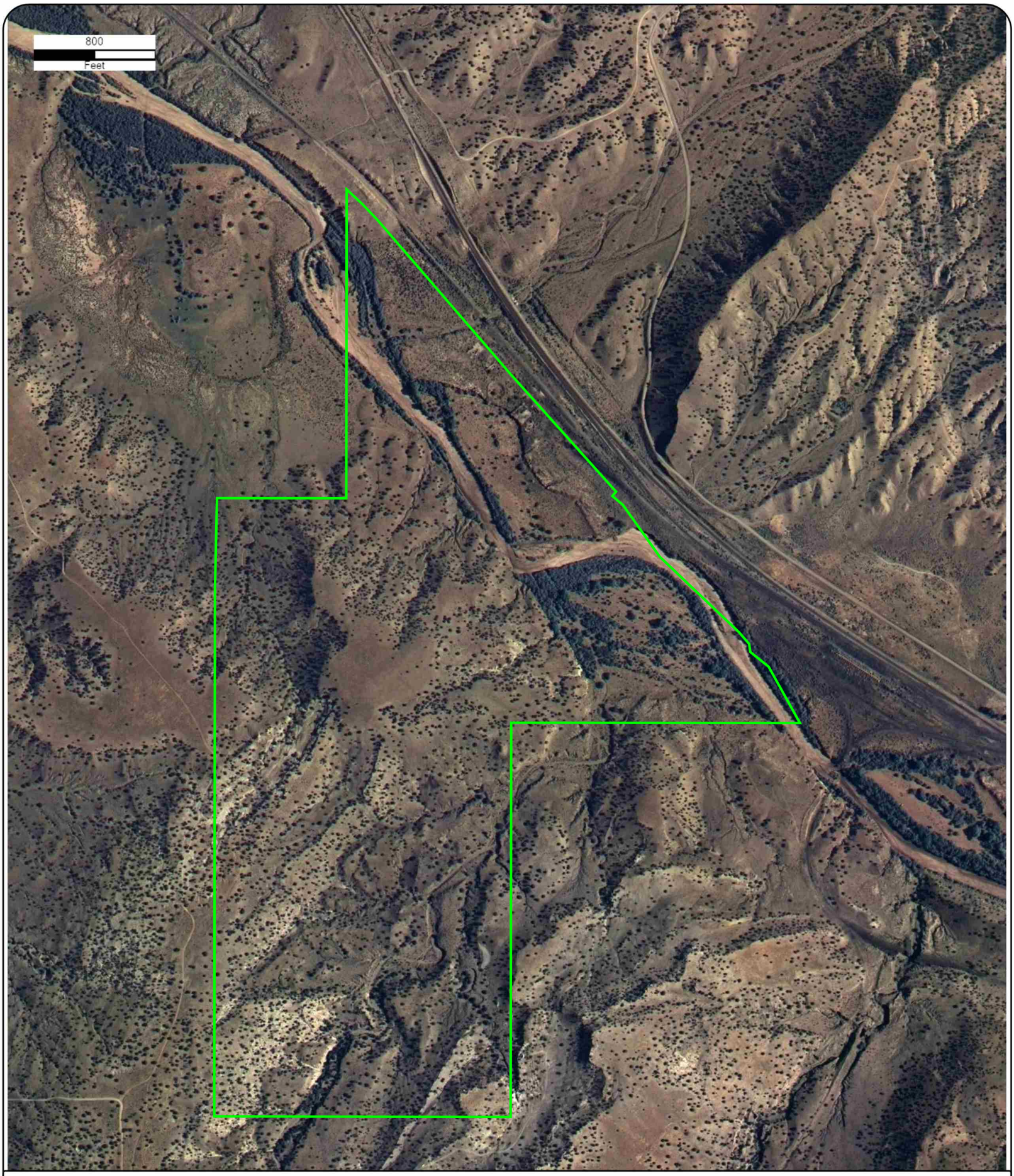


Year: 2009
Source: USDA
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS



Year: 2005
Source: USGS
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

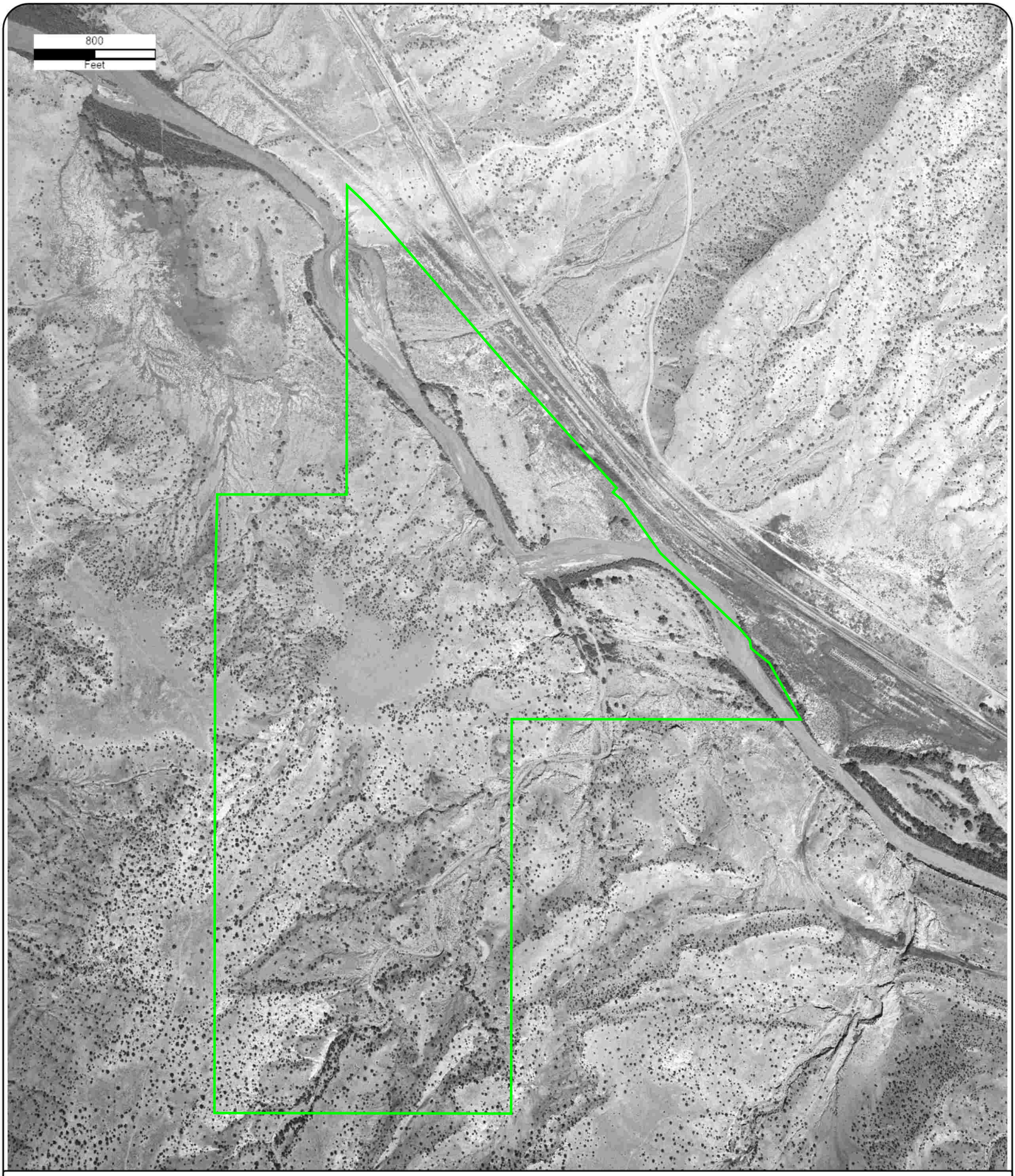


Year: 1996
Source: USGS
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS



Year: 1990
Source: BLM
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

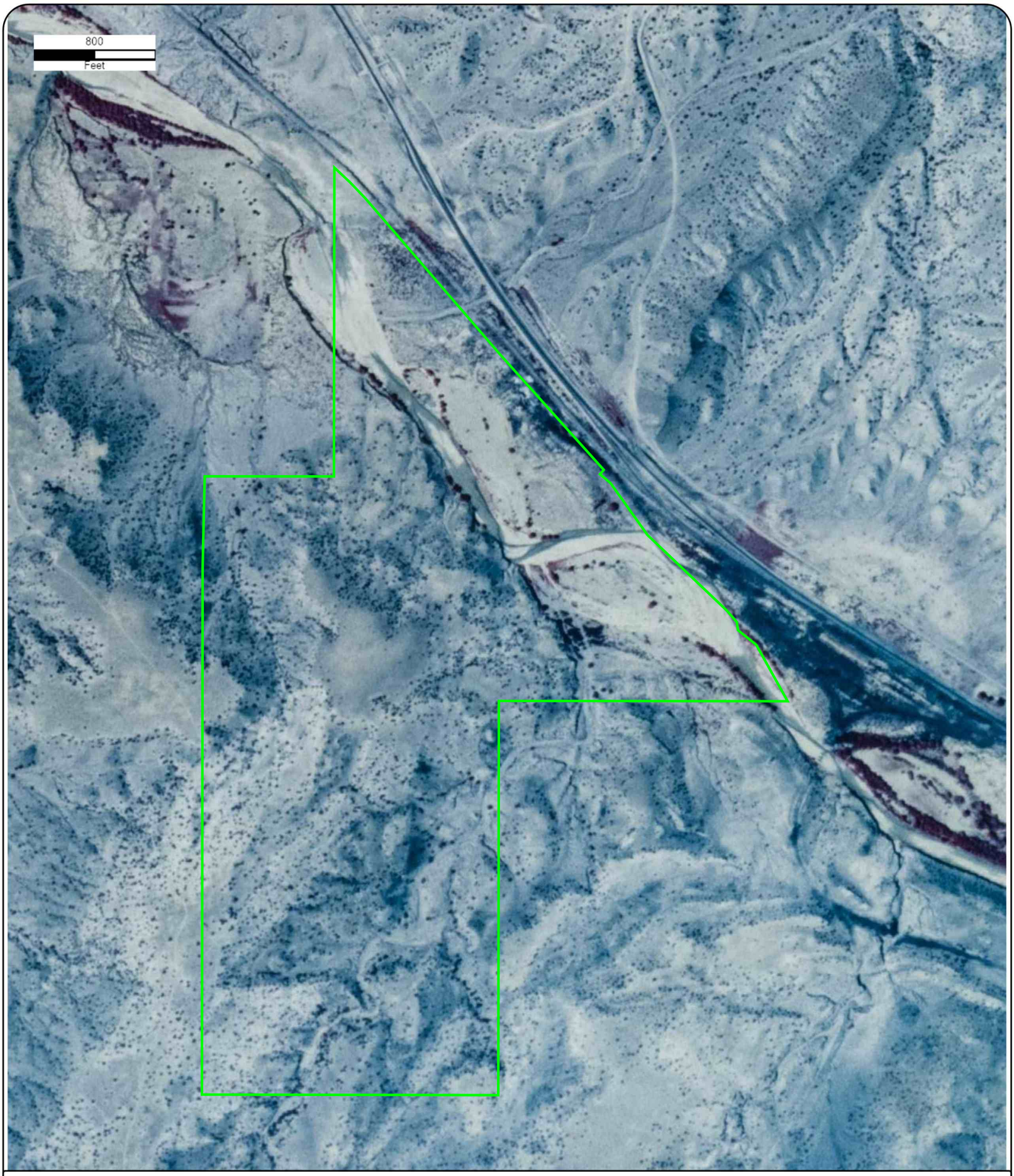


Year: 1985
Source: USGS
Scale: 1" = 800'
Comment:

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Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

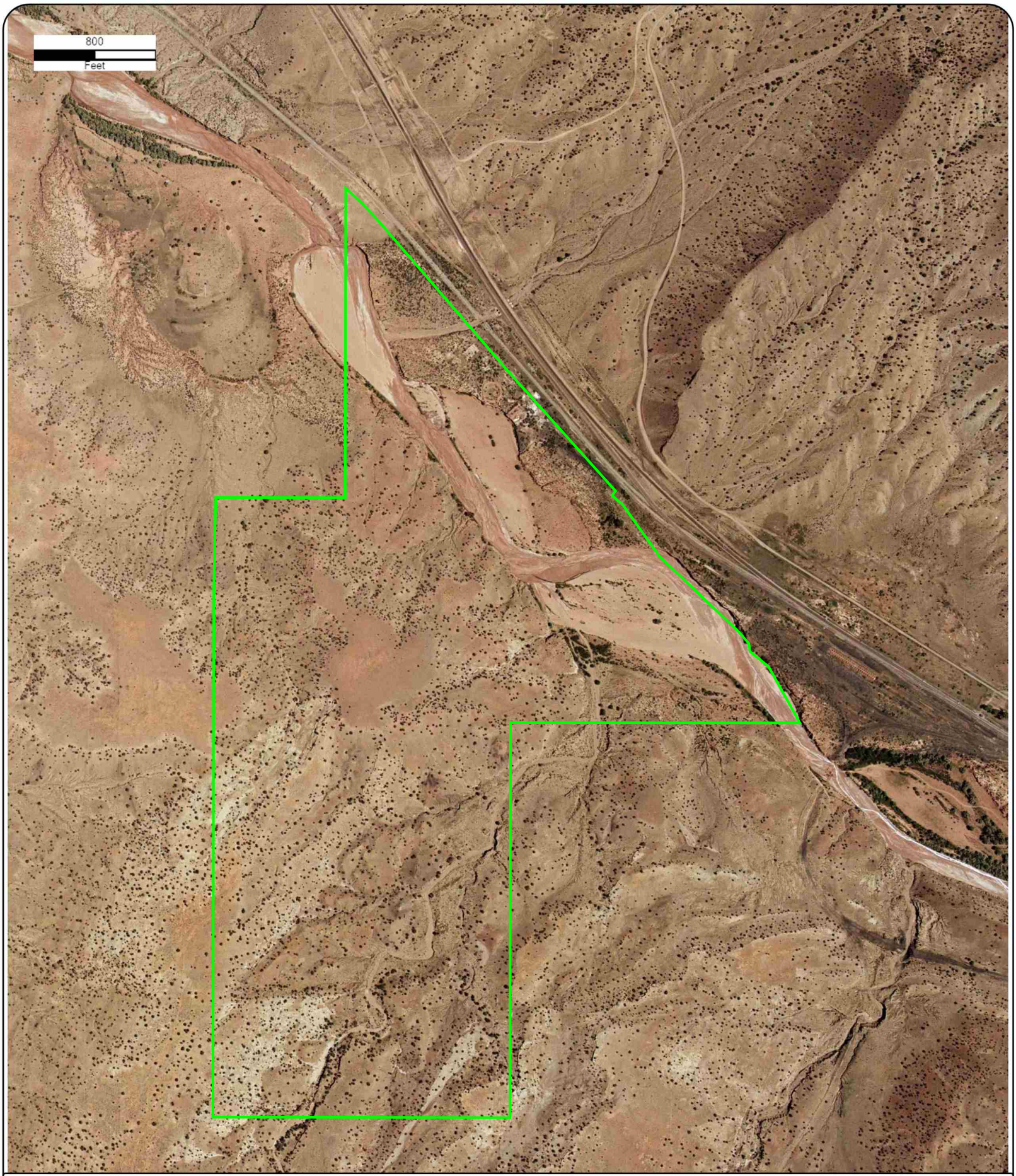


Year: 1981
Source: USGS
Scale: 1" = 800'
Comment:

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Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

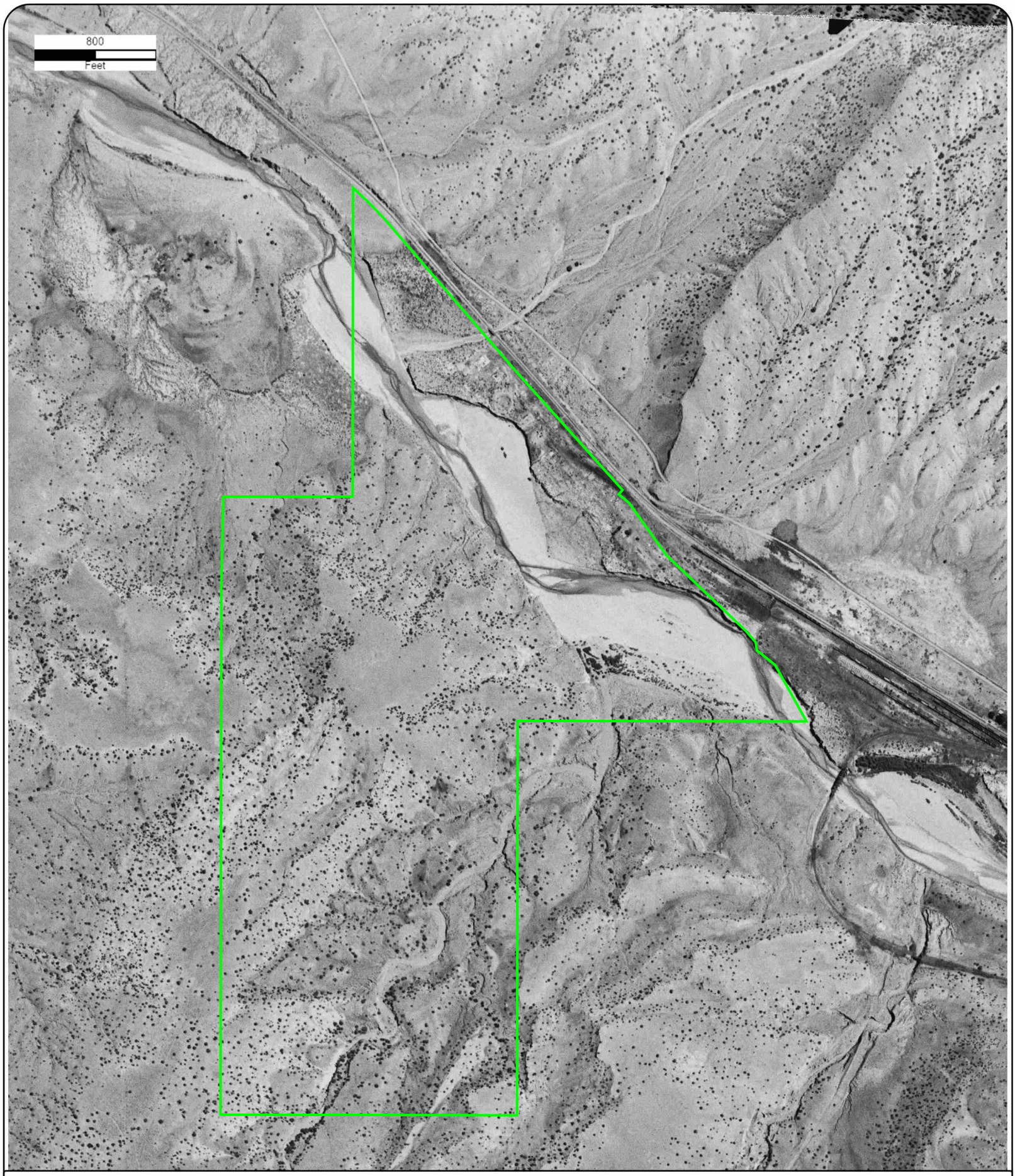


Year: 1973
Source: BLM
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

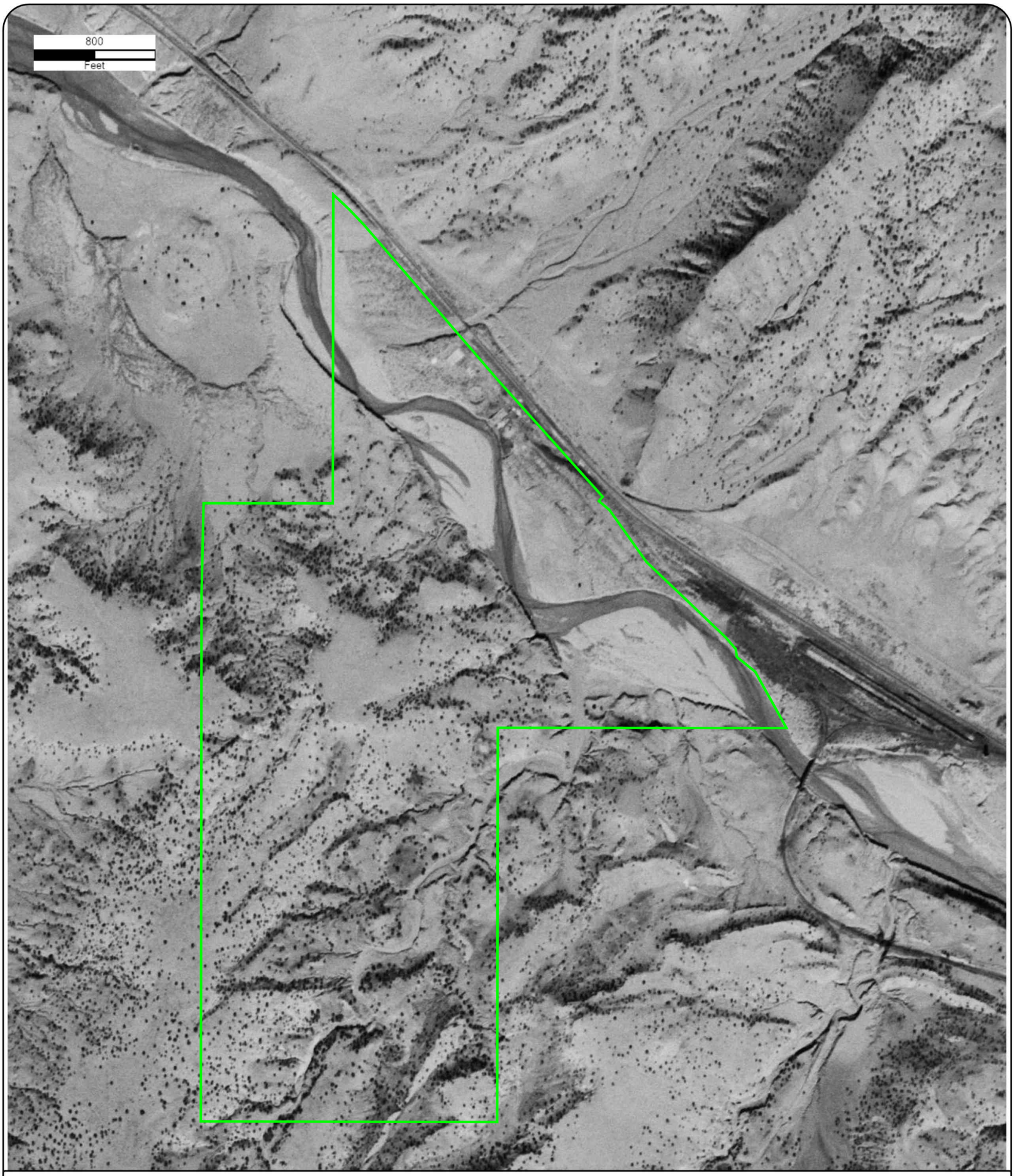


Year: 1958
Source: USGS
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

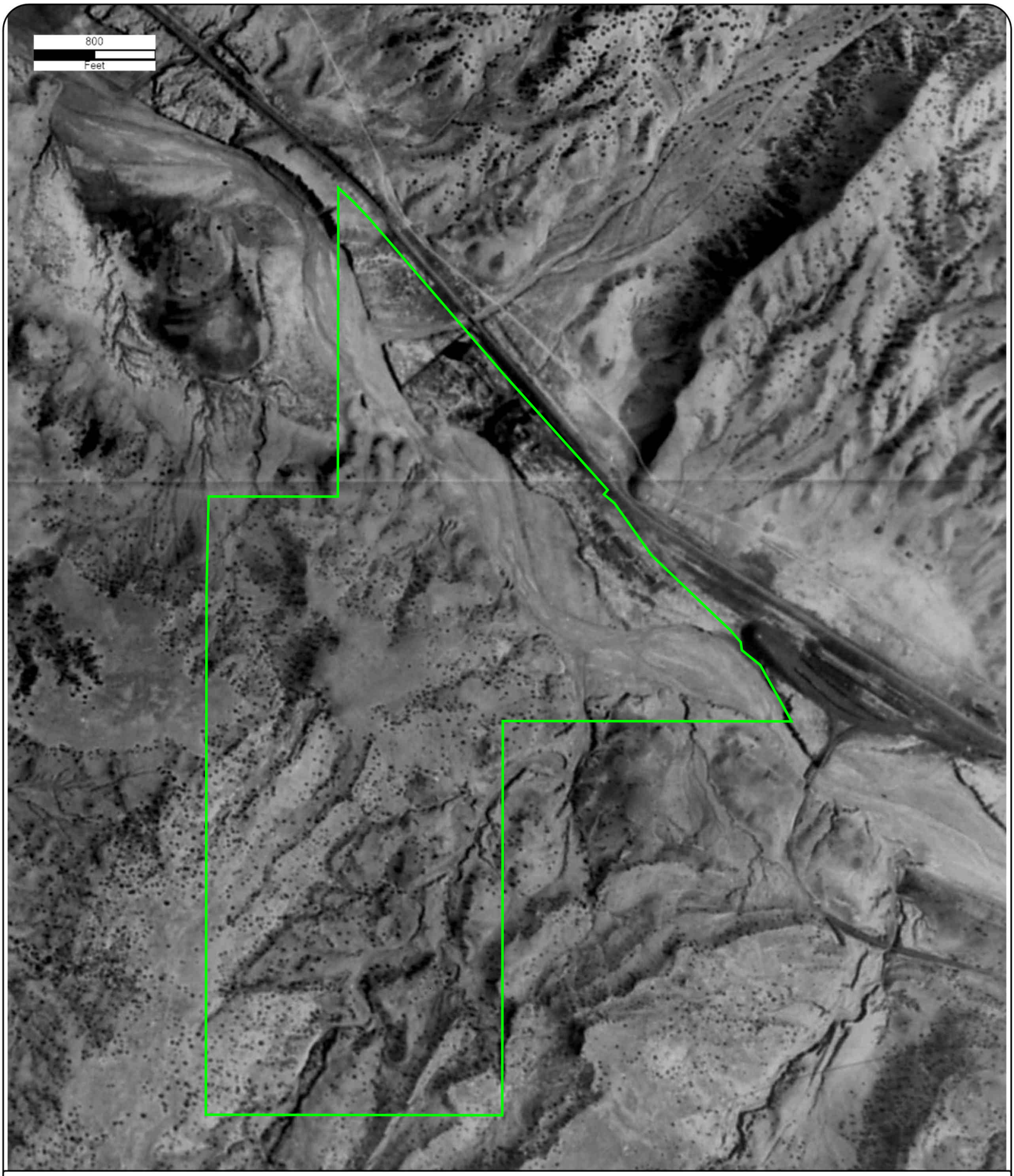


Year: 1954
Source: AMS
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS



Year: 1935
Source: ASCS
Scale: 1" = 800'
Comment:

Address: Road 57, Waldo, NM
Approx Center: -106.16211058,35.45054412

Order No: 25121700731

ERIS

APPENDIX D

Physical Setting Documentation

PSR
PHYSICAL SETTING REPORT

Property Information

Order Number:		25121700731p
Date Completed:		December 17, 2025
Project Number:		NMENV.M007.SF-WALDO
Project Property:		Waldo Zinc Smelter Road 57 Waldo NM 87010
Coordinates:		
	Latitude:	35.45054412
	Longitude:	-106.16211058
	UTM Northing:	3923628.93254 Meters
	UTM Easting:	394537.639438 Meters
	UTM Zone:	UTM Zone 13S
	Elevation:	5,709.55 ft
	Slope Direction:	NE

Topographic Information....2
Hydrologic Information....12
Geologic Information....18
Soil Information....22
Wells and Additional Sources....43
Summary....48
Detail Report....50
Radon Information....80
Appendix....81
Liability Notice....83

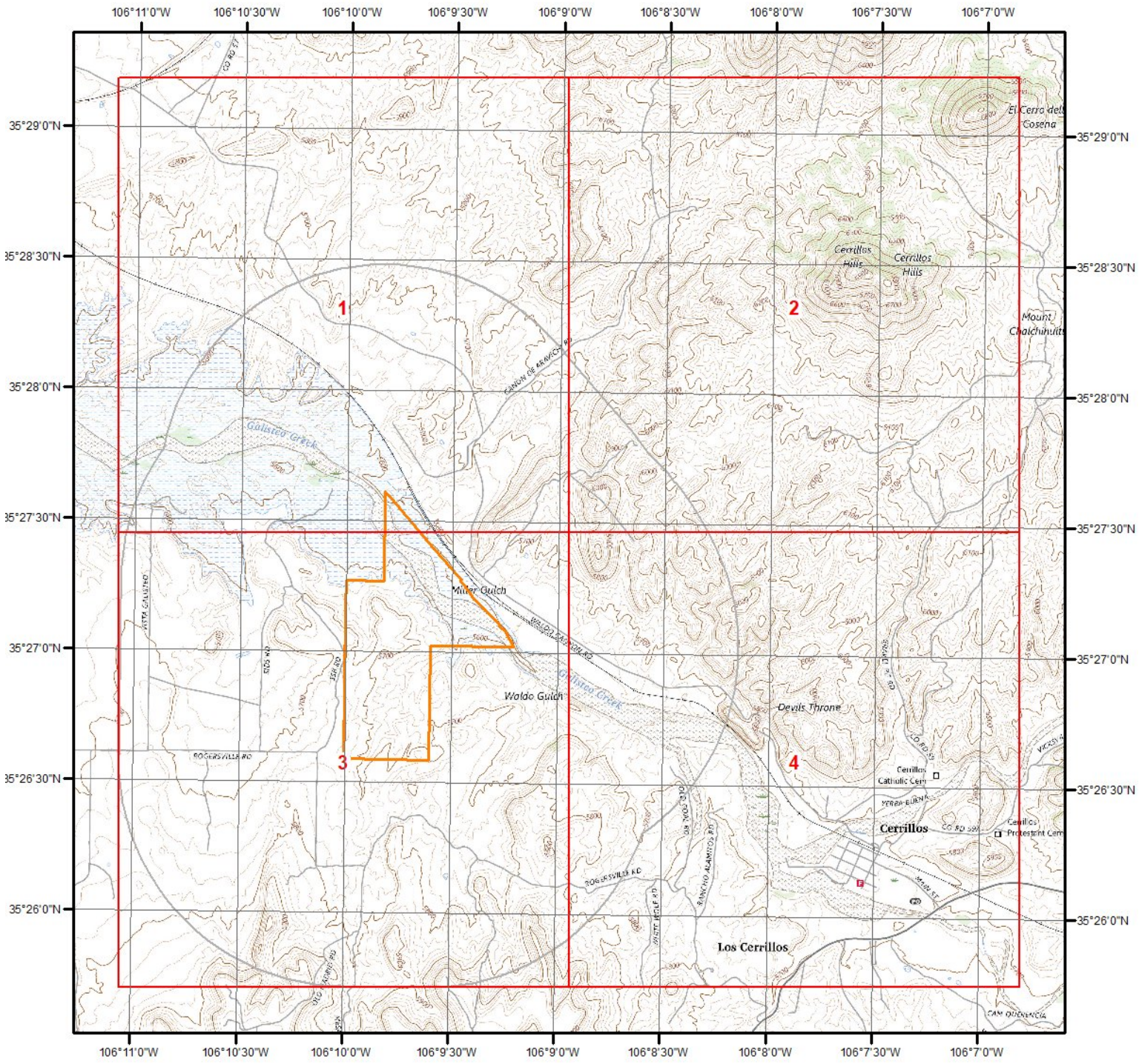
The ERIS ***Physical Setting Report - PSR*** provides comprehensive information about the physical setting around a site and includes a complete overview of topography and surface topology, in addition to hydrologic, geologic and soil characteristics. The location and detailed attributes of oil and gas wells, water wells, public water systems and radon are also included for review.

The compilation of both physical characteristics of a site and additional attribute data is useful in assessing the impact of migration of contaminants and subsequent impact on soils and groundwater.

Disclaimer

This Report does not provide a full environmental evaluation for the site or adjacent properties. Please see the terms and disclaimer at the end of the Report for greater detail.

Topographic Information



Current USGS Topo (2023)

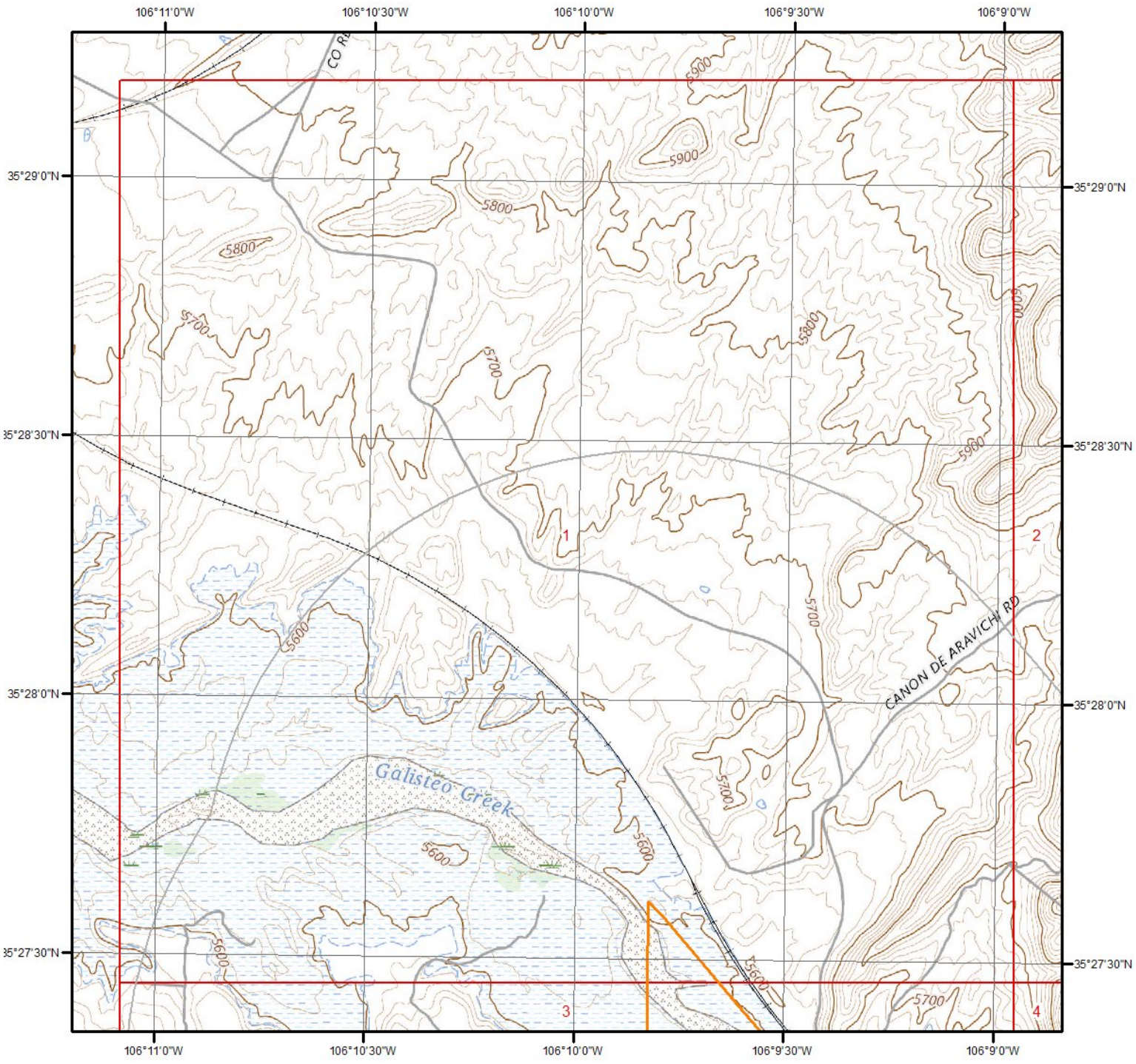
0 0.2 0.4 0.8 1.2 1.6 Miles

N

Quadrangle(s): San Felipe Pueblo NE,NM; Golden,NM; Hagan,NM; Picture Rock,NM; Santo Domingo Pueblo,NM; Captain Davis Mountain,NM;

Source: USGS 7.5 Minute Topographic Map

Topographic Information



Current USGS Topo - Page 1

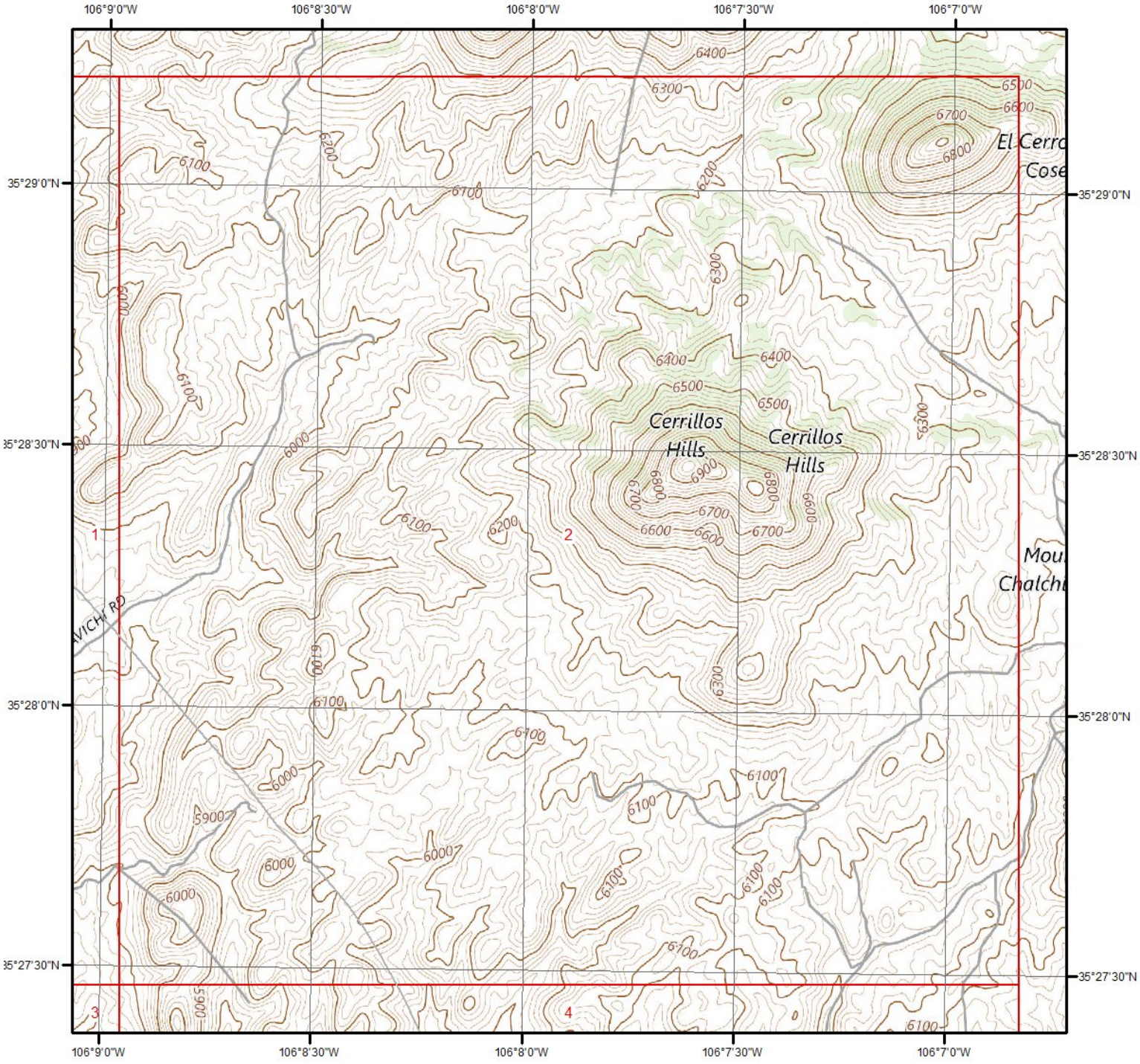
0 0.2 0.4 0.8 Miles

N

Quadrangle(s): Madrid,NM

Source: USGS 7.5 Minute Topographic Map

Topographic Information



Current USGS Topo - Page 2

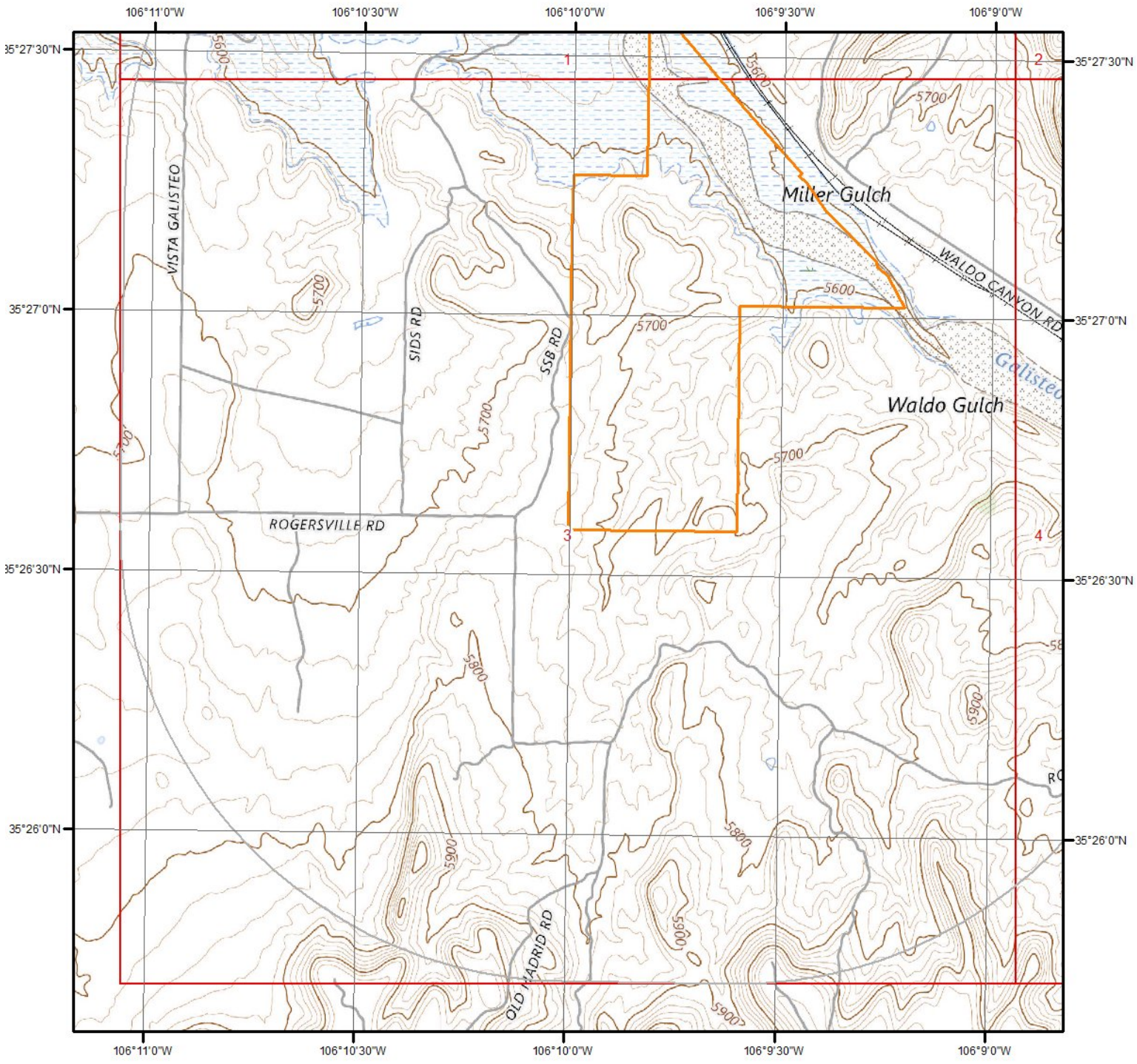
0 0.2 0.4 0.8 Miles

N

Quadrangle(s): Picture Rock,NM; Madrid,NM

Source: USGS 7.5 Minute Topographic Map

Topographic Information



Current USGS Topo - Page 3

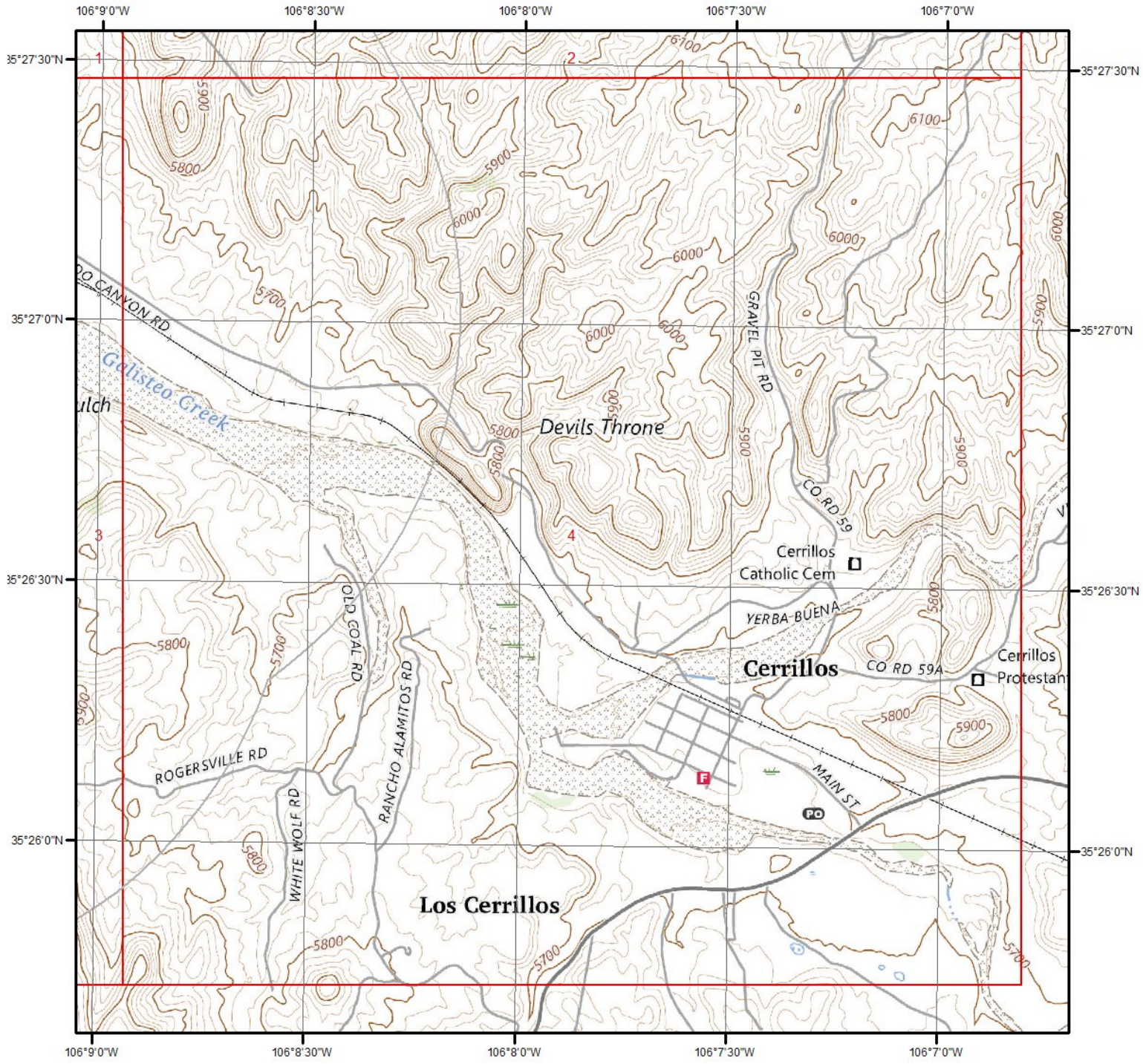
0 0.2 0.4 0.8 Miles

N

Quadrangle(s): Madrid,NM

Source: USGS 7.5 Minute Topographic Map

Topographic Information



Current USGS Topo - Page 4

0 0.2 0.4 0.8 Miles

N

Quadrangle(s): Picture Rock,NM; Madrid,NM

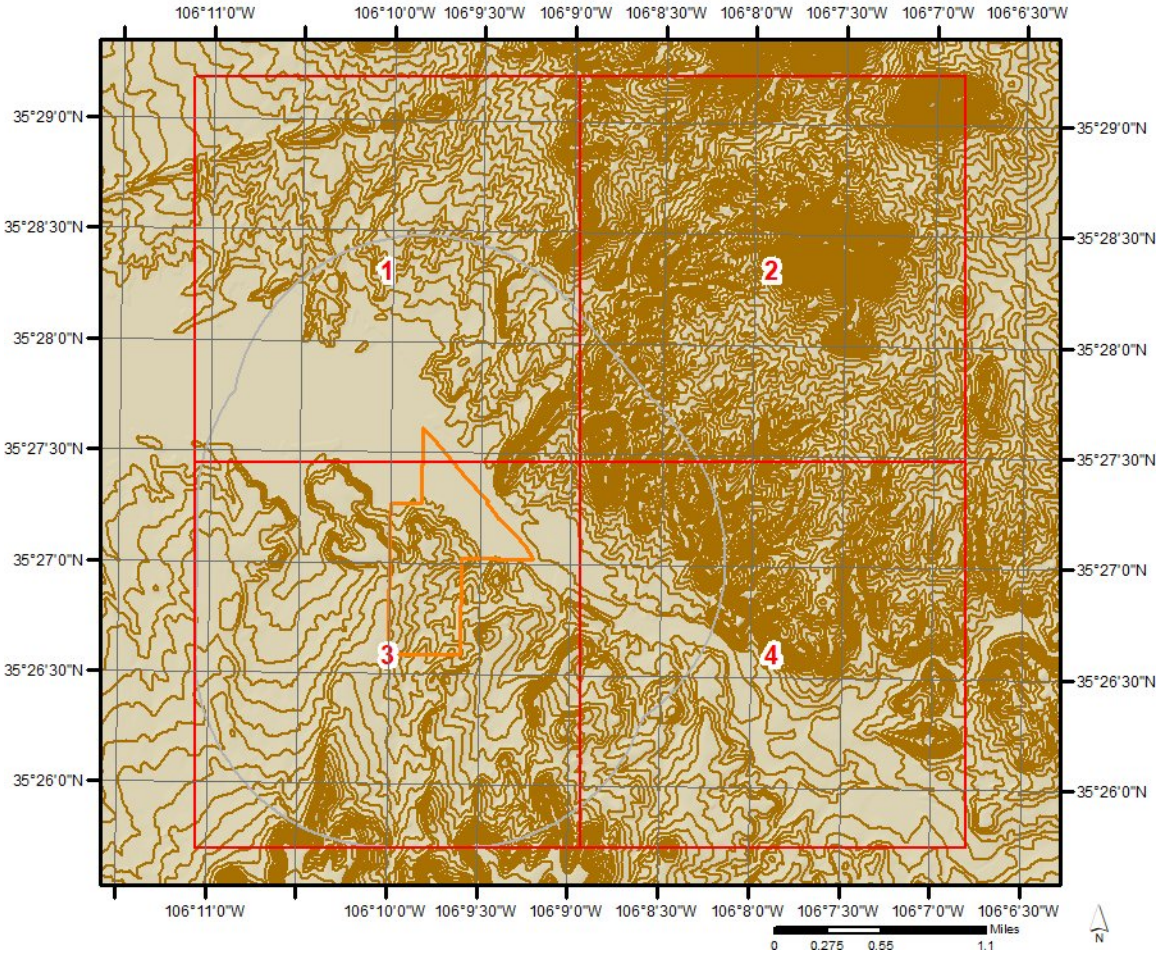
Source: USGS 7.5 Minute Topographic Map

Topographic Information

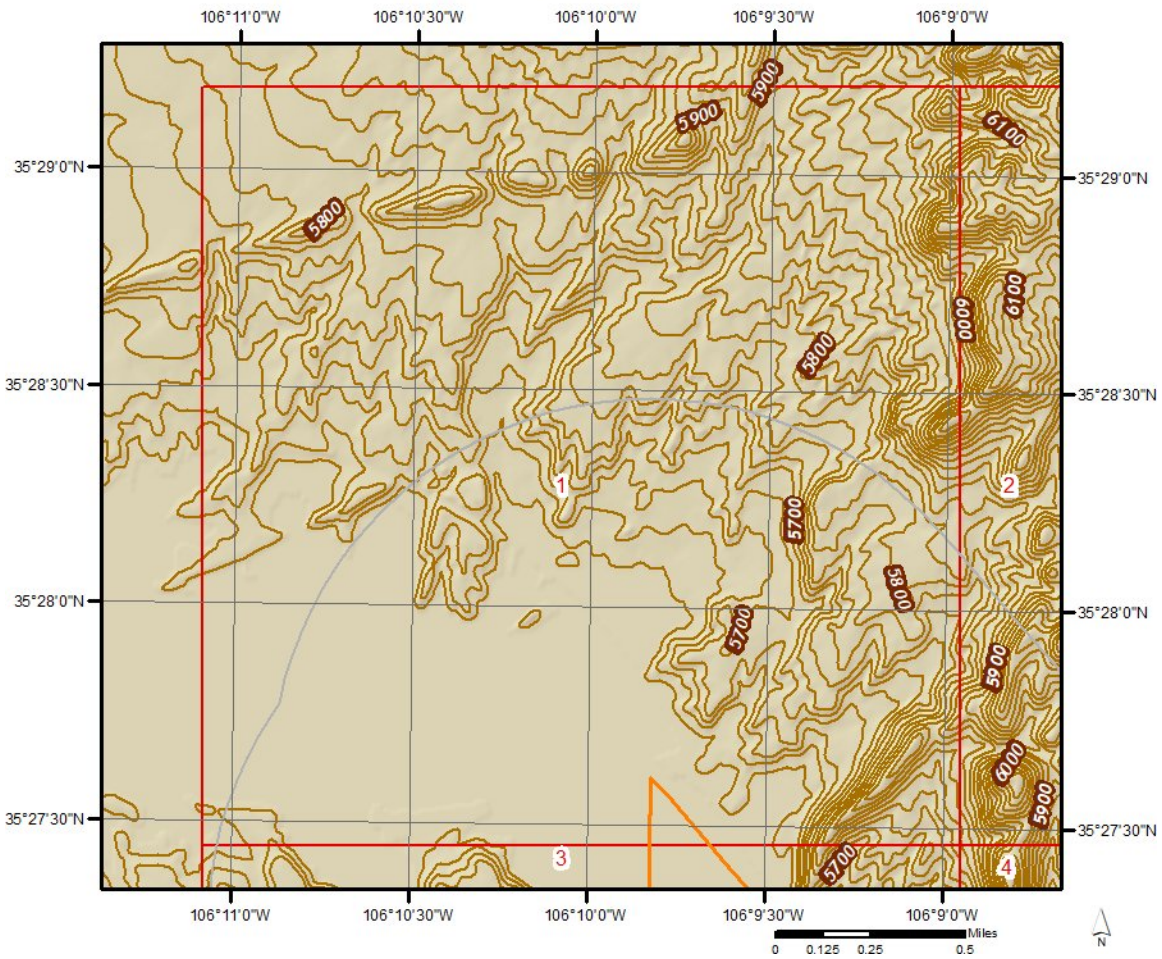
The previous topographic map(s) are created by seamlessly merging and cutting current USGS topographic data. Below are shaded relief map(s), derived from USGS elevation data to show surrounding topography in further detail.

Topographic information at project property:

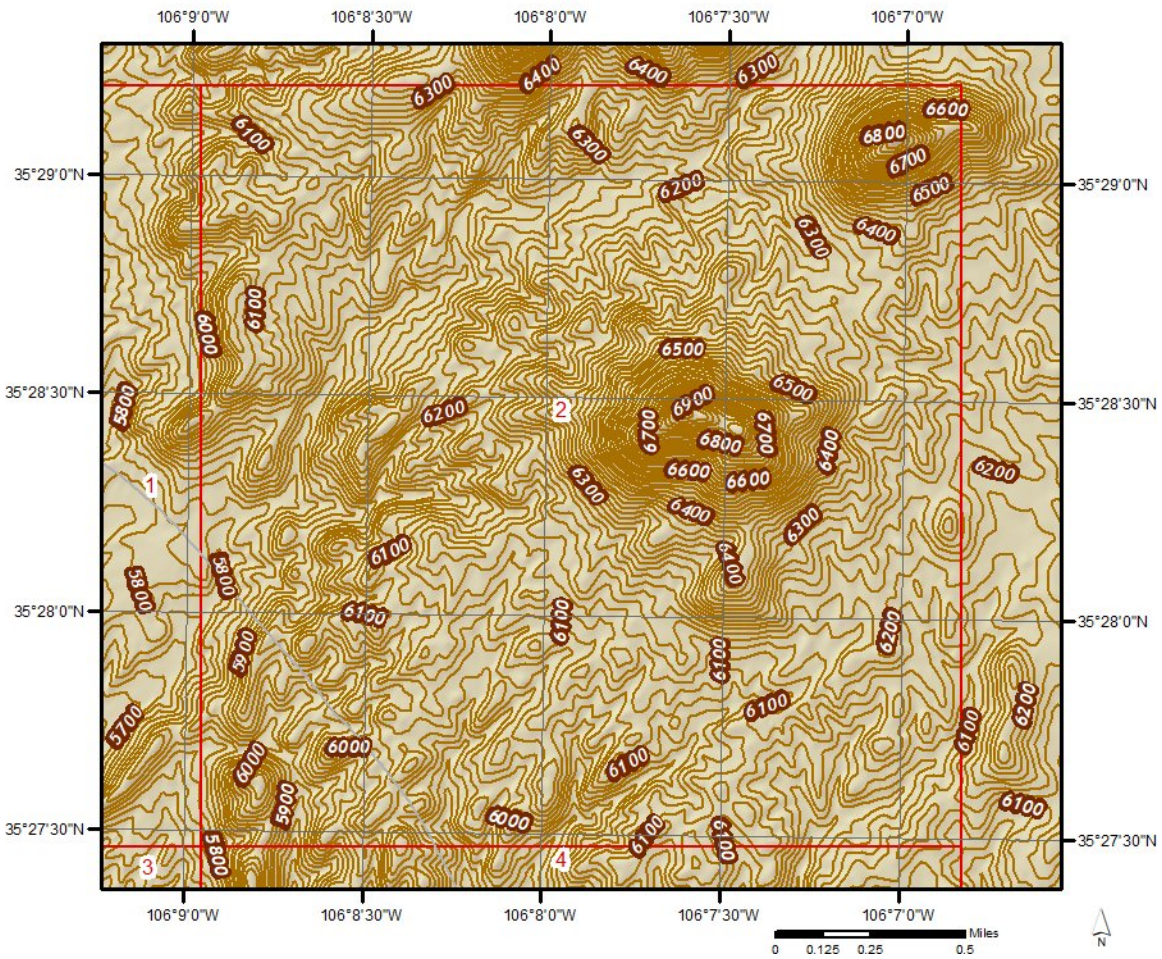
Elevation:	5,709.55 ft
Slope Direction:	NE



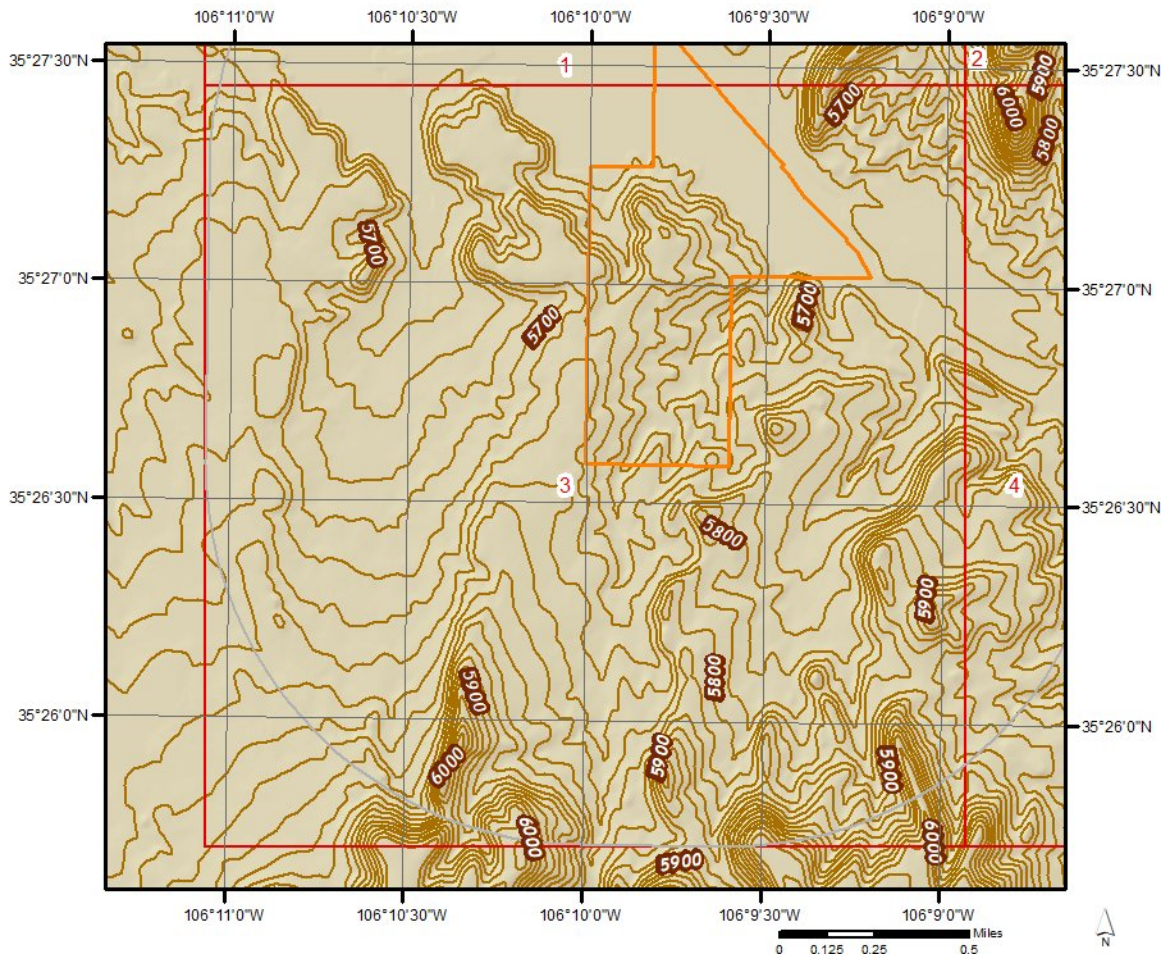
Topographic Information



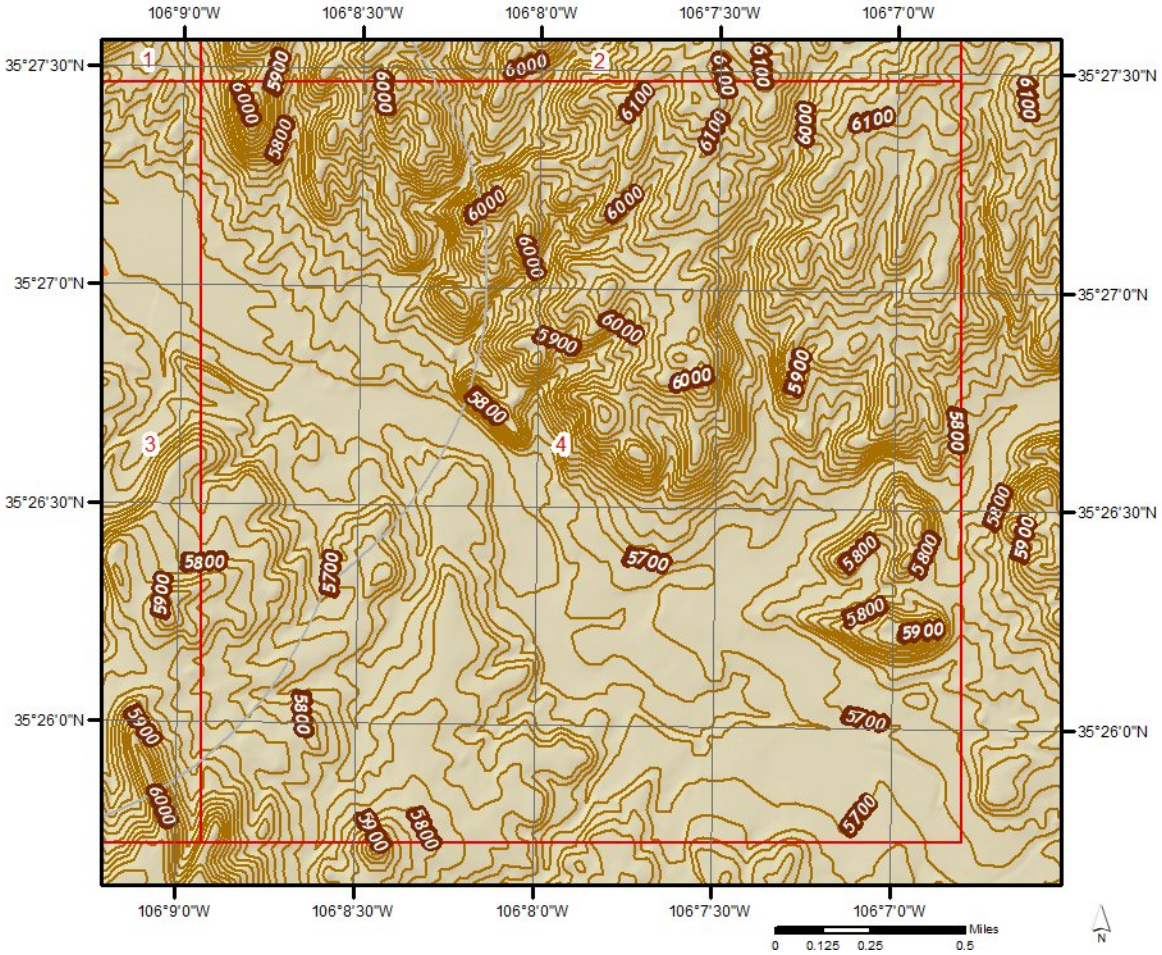
Topographic Information



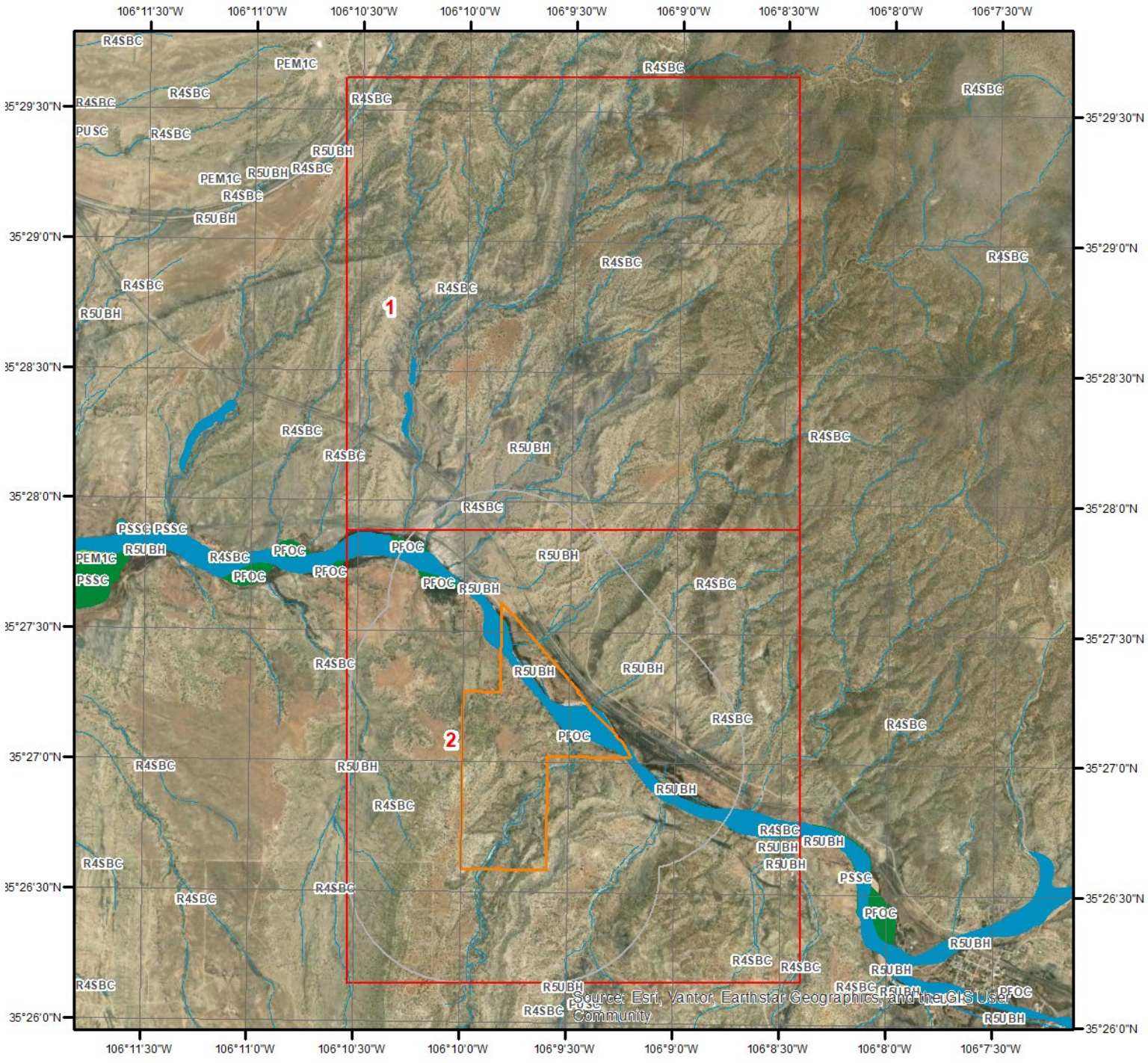
Topographic Information



Topographic Information



Hydrologic Information



Wetland

0 0.275 0.55 1.1 Miles

N

This map shows wetland existence using data from US Fish & Wildlife.
Data coverage is shown to the right. Gray indicates no data available in the area.

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

ERIS

Hydrologic Information



Wetland Type - Page 1

0 0.125 0.25 0.5 Miles

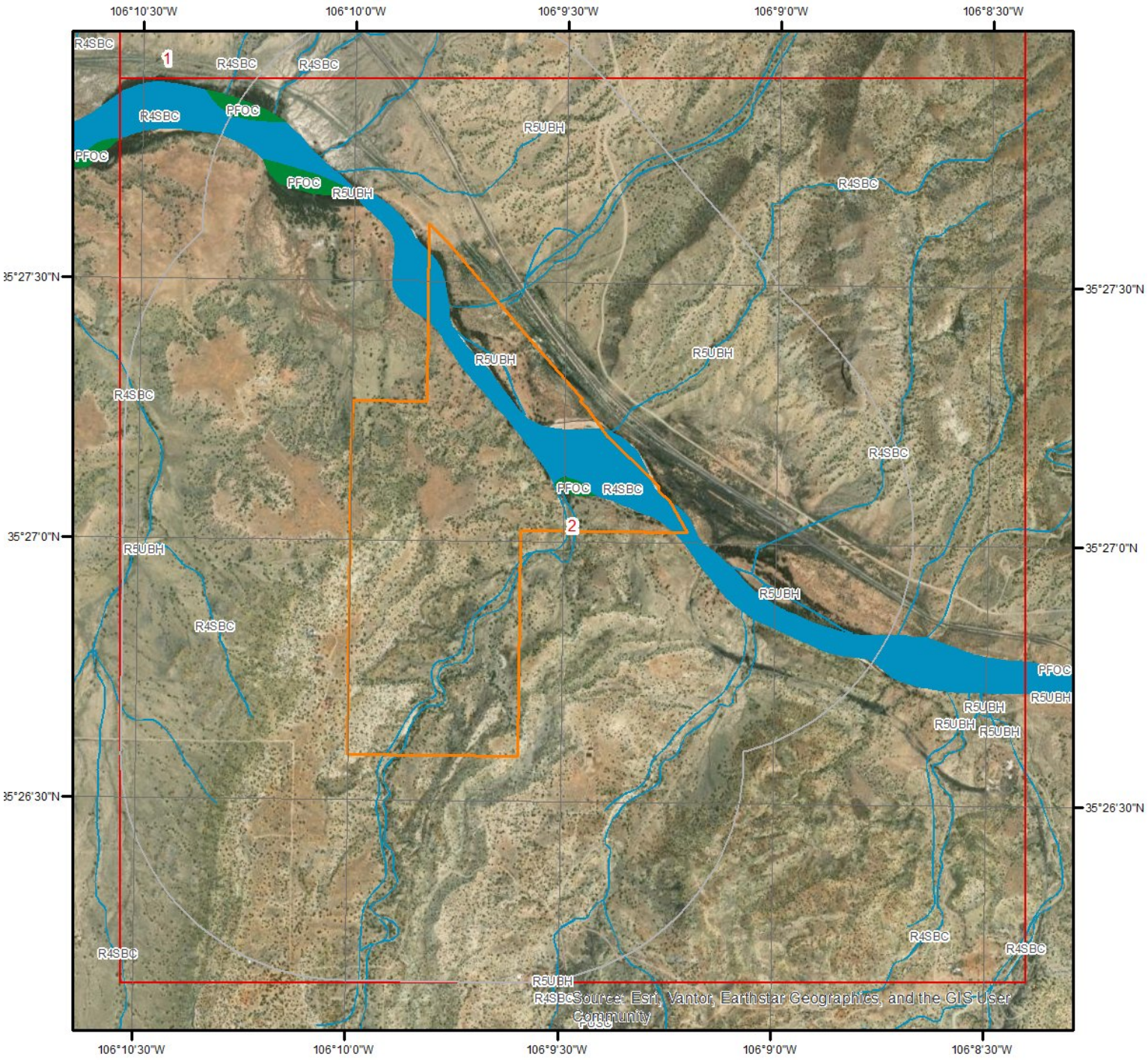
This map shows wetland existence using data from US Fish & Wildlife.
Data coverage is shown to the right. Gray indicates no data available in the area.

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

N

ERIS

Hydrologic Information



Wetland Type - Page 2

0 0.125 0.25 0.5 Miles

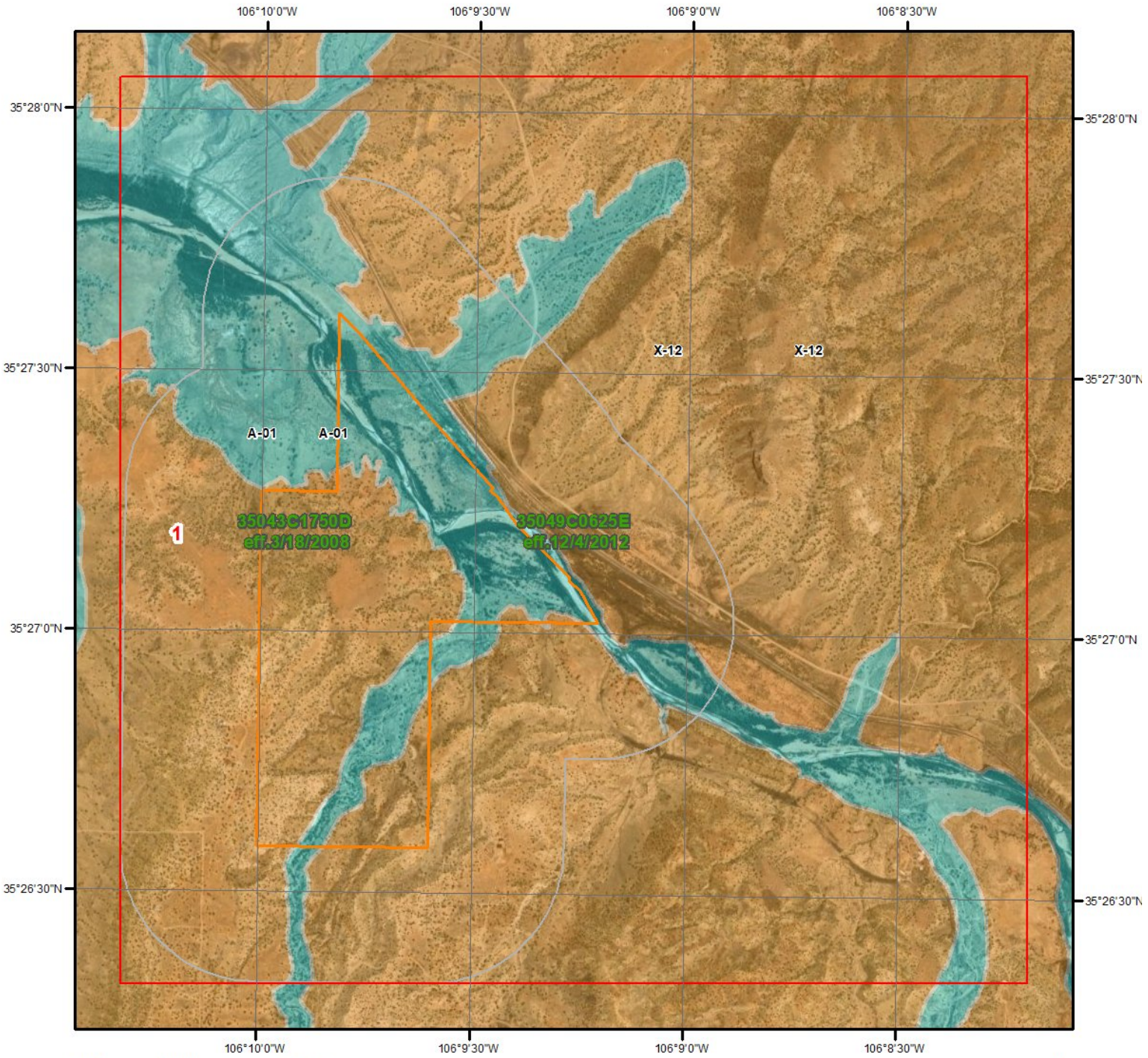
N

This map shows wetland existence using data from US Fish & Wildlife.
Data coverage is shown to the right. Gray indicates no data available in the area.

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

ERIS

Hydrologic Information



Flood Hazard Zones

This map shows FEMA flood hazard zones based on FEMA's National Flood Hazard Layer. FIRM Panels are overlayed. An absent FIRM panel represents no data available.

Miles
0 0.2 0.4

N

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee
- Open Water

Quadrangle(s): San Felipe Pueblo NE,NM; Golden,NM; Hagan,NM; Picture Rock,NM;

ERIS

Hydrologic Information



Flood Hazard Zones - Page 1

This map shows FEMA flood hazard zones based on FEMA's National Flood Hazard Layer. FIRM Panels are overlayed. An absent FIRM panel represents no data available.

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee
- Open Water

Quadrangle(s):

Hydrologic Information

The Wetland Type map shows wetland existence overlaid on an aerial imagery. The Flood Hazard Zones map shows FEMA flood hazard zones overlaid on an aerial imagery. Relevant FIRM panels and detailed zone information is provided below.
For detailed Zone descriptions please click the link: https://floodadvocate.com/fema-zone-definitions

Available FIRM Panels in area:	35049C0625E(effective:2012-12-04) 35043C1750D(effective:2008-03-18)

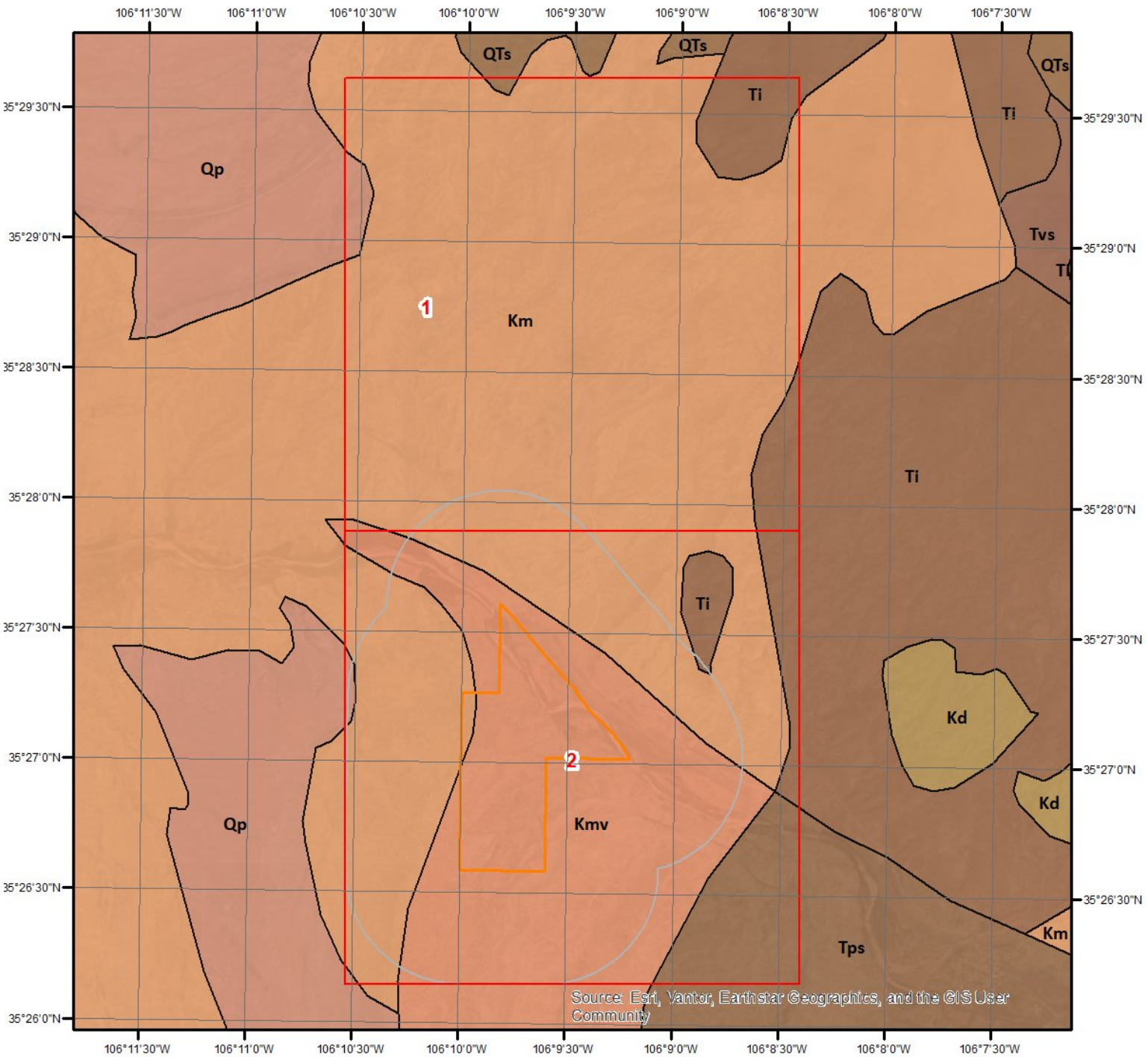
Flood Zone A-01

Zone:	A
Zone subtype:	

Flood Zone X-12

Zone:	X
Zone subtype:	AREA OF MINIMAL FLOOD HAZARD

Geologic Information



Geologic Units

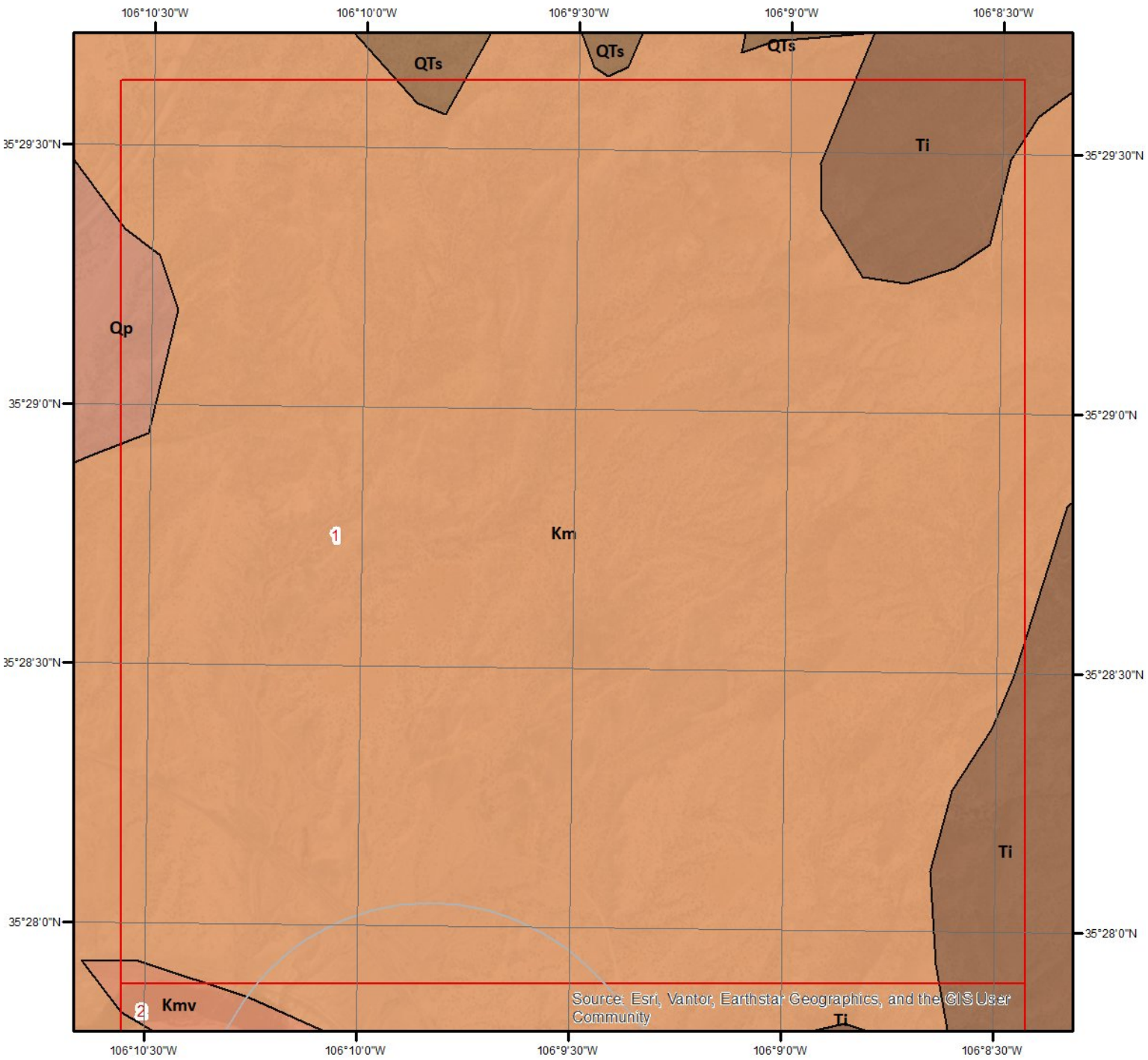
This maps shows geologic units in the area. Please refer to the report for detailed descriptions.

N

0 0.5 1 Miles

ERIS

Geologic Information



Geologic Units - Page 1

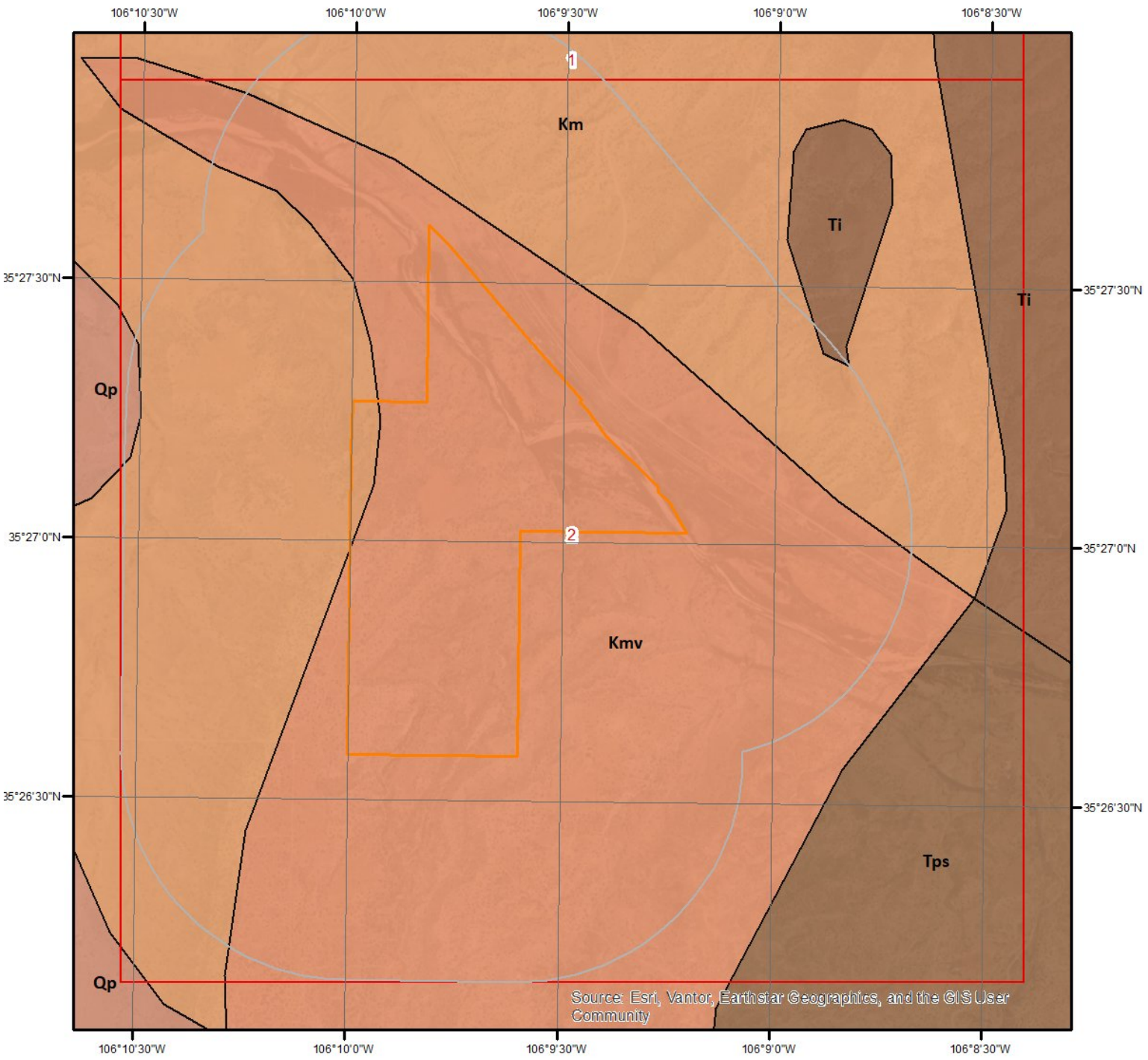
This maps shows geologic units in the area. Please refer to the report for detailed descriptions.

N

Miles
0 0.25 0.5

ERIS

Geologic Information



Geologic Units - Page 2

N

0 0.25 0.5 Miles

This maps shows geologic units in the area. Please refer to the report for detailed descriptions.

ERIS

Geologic Information

The previous page shows USGS geology information. Detailed information about each unit is provided below.

Geologic Unit Km

Unit Name:	Mancos Shale
Unit Age:	Cenomanian to Campanian
Primary Rock Type:	Shale
Secondary Rock Type:	
Unit Description:	Divided into Upper and Lower parts by Gallup Sandstone.

Geologic Unit Kmv

Unit Name:	Mesaverde Group
Unit Age:	Campanian to Turonian
Primary Rock Type:	Sandstone
Secondary Rock Type:	Siltstone
Unit Description:	Includes Cliff House Sandstone, Menefee Formation, and Point Lookout Sandstone.

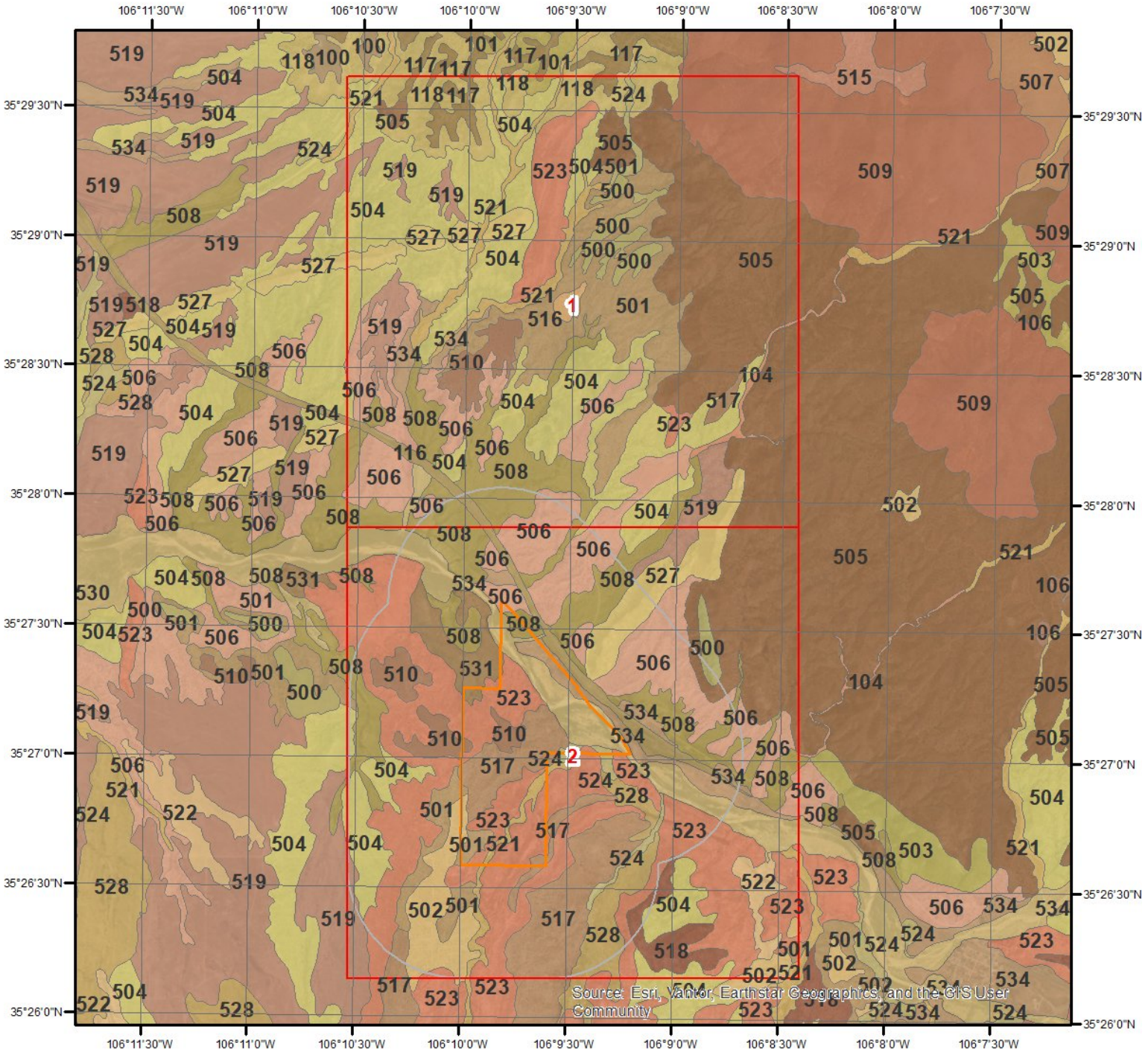
Geologic Unit Qp

Unit Name:	Piedmont alluvial deposits
Unit Age:	Holocene to lower Pleistocene
Primary Rock Type:	Unconsolidated
Secondary Rock Type:	
Unit Description:	Includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans. May locally include uppermost Pliocene deposits.

Geologic Unit Ti

Unit Name:	Tertiary intrusive rocks of intermediate to silicic composition
Unit Age:	Pliocene to Eocene
Primary Rock Type:	Granitic
Secondary Rock Type:	Syenitic
Unit Description:	Includes monzonitic to granitic plutons, stocks, laccoliths, and porphyritic dikes in deeply eroded magmatic centers; and andesitic, dacitic, or rhyolitic plugs and dikes near cauldrons or stratovolcanoes. In the Latir field, fine-grained rhyolitic dikes commonly cut coarse-grained granitic plutons. Includes alkaline laccoliths, plugs, and dikes in Colfax County. North-trending dikes near Capitan include some mafic diabase dikes.

Soil Information



SSURGO Soils

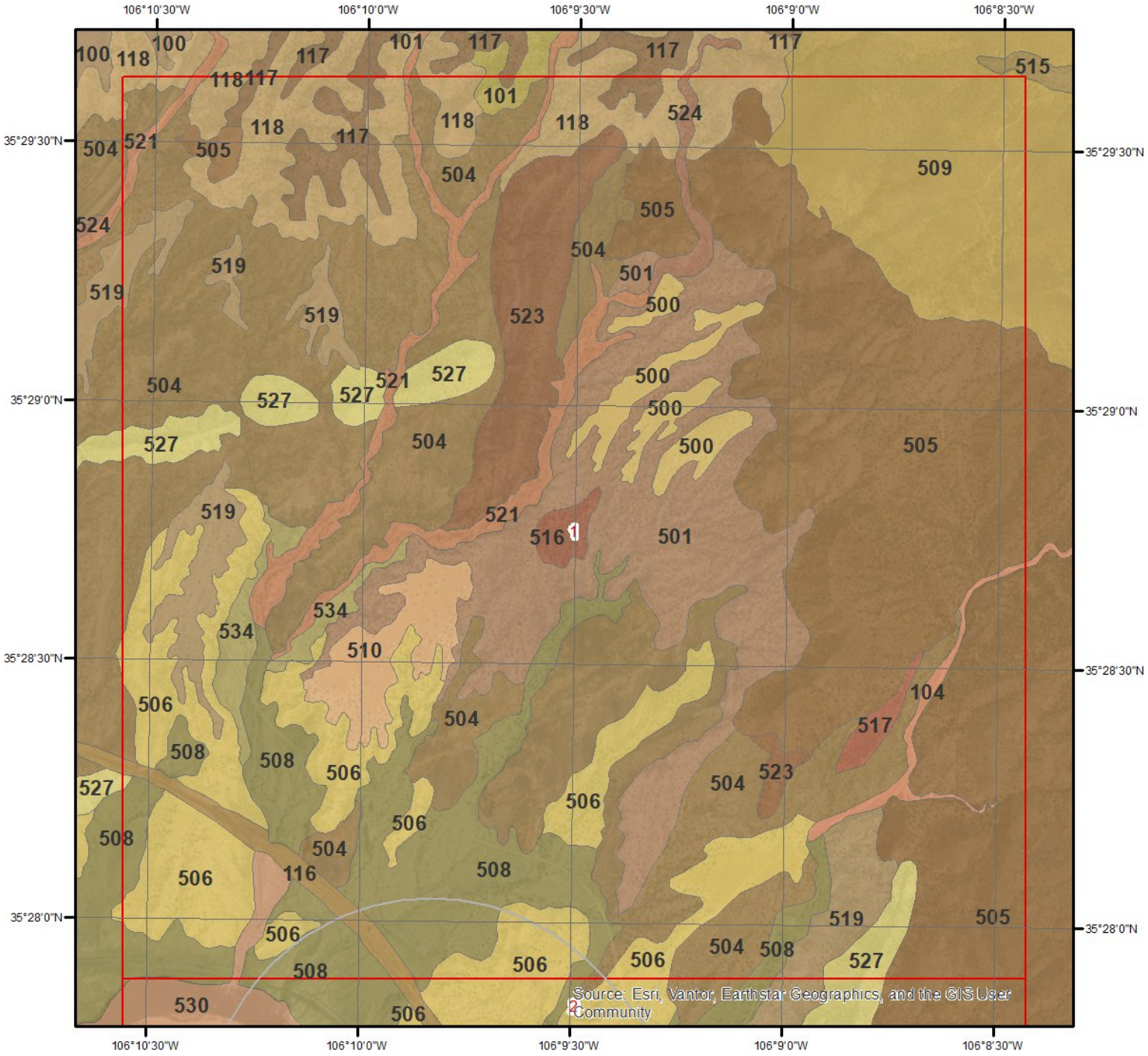
N

0 0.5 1 Miles

This maps shows SSURGO soil units around the target property. Please refer to the report for detailed soil descriptions.

ERIS

Soil Information



SSURGO Soils - Page 1

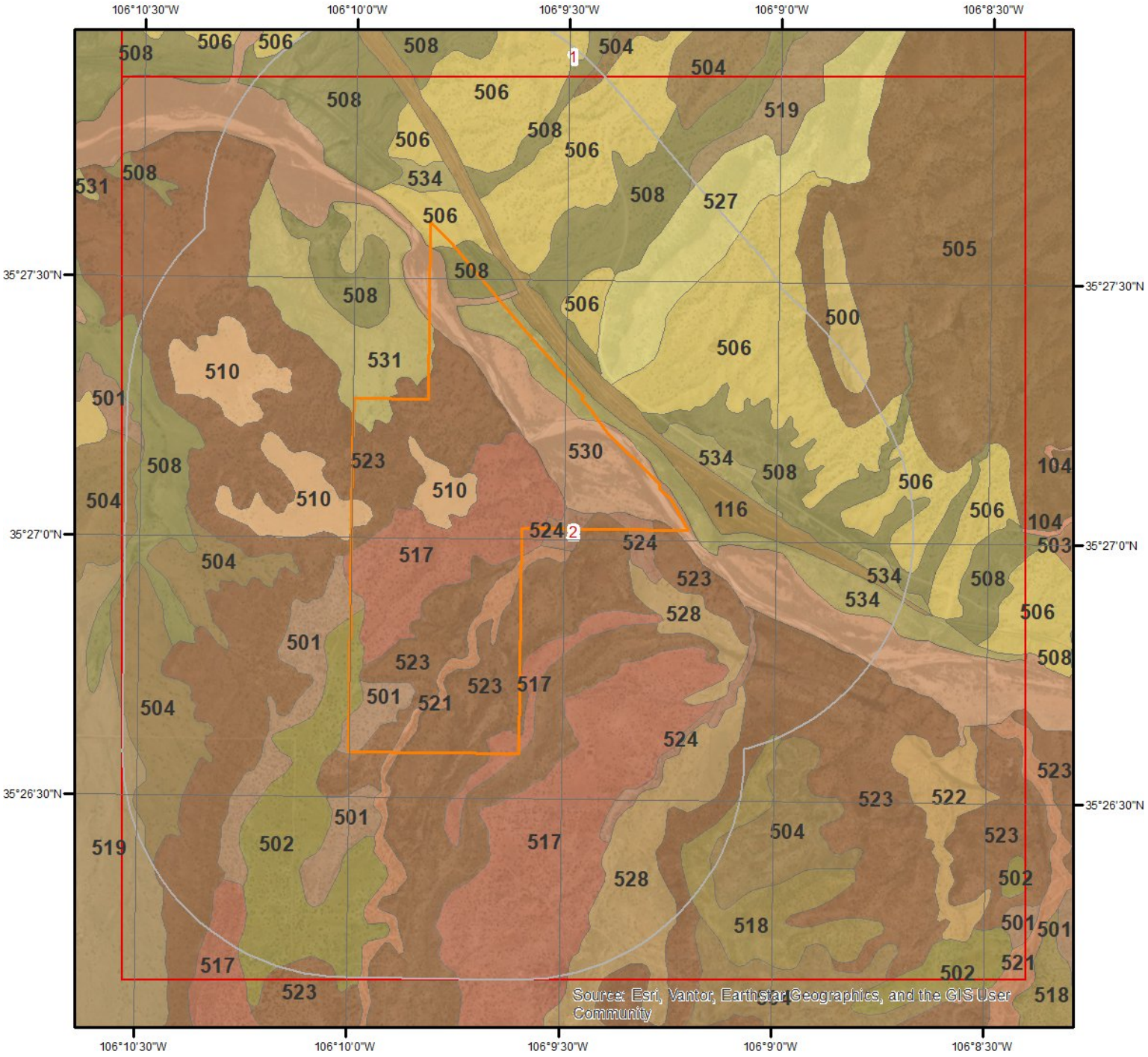
N

0 0.25 0.5 Miles

This maps shows SSURGO soil units around the target property. Please refer to the report for detailed soil descriptions.

ERIS

Soil Information



SSURGO Soils - Page 2

N

Miles
0 0.25 0.5

This maps shows SSURGO soil units around the target property. Please refer to the report for detailed soil descriptions.

ERIS

Soil Information

The previous page shows a soil map using SSURGO data from USDA Natural Resources Conservation Service. Detailed information about each unit is provided below.

Map Unit 116 (22.84%)

Map Unit Name:	Arents-Urban land-Orthents complex, 1 to 60 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.
Major components are printed below	
Arents(50%)	
horizon ABkp(0cm to 10cm)	Gravelly loam
horizon Btkp1(10cm to 66cm)	Gravelly loam
horizon Btkp2(66cm to 117cm)	Gravelly loam
horizon Btkp3(117cm to 160cm)	Loam
horizon BCkp(160cm to 229cm)	Loam
Orthents(20%)	
horizon C1(0cm to 18cm)	Very gravelly coarse sand
horizon C2(18cm to 38cm)	Very gravelly coarse sand
horizon C3(38cm to 203cm)	Stratified gravelly coarse sand to very gravelly coarse sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 116 - Arents-Urban land-Orthents complex, 1 to 60 percent slopes

Component: Arents (50%)
The Arents component makes up 50 percent of the map unit. Slopes are 1 to 45 percent. This component is on road beds on eroded fan remnants, fan piedmonts. The parent material consists of roadfill material derived from granite, gneiss, schist, sandstone, or siltstone. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 8. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 7 within 30 inches of the soil surface.

Component: Urban land (25%)
Generated brief soil descriptions are created for major soil components. The Urban land is a miscellaneous area.

Component: Orthents (20%)
The Orthents component makes up 20 percent of the map unit. Slopes are 30 to 60 percent. This component is on cuts (road, railroad, etc.), fan piedmonts, eroded fan remnants. The parent material consists of roadcut material derived from granite, gneiss, schist, loess, sandstone, or siltstone. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 8e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 2 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Alire (1%)
Generated brief soil descriptions are created for major soil components. The Alire soil is a minor component.

Component: Tanoan (1%)
Generated brief soil descriptions are created for major soil components. The Tanoan soil is a minor component.

Component: Khapo (1%)
Generated brief soil descriptions are created for major soil components. The Khapo soil is a minor component.

Component: Predawn (1%)
Generated brief soil descriptions are created for major soil components. The Predawn soil is a minor component.

Component: Panky (1%)
Generated brief soil descriptions are created for major soil components. The Panky soil is a minor component.

Map Unit 500 (0.15%)

Map Unit Name:	Sedillo very gravelly loam, 2 to 6 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Sedillo(90%)

horizon A(0cm to 10cm)	Very gravelly loam
horizon Bt(10cm to 28cm)	Very gravelly clay loam
horizon Btk(28cm to 48cm)	Very cobbly clay loam
horizon Bk1(48cm to 79cm)	Extremely cobbly loam
horizon Bk2(79cm to 109cm)	Extremely cobbly sandy loam
horizon BCk(109cm to 259cm)	Extremely cobbly coarse sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 500 - Sedillo very gravelly loam, 2 to 6 percent slopes

Component: Sedillo (90%)
The Sedillo component makes up 90 percent of the map unit. Slopes are 2 to 6 percent. This component is on fan remnants, fan piedmonts. The parent material consists of alluvium derived from monzonite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the F036XA136NM Pinyon-juniper-apache Plume ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 27 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Cerrillos (4%)
Generated brief soil descriptions are created for major soil components. The Cerrillos soil is a minor component.

Component: Ildefonso (3%)
Generated brief soil descriptions are created for major soil components. The Ildefonso soil is a minor component.

Component: Truehill (3%)
Generated brief soil descriptions are created for major soil components. The Truehill soil is a minor component.

Map Unit 501 (1.02%)

Map Unit Name:	Truehill extremely gravelly loam, 25 to 55 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly

	wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Truehill(90%)

horizon A(0cm to 10cm)	Extremely gravelly loam
horizon Bt(10cm to 18cm)	Very gravelly clay loam
horizon Btk(18cm to 30cm)	Very gravelly clay loam
horizon Bk1(30cm to 56cm)	Extremely cobbly sandy loam
horizon Bk2(56cm to 102cm)	Extremely gravelly coarse sandy loam
horizon Bk3(102cm to 124cm)	Extremely gravelly coarse sand
horizon Bk4(124cm to 170cm)	Extremely gravelly sandy clay loam
horizon Bk5(170cm to 203cm)	Extremely gravelly loamy coarse sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 501 - Truehill extremely gravelly loam, 25 to 55 percent slopes

Component: Truehill (90%)
The Truehill component makes up 90 percent of the map unit. Slopes are 25 to 55 percent. This component is on fan remnants, fan piedmonts. The parent material consists of alluvium derived from monzonite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the F035XG134NM Gravelly - Woodland ecological site. Nonirrigated land capability classification is 8. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 35 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Ildefonso (5%)
Generated brief soil descriptions are created for major soil components. The Ildefonso soil is a minor component.

Component: Cerropelon (2%)
Generated brief soil descriptions are created for major soil components. The Cerropelon soil is a minor component.

Component: Sedillo (2%)
Generated brief soil descriptions are created for major soil components. The Sedillo soil is a minor component.

Component: Rock outcrop (1%)
Generated brief soil descriptions are created for major soil components. The Rock outcrop soil is a minor component.

Map Unit 502 (0.81%)

Map Unit Name:	Khapo fine sandy loam, 1 to 3 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Khapo(90%)

horizon A(0cm to 7cm)	Fine sandy loam
horizon Bt(7cm to 20cm)	Fine sandy loam
horizon Btk1(20cm to 69cm)	Fine sandy loam
horizon Btk2(69cm to 93cm)	Sandy clay loam
horizon Btk3(93cm to 120cm)	Sandy clay loam
horizon 2BCk(120cm to 206cm)	Gravelly sandy loam

Component Description:

Soil Information

Minor map unit components are excluded from this report.

Map Unit: 502 - Khapo fine sandy loam, 1 to 3 percent slopes

Component: Khapo (90%)
The Khapo component makes up 90 percent of the map unit. Slopes are 1 to 3 percent. This component is on eroded fan remnants, semi-bolsons. The parent material consists of eolian deposits derived from sandstone and shale over slope alluvium derived from monzonite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XA112NM Loamy ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 5 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Cerrillos (6%)
Generated brief soil descriptions are created for major soil components. The Cerrillos soil is a minor component.

Component: Zepol (4%)
Generated brief soil descriptions are created for major soil components. The Zepol soil is a minor component.

Map Unit 504 (4.2%)

Map Unit Name:	Sandoval-Badland complex, 15 to 45 percent slopes
Bedrock Depth - Min:	0cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Sandoval(70%)

horizon A(0cm to 8cm)	Gravelly clay loam
horizon C1(8cm to 26cm)	Extremely paragravelly clay loam
horizon C2(26cm to 41cm)	Extremely paragravelly clay loam
horizon Cr(41cm to 66cm)	Cemented bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 504 - Sandoval-Badland complex, 15 to 45 percent slopes

Component: Sandoval (70%)
The Sandoval component makes up 70 percent of the map unit. Slopes are 15 to 45 percent. This component is on semi-bolsons, low hills. The parent material consists of slope alluvium derived from sandstone and shale over residuum weathered from shale. Depth to a root restrictive layer, bedrock, paralithic, is 10 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XA130NM Shale Hills 10-14"p.z. (provisional) ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 12 percent. The soil has a very slightly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Badland (20%)
Generated brief soil descriptions are created for major soil components. The Badland is a miscellaneous area.

Component: Cumacho (5%)
Generated brief soil descriptions are created for major soil components. The Cumacho soil is a minor component.

Component: Rock outcrop (4%)
Generated brief soil descriptions are created for major soil components. The Rock outcrop soil is a minor component.

Component: Charalito (1%)
Generated brief soil descriptions are created for major soil components. The Charalito soil is a minor component.

Map Unit 505 (20.15%)

Map Unit Name:	Puertecito-Paraje complex, 15 to 50 percent slopes
Bedrock Depth - Min:	26cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Puertecito(50%)	
horizon A(0cm to 5cm)	Extremely cobbly sandy loam
horizon Bt(5cm to 26cm)	Very cobbly sandy clay loam
horizon 2R(26cm to 51cm)	Cemented bedrock
Paraje(40%)	
horizon A(0cm to 8cm)	Very cobbly sandy loam
horizon Bt1(8cm to 23cm)	Very cobbly clay loam
horizon Bt2(23cm to 40cm)	Very cobbly clay loam
horizon Bt3(40cm to 76cm)	Very cobbly sandy clay loam
horizon Btk(76cm to 150cm)	Very cobbly sandy clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 505 - Puertecito-Paraje complex, 15 to 50 percent slopes

Component: Puertecito (50%)
The Puertecito component makes up 50 percent of the map unit. Slopes are 15 to 35 percent. This component is on low hills, fault-block mountains. The parent material consists of slope alluvium derived from monzonite over residuum weathered from monzonite. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R070CY106NM Hills ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Paraje (40%)
The Paraje component makes up 40 percent of the map unit. Slopes are 30 to 50 percent. This component is on low hills, fault-block mountains. The parent material consists of colluvium and/or slope alluvium derived from monzonite. Depth to a root restrictive layer, abrupt textural change, is 2 to 6 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the F035XG134NM Gravelly - Woodland ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 19 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Rock outcrop (5%)
Generated brief soil descriptions are created for major soil components. The Rock outcrop soil is a minor component.

Component: Wandurn (3%)
Generated brief soil descriptions are created for major soil components. The Wandurn soil is a minor component.

Component: Penistaja family (2%)
Generated brief soil descriptions are created for major soil components. The Penistaja family soil is a minor component.

Map Unit 506 (2.86%)

Soil Information

Map Unit Name:	Ildefonso-Sandoval complex, 5 to 35 percent slopes
Bedrock Depth - Min:	49cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	A - Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil.

Major components are printed below

Ildefonso(50%)	
horizon A(0cm to 9cm)	Very gravelly sandy loam
horizon Bk1(9cm to 28cm)	Gravelly sandy loam
horizon Bk2(28cm to 74cm)	Extremely gravelly coarse sandy loam
horizon BCk(74cm to 150cm)	Gravelly sandy loam
Sandoval(40%)	
horizon A(0cm to 6cm)	Very gravelly very fine sandy loam
horizon C1(6cm to 33cm)	Gravelly sandy clay loam
horizon C2(33cm to 49cm)	Extremely paragravelly sandy clay loam
horizon Cr(49cm to 74cm)	Cemented

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 506 - Ildefonso-Sandoval complex, 5 to 35 percent slopes

Component: Ildefonso (50%)
The Ildefonso component makes up 50 percent of the map unit. Slopes are 5 to 25 percent. This component is on beveled eroded fan remnants, fan piedmonts. The parent material consists of slope alluvium derived from monzonite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XA112NM Loamy ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 6 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Sandoval (40%)
The Sandoval component makes up 40 percent of the map unit. Slopes are 15 to 35 percent. This component is on eroded fan remnants, basins. The parent material consists of slope alluvium derived from sandstone and shale over residuum weathered from calcareous shale. Depth to a root restrictive layer, bedrock, paralithic, is 10 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R035XA130NM Shale Hills 10-14"p. z. (provisional) ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 11 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Truehill (4%)
Generated brief soil descriptions are created for major soil components. The Truehill soil is a minor component.

Component: Penistaja family (3%)
Generated brief soil descriptions are created for major soil components. The Penistaja family soil is a minor component.

Component: Rock outcrop (3%)
Generated brief soil descriptions are created for major soil components. The Rock outcrop soil is a minor component.

Map Unit 508 (3.77%)

Map Unit Name:	Charalito-Riverwash complex, 1 to 3 percent slopes, flooded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	76cm

Soil Information

Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Charalito(65%)

horizon A(0cm to 3cm)	Gravelly sandy loam
horizon AC(3cm to 12cm)	Gravelly sandy clay loam
horizon C1(12cm to 56cm)	Gravelly coarse sandy loam
horizon C2(56cm to 101cm)	Gravelly sandy clay loam
horizon C3(101cm to 153cm)	Paragravelly sandy loam

Riverwash(20%)

horizon C1(0cm to 5cm)	Very gravelly loamy coarse sand
horizon C2(5cm to 75cm)	Gravelly fine sandy loam
horizon C3(75cm to 203cm)	Very gravelly loamy sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 508 - Charalito-Riverwash complex, 1 to 3 percent slopes, flooded

Component: Charalito (65%)
The Charalito component makes up 65 percent of the map unit. Slopes are 1 to 3 percent. This component is on semi-bolsons, inset fans on valley floors. The parent material consists of alluvium derived from monzonite, limestone, and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XG114NM Gravelly ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 14 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Riverwash (20%)
Generated brief soil descriptions are created for major soil components. The Riverwash is a miscellaneous area.

Component: Chupe (7%)
Generated brief soil descriptions are created for major soil components. The Chupe soil is a minor component.

Component: Cumacho (4%)
Generated brief soil descriptions are created for major soil components. The Cumacho soil is a minor component.

Component: Galisteo (3%)
Generated brief soil descriptions are created for major soil components. The Galisteo soil is a minor component.

Component: Zia (1%)
Generated brief soil descriptions are created for major soil components. The Zia soil is a minor component.

Map Unit 510 (0.54%)

Map Unit Name:	Cerrillos-Sedillo complex, 1 to 5 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Cerrillos(60%)

horizon A(0cm to 10cm)	Fine sandy loam
horizon Bt(10cm to 30cm)	Clay loam
horizon Btk(30cm to 51cm)	Clay loam

horizon Bk1(51cm to 91cm)	Gravelly sandy clay loam
horizon Bk2(91cm to 117cm)	Sandy clay loam
horizon Bk3(117cm to 150cm)	Gravelly sandy clay loam
horizon Bk4(150cm to 218cm)	Gravelly sandy clay loam
horizon Bk5(218cm to 239cm)	Sandy clay loam
Sedillo(30%)	
horizon A(0cm to 8cm)	Very fine sandy loam
horizon BA(8cm to 23cm)	Loam
horizon Btk(23cm to 38cm)	Very cobbly clay loam
horizon Bk1(38cm to 64cm)	Extremely gravelly loam
horizon Bk2(64cm to 99cm)	Very cobbly sandy loam
horizon Bk3(99cm to 132cm)	Cobbly sandy clay loam
horizon Bk4(132cm to 175cm)	Gravelly sandy clay loam
horizon Bk5(175cm to 203cm)	Gravelly sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 510 - Cerrillos-Sedillo complex, 1 to 5 percent slopes

Component: Cerrillos (60%)
The Cerrillos component makes up 60 percent of the map unit. Slopes are 1 to 3 percent. This component is on fan remnants, fan piedmonts. The parent material consists of eolian deposits derived from sandstone and shale over alluvium derived from monzonite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R035XA112NM Loamy ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 28 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Sedillo (30%)
The Sedillo component makes up 30 percent of the map unit. Slopes are 2 to 5 percent. This component is on fan remnants, fan piedmonts. The parent material consists of eolian deposits and alluvium derived from sandstone, shale, and monzonite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XG114NM Gravelly ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 35 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Penistaja family (5%)
Generated brief soil descriptions are created for major soil components. The Penistaja family soil is a minor component.

Component: Truehill (3%)
Generated brief soil descriptions are created for major soil components. The Truehill soil is a minor component.

Component: Ildefonso (2%)
Generated brief soil descriptions are created for major soil components. The Ildefonso soil is a minor component.

Map Unit 517 (2.96%)

Map Unit Name:	Puertecito extremely gravelly fine sandy loam, 15 to 25 percent slopes
Bedrock Depth - Min:	28cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Soil Information

Major components are printed below

Puertecito(90%)

horizon A(0cm to 5cm)	Extremely gravelly fine sandy loam
horizon Bt(5cm to 15cm)	Gravelly loam
horizon Btk(15cm to 28cm)	Very gravelly loam
horizon R(28cm to 53cm)	Cemented bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 517 - Puertecito extremely gravelly fine sandy loam, 15 to 25 percent slopes

Component: Puertecito (90%)
The Puertecito component makes up 90 percent of the map unit. Slopes are 15 to 25 percent. This component is on dip slopes on cuestas, semi-bolsons. The parent material consists of slope alluvium derived from sandstone and shale over residuum weathered from sandstone. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R070CY106NM Hills ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 9 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Rock outcrop (6%)
Generated brief soil descriptions are created for major soil components. The Rock outcrop soil is a minor component.

Component: Sandoval (4%)
Generated brief soil descriptions are created for major soil components. The Sandoval soil is a minor component.

Map Unit 518 (0.45%)

Map Unit Name:	Rock outcrop-Skyvillage complex, 5 to 35 percent slopes
Bedrock Depth - Min:	0cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	null
Hydrologic Group - Dominant:	null

Major components are printed below

Rock outcrop(50%)

horizon R(0cm to 158cm)	Bedrock

Skyvillage(40%)

horizon A(0cm to 8cm)	Gravelly loamy sand
horizon C(8cm to 15cm)	Gravelly sandy loam
horizon R(15cm to 40cm)	Cemented bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 518 - Rock outcrop-Skyvillage complex, 5 to 35 percent slopes

Component: Rock outcrop (50%)
Generated brief soil descriptions are created for major soil components. The Rock outcrop is a miscellaneous area.

Component: Skyvillage (40%)
The Skyvillage component makes up 40 percent of the map unit. Slopes are 5 to 35 percent. This component is on semi-bolsons, ridges. The parent material consists of residuum weathered from sandstone. Depth to a root restrictive layer, bedrock, lithic, is 2 to 10 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no

zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. This component is in the R035XG121NM Shallow Sandstone ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Sandoval (4%)
Generated brief soil descriptions are created for major soil components. The Sandoval soil is a minor component.

Component: Cerropelon (3%)
Generated brief soil descriptions are created for major soil components. The Cerropelon soil is a minor component.

Component: Cumacho (3%)
Generated brief soil descriptions are created for major soil components. The Cumacho soil is a minor component.

Map Unit 519 (1.83%)

Map Unit Name:	Cumacho fine sandy loam, 2 to 8 percent slopes
Bedrock Depth - Min:	117cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Cumacho(90%)

horizon A(0cm to 3cm)	Fine sandy loam
horizon Bt(3cm to 17cm)	Loam
horizon Btk(17cm to 28cm)	Clay loam
horizon 2Bk(28cm to 49cm)	Clay loam
horizon 2BCky(49cm to 83cm)	Paragravelly clay loam
horizon 2C(83cm to 117cm)	Extremely paragravelly fine sandy loam
horizon 2Cd(117cm to 163cm)	Cemented bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 519 - Cumacho fine sandy loam, 2 to 8 percent slopes

Component: Cumacho (90%)
The Cumacho component makes up 90 percent of the map unit. Slopes are 2 to 8 percent. This component is on semi-bolsons, pediments. The parent material consists of eolian deposits and alluvium derived from sandstone and shale over residuum weathered from shale. Depth to a root restrictive layer, bedrock, densic, is 39 to 59 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XA112NM Loamy ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 15 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Penistaja family (5%)
Generated brief soil descriptions are created for major soil components. The Penistaja family soil is a minor component.

Component: Cerrillos (3%)
Generated brief soil descriptions are created for major soil components. The Cerrillos soil is a minor component.

Component: Ildefonso (2%)
Generated brief soil descriptions are created for major soil components. The Ildefonso soil is a minor component.

Map Unit 521 (0.56%)

Soil Information

Map Unit Name:	Devargas-Riovista-Riverwash complex, 0 to 5 percent slopes, flooded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Devargas(50%)	
horizon A(0cm to 5cm)	Sandy loam
horizon Bt(5cm to 15cm)	Loam
horizon Btk1(15cm to 46cm)	Loam
horizon Btk2(46cm to 76cm)	Sandy loam
horizon 2BCk(76cm to 152cm)	Extremely cobbly coarse sand
Riovista(30%)	
horizon A1(0cm to 13cm)	Cobbly sandy loam
horizon A2(13cm to 36cm)	Extremely cobbly sandy loam
horizon C1(36cm to 76cm)	Extremely cobbly coarse sand
horizon C2(76cm to 152cm)	Stratified coarse sand to extremely cobbly loamy sand
Riverwash(10%)	
horizon C1(0cm to 25cm)	Gravelly coarse sand
horizon C2(25cm to 127cm)	Very gravelly coarse sand
horizon C3(127cm to 165cm)	Gravelly sandy loam
horizon C4(165cm to 216cm)	Gravelly coarse sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 521 - Devargas-Riovista-Riverwash complex, 0 to 5 percent slopes, flooded

Component: Devargas (50%)
The Devargas component makes up 50 percent of the map unit. Slopes are 1 to 5 percent. This component is on stream terraces, fan piedmonts. The parent material consists of alluvium derived from monzonite and sandstone. Depth to a root restrictive layer, strongly contrasting textural stratification, is 20 to 39 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XA112NM Loamy ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 6 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Riovista (30%)
The Riovista component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on fan piedmonts, flood-plain steps on valley floors. The parent material consists of alluvium derived from monzonite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XG114NM Gravelly ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Riverwash (10%)
Generated brief soil descriptions are created for major soil components. The Riverwash is a miscellaneous area.

Component: Penistaja family (6%)
Generated brief soil descriptions are created for major soil components. The Penistaja family soil is a minor component.

Component: Ildefonso (4%)
Generated brief soil descriptions are created for major soil components. The Ildefonso soil is a minor component.

Soil Information

Map Unit 523 (16.15%)

Map Unit Name:	Kech-Cerropelon-Rock outcrop complex, 5 to 50 percent slopes
Bedrock Depth - Min:	46cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Kech(45%)	
horizon A1(0cm to 5cm)	Loamy fine sand
horizon A2(5cm to 10cm)	Fine sandy loam
horizon Bt1(10cm to 21cm)	Gravelly sandy clay loam
horizon Bt2(21cm to 31cm)	Sandy clay loam
horizon Bt3(31cm to 46cm)	Sandy clay loam
horizon R(46cm to 71cm)	Cemented bedrock
Cerropelon(35%)	
horizon A(0cm to 3cm)	Very cobbly sandy loam
horizon Bt1(3cm to 16cm)	Gravelly clay loam
horizon Bt2(16cm to 31cm)	Clay loam
horizon Btk(31cm to 54cm)	Clay loam
horizon BCk(54cm to 71cm)	Clay loam
horizon Cr(71cm to 100cm)	Cemented bedrock
Rock outcrop(10%)	
horizon R(0cm to 158cm)	Bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 523 - Kech-Cerropelon-Rock outcrop complex, 5 to 50 percent slopes

Component: Kech (45%)
The Kech component makes up 45 percent of the map unit. Slopes are 5 to 10 percent. This component is on semi-bolsons, structural benches on bedrock controlled hills. The parent material consists of slope alluvium derived from sandstone over residuum weathered from sandstone. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XG121NM Shallow Sandstone ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 2 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Cerropelon (35%)
The Cerropelon component makes up 35 percent of the map unit. Slopes are 15 to 50 percent. This component is on semi-bolsons, bedrock controled hills. The parent material consists of slope alluvium derived from sandstone and shale over residuum weathered from shale. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 39 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. This component is in the R035XG122NM Sandstone Hills ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 1 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Rock outcrop (10%)
Generated brief soil descriptions are created for major soil components. The Rock outcrop is a miscellaneous area.

Component: Skyvillage (5%)
Generated brief soil descriptions are created for major soil components. The Skyvillage soil is a minor component.

Component: Cumacho (3%)

Soil Information

Generated brief soil descriptions are created for major soil components. The Cumacho soil is a minor component.

Component: Badland (2%)
Generated brief soil descriptions are created for major soil components. The Badland soil is a minor component.

Map Unit 524 (0.17%)

Map Unit Name:	Zia-Gullied land complex, 2 to 10 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Zia(65%)

horizon A1(0cm to 8cm)	Fine sandy loam
horizon A2(8cm to 33cm)	Fine sandy loam
horizon C1(33cm to 68cm)	Fine sandy loam
horizon 2C2(68cm to 104cm)	Loamy fine sand
horizon 2C3(104cm to 200cm)	Fine sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 524 - Zia-Gullied land complex, 2 to 10 percent slopes

Component: Zia (65%)
The Zia component makes up 65 percent of the map unit. Slopes are 2 to 10 percent. This component is on low stream terraces, semi-bolsons. The parent material consists of alluvium derived from sandstone and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is very rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R035XA112NM Loamy ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 5 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Gullied land (25%)
Generated brief soil descriptions are created for major soil components. The Gullied land is a miscellaneous area.

Component: Charalito (4%)
Generated brief soil descriptions are created for major soil components. The Charalito soil is a minor component.

Component: Galisteo (3%)
Generated brief soil descriptions are created for major soil components. The Galisteo soil is a minor component.

Component: Sena (3%)
Generated brief soil descriptions are created for major soil components. The Sena soil is a minor component.

Map Unit 527 (0.88%)

Map Unit Name:	Musofare-Asparas complex, 20 to 50 percent slopes
Bedrock Depth - Min:	86cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Soil Information

Major components are printed below

Musofare(50%)

horizon A(0cm to 5cm)	Extremely cobbly sandy loam
horizon Bt(5cm to 33cm)	Very gravelly clay loam
horizon Btk1(33cm to 57cm)	Very cobbly loam
horizon Btk2(57cm to 86cm)	Very cobbly loam
horizon 2Cr(86cm to 127cm)	Cemented bedrock
horizon 2R(127cm to 152cm)	Cemented bedrock

Asparas(40%)

horizon A(0cm to 5cm)	Extremely cobbly loam
horizon Bt1(5cm to 18cm)	Sandy clay loam
horizon Bt2(18cm to 29cm)	Clay
horizon Btk(29cm to 75cm)	Very cobbly clay loam
horizon CBtk(75cm to 110cm)	Clay
horizon Cr(110cm to 135cm)	Cemented bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 527 - Musofare-Asparas complex, 20 to 50 percent slopes

Component: Musofare (50%)
The Musofare component makes up 50 percent of the map unit. Slopes are 20 to 50 percent. This component is on south-facing dikes, basins. The parent material consists of colluvium derived from diorite, andesite, sandstone, and shale. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 39 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XG121NM Shallow Sandstone ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 18 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Asparas (40%)
The Asparas component makes up 40 percent of the map unit. Slopes are 20 to 50 percent. This component is on north-facing dikes, basins. The parent material consists of colluvium derived from diorite, andesite, sandstone, and shale. Depth to a root restrictive layer, bedrock, paralithic, is 39 to 59 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XA117NM Cinder ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 15 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Sandoval (5%)
Generated brief soil descriptions are created for major soil components. The Sandoval soil is a minor component.

Component: Skyvillage (3%)
Generated brief soil descriptions are created for major soil components. The Skyvillage soil is a minor component.

Component: Rock outcrop (2%)
Generated brief soil descriptions are created for major soil components. The Rock outcrop soil is a minor component.

Map Unit 528 (0.86%)

Map Unit Name:	Penistaja family loam, 3 to 8 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly

	wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Penistaja family(90%)

horizon A1(0cm to 3cm)	Loam
horizon A2(3cm to 13cm)	Loam
horizon Btk1(13cm to 35cm)	Clay loam
horizon Btk2(35cm to 61cm)	Clay loam
horizon Btk3(61cm to 104cm)	Clay loam
horizon BCtk(104cm to 210cm)	Loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 528 - Penistaja family loam, 3 to 8 percent slopes

Component: Penistaja family (90%)
The Penistaja family component makes up 90 percent of the map unit. Slopes are 3 to 8 percent. This component is on fan aprons, basins. The parent material consists of slope alluvium derived from sandstone and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XA112NM Loamy ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 2 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Truehill (4%)
Generated brief soil descriptions are created for major soil components. The Truehill soil is a minor component.

Component: Cumacho (3%)
Generated brief soil descriptions are created for major soil components. The Cumacho soil is a minor component.

Component: Cerrillos (3%)
Generated brief soil descriptions are created for major soil components. The Cerrillos soil is a minor component.

Map Unit 530 (18.58%)

Map Unit Name:	Jaralosa-Chupe-Riverwash complex, 0 to 1 percent slopes, flooded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	A - Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil.

Major components are printed below

Jaralosa(45%)

horizon A(0cm to 3cm)	Very fine sandy loam
horizon AC(3cm to 44cm)	Very fine sandy loam
horizon Cnyz1(44cm to 62cm)	Loamy very fine sand
horizon Cnyz2(62cm to 103cm)	Loamy very fine sand
horizon 2C1(103cm to 152cm)	Gravelly coarse sand
horizon 2C2(152cm to 215cm)	Very gravelly coarse sand

Chupe(30%)

horizon AC(0cm to 8cm)	Loamy coarse sand
horizon C1(8cm to 25cm)	Gravelly coarse sand
horizon C2(25cm to 66cm)	Gravelly coarse sand
horizon C3(66cm to 79cm)	Gravelly coarse sand
horizon C4(79cm to 94cm)	Gravelly coarse sand
horizon C5(94cm to 107cm)	Very gravelly coarse sand

horizon C6(107cm to 127cm)	Sandy clay loam
horizon C7(127cm to 165cm)	Gravelly loamy coarse sand
horizon C8(165cm to 213cm)	Coarse sand
horizon C9(213cm to 243cm)	Gravelly coarse sand
Riverwash(10%)	
horizon C1(0cm to 25cm)	Gravelly coarse sand
horizon C2(25cm to 127cm)	Very gravelly coarse sand
horizon C3(127cm to 165cm)	Gravelly sandy clay loam
horizon C4(165cm to 216cm)	Gravelly coarse sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 530 - Jaralosa-Chupe-Riverwash complex, 0 to 1 percent slopes, flooded

Component: Jaralosa (45%)
The Jaralosa component makes up 45 percent of the map unit. Slopes are 0 to 1 percent. This component is on point bars on valley floors, basins. The parent material consists of alluvium derived from sandstone and shale over alluvium derived from granite, gneiss, schist, or monzonite. Depth to a root restrictive layer, strongly contrasting textural stratification, is 30 to 39 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the F036XA005NM Riverine Riparian ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 2 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

Component: Chupe (30%)
The Chupe component makes up 30 percent of the map unit. Slopes are 0 to 1 percent. This component is on basins, flood plains on valley floors. The parent material consists of alluvium derived from sandstone, granite, gneiss, and schist. Depth to a root restrictive layer, strongly contrasting textural stratification, is 33 to 43 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. This component is in the R035XA113NM Sandy ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 2 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Riverwash (10%)
Generated brief soil descriptions are created for major soil components. The Riverwash is a miscellaneous area.

Component: Galisteo (5%)
Generated brief soil descriptions are created for major soil components. The Galisteo soil is a minor component.

Component: Mirada (5%)
Generated brief soil descriptions are created for major soil components. The Mirada soil is a minor component.

Component: Sena (5%)
Generated brief soil descriptions are created for major soil components. The Sena soil is a minor component.

Map Unit 531 (0.59%)

Map Unit Name:	Sena very fine sandy loam, 0 to 2 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Sena(90%)

horizon Akz1(0cm to 2cm)	Very fine sandy loam
horizon Akz2(2cm to 10cm)	Loam
horizon Btknyz1(10cm to 28cm)	Clay loam
horizon Btknyz2(28cm to 51cm)	Clay
horizon Btknyz3(51cm to 75cm)	Clay
horizon Cz1(75cm to 148cm)	Clay
horizon Cz2(148cm to 210cm)	Clay

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 531 - Sena very fine sandy loam, 0 to 2 percent slopes

Component: Sena (90%)
The Sena component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on basins, flood-plain steps on valley floors. The parent material consists of alluvium derived from shale. Depth to a root restrictive layer, natric, inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XA126NM Salt Flats ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 13 percent. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 20 within 30 inches of the soil surface.

Component: Galisteo (3%)
Generated brief soil descriptions are created for major soil components. The Galisteo soil is a minor component.

Component: Riverwash (3%)
Generated brief soil descriptions are created for major soil components. The Riverwash soil is a minor component.

Component: Charalito (2%)
Generated brief soil descriptions are created for major soil components. The Charalito soil is a minor component.

Component: Zia (2%)
Generated brief soil descriptions are created for major soil components. The Zia soil is a minor component.

Map Unit 534 (0.63%)

Map Unit Name:	Oelop-Charalito complex, 1 to 3 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Oelop(70%)

horizon A(0cm to 4cm)	Sandy clay loam
horizon Btk1(4cm to 26cm)	Clay loam
horizon Btk2(26cm to 68cm)	Loam
horizon Btk3(68cm to 88cm)	Clay loam
horizon Btk4(88cm to 152cm)	Sandy clay loam
horizon 2BCk(152cm to 200cm)	Gravelly coarse sand

Charalito(20%)

horizon A(0cm to 16cm)	Loamy sand
horizon C1(16cm to 53cm)	Loamy sand
horizon 2C2(53cm to 87cm)	Sandy loam
horizon 3C3(87cm to 200cm)	Very gravelly coarse sand

Component Description:

Soil Information

Minor map unit components are excluded from this report.

Map Unit: 534 - Oelop-Charalito complex, 1 to 3 percent slopes

Component: Oelop (70%)
The Oelop component makes up 70 percent of the map unit. Slopes are 1 to 3 percent. This component is on stream terraces, basins. The parent material consists of alluvium derived from sandstone and shale. Depth to a root restrictive layer, strongly contrasting textural stratification, is 55 to 63 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XA112NM Loamy ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 2 within 30 inches of the soil surface.

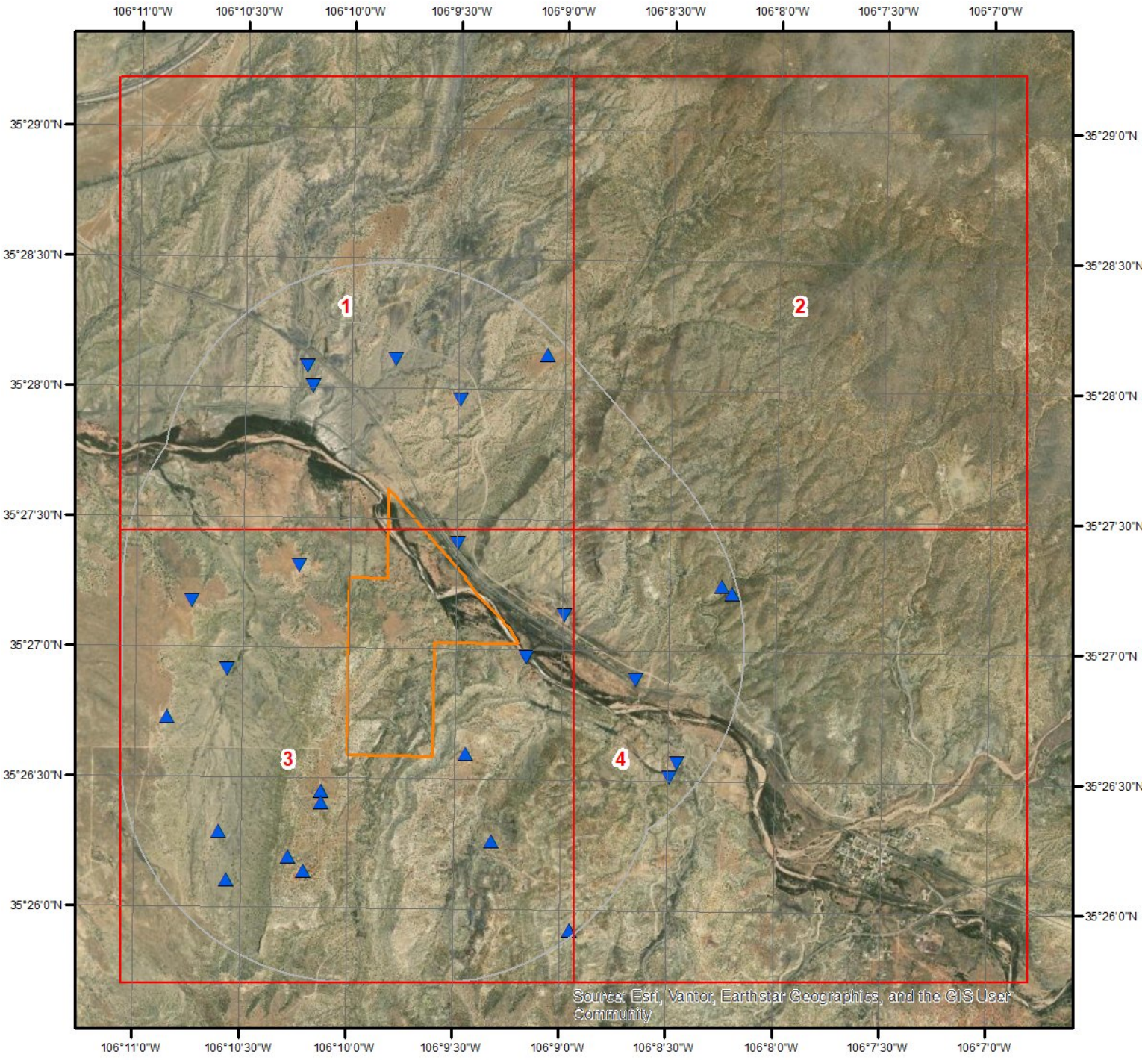
Component: Charalito (20%)
The Charalito component makes up 20 percent of the map unit. Slopes are 1 to 3 percent. This component is on basins, flood-plain steps on valley floors. The parent material consists of alluvium derived from sandstone and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XG114NM Gravelly ecological site. Nonirrigated land capability classification is 6c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 1 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Sedillo (4%)
Generated brief soil descriptions are created for major soil components. The Sedillo soil is a minor component.

Component: Riverwash (3%)
Generated brief soil descriptions are created for major soil components. The Riverwash soil is a minor component.

Component: Hagerman (3%)
Generated brief soil descriptions are created for major soil components. The Hagerman soil is a minor component.

Wells and Additional Sources



Wells & Additional Sources

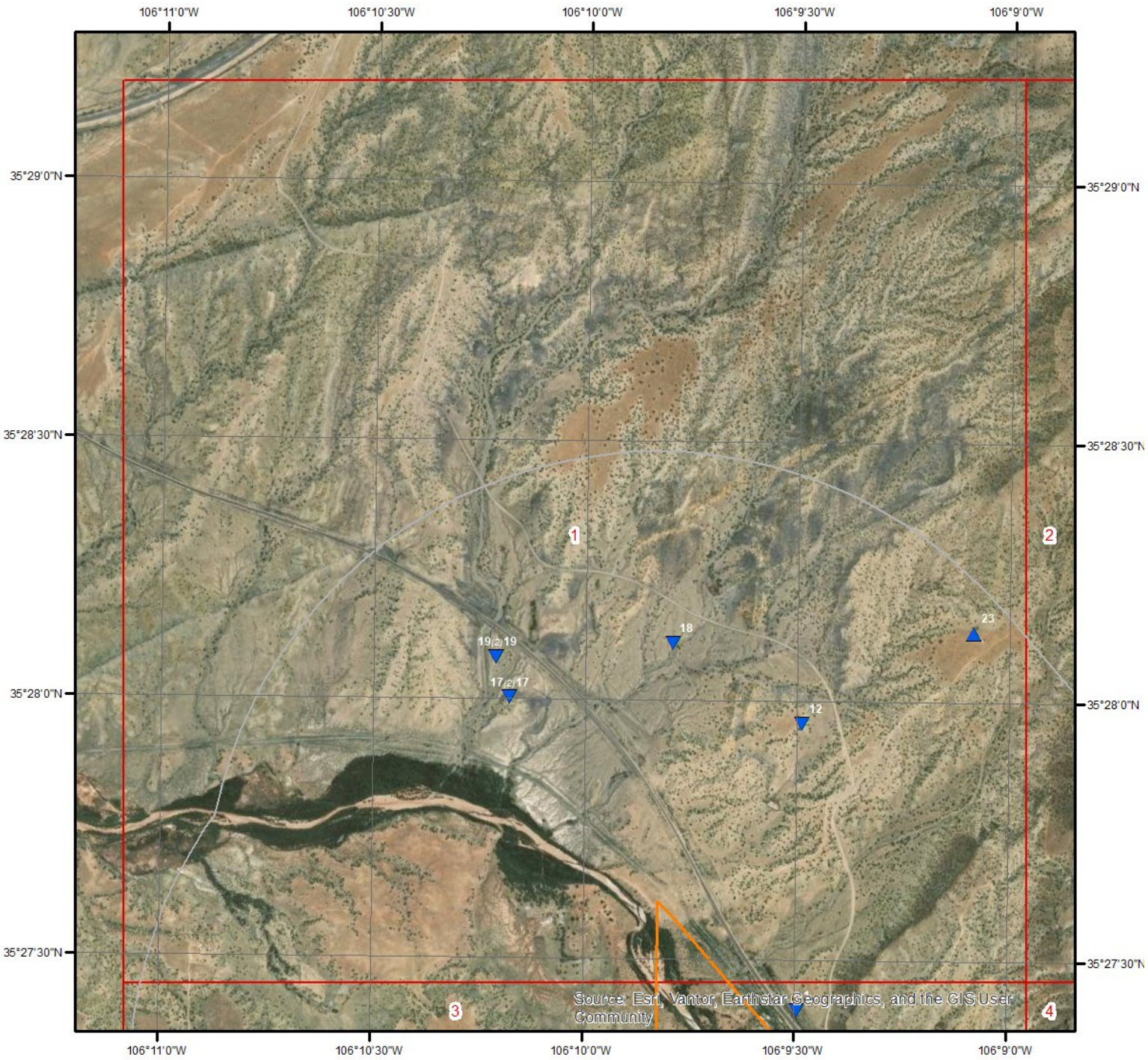
N

0 0.3 0.6 1.2 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources



Wells & Additional Sources - Page 1

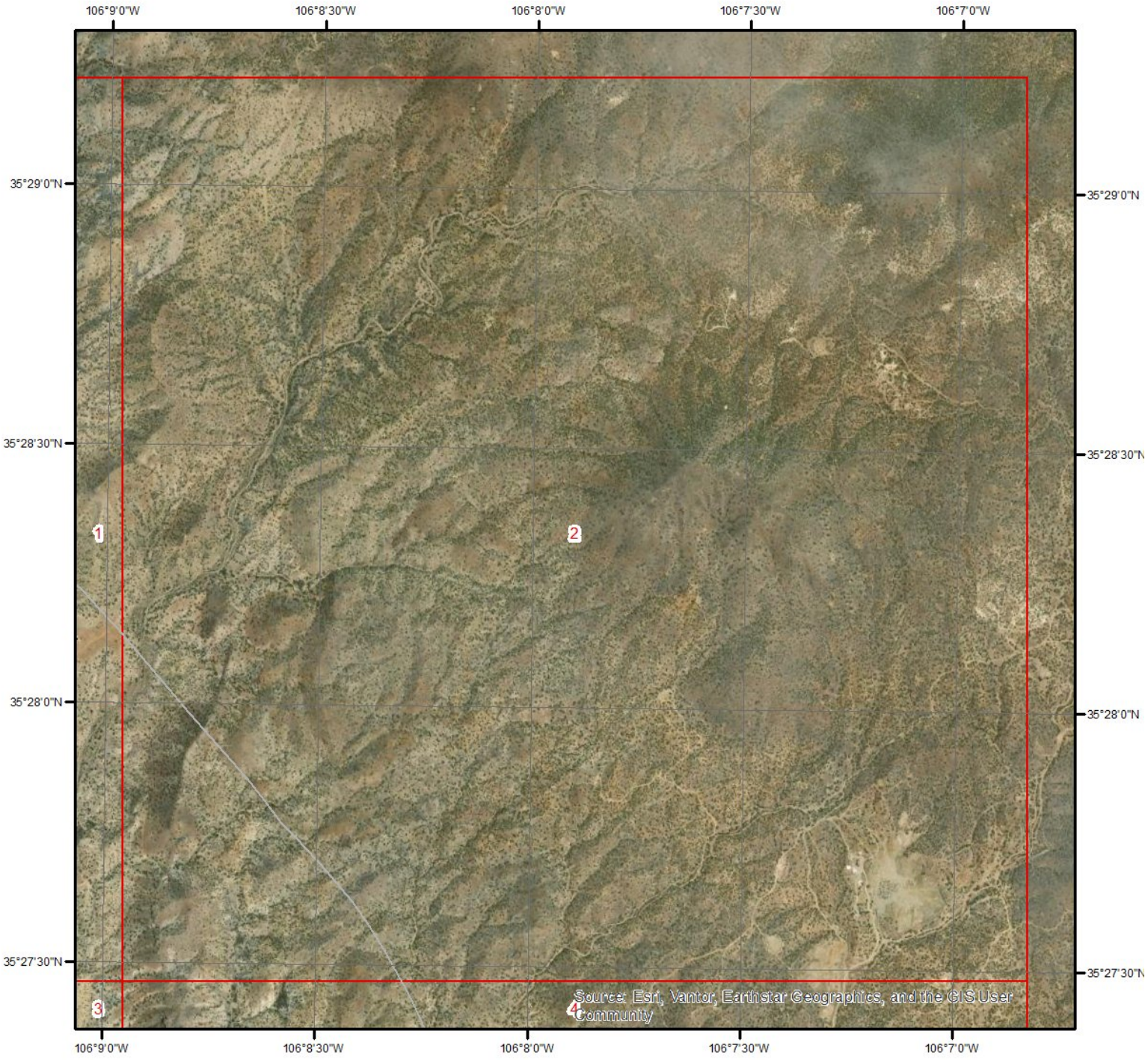
N

0 0.15 0.3 0.6 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources



Wells & Additional Sources - Page 2

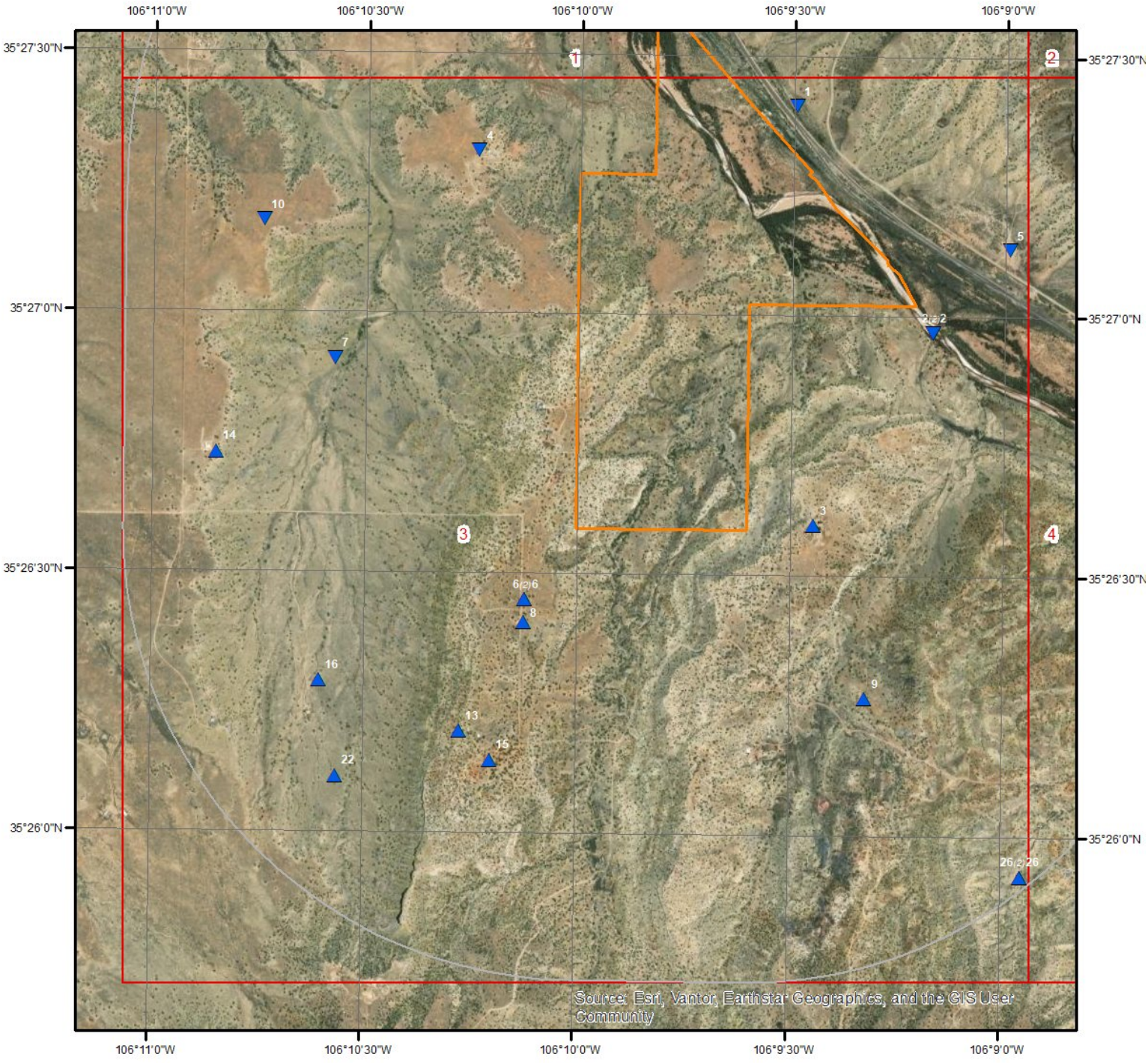
N

0 0.15 0.3 0.6 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources



Wells & Additional Sources - Page 3

N

0 0.15 0.3 0.6 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources



Wells & Additional Sources - Page 4

N

0 0.15 0.3 0.6 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources Summary

Federal Sources

Public Water Systems Violations and Enforcement Data

Map Key	ID	Distance (ft)	Direction
	No records found		

Safe Drinking Water Information System (SDWIS)

Map Key	ID	Distance (ft)	Direction
	No records found		

USGS National Water Information System

Map Key	Site No	Distance (ft)	Direction
2	USGS-352658106090810	375.02	E
2	USGS-08317850	375.02	E
11	USGS-352653106083701	2884.67	E
24	USGS-352715106081301	4952.54	E

State Sources

Oil and Gas Wells

Map Key	ID	Distance (ft)	Direction
	No records found		

Point of Diversion Report

Map Key	POD Rec No	Distance (ft)	Direction
1	198042	383.84	NNE
3	235754	771.62	SSE
4	215991	1219.65	NW
5	34166	1266.60	E
6	207429	1021.27	SSW
6	217889	1021.27	SSW
7	279723	2832.63	W
8	207430	1256.78	SSW
9	210282	2400.14	SSE
10	249429	3671.46	W
12	198043	2677.59	NNE
13	237369	2730.31	SSW
14	214006	4207.04	WSW
15	147481	2885.86	SSW
16	283838	3483.03	SW
17	201768	2960.03	NNW
17	201769	2960.03	NNW
18	198044	3028.11	N
19	340561	3432.77	NNW
19	147479	3432.77	NNW
20	331806	4716.43	ESE

21	333162	4632.28	ESE
22	145272	4028.58	SW
23	233575	4844.15	NNE
25	4707	5141.09	E
26	145711	5147.04	SSE
26	226585	5147.04	SSE

Public Water Supply Wells

Map Key	ID	Distance (ft)	Direction
	No records found		

USGS National Water Information System

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
2	E	0.07	375.02	5,607.96	FED USGS

Site No: USGS-352658106090810
Site Type: Stream
Formation Type:
Date Drilled:
Well Depth:
Well Depth Unit:
Well Hole Depth:
Well Hole Depth Unit:
Reporting Agency: USGS New Mexico Water Science Center
Station Name: 08317850 GALISTEO CK AB RESERVOIR,NM
Latitude: 35.44948128000000
Longitude: -106.1528002000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
2	E	0.07	375.02	5,607.96	FED USGS

Site No: USGS-08317850
Site Type: Stream
Formation Type:
Date Drilled:
Well Depth:
Well Depth Unit:
Well Hole Depth:
Well Hole Depth Unit:
Reporting Agency: USGS New Mexico Water Science Center
Station Name: GALISTEO CREEK ABOVE GALISTEO RESERVOIR, NM
Latitude: 35.44948128000000
Longitude: -106.1528002000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	E	0.55	2,884.67	5,643.26	FED USGS

Site No: USGS-352653106083701
Site Type: Well
Formation Type:
Date Drilled: 19740101
Well Depth: 50.0
Well Depth Unit: ft
Well Hole Depth: 200

Well Hole Depth Unit:	ft
Reporting Agency:	USGS New Mexico Water Science Center
Station Name:	14N.07E.13.2241
Latitude:	35.44809240000000
Longitude:	-106.1441890000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
24	E	0.94	4,952.54	5,889.14	FED USGS

Site No:	USGS-352715106081301
Site Type:	Well
Formation Type:	Cuerbio Basalt
Date Drilled:	19770204
Well Depth:	230
Well Depth Unit:	ft
Well Hole Depth:	
Well Hole Depth Unit:	
Reporting Agency:	USGS New Mexico Water Science Center
Station Name:	14N.08E.07.323
Latitude:	35.45420338000000
Longitude:	-106.1375223000000

Point of Diversion Report

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
1	NNE	0.07	383.84	5,615.96	WATER WELLS

License Nb:	547	District Office S:	
POD No:	81720	Surv Map:	
POD Rec No:	198042	Other Loc:	
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:		Restrict :	0.0
Finish Date:		Section:	
Plug Date:		Township:	
Log File D:		Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	PA
Depth of Well:	500	UTM Zone:	13
Depth of Water:	0	UTM Accura:	10

Wells and Additional Sources Detail Report

Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	7.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	394899.5
Pcw Rcv Da:		Northing:	3924308.6
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	01/19/2005, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	527507.0
Static Lev:	0	Y:	1621465.0
Tract Nbr:		Point Y:	35.45670958
Map Nbr:		Point X:	-106.1582117
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
3	SSE	0.15	771.62	5,736.01	WATER WELLS

License Nb:	1472	District Office S:	
POD No:	90122	Surv Map:	
POD Rec No:	235754	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:	POD1	BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	1 NA NA
Start Date:	04/16/2008, 12:00 AM	Restrict :	0.0
Finish Date:	04/17/2008, 12:00 AM	Section:	
Plug Date:		Township:	
Log File D:	05/19/2008, 12:00 AM	Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	5	UTM Source:	PA
Depth of Well:	240	UTM Zone:	13

Wells and Additional Sources Detail Report

Depth of Water:	51	UTM Accura:	
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	5	Lat Lon SO:	
Casing Size:	4.5	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	394954.1
Pcw Rcv Da:		Northing:	3922816.8
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	05/19/2008, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Na	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	1667992.0
Static Lev:	0	Y:	1616635.0
Tract Nbr:		Point Y:	35.44326689
Map Nbr:		Point X:	-106.15741752
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.23	1,219.65	5,695.02	WATER WELLS

License Nb:	0	District Office S:	
POD No:	86538	Surv Map:	
POD Rec No:	215991	Other Loc:	
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:		Restrict :	0.0
Finish Date:		Section:	
Plug Date:		Township:	
Log File D:		Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	UN

Wells and Additional Sources Detail Report

Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	10
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393769.2
Pcw Rcv Da:		Northing:	3924153.1
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	12/13/2005, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	523805.0
Static Lev:	0	Y:	1620908.0
Tract Nbr:	2-3	Point Y:	35.45518763
Map Nbr:		Point X:	-106.17064504
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
5	E	0.24	1,266.60	5,635.11	WATER WELLS

License Nb:	231	District Office S:	
POD No:	24559	Surv Map:	
POD Rec No:	34166	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:	02/21/1974, 12:00 AM	Restrict :	0.0
Finish Date:	03/18/1974, 12:00 AM	Section:	12
Plug Date:		Township:	14N
Log File D:	05/29/1974, 12:00 AM	Range:	07E
Wrats S ID:	0	Quarter 4th:	4
CFS Start:		Quarter 16th:	3
CFS End MD:		Quarter 64th:	3
CFS Cnv Fa:	0.0	Datum:	NAD83

Wells and Additional Sources Detail Report

CS Code:	5	UTM Source:	EA
Depth of Well:	60	UTM Zone:	13
Depth of Water:	30	UTM Accura:	0
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	10	Lat Lon SO:	
Casing Size:	8.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	395654.6
Pcw Rcv Da:		Northing:	3923794.5
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	05/25/2021, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Na	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:	NA	X:	1670250.0
Static Lev:	0	Y:	1619872.0
Tract Nbr:		Point Y:	35.45215455
Map Nbr:		Point X:	-106.14982603
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	SSW	0.19	1,021.27	5,766.91	WATER WELLS

License Nb:	1472	District Office S:	
POD No:	84190	Surv Map:	
POD Rec No:	207429	Other Loc:	Madrid Quad. Map
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:	08/09/2005, 12:00 AM	Restrict :	0.0
Finish Date:	08/20/2005, 12:00 AM	Section:	14
Plug Date:		Township:	14N
Log File D:	09/19/2005, 12:00 AM	Range:	07E
Wrats S ID:	0	Quarter 4th:	4
CFS Start:		Quarter 16th:	1
CFS End MD:		Quarter 64th:	3

Wells and Additional Sources Detail Report

CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	EA
Depth of Well:	700	UTM Zone:	13
Depth of Water:	110	UTM Accura:	10
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	3	Lat Lon SO:	
Casing Size:	4.5	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393929.1
Pcw Rcv Da:		Northing:	3922557.7
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	07/16/2025, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Sidney S. Bryan	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	524396.0
Static Lev:	0	Y:	1615680.0
Tract Nbr:	2-5	Point Y:	35.44082234
Map Nbr:		Point X:	-106.16867533
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	SSW	0.19	1,021.27	5,766.91	WATER WELLS

License Nb:	1472	District Office S:	
POD No:	86995	Surv Map:	
POD Rec No:	217889	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:	04/14/2006, 12:00 AM	Restrict :	0.0
Finish Date:	04/20/2006, 12:00 AM	Section:	
Plug Date:		Township:	
Log File D:	06/09/2006, 12:00 AM	Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	

Wells and Additional Sources Detail Report

CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	PA
Depth of Well:	585	UTM Zone:	13
Depth of Water:	52	UTM Accura:	10
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	23	Lat Lon SO:	
Casing Size:	4.5	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393929.1
Pcw Rcv Da:		Northing:	3922557.7
Sched Date:		Latitude Degree:	0
Use of Wel:	DOMLS	Latitude Minute:	0
Sys Date:	12/04/2018, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	524396.0
Static Lev:	0	Y:	1615680.0
Tract Nbr:		Point Y:	35.44082234
Map Nbr:		Point X:	-106.16867533
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	W	0.54	2,832.63	5,638.01	WATER WELLS

License Nb:	49	District Office S:	
POD No:	93705	Surv Map:	
POD Rec No:	279723	Other Loc:	20 Acres
POD Basin:	RG	Zone :	
POD Suffix:	POD1	BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	NA NA NA
Start Date:	11/21/2012, 12:00 AM	Restrict :	0.0
Finish Date:	11/29/2012, 12:00 AM	Section:	14
Plug Date:		Township:	14N
Log File D:	01/25/2013, 12:00 AM	Range:	07E
Wrats S ID:	0	Quarter 4th:	1

Wells and Additional Sources Detail Report

CFS Start:		Quarter 16th:	1
CFS End MD:		Quarter 64th:	3
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	5	UTM Source:	PA
Depth of Well:	300	UTM Zone:	13
Depth of Water:	90	UTM Accura:	
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	3	Lat Lon SO:	
Casing Size:	5.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393254.9
Pcw Rcv Da:		Northing:	3923415.9
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	01/29/2013, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Na	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	1662392.0
Static Lev:	0	Y:	1618530.0
Tract Nbr:		Point Y:	35.44848678
Map Nbr:		Point X:	-106.17621474
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	SSW	0.24	1,256.78	5,766.71	WATER WELLS

License Nb:	0	District Office S:	
POD No:	84191	Surv Map:	
POD Rec No:	207430	Other Loc:	Madrid Quad. Map
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:		Restrict :	0.0
Finish Date:		Section:	14
Plug Date:		Township:	14N
Log File D:		Range:	07E

Wells and Additional Sources Detail Report

Wrats S ID:	0	Quarter 4th:	4
CFS Start:		Quarter 16th:	1
CFS End MD:		Quarter 64th:	3
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	EA
Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	10
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393924.4
Pcw Rcv Da:		Northing:	3922474.9
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	01/06/2005, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Sidney S. Bryan	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	524384.0
Static Lev:	0	Y:	1615408.0
Tract Nbr:	2-5	Point Y:	35.44007541
Map Nbr:		Point X:	-106.16871631
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
9	SSE	0.45	2,400.14	5,741.75	WATER WELLS

License Nb:	1472	District Office S:	
POD No:	85118	Surv Map:	
POD Rec No:	210282	Other Loc:	
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:	08/22/2005, 12:00 AM	Restrict :	0.0
Finish Date:	08/24/2005, 12:00 AM	Section:	21
Plug Date:		Township:	14N

Wells and Additional Sources Detail Report

Log File D:	09/19/2005, 12:00 AM	Range:	07E
Wrats S ID:	0	Quarter 4th:	2
CFS Start:		Quarter 16th:	3
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	UN
Depth of Well:	500	UTM Zone:	13
Depth of Water:	70	UTM Accura:	10
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	10	Lat Lon SO:	
Casing Size:	4.5	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	395135.2
Pcw Rcv Da:		Northing:	3922200.5
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	09/19/2005, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	528368.0
Static Lev:	0	Y:	1614558.0
Tract Nbr:		Point Y:	35.43773009
Map Nbr:		Point X:	-106.15534309
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
10	W	0.70	3,671.46	5,683.54	WATER WELLS

License Nb:	0	District Office S:	
POD No:	91792	Surv Map:	
POD Rec No:	249429	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:	POD1	BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	NA NA NA
Start Date:		Restrict :	0.0
Finish Date:		Section:	

Wells and Additional Sources Detail Report

Plug Date:		Township:	
Log File D:		Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	5	UTM Source:	PA
Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393006.3
Pcw Rcv Da:		Northing:	3923908.5
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	05/20/2020, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Na	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	1661556.0
Static Lev:	0	Y:	1620136.0
Tract Nbr:		Point Y:	35.45290078
Map Nbr:		Point X:	-106.17901831
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
12	NNE	0.51	2,677.59	5,686.85	WATER WELLS

License Nb:	547	District Office S:	
POD No:	81721	Surv Map:	
POD Rec No:	198043	Other Loc:	
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:		Restrict :	0.0

Wells and Additional Sources Detail Report

Finish Date:		Section:	
Plug Date:		Township:	
Log File D:		Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	PA
Depth of Well:	500	UTM Zone:	13
Depth of Water:	0	UTM Accura:	10
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	7.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	394920.0
Pcw Rcv Da:		Northing:	3925330.8
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	01/19/2005, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	527532.0
Static Lev:	0	Y:	1624820.0
Tract Nbr:		Point Y:	35.46592679
Map Nbr:		Point X:	-106.15811792
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	SSW	0.52	2,730.31	5,835.65	WATER WELLS

License Nb:	547	District Office S:	
POD No:	90375	Surv Map:	
POD Rec No:	237369	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:	POD1	BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	B 2 NA

Wells and Additional Sources Detail Report

Start Date:	04/22/2008, 12:00 AM	Restrict :	0.0
Finish Date:	04/23/2008, 12:00 AM	Section:	14
Plug Date:		Township:	14N
Log File D:	09/25/2008, 12:00 AM	Range:	07E
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	5	UTM Source:	PA
Depth of Well:	420	UTM Zone:	13
Depth of Water:	0	UTM Accura:	
Ground Water Src:	D	UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393693.8
Pcw Rcv Da:		Northing:	3922089.4
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	09/25/2008, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Na	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	1663887.0
Static Lev:	0	Y:	1614196.0
Tract Nbr:		Point Y:	35.43657555
Map Nbr:		Point X:	-106.1712062
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
14	WSW	0.80	4,207.04	5,726.73	WATER WELLS

License Nb:	1472	District Office S:	
POD No:	86084	Surv Map:	
POD Rec No:	214006	Other Loc:	
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	

Wells and Additional Sources Detail Report

POD Name:		Subdiv Loc:	
Start Date:	11/07/2005, 12:00 AM	Restrict :	0.0
Finish Date:	11/09/2005, 12:00 AM	Section:	
Plug Date:		Township:	
Log File D:	04/21/2006, 12:00 AM	Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	UN
Depth of Well:	585	UTM Zone:	13
Depth of Water:	75	UTM Accura:	10
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	5	Lat Lon SO:	
Casing Size:	4.5	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	392831.7
Pcw Rcv Da:		Northing:	3923087.9
Sched Date:		Latitude Degree:	0
Use of Wel:	DOMESTIC	Latitude Minute:	0
Sys Date:	05/30/2006, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	520773.0
Static Lev:	0	Y:	1617374.0
Tract Nbr:		Point Y:	35.44548439
Map Nbr:		Point X:	-106.18083387
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
15	SSW	0.55	2,885.86	5,818.64	WATER WELLS

License Nb:	49	District Office S:	
POD No:	71280	Surv Map:	
POD Rec No:	147481	Other Loc:	
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	

Wells and Additional Sources Detail Report

Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:	02/11/1999, 12:00 AM	Restrict :	0.0
Finish Date:	02/13/1999, 12:00 AM	Section:	
Plug Date:		Township:	
Log File D:	02/25/1999, 12:00 AM	Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	UN
Depth of Well:	500	UTM Zone:	13
Depth of Water:	180	UTM Accura:	10
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	3	Lat Lon SO:	
Casing Size:	5.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393801.2
Pcw Rcv Da:		Northing:	3921986.4
Sched Date:		Latitude Degree:	0
Use of Wel:	ONE HOUSEHOLD	Latitude Minute:	0
Sys Date:	03/02/1999, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	524000.0
Static Lev:	0	Y:	1613800.0
Tract Nbr:		Point Y:	35.43565848
Map Nbr:		Point X:	-106.17000972
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
16	SW	0.66	3,483.03	5,725.26	WATER WELLS

License Nb:	0	District Office S:	
POD No:	94003	Surv Map:	
POD Rec No:	283838	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:	POD1	BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0

Wells and Additional Sources Detail Report

POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	B1 NA NA
Start Date:		Restrict :	0.0
Finish Date:		Section:	
Plug Date:		Township:	
Log File D:		Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	5	UTM Source:	PA
Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393195.3
Pcw Rcv Da:		Northing:	3922272.5
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	06/19/2014, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Na	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	1662244.0
Static Lev:	0	Y:	1614776.0
Tract Nbr:		Point Y:	35.43817278
Map Nbr:		Point X:	-106.1767213
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
17	NNW	0.56	2,960.03	5,607.96	WATER WELLS

License Nb:	0	District Office S:	
POD No:	82541	Surv Map:	
POD Rec No:	201768	Other Loc:	
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	

Wells and Additional Sources Detail Report

Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:		Restrict :	0.0
Finish Date:		Section:	02
Plug Date:		Township:	14N
Log File D:		Range:	07E
Wrats S ID:	0	Quarter 4th:	3
CFS Start:		Quarter 16th:	4
CFS End MD:		Quarter 64th:	2
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	UN
Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	10
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393875.3
Pcw Rcv Da:		Northing:	3925429.4
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	04/14/2004, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	524100.0
Static Lev:	0	Y:	1625100.0
Tract Nbr:		Point Y:	35.46670464
Map Nbr:		Point X:	-106.16964261
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
17	NNW	0.56	2,960.03	5,607.96	WATER WELLS

License Nb:	0	District Office S:	
POD No:	82540	Surv Map:	
POD Rec No:	201769	Other Loc:	
POD Basin:	RG	Zone :	C

Wells and Additional Sources Detail Report

POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:		Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:		Restrict :	0.0
Finish Date:		Section:	02
Plug Date:		Township:	14N
Log File D:		Range:	07E
Wrats S ID:	0	Quarter 4th:	3
CFS Start:		Quarter 16th:	4
CFS End MD:		Quarter 64th:	2
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	UN
Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	10
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393875.3
Pcw Rcv Da:		Northing:	3925429.4
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	04/14/2004, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	524100.0
Static Lev:	0	Y:	1625100.0
Tract Nbr:		Point Y:	35.46670464
Map Nbr:		Point X:	-106.16964261
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
18	N	0.57	3,028.11	5,621.83	WATER WELLS

License Nb:	547	District Office S:	
POD No:	81722	Surv Map:	
POD Rec No:	198044	Other Loc:	

Wells and Additional Sources Detail Report

POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:		Restrict :	0.0
Finish Date:		Section:	
Plug Date:		Township:	
Log File D:		Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	PA
Depth of Well:	500	UTM Zone:	13
Depth of Water:	0	UTM Accura:	10
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	7.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	394460.1
Pcw Rcv Da:		Northing:	3925619.2
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	01/19/2005, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	526011.0
Static Lev:	0	Y:	1625747.0
Tract Nbr:		Point Y:	35.46847794
Map Nbr:		Point X:	-106.16322313
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
19	NNW	0.65	3,432.77	5,607.96	WATER WELLS

License Nb:	0	District Office S:	
POD No:	71275	Surv Map:	

Wells and Additional Sources Detail Report

POD Rec No:	340561	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:	EXPL	BLK:	
Pod Sub Ba:	MRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:		Restrict :	0.0
Finish Date:		Section:	02
Plug Date:		Township:	14N
Log File D:		Range:	07E
Wrats S ID:	0	Quarter 4th:	3
CFS Start:		Quarter 16th:	4
CFS End MD:		Quarter 64th:	2
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	0	UTM Source:	G
Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393830.0
Pcw Rcv Da:		Northing:	3925572.0
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	03/29/2023, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	0.0
Static Lev:	0	Y:	0.0
Tract Nbr:		Point Y:	35.46798532
Map Nbr:		Point X:	-106.17016041
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Middle Rio Grande		
Grant :			
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
19	NNW	0.65	3,432.77	5,607.96	WATER WELLS

License Nb:	331	District Office S:	

Wells and Additional Sources Detail Report

POD No:	71275	Surv Map:	
POD Rec No:	147479	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:		BLK:	
Pod Sub Ba:	MRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:	01/27/2004, 12:00 AM	Restrict :	0.0
Finish Date:	02/09/2004, 12:00 AM	Section:	02
Plug Date:		Township:	14N
Log File D:	02/08/2000, 12:00 AM	Range:	07E
Wrats S ID:	0	Quarter 4th:	3
CFS Start:		Quarter 16th:	4
CFS End MD:		Quarter 64th:	2
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	0	UTM Source:	G
Depth of Well:	1055	UTM Zone:	13
Depth of Water:	0	UTM Accura:	0
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	75	Lat Lon SO:	
Casing Size:	7.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393830.0
Pcw Rcv Da:		Northing:	3925572.0
Sched Date:		Latitude Degree:	0
Use of Wel:	STK	Latitude Minute:	0
Sys Date:	06/28/2004, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	0.0
Static Lev:	0	Y:	0.0
Tract Nbr:		Point Y:	35.46798532
Map Nbr:		Point X:	-106.17016041
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Middle Rio Grande		
Grant :			
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	ESE	0.89	4,716.43	5,663.83	WATER WELLS

Wells and Additional Sources Detail Report

License Nb:	0	District Office S:	
POD No:	99656	Surv Map:	
POD Rec No:	331806	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:	POD1	BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	8 T-1
Start Date:		Restrict :	0.0
Finish Date:		Section:	18
Plug Date:		Township:	14N
Log File D:		Range:	08E
Wrats S ID:	0	Quarter 4th:	3
CFS Start:		Quarter 16th:	1
CFS End MD:		Quarter 64th:	1
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	5	UTM Source:	EA
Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	396395.4
Pcw Rcv Da:		Northing:	3922643.4
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	06/06/2022, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Na	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:	6185C	X:	1672728.4
Static Lev:	0	Y:	1616126.0
Tract Nbr:		Point Y:	35.44185488
Map Nbr:		Point X:	-106.14151773
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Alamitos		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
21	ESE	0.88	4,632.28	5,670.25	WATER WELLS

Wells and Additional Sources Detail Report

License Nb:	0	District Office S:	
POD No:	99972	Surv Map:	
POD Rec No:	333162	Other Loc:	53 Old Coal Rd
POD Basin:	RG	Zone :	
POD Suffix:	POD1	BLK:	
Pod Sub Ba:	SF	Percent Sh:	0
POD Status:		Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	5 NA NA
Start Date:		Restrict :	0.0
Finish Date:		Section:	18
Plug Date:		Township:	14N
Log File D:		Range:	08E
Wrats S ID:	0	Quarter 4th:	1
CFS Start:		Quarter 16th:	3
CFS End MD:		Quarter 64th:	3
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	5	UTM Source:	EA
Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	396446.3
Pcw Rcv Da:		Northing:	3922745.8
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	09/10/2021, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Na	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:	NA	X:	1672891.0
Static Lev:	0	Y:	1616463.9
Tract Nbr:		Point Y:	35.44278331
Map Nbr:		Point X:	-106.14097004
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Santa Fe River		
Grant :	Alamitos		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
22	SW	0.76	4,028.58	5,767.78	WATER WELLS

Wells and Additional Sources Detail Report

License Nb:	622	District Office S:	
POD No:	70552	Surv Map:	
POD Rec No:	145272	Other Loc:	
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:	08/25/1998, 12:00 AM	Restrict :	0.0
Finish Date:	08/25/1998, 12:00 AM	Section:	
Plug Date:		Township:	
Log File D:	10/26/1998, 12:00 AM	Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	UN
Depth of Well:	460	UTM Zone:	13
Depth of Water:	235	UTM Accura:	10
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	10	Lat Lon SO:	
Casing Size:	4.5	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	393252.0
Pcw Rcv Da:		Northing:	3921932.4
Sched Date:		Latitude Degree:	0
Use of Wel:	DOM	Latitude Minute:	0
Sys Date:	12/01/1998, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	522200.0
Static Lev:	0	Y:	1613600.0
Tract Nbr:		Point Y:	35.4351129
Map Nbr:		Point X:	-106.17605214
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB

23	NNE	0.92	4,844.15	5,813.85	WATER WELLS

License Nb:	0	District Office S:	
POD No:	90020	Surv Map:	
POD Rec No:	233575	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:	POD 1	BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:	01/23/2008, 12:00 AM	Restrict :	0.0
Finish Date:	02/06/2008, 12:00 AM	Section:	
Plug Date:		Township:	
Log File D:	03/24/2008, 12:00 AM	Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	5	UTM Source:	PA
Depth of Well:	1000	UTM Zone:	13
Depth of Water:	26	UTM Accura:	
Ground Water Src:	A	UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	5.5	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	395534.9
Pcw Rcv Da:		Northing:	3925654.5
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	07/03/2018, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	1669780.0
Static Lev:	0	Y:	1625970.0
Tract Nbr:		Point Y:	35.46890975
Map Nbr:		Point X:	-106.15138375
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :			
Legal:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB

25	E	0.97	5,141.09	5,848.68	WATER WELLS

License Nb:	699	District Office S:	
POD No:	24629	Surv Map:	
POD Rec No:	4707	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:	-X-9	BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:		Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:	02/04/1977, 12:00 AM	Restrict :	0.0
Finish Date:	02/05/1977, 12:00 AM	Section:	07
Plug Date:		Township:	14N
Log File D:	03/02/1977, 12:00 AM	Range:	08E
Wrats S ID:	0	Quarter 4th:	3
CFS Start:		Quarter 16th:	2
CFS End MD:		Quarter 64th:	3
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	0	UTM Source:	G
Depth of Well:	230	UTM Zone:	13
Depth of Water:	22	UTM Accura:	
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	0.0	Lat Lon AC:	
Elevation:	5823.3	County:	Santa Fe
Ref :		Easting:	396847.0
Pcw Rcv Da:		Northing:	3923956.0
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	06/19/1991, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	0.0
Static Lev:	0	Y:	0.0
Tract Nbr:		Point Y:	35.45373489
Map Nbr:		Point X:	-106.13670927
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :			
Legal:			

Wells and Additional Sources Detail Report

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
26	SSE	0.97	5,147.04	5,818.47	WATER WELLS

License Nb:	0	District Office S:	
POD No:	70716	Surv Map:	
POD Rec No:	145711	Other Loc:	
POD Basin:	RG	Zone :	C
POD Suffix:		BLK:	
Pod Sub Ba:	NRG	Percent Sh:	0
POD Status:	PEN	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	
Start Date:		Restrict :	0.0
Finish Date:		Section:	24
Plug Date:		Township:	14N
Log File D:		Range:	07E
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	21	UTM Source:	UN
Depth of Well:	0	UTM Zone:	13
Depth of Water:	0	UTM Accura:	10
Ground Water Src:		UTM Error:	
Pump Type:		XY Source:	A
Pump Seria:		XY Accuracy:	M
Estimate Yield:	0	Lat Lon SO:	
Casing Size:	7.0	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	395685.5
Pcw Rcv Da:		Northing:	3921566.3
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	05/31/2000, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:		Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	530200.0
Static Lev:	0	Y:	1612500.0
Tract Nbr:		Point Y:	35.43207065
Map Nbr:		Point X:	-106.14920002
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		
Legal:			

Wells and Additional Sources Detail Report

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
26	SSE	0.97	5,147.04	5,818.47	WATER WELLS

License Nb:	547	District Office S:	
POD No:	70716	Surv Map:	
POD Rec No:	226585	Other Loc:	
POD Basin:	RG	Zone :	
POD Suffix:	POD1	BLK:	
Pod Sub Ba:	NRG	Percent Sh:	100
POD Status:	ACT	Discharge:	
Pod Sub Ba Abbr:		Aquifer:	
POD Name:		Subdiv Loc:	NA NA NA
Start Date:	12/29/2007, 12:00 AM	Restrict :	0.0
Finish Date:	12/29/2007, 12:00 AM	Section:	
Plug Date:		Township:	
Log File D:	01/11/2008, 12:00 AM	Range:	
Wrats S ID:	0	Quarter 4th:	
CFS Start:		Quarter 16th:	
CFS End MD:		Quarter 64th:	
CFS Cnv Fa:	0.0	Datum:	NAD83
CS Code:	5	UTM Source:	UN
Depth of Well:	200	UTM Zone:	13
Depth of Water:	52	UTM Accura:	10
Ground Water Src:	S	UTM Error:	
Pump Type:		XY Source:	
Pump Seria:		XY Accuracy:	
Estimate Yield:	3	Lat Lon SO:	
Casing Size:	4.5	Lat Lon AC:	
Elevation:	0.0	County:	Santa Fe
Ref :		Easting:	395685.6
Pcw Rcv Da:		Northing:	3921566.5
Sched Date:		Latitude Degree:	0
Use of Wel:		Latitude Minute:	0
Sys Date:	01/14/2008, 12:00 AM	Latitude Second:	0.0
Subdiv Nam:	Na	Longitude Degree:	0
Surface Co:	0	Longitude Minute:	0
Ditch Name:		Longitude Second:	0.0
Well Tag:		X:	1670444.0
Static Lev:	0	Y:	1612563.0
Tract Nbr:		Point Y:	35.43207247
Map Nbr:		Point X:	-106.14919895
Driller:			
POD Basin Desc:	Rio Grande		
POD Sub Basin Desc:	Northern Rio Grande		
Grant :	Mesita De Juana Lopez		

Wells and Additional Sources Detail Report

Legal:

Radon Information

This section lists any relevant radon information found for the target property.

Federal EPA Radon Zone for *SANTA FE* County: **1**

Zone 1: Counties with predicted average indoor radon screening levels greater than 4 pCi/L
Zone 2: Counties with predicted average indoor radon screening levels from 2 to 4 pCi/L
Zone 3: Counties with predicted average indoor radon screening levels less than 2 pCi/L

Federal Area Radon Information for *SANTA FE* County

No Measures/Homes:	73
Geometric Mean:	3.2
Arithmetic Mean:	4.6
Median:	3.5
Standard Deviation:	3.8
Maximum:	21.6
% >4 pCi/L:	41
% >20 pCi/L:	1
Notes on Data Table:	TABLE 1. Screening indoor radon data from the EPA/State Residential Radon Survey of New Mexico conducted during 1988-89. Data represent 2-7 day charcoal canister measurements from the lowest level of each home tested.

Appendix

Federal Sources

FEMA National Flood Hazard Layer — **FEMA FLOOD**

The National Flood Hazard Layer (NFHL) data incorporates Flood Insurance Rate Map (FIRM) databases published by the Federal Emergency Management Agency (FEMA), and any Letters Of Map Revision (LOMRs) that have been issued against those databases since their publication date. The FIRM Database is the digital, geospatial version of the flood hazard information shown on the published paper FIRMs. The FIRM Database depicts flood risk information and supporting data used to develop the risk data. The FIRM Database is derived from Flood Insurance Studies (FISs), previously published FIRMs, flood hazard analyses performed in support of the FISs and FIRMs, and new mapping data, where available.

Indoor Radon Data — **INDOOR RADON**

Indoor radon measurements tracked by the Environmental Protection Agency(EPA) and the State Residential Radon Survey.

Public Water Systems Violations and Enforcement Data — **PWSV**

This list of drinking water violations and enforcement actions is sourced from the U.S Environmental Protection Agency's (EPA) Enforcement and Compliance History Online (ECHO) system that incorporates Public Water Systems data from EPA's Safe Drinking Water Information System (SDWIS) database, as part of the national download of Safe Drinking Water Act (SDWA) data. SDWIS contains information on public water systems from the Public Water System Supervision (PWSS) Program, including monitoring, enforcement, and violation data related to requirements established by the SWDA. Address information provided in SWDIS may correspond either with the physical location of the water system, or with a contact address.

Radon Zone Level — **RADON ZONE**

Areas showing the level of Radon Zones (level 1, 2 or 3) by county. This data is maintained by the Environmental Protection Agency (EPA).

Safe Drinking Water Information System (SDWIS) — **SDWIS**

This national download of Safe Drinking Water Act (SDWA) data is sourced from the U.S Environmental Protection Agency's (EPA) Enforcement and Compliance History Online (ECHO) system that incorporates Public Water Systems data from EPA's Safe Drinking Water Information System (SDWIS) database. SDWIS contains information on public water systems from the Public Water System Supervision (PWSS) Program related to requirements established by the Safe Drinking Water Act (SDWA). Address information provided in SWDIS may correspond either with the physical location of the water system, or with a contact address.

Soil Survey Geographic database — **SSURGO**

The Soil Survey Geographic database (SSURGO) contains information about soil as collected by the National Cooperative Soil Survey at the Natural Resources Conservation Service (NRCS). Soil maps outline areas called map units. The map units are linked to soil properties in a database. Each map unit may contain one to three major components and some minor components.

U.S. Fish & Wildlife Service Wetland Data — **US WETLAND**

The U.S. Fish & Wildlife Service Wetland layer represents the approximate location and type of wetlands and deepwater habitats in the United States.

USGS Current Topo — **US TOPO**

US Topo topographic maps are produced by the National Geospatial Program of the U.S. Geological Survey (USGS). The project was launched in late 2009, and the term "US Topo" refers specifically to quadrangle topographic maps published in 2009 and later.

USGS Geology — **US GEOLOGY**

Seamless maps depicting geological information provided by the United States Geological Survey (USGS).

USGS National Water Information System — **FED USGS**

The U.S. Geological Survey's (USGS) National Water Information System (NWIS) is the nation's principal repository of water resources data. The data includes comprehensive information of well-construction details, time-series data for gage height, streamflow, groundwater level, and precipitation and water use data. This NWIS database information is obtained through the Water Quality Data Portal (WQP). The WQP

is a cooperative service sponsored by the USGS, the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC).

State Sources

Oil and Gas Wells **OGW**

Oil and Gas Well Data collected by New Mexico Oil Conservation Division.

Point of Diversion Report **WATER WELLS**

Point of Diversion report provided by the New Mexico Office of the State Engineer (OSE). This data comes from the NM Water Rights Reporting System (NMWRRS). The report returns a summary of water rights use, owner, wells, point of diversion and location and other information. This list includes declared, complete, in-progress, and plugged wells.

Public Water Supply Wells **PWSW**

A list of public water supply systems maintained by the New Mexico Environment Department (NMED), Drinking Water Bureau (DWB). This database includes active and inactive public water systems.

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Reliance on information in Report: The Physical Setting Report (PSR) DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as a review of environmental databases and physical characteristics for the site or adjacent properties.

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APPENDIX E

User Provided Information

PRELIMINARY ASSESSMENT REPORT
WALDO ZINC SMELTER
CERCLIS # NM0000605582
SANTA FE COUNTY, NEW MEXICO

April 2007

New Mexico Environment Department
Ground Water Quality Bureau
Superfund Oversight Section

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1.0 Introduction

Under the authority of the Comprehensive Environmental Response, Compensation and Liability Act, as amended, 42 United States Code (U.S.C.) §§ 9601 to 9675, the New Mexico Environment Department (NMED) Superfund Oversight Section (SOS) conducted a Preliminary Site Assessment (PA) of the Waldo Zinc Smelter (the Site), in the Town of Waldo, Santa Fe County, New Mexico, CERCLIS ID # NM0000605582. The objective of the PA is to evaluate the Site using the Hazard Ranking System (Ref. 1) and the Superfund Chemical Data Matrix (SCDM) (Ref. 2) to determine if a threat to human health and the environment exists such that further action under CERCLA is warranted.

2.0 Site Information

2.1 Location and Description

The Site is an abandoned zinc smelter located in Waldo, Santa Fe County, New Mexico (Figure 1). The geographic coordinates are approximately 35º 27' 25.142" N latitude and 106º 9' 33.635" W longitude (Ref. 3). Waldo is located approximately 2 miles northwest from the Village of Cerrillos, New Mexico and approximately 27 miles southwest from Santa Fe, New Mexico.

The Site consists of an abandoned zinc smelter. The Waldo Zinc Smelter was a 5-story zinc smelter that had a daily capacity to process 15-tons of zinc oxide (Ref. 4). Zinc oxide was processed to make paint pigments for the Pittsburgh Paint Company which operated several major zinc mines in New Mexico (Ref. 4). The Waldo Zinc Smelter operated from 1917-1920, and intermittently between 1921-1922 (Ref. 4). The smelter eventually closed in 1922 (Ref. 4). Remaining structures at the Site include several vats, building foundations, and a slag floor (Ref. 5, p. 4). Currently, there are no smelting activities occurring at the Site.

Access to the Site is unrestricted and three (3) barbed wire fences and a railroad track separate the Site from New Mexico County Road 57 (Ref. 5, p. 4). A basketball, tracks of cattle, human, dogs, mountain bike and a motorcycle were observed on Site and on the Galisteo Creek (Ref. 5, p. 9). Additionally, a woman was observed crossing the Site with three dogs (Ref. 5, p. 9).

Surficial soils belong to Las Lucas series which consists of well-drained soils that formed in material weathered from Mancos shale and mixed wind laid materials (Ref. 6, p. 32). Depth to shale is 40 to 60 inches (Ref. 6, p. 32). Slopes are 1 to 9 percent (Ref. 6 , p. 32). The vegetation is mostly mid grasses (Ref. 6, p. 32). Elevation ranges from 6,200 feet to 6,600 feet (Ref. 6, p. 27). The mean annual precipitation is 12 to 14 inches, and the mean annual air temperature is 48 degrees to 52 degrees Fahrenheit (Ref. 6, p. 27). The Las Lucas soils are used for range, as wildlife habitat, and for water supply (Ref. 6, p. 32).

2.2 Operational History and Ownership

The Site consists of an abandoned zinc smelter in the ghost town of Waldo, New Mexico. Carl August Benjamin Grubnau and his wife Victorina arrived in Waldo in 1916 and purchased 48 acres just south of the AT&SF right of way and had a siding track laid to the Site (Ref. 4). Grubnau built a 5-story zinc smelter, and a roaster between the railroad and the Galisteo River (Ref. 4). The Waldo Zinc Smelter had a daily capacity to process 15-tons of zinc oxide (Ref. 4).

The Waldo Zinc Smelter operated from 1917-1920, and intermittently between 1921-1922 (Ref. 4). The smelter eventually closed in 1922 (Ref. 4). Remaining structures at the Site include several vats, building foundations, and a slag floor (Ref. 5, p. 4).

2.3 Regulatory History

In September 2003, NMED SOS conducted a Pre-CERCLIS screening assessment of the Site because the Site was referred to the NMED SOS by a citizen. NMED recommended further investigation and sampling in the Pre-CERCLIS Screening document (Ref. 7, p. 2).

2.4 Previous Environmental Investigation

SOS completed a Pre-CERCLIS Screen of the Waldo Zinc Smelter Site in September 2003, after a citizen referred the Site to NMED (Ref. 7, p. 2). In this document, NMED made a recommendation for further investigation (Ref. 7, p. 2). This preliminary assessment with sampling is prepared in response to the recommendation.

The Army Corp of Engineer conducted a retained sediment characterization study in September 2005 at the Galisteo Reservoir, located approximately 3 miles downstream from the Waldo Zinc Smelter Site. Characterization of the Galisteo Reservoir retained sediments that are likely to be released as a result of saltcedar eradication was performed to determine whether the sediments released to Galisteo Creek may pose an adverse risk to human health and the aquatic environment downstream of the Galisteo Dam (Ref. 8, p. ES-1). Chemical characterization focused on 22 metals due to the possible occurrence of elevated metal concentrations resulting from natural liberalization and historical mining and smelting activities within the Cerrillos Mining District in the drainage basin upstream of the reservoir (Ref. 8, ES-1). It was expected that some spatial variation in particle size distribution and metals concentrations would exist among sample point location within the vicinity of each sample location (Ref. 8, ES-1). Therfore, the sampling of retained sediments at Galisteo Reservoir and the sampling of background sediments consisted of composite sampling from five co-located samples that are more representative of the average characteristics at each sampling location (Ref. 8, p. ES-1). A total of 80 surface and subsurface individual reservoir co-located composte sediment samples were collected along a series of transects located perpendicular to the main Galisteo channel and the south tributary channel (Ref. 8, p. ES-1). A total of 12 surface individual reservoir co-located composite background and baseline sediment samples were collected from the channel bed of the Galisteo Creek (Ref. 8, p. ES-2). The sediment samples were also tested for leachable metals for environmental assessment of potential impacts on downstream water quality criteria (Ref. 8 p. ES-2) The metal concentrations in the 92 individual co-located composite sediment samples and in the Reservoir and Background samples were all significantly lower than the corresponding soil screening criteria for industrial workers (Ref. 8, p. ES-2). The study concluded that reservoir sediments are of low risk to human health and the aquatic environment downstream of the Galisteo Dam (Ref. 8, p. ES-2).

3.0 Site Investigation

The objective of the Site investigation was to document if the Site is a source of CERCLA hazardous substance and to characterize the source. The site investigation objective also included documentation of a release of CERCLA hazardous substances at the Site and the

potential for the contamination to affect the resident population, near-by population, and the environment.

3.1 Source/Waste Characteristics

The Site is currently characterized as a soil contaminated Site and the source of the contamination is from the operations of a zinc smelting operation that operated from 1917-1922 (Ref. 4). Elevated levels of arsenic, cadmium, iron, lead, and zinc were found in Site soils (Ref. 9). Table 1 summarizes the analytical data from soils at the Site.

During the preliminary assessment for the Site, NMED SOS gathered information pertaining to potential sources, receptors, and contaminated media.

3.1.1 Source/Waste Description

The Site is characterized as a Site with contaminated soil. A release of CERCLA hazardous substances was documented at the Waldo Zinc Smelter. Substances found in soil at levels above state and federal screening levels or health-based benchmarks include heavy metals such as arsenic, cadmium, iron, lead, and zinc (Ref. 9, Ref. 13, and Ref. 14).

3.1.2 Source Waste Characterization Methods

The sampling objectives were to document the presence and release of CERCLA hazardous substance and to document potential receptors at the Waldo Zinc Smelter. The NMED collected soil and surface water samples on March 22, 2004 (Ref. 5, Ref. 9, Ref. 10, and Ref. 11). On November 1, 2006, NMED collected an additional surface water sample (Ref. 5 and Ref. 12).

The NMED SOS used a Spectrace 9000 portable X-ray fluorescence (XRF) instrument as a screening tool in sampling of Site soils. The XRF could not be calibrated due to the unavailability of calibration sources and consequently the XRF was used as a screening tool to determine which samples (highest and lowest results) to send to a EPA Contract Laboratory Program (CLP) for confirmation analysis for target analyte list metals (Ref. 5, p. 2 and Ref. 9). The NMED SOS screened 13 grab soil samples in the field (Ref. 5, p. 2). Table 2 lists the screening results from the XRF instrument. See Table 1 and Table 2 for a comparison between the CLP analytical results and XRF instrument results. Of note, is that the XRF instrument results are lower than the CLP analytical results. Of the 13 grab soil samples, three soils samples (two grab soil samples plus one duplicate) were sent to the CLP. The sampling location "Railroad Spur" (Table 2, sampling location "RR Spur**"**) was selected for CLP confirmation sampling (Table 1; EPA CLP ID # MF0X15, sample location "Soil High") due to the highest XRF soil screening result in the field (Ref. 5, p. 2) Sampling location Soil Staining Outer Bottom (SSOB), (Table 2, sampling location "SSOB"), was selected for CLP confirmation sampling due to lowest XRF readings in the field (Table 2; EPA CLP ID # MF0X17, sample location "Soil Low"). Of the 13 grab soil samples, two sediment samples from the Galisteo River were analyzed with the XRF instrument (Table 2).

NMED collected eight surface water samples from the Galisteo River on March 22, 2004 (Ref. 5, Ref. 10 and Ref. 11). The eight water samples were analyzed for total and dissolved metals through the CLP (Ref. 5, Ref. 10, and Ref. 11). On November 1, 2006, NMED collected an additional sample from the Galisteo River (Ref. 5, p. 15 and Ref. 12). The November 2006

surface water sample was analyzed by Pinnacle Laboratories located in Albuquerque, New Mexico and was analyzed for total and dissolved target analyte list metals (Ref. 12). The November 2006 surface water sample was collected to see if site conditions had changed in response to a complaint from a citizen that flooding in the area might be impacting the Galisteo River (Ref. 5, p. 14). NMED did not notice any significant changes in Site conditions (Ref. 5, p. 15).

3.1.3 Source/Waste Characterization Results

CLP laboratory analytical results document an observed release of CERCLA hazardous substances at the Waldo Zinc Smelter. Substances found in soil at levels above state and federal screening levels or health-based benchmarks include heavy metals such as arsenic, cadmium, iron, lead, and zinc (Ref. 9, p. 1).

Two soil samples (EPA sample ID MF0X15 and MF0X18) plus one duplicate soil sample (MF0X17 is a duplicate of MF0X15) were sent the CLP for confirmation analysis (Table 1 and Ref. 9). Soil sample ID # MFOX15 contained arsenic, cadmium, iron, lead, and zinc above state and federal soil screening levels (Table 1; Ref. 9, p. 1).

Soil sample ID # MF0X15 contained arsenic at a concentration of 94.9 mg/Kg (Table 1; Ref. 9 , p. 1). The federal EPA Region 6 Screening Value for Residential Soils (SVRS) for cancer risk is 0.39 mg/Kg and for non-cancer risk is 22 mg/Kg (Ref. 13, p. 1). The NMED Soil Screening Level (SSL) for arsenic is 4 mg/Kg (Ref. 14, p. 1). The SCDM Health Based Parameter (HBP) for the soil exposure pathway is 0.43 mg/Kg (cancer risk) (Ref. 2, p. 2).

Soil sample ID # MFOX15 contained cadmium at a concentration of 326 mg/Kg (Ref. 9, p. 1; Table 1). The EPA Region 6 SVRS for cadmium is 39 mg/Kg (Ref. 13). The NMED SSL for cadmium is 74.1 mg/Kg (non-cancer risk) (Ref. 14, p. 2). The SCDM HBP for the soil exposure pathway for cadmium is 39 mg/Kg (non-cancer risk) (Ref. 2, p. 4).

Soil sample ID # MF0X15 contained iron at a concentration of 126,000 mg/Kg (Ref. 9, p. 1; Table 1). The EPA Region 6 SVRS for iron is 23,000 mg/Kg (Ref. 13). The NMED SSL for iron is 23,500 (Ref. 14, p. 4). There is no value on the SCDM HBP for iron on the soil exposure pathway (Ref. 2, p. 6).

Soil sample ID # MF0X15 contained lead at a concentration of 102,000 mg/Kg (Ref. 9). The EPA Region 6 SVRS for lead is 400 mg/Kg (Ref. 13). The NMED SSL for lead is 400 mg/Kg (Ref. 14, p. 5). There is no value on the SCDM HBP for lead on the soil exposure pathway (Ref. 2, p. 8).

Soil sample ID # MF0X15 contained zinc at a concentration of 31,000 mg/Kg (Ref. 9). The EPA Region 6 SVRS for zinc is 23,000 mg/Kg (Ref. 13). The NMED SSL for zinc is 23,500 mg/Kg (non-cancer risk) (Ref. 14 , p. 7). The SCDM HBP for the soil exposure pathway for zinc is 23,000 mg/Kg (non-cancer risk) (Ref. 2, p. 9).

Soil sample ID # MF0X17 was collected from the terrace floor located between the Galisteo Creek and the Waldo Zinc Smelter (Figure 2). Metal concentrations, except for arsenic, were

below the EPA Region 6 SVRS, NMED SSL and SCDM HBP levels soil screening levels (Ref. 2, Ref. 9, and Ref. 13). The arsenic concentration of 8.0 mg/Kg exceeded the NMED SSL of 4 mg/Kg (Ref. 9 and Ref. 14).

Surface water samples collected for total and dissolved metals analysis from the Galisteo River on March 2004 and November 2006 did not exceed New Mexico Water Quality Control Commission (NMWQCC) standards or EPA maximum contaminant levels (Table 3 and Table 4; Ref. 10, Ref. 11, and Ref. 12).

3.2 Ground Water Pathway

The ground water pathway assesses the threat to human health and the environment by determining whether hazardous substances are likely to have been released to ground water and whether any receptors (drinking water wells, wellhead protection areas, resources) are likely to be exposed to hazardous substances as a result of a release. The NMED SOS did not sample ground water or fully characterize the ground water migration pathway during the Waldo Zinc Smelter Site PA. The NMED SOS does not disregard the potential for ground water contamination and subsequent migration of the contamination at this time. However, the NMED SOS has limited this investigation to the soil and surface water exposure pathway as the emphasis of this investigation.

3.2.1 Hydrogeology

The Site is located in the east side of the Rio Grande trough in the Galisteo Basin (Ref. 15, p. 6). The Cerrillos area (note-the Cerrillos area is located approximately 2 miles southeast from the Waldo Zinc Smelter) is part of the La Bajada constriction, a positive element in the down faulted Rio Grande depression (Ref. 16, p. 31). The Site is underlain by Upper Cretaceous Mancos Shale, one of three older sedimentary rock units (Mesaverde Formation, Mancos Shale, Dakota Formation) (Ref. 15, p. 6).

Other water-bearing rock units in the Cerrillos area include the alluvial aquifer, fractured igneous rocks, and the Ancha Formation (Ref. 15, p. 6). The alluvial aquifer includes Quaternary modern alluvium and older terrace and pediment material (Ref. 15, p. 6). The alluvial aquifer is variable as a source of water, and the greatest likelihood of obtaining water is from sandy or gravelly channel fill material underlain by rocks of low permeability (Ref. 17, p. 47). This aquifer is associated with stream courses such as the San Marcos Arroyo, which borders the Cerrillos Mill/Smelter Site (Ref. 15, p. 6).

Tertiary fractured igneous rocks constitute the principle aquifer found in the Cerrillos Hills, immediately northeast of the Site (Ref. 15, p. 6). The potential yield for wells in these rocks is small, except in location where numerous fractures intersect (Ref. 17, p. 48).

Ground water flow in the Site vicinity is generally from north to south and drains to Galisteo Creek and its alluvium (Ref. 17, p. 49). Due to extensive local fracturing and faulting, ground water movement in the area is primarily under fracture flow conditions) and water bearing units in the Site vicinity are most likely hydraulically connected (Ref. 17, p. 48). The water table in the Cerrillos area is generally high (> 100 feet) because the Mancos Shale creates a perched water table in the overlying Ancha Formation or alluvium (Ref. 15 p. 7).

3.2.2 Local Ground Water Quality

The NMED SOS did not sample ground water or fully characterize the ground water migration pathway during the Waldo Zinc Smelter Site PA. The NMED SOS does not disregard the potential for ground water contamination and subsequent migration of the contamination at this time. However, the NMED SOS has limited this investigation to the soil exposure pathway as the emphasis of this investigation.

3.2.3 Ground Water Use

Los Vaditos de Cerrillos community water system has 145 service connections and supplies water to approximately 351 people (145 service connections x 2.42 (average household size in Santa Fe County) (Ref. 18 and Ref. 19). Los Vaditos de Cerrillos community water system is located approximately 3 miles from the Site (Figure 3). The Town of Cerrillos obtains its water from an infiltration gallery located in the San Marcos Arroyo located approximately three miles from the Site (Ref. 5, p. 11; Figure 3). The infiltration gallery consists of a retention dam, perforated piping, a clear well, and a storage tank (Ref. 5, p. 11). Additionally, the Cerrillos water system uses the Cerrillos Well # 1 for emergencies; however, this well was not used for calculating population distribution (Ref. 5, p. 11). Cerrillos Well # 1 is located approximately 2-3 miles from the Site (Figure 3). The Cerrillos water system does not have a wellhead protection program (Ref. 5, p. 13).

The Madrid Village Water Co-op (MVWC) water system has 125 service connections and supplies water to approximately 303 people (125 connections X 2.42 (average household size in Santa Fe county)) (Ref. 18, p. 1; Ref. 20, p. 1). The MVWC is located within 3-4 miles from the Site (Figure 3). The Madrid Water Co-op has four wells (Wells 1-4); however, only Madrid Well # 3 is used (Ref. 5, p. 12). Madrid Well # 3 is 3-4 miles from the Site (Fig. 3). The other MVWC wells are either inoperative or dry (Ref. 5, p. 12). The Madrid Water Co-op has a wellhead protection program (Ref. 5, p. 13).

Ground water in the Cerrillos and Madrid area is used for drinking water and livestock watering (Ref. 5, p. 16, Ref. 19, and Ref. 20**)**. All of the drinking water in the area comes from ground water (Ref. 19, and Ref. 20). The nearest private water supply well closest to the Site is ½ mile (New Mexico Office of State Engineer W.A.T.E.R.S. data base indicate a private well approximately ½ mile from the Site; however, during the Site visit the nearest residence observed was approximately 1.1 miles away) and the closest municipal wells, Madrid Well #1 and Cerrillos infiltration gallery are 3-4 miles from the Site (Fig. 3; Ref. 5, p. 9)

Figure 3 shows the location of municipal wells and private wells within a four-mile radius of the Site and Table 5 summarizes the number of people using ground water for drinking water within each target distance limit (TDL) and shows how these numbers were calculated. Calculations indicate that there are 811 people using ground water for drinking water within a four mile radius from the Site (Table 5).

3.2.4 Ground Water Investigation Methods

Ground water was not sampled during this preliminary assessment. The on-site supply well was dry; therefore, ground water was not sampled.

3.2.5 Ground Water Investigation Results

Ground water was not sampled during this preliminary assessment. The on-site supply well was dry; therefore, ground water was not sampled.

3.3 Surface Water Pathway

The surface water pathway assesses the threat to human health and the environment by determining whether hazardous substances are likely to have been released to surface water; and whether any receptors (intakes supplying drinking water, fisheries, sensitive environments) are likely to be exposed to a hazardous substance as a result of a release.

3.3.1 Hydrology

The Galisteo Creek, a tributary of the Rio Grande, is the major surface drainage feature in the area (Ref. 17). The Galisteo Creek is located approximately 400 feet south of the Site (Ref. 7, p. 2).

3.3.2 Surface Water Quality

The nearest significant surface water body to the Site is the Galisteo Creek (Fig. 3).
The Galisteo Creek is located approximately 400 feet south from the Site (Ref. 7, p. 2). Contours indicate that surface drainage from the Site would drain towards the Galisteo Creek (Fig. 3).

NMED collected surface water samples on March 2004 and November 2006 (Ref. 10, Ref.11, and Ref. 12). The March 2004 surface water samples were analyzed for total and dissolved metals by an EPA Contract Laboratory Program. The November 2006 surface water sample was analyzed by Pinnacle Laboratories located in Albuquerque, New Mexico and was analyzed for target analyte list metals (total and dissolved). The March 2004 and November 2006 surface water samples did not exceed state or federal standards (Table 2 and Table 3; Ref. 10, Ref. 11, and Ref. 12,).

The NMED Surface Water Quality Bureau has required the property owner to implement a Surface Water Pollution Prevention Plan (SWPP) at the Site (Ref. 21). The SWPP requires vegetative cover and stabilization measures to be set in place (Ref. 21).

3.3.3 Surface Water Use

No drinking water intakes occur along the 15-mile downstream segment of San Marcos Arroyo and Galisteo Creek (Ref. 15, p. 10). Wetlands occur along Galisteo Creek and the creek is occasionally used for livestock watering and irrigation (Ref. 15, p. 10). Galisteo Creek is not used for fishing due to its intermittent nature (Ref. 15, p. 10). An environmental impact study conducted in the Site vicinity (environmental impact study was conducted at the Cerrillos Mill/Smelter located approximately 2-3 miles from the Site), did not identify any state or federally designated endangered species (Ref. 15, p. 10). Additionally, no endangered species are likely to occur along the 15-mile reach of the San Marcos Arroyo and Galisteo Creek (Ref. 15, p. 10).

3.4 Soil Exposure Pathway

The soil exposure pathway assesses the threat to human health and the environment by direct contact with hazardous substances and areas of suspected contamination. This pathway addresses any material containing hazardous substances that is on or within 2 feet of the surface and not capped by an impermeable cover.

3.4.1 Soil Exposure Pathway Description

Refer to Sections 3.1.2 and 3.1.3 for soil investigation methods and results.

3.4.2 Potentially Exposed Receptors

The Village of Cerrillos is 2-3 miles away from the Site and Madrid is 3-4 miles from the Site (Fig. 3). According to the 2000 census the Village of Cerrillos has a population of 229 people and Madrid has a population of 149 people (Ref. 22 and Ref. 23). There are no schools or day care facilities within 200 feet of the Site (Ref. 5, p. 9).

3.4.3 Soil Investigation Methods

Refer to Section 3.1.2 for soil investigation methods.

3.4.4 Soil Investigation Results

Refer to Section 3.1.3 for soil investigation results.

3.5 Air Pathway

The air pathway assesses the threat to human health and the environment by determining whether hazardous substances are likely to have been released to the air; and whether any receptors (human population and sensitive environments) are likely to be exposed to hazardous substances as a result of a release. The air pathway evaluates the human population and sensitive environments with in four (4) miles of the Site.

The air pathway was not evaluated during this preliminary assessment.

3.5.1 Potentially Exposed Receptors

The Village of Cerrillos is 2-3 miles away from the Site and Madrid is 3-4 miles from the Site (Fig. 3). According to the 2000 census the Village of Cerrillos has a population of 229 people and Madrid has a population of 149 people (Ref. 22 and Ref. 23). There are no schools or day care facilities within 200 feet of the Site (Ref. 5, p. 9).

4.0 Summary and Conclusions

The NMED SOS conducted a Preliminary Assessment at the Waldo Zinc Smelter Site. The Site is located near the ghost town of Waldo, Santa Fe County, New Mexico (Figure 3). In March 2004, the NMED SOS collected soil and surface water samples to document observed contamination with CERCLA hazardous substances and potential receptors at the Waldo Zinc Smelter Site Site. The Site consists of contaminated soil and the soil exposure pathway was the principal pathway investigated.

Three soil samples were sent to a CLP out of 13 grab soil samples that were screened on-site using a Spectrace 9000 portable XRF spectrometer. The substances observed in soil sample MFOX15 that

were above state, federal soil screening levels or health-based benchmarks at the Site include arsenic, cadmium, iron, lead, and zinc (Ref. 2, Ref. 9, p. 1, Ref. 13, and Ref. 14). Soil sample MFOX17 exceeded the NMED SSL for arsenic at a concentration of 8 mg/Kg (Ref. 9, p. 3)

Surface water samples collected from the Galisteo River did not exceed federal and state standards (Ref. 2, Ref. 10, Ref. 11, Ref. 12, Ref. 13, and Ref. 14)

A retained sediment study conducted at the Galisteo Reservoir (located approximately three miles downgradient from the Site) by the U.S. Army Corp of Engineers concluded that 92 sediment samples collected were below soil screening criteria (Ref. 8, p. ES-2).

The NMED SWQB has required the property owner to implement a Surface Water Pollution Prevention Plan at the Site (Ref. 21). The SWPP requires vegetative cover and stabilization measures to be set in place (Ref. 21).

The primary use of ground water near the Site is for drinking water and stock irrigation (Ref. 5, Ref. 19, and Ref. 20). The closest ground water targets is a private well that is more than ½ mile away (Fig. 3). The nearest active municipal wells are between three and four miles from the Site (Figure 3).

5.0 List of References

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&ds_name=DEC_2000_SAFF&_ci_nbr=null&qr_name=null&reg=null%3Anull&_keyword=&_industry

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Figure 1: Location of the Waldo Zinc Smelter within New Mexico (Ref. 3)

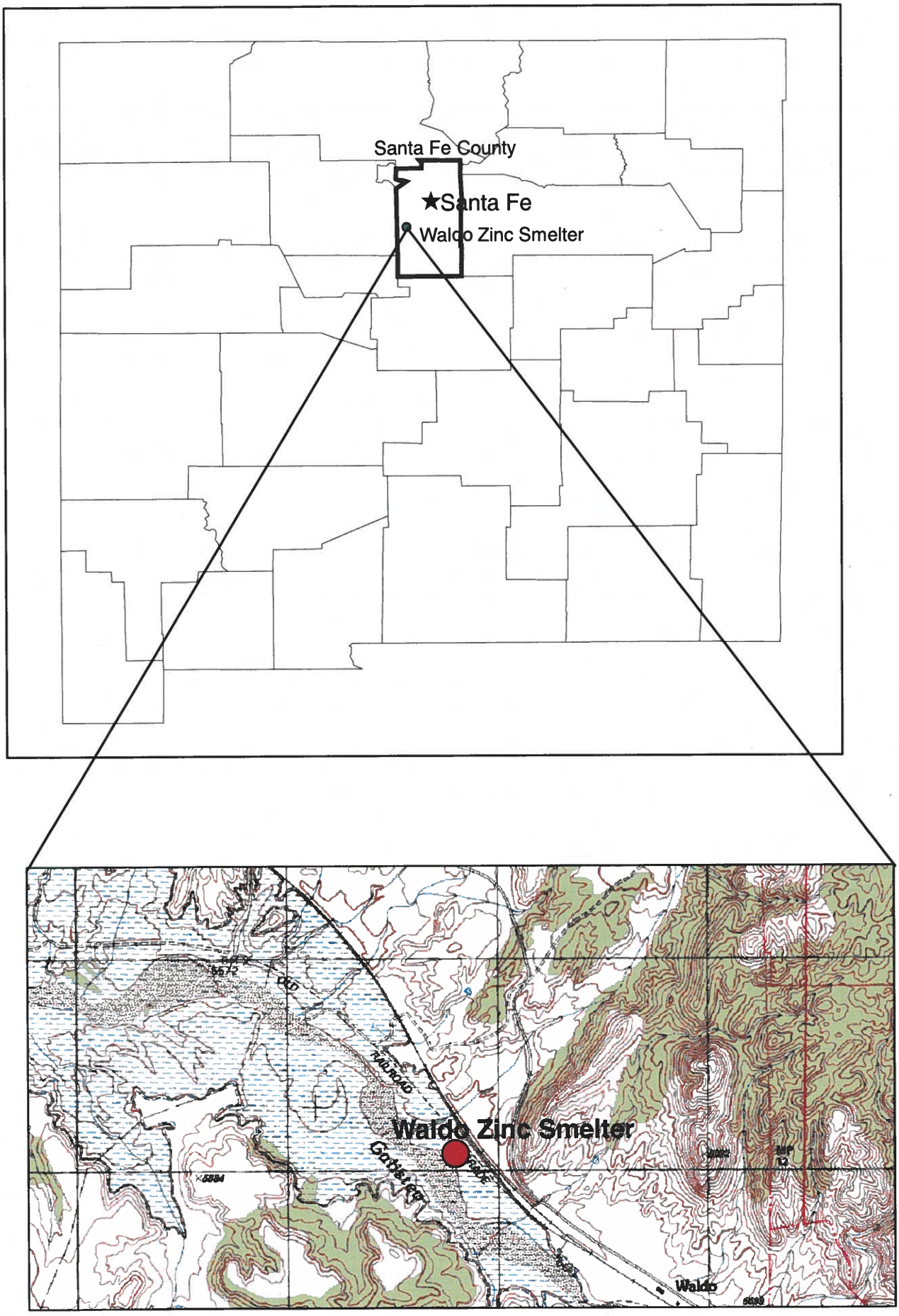
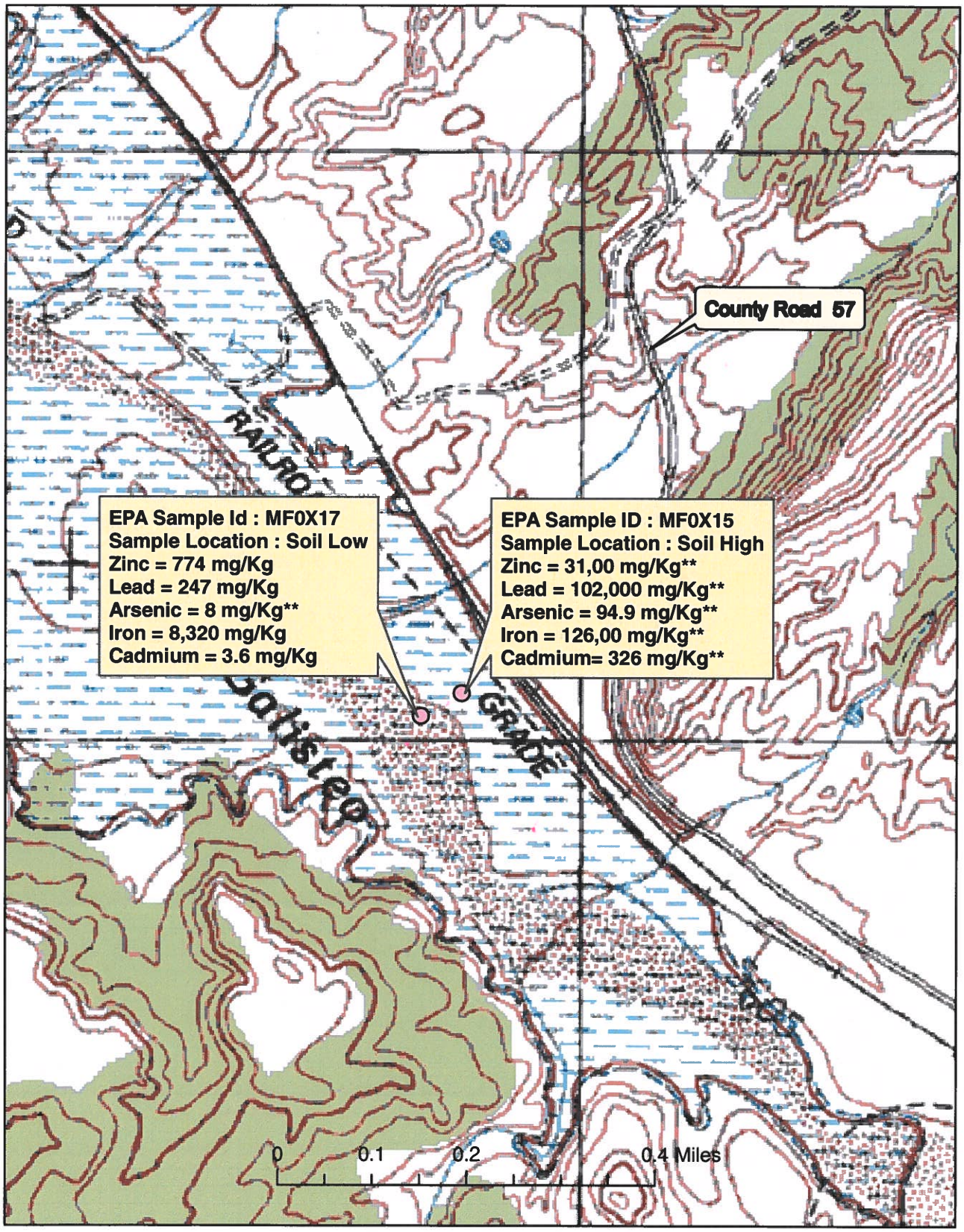


Figure 2: Soil Sampling Locations at the Waldo Zinc Smelter (Soil samples analyzed by the the Contract Laboratory Program) (Ref. 3 a



** denotes that analyte exceeds Soil Screening Levels

Figure 3: Waldo Zinc Smelter 4-Mile Radius Map (Ref. 3, Ref. 19, Ref. 20, and Ref.

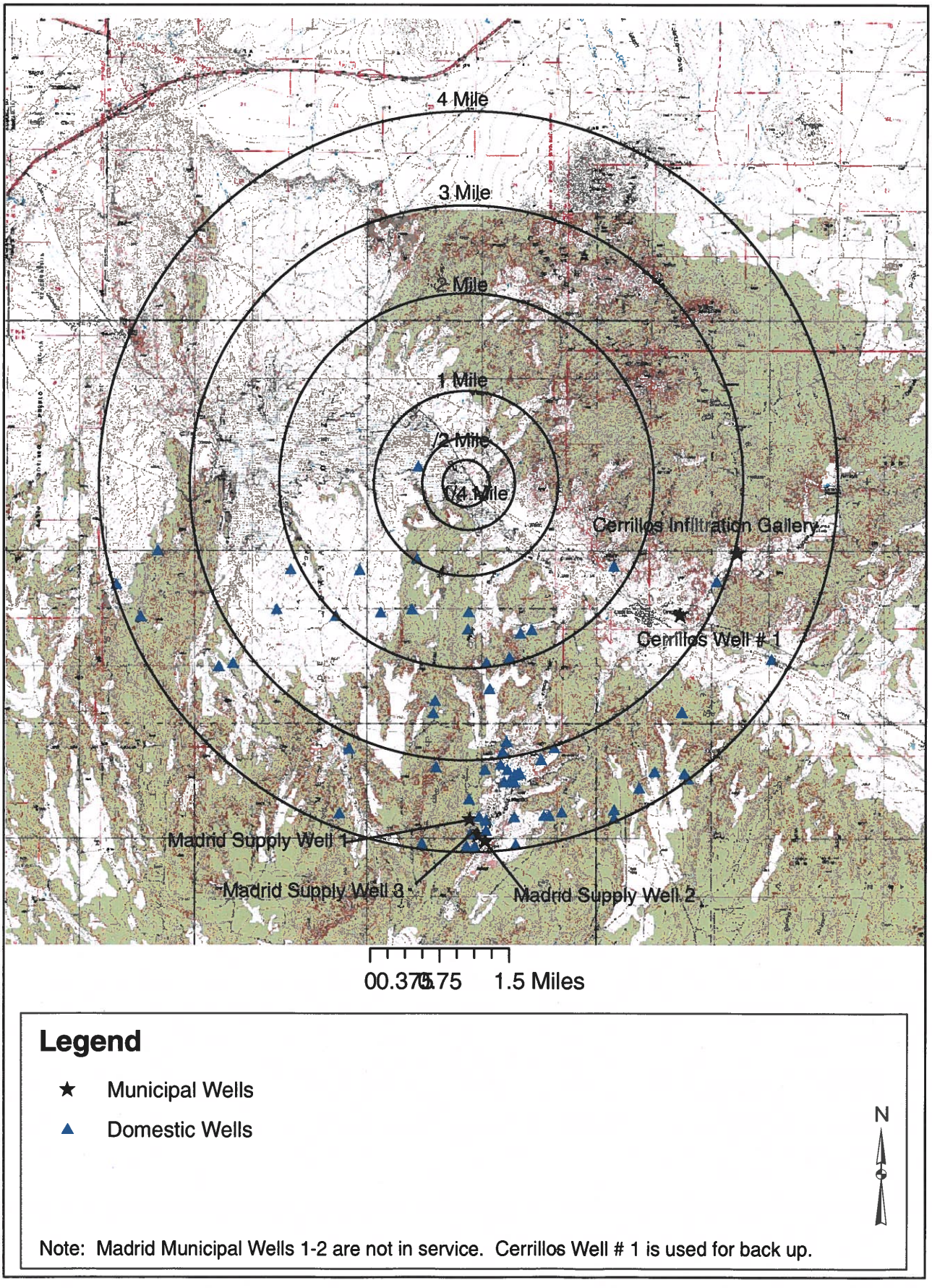


Figure 4: XRF Soil Sampling Locations at the Waldo Zinc Smelter (Ref. 26)

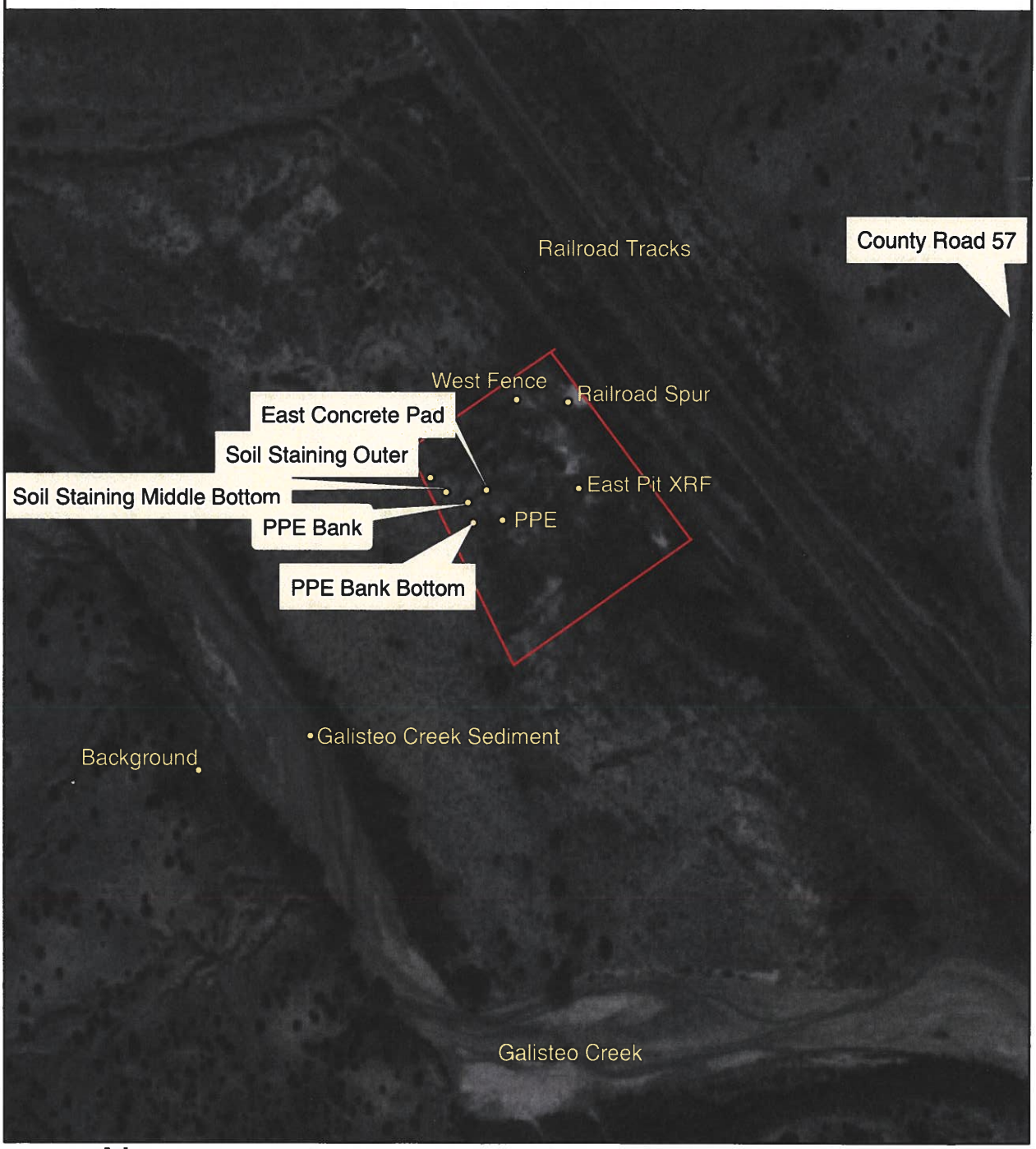


Table 1: Summary of Soil Sampling Analytical Results for Metals at the Waldo Zinc Smelter (units are in mg/Kg) (Ref. 3, Ref. 9, Ref. 13, and Ref. 14)

Analyte↓	EPA Sample ID→			MFOX15	MF0X16	MF0X17
	Sample Location →			Soil High	Soil High1* (duplicate)	Soil Low
	Sample Date →			3/22/2004	3/22/2004	3/22/2004
Aluminum	76,000	NP	77,800 (NC)	1,240	1,380	2,850
Antimony	31	31 (NC)	31.3 (NC)	3.8 J	3.3 J	12.1 U
Arsenic	0.39 (C) 22 (NC)	0.430 (C) 23 (NC)	4	**94.9**	**87.7**	**8.0**
Barium	6,000 (NC)	5,500 (NC)	5,450 (NC)	42.5 J	42.8 J	140
Beryllium	150	0.15 (C) 160 (NC)	156 (NC)	0.04 J	0.03 J	1 J
Cadmium	39	39 (NC)	74.1 NC)	**326**	**248**	3.6
Calcium	NP	NP		5,580	5,720	11,900
Chromium	Total: 210 Cr(VI): 100	230 (NC)	Cr(III) 100,000 Cr(VI) 234	2.1 J	2.1 J	3.1
Cobalt	900 ©	NP	1,520 (NC)	0.62 J	0.55 J	2.6 J
Copper	2,900	NP	3,130 (NC)	2,230	2,520	23.2
Iron	23,000	NP	23,500 (NC)	**126,000**	**123,000**	8,320
Lead	400	NP	400	**102,000**	**102,000**	247
Magnesium	NP	NP		660 J	516 J	1540
Manganese	3,200	1,100 (NC)	1,550(NC)	864	674	358
Mercury	23	23 (NC)	23.5 (NC)	1.4	1.4	0.10 U
Nickel	1,600	1,600 (NC)	1,560 (NC)	1.2 J	1.0 J	8.1 J
Potassium	NP	NP		3,330	3,290	851 J
Selenium	390	390 (NC)	391 (NC)	4.4 J	3.3 J	7.1 U
Silver	390	390 (NC)	391 (NC)	170	172	0.55
Sodium	NP	NP		1,010 J	747 J	1,010 U
Thallium	NP	NP	5.16 (NC)	3.6	**7.8**	5.0 U
Vanadium	78	550 (NC)	548 (NC)	4.4 J	4.2 J	11.8
Zinc	23,000	2,300 (NC)	23,500 (NC)	**31,000**	**26,500**	774
Cyanide	1,200 (N) (also many cyanide compounds)	1,600 (NC)		1.1 U	1.1 U	1.0
EPA Region 6 Screening Value for Residential Soils						
SCDM Health Based Parameter						
NMED Soil Screening Levels						

Legend:
BOLD- Above Regulatory standard
C-Cancer risk
NC-Non Cancer risk
U-not detected at the laboratory reported quantitation limit
J-Result is estimated because of outlying quality control parameters such as matrix spike, serial dilution, etc., or the result is below the CRQL
SCDM-Superfund Chemical Data Matrix
*-Duplicate of MFOX15

Table 2: X-ray Fluorescence (XRF) Soil Screening Results at the Waldo Zinc Smelter Site (Ref. 5) (results in mg/Kg).

Sampling Location	ANALYTE																								
	CrHi	K	Ca	Ti	CrLo	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Hg	Pb	Rb	Cd	Sn	Sb	Ba	Ag	U	Th
RR Spur	1740	8200	3230	460		2350	89200	920	460	1600	18310		175	167	33	41	1070	49020	156	490	85		64	179		178
SSMB	640	16570	21820	2270	450	2970	60120	400	156	175	3230			272	173.3			2454	78				407			28.2
PPEBottom	500	19710	15250	2370	600	2510	44030		307	173	5640			230	214			1044	63		32		487	58	16.3	26.7
PPE	750	16680	25790	2180		3050	36780	600	218	216	10250			300	244.6			1158	31	144			595	114	17.1	34.4
East Pit	690	5090	19290	260	400	8770	61270	1540	930	2580	59840		43	219	34.8		150	14080	30	284		44	152	169		57
MGAT	530	21840	25930	2360	720	540	13100		122		64	24		284	196				49				602		30.6	30.2
ECP	2510	1270	13110		760	5350	189100	1580	390	109	2370			53	27.2			4240					93	110	9	
BKG	400	19280	22400	2560		560	17110				103	43		163	333.9	6.7			51	65			418	35	21.7	34.5
SS0B	340	19180	20900	2320	750	580	14220				677			212	125.1	7.5		162	51.5	130			494			21.6
West Fence	1370	12940	28310	1480		3760	99600	1040	530	1290	19200		35	405	80.7	24.6	289	11600	68	242			360	164		55
GCS	260	12340	23070	950	600	370	11510		85		34	33		218	84.4				38.5				519		23	12.9
ECCB	510	15030	35430	1770	500	4390	67670		380	243	6680			270												
PPESED		11100	22460	990	630	470	7510				34	28		178	62.4				19.9				353	68	25	23.5

Legend

ECCB-East Concrete Bottom
GCS-Galisteo Creek Sediment
SSMB-Stained Soil Middle Bottom
PPE-Probable Point of Entry
MGAT-Middle Gallisteo and Terrace
BKG-Background
SSOB-Soil Staining Outer Bottom
PPESED-Probable Point of Entry Sediment
RR Spur-Railroad Spur
CrHi-Chromium Hi
K-Potasium
Ca-Calcium
Ti-Titanium
CrLo-Chromium Lo
Mn-Manganese
Fe-Iron
Co-Cobalt
Ni-Nickel
Cu-Copper
Zn-Zinc
As-Arsenic
Se-Selenium
Sr-Strontium
Zr-Zirconium
Mo-Molybdenum
Hg-Mercury
Rb-Rubidium
Cd-Cadmium
Sn-Tin
Sb-Antimony
Ba-Barium
Ag-Silver
U-Uranium
Th-Thorium

Table 3: Summary of the Surface Water Analytical Results for Total and Dissolved Metals sampled on March 2004, Waldo Zinc Smelter (Water Samples from the Galisteo River) (Ref. 13, Ref. 10, Ref. 11, and Ref. 24) (Results in micrograms per liter (ug/L))

Analyte	Sample ID:		MFOXO5	MFOXO6	MFOX07	MFOX08	MFOX09	MFOX10	MFOX13	MFOX14
	Sample Name:⟶		Down-gradient (TM)	Down-gradient (DM)	PPE (TM)	PPE (DM)	PPE2 (TM)	PPE2 (DM)	Upgradient (TM)	Upgradient (DM)
	Sample Date:⟶		3/22/2004	3/22/2004	3/22/2004	3/22/2004	3/22/2004	3/22/2004	3/22/2004	3/22/2004
Aluminum	-	5,000 (i)	25.9 J	30.0 U	31.8	30.0 U	30.2	9.1 J	45.5	30.0 U
Antimony	6	-	3.1	2.0 J	3.6	2.0 J	2.8	2.0 J	2.9	2.0 J
Arsenic	10	100	1.0 J	1.1	1.0	1.0	0.87 J	1.0	0.91 J	0.81 J
Barium	2000	1000	44.2	48.6	43	44.5	42.2	44.3	44.6	47.8
Beryllium	4	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	5	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chromium	100	50	0.07 J	2.0 U	0.10 J	2.0 U	0.08 J	2.0 U	0.10 J	2.0 U
Cobalt	-	50 (i)	0.43 J	0.55	0.42 J	0.49 J	0.41 J	0.47 J	0.42 J	0.47 J
Copper	1300	1,000	0.61 J	0.66 J	0.60 J	0.63 J	0.57 J	0.71 J	0.60 J	0.63 J
Cyanide	200	200	1.7 J	10.0 U	10 U	10.0 U	4.8 J	6.4 J	10.0 U	10.0 U
Lead	15	50	0.61 J	1.0 U	0.15 J	1.0 U	0.03 J	1.0 U	0.12 J	1.0 U
Manganese	-	200	105	103	74.7	66.5	76.1	66.9	129	130
Mercury	2	2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	-	200 (i)	2.5	3.2	2.7	3.2	2.6	3.3	2.7	3.2
Selenium	50	50	0.85 J	5.0 U	.98 J	5.0 U	0.89 J	5.0 U	1.0 J	5.0 U
Silver	-	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Thallium	5	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vanadium	-	-	1.5	1.7	1.5	1.5	1.5	1.5	1.8	1.9
Zinc	-	10,000	0.52 J	0.54 J	0.68 J	0.64 J	1.0 U	2.0	0.52 J	0.45 J
EPA Ground Water & Drinking Water MCL										
NMWQCC Standard										

Legend

(i)- irrigation standard

J-Result is estimated because of outlying quality control parameters such as matrix spike, serial dilution, etc., or the result is below the Contract Required Quanitation Limit.

DM-Dissolved Metals (filtered)

MCL-Maximum Contaminant Level

NMWQCC-New Mexico Water Quality Control Commission

TM-Total Metal (unfiltered)

U-Not detected at the laboratory reported quantitation limit.

I-Reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

NA-not analyzed

Table 4: Summary of the Analytical Results for Total and Dissolved Metals sampled on November 1, 2006 at the Waldo Zinc Smelter. Results in ug/L. (Ref. 12, Ref. 13, and Ref. 24).

Analyte↓	Sample ID:		611065	611065
	Sample Name:⟶		Galisteo Creek Downgradient (TM)	Galisteo Creek Downgradient (DM)
	Sample Date:⟶		11/1/2006	11/1/2006
Aluminum	-	5,000 (i)	0.283	20 U
Antimony	6	-	0.1 U	10 U
Arsenic	10	100	1.72 I	1 I
Barium	2000	1000	117	102.0
Beryllium	4	-	1 U	1 U
Cadmium	5	10	1 U	1 U
Chromium	100	50	2.41	2.62
Cobalt	-	50 (i)	1 U	1 U
Copper	1300	1,000	1 U	6.10
Iron			NA	10 U
Cyanide	200	200	NA	NA
Lead	15	50	1 U	1 U
Mangnesium			NA	53000
Manganese	-	200	NA	153.0
Mercury	2	2	NA	0.2 U
Nickel	-	200 (i)	9.99	9.07
Selenium	50	50	2 U	2 U
Silver	-	50	5	.5 U
Thallium	5	-	1 U	1U
Vanadium	-	-	9.18	8.3
Zinc	-	10,000	1 U	10 U
EPA Ground Water & Drinking Water MCL				
NMWQCC Standard				

Legend

(i)- irrigation standard

J-Result is estimated because of outlying quality control parameters such as matrix spike, serial dilution, etc., or the result is below Contract Required Quanitation Limit.

DM-Dissolved Metals (filtered)

I-Reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

MCL-Maximum Contaminant Level

NMWQCC-New Mexico Water Quality Control Commission

NA-not analyzed

TM-Total Metal (unfiltered)

U-Not detected at the laboratory reported quantitation limit.

Table 5: Population Distribution for Drinking Water Wells (Ref. 18, Ref. 19, Ref. 20, and Ref. 25)

Distance (miles)	Municipal Wells	Population Served by Municipal wells	Private Wells	Population Served by Private Wells**	Total Population
0 – 1/4 Mile					
1/4 - 1/2 Mile					
1/2 - 1 Mile			2	4.84	4.84
1 -2 Miles			12	29.04	29.04
2 -3 Miles			8	19.36	19.36
3 - 4 Miles	2*	351 (Cerrillos water system) 303 (MVWC)	43	104.06	758.06
Total Population					**811**

*There are two municipal wells that are within 3-4 miles from the site, one well from the Cerrillos Water System and one well from the Madrid Village Water Co-op (MVWC).

** Calculated from the Santa Fe average household size of 2.42 (Ref. 18)

APPENDIX F

Historical Fire Insurance Maps

FIRE INSURANCE MAPS

Project Property: Waldo Zinc Smelter
Road 57 Waldo NM 87010
Project No: NMENV.M007.SF-WALDO
Requested By: INTERA Incorporated
Order No: 25121700731
Date Completed: December 17, 2025

Please note that no information was found for your site or adjacent properties.

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

APPENDIX G

Historical City Directories

ERIS

CITY DIRECTORY

Project Property:	*Waldo Zinc Smelter* *Road 57* *Waldo,NM 87010*
Project No:	*NMENV.M007.SF-WALDO*
Requested By:	*INTERA Incorporated*
Order No:	*25121700731*
Date Completed:	*December 19, 2025*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

December 19, 2025
RE: CITY DIRECTORY RESEARCH
Road 57
Waldo,NM 87010

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

Search Criteria:
ALL of Hwy 57
ALL of SSB Trl
Search Notes:

Search Results Summary

Date	Source	Comment
2024	DIGITAL BUSINESS DIRECTORY	
2020	DIGITAL BUSINESS DIRECTORY	
2016	DIGITAL BUSINESS DIRECTORY	
2012	DIGITAL BUSINESS DIRECTORY	
2008	DIGITAL BUSINESS DIRECTORY	
2003	DIGITAL BUSINESS DIRECTORY	
2000	DIGITAL BUSINESS DIRECTORY	
1998	DIGITAL BUSINESS DIRECTORY	

2024 HWY 57

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2024 SSB TRL

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2020 HWY 57

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2020 SSB TRL

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2016 HWY 57

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2016 SSB TRL

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2012 HWY 57

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2012 SSB TRL

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2008 HWY 57

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2008 SSB TRL

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2003 HWY 57

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2003 SSB TRL

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2000 HWY 57

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2000 SSB TRL

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

1998 HWY 57

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

1998 SSB TRL

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

APPENDIX H

Database Report

DATABASE REPORT

Project Property:	*Waldo Zinc Smelter* *Road 57* *Waldo NM 87010*
Project No:	*NMENV.M007.SF-WALDO*
Report Type:	*Database Report*
Order No:	*25121700731*
Requested by:	*INTERA Incorporated*
Date Completed:	*December 17, 2025*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

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Executive Summary

Property Information:

Project Property:		*Waldo Zinc Smelter* *Road 57 Waldo NM 87010*
Project No:		*NMENV.M007.SF-WALDO*
Coordinates:		
	Latitude:	*35.45054412*
	Longitude:	*-106.16211058*
	UTM Northing:	*3,923,628.93*
	UTM Easting:	*394,537.64*
	UTM Zone:	*13S*
Elevation:		*5,710 FT*

Order Information:

Order No:	*25121700731*
Date Requested:	*December 17, 2025*
Requested by:	*INTERA Incorporated*
Report Type:	*Database Report*

Historicals/Products:

Aerial Photographs	*Historical Aerials (with Project Boundaries)*
Chain of Title & Lien Searches	*ASTM E1527-21 Compliant Environmental Lien Search (back to 1980) with Historic Chain of Title (back to 1932)*
City Directory Search	*CD - 2 Street Search*
ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*
Fire Insurance Maps	*US Fire Insurance Maps*
Physical Setting Report (PSR)	*Physical Setting Report (PSR)*
Topographic Map	*Topographic Maps*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	0	-	-	0
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
State								
SCS	Y	1	0	0	0	0	0	0
DELISTED SCS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	0	0	-	0
HIST LF	Y	0.5	0	0	0	0	-	0
RECYCLING	Y	0.5	0	0	0	0	-	0
LST	Y	0.5	0	0	0	0	-	0
DELISTED LST	Y	0.5	0	0	0	0	-	0
LUST HIST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	0	-	-	0
AST	Y	0.25	0	0	0	-	-	0
TANKS	Y	0.25	0	0	0	-	-	0
UST HIST	Y	0.25	0	0	0	-	-	0
AST HIST	Y	0.25	0	0	0	-	-	0
DELISTED TANK	Y	0.25	0	0	0	-	-	0
INST	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
BROWNFIELDS	Y	0.5	0	0	0	0	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0
County	***No County databases were selected to be included in the search.***							
Additional Environmental Records								
Federal								
PFAS GHG	Y	0.5	0	0	0	0	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
OSC RESPONSE	Y	0.125	0	0	-	-	-	0
FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
PFAS ERNS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	0	0
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
POWER PLANTS	Y	0.125	0	0	-	-	-	0
HIST RISK	Y	0.125	0	0	-	-	-	0
State								
HAZ	Y	0.5	0	0	0	0	-	0
SPILLS	Y	0.125	0	0	-	-	-	0
SPILLS OIL	Y	0.125	0	0	-	-	-	0
CDL	Y	0.125	0	0	-	-	-	0
PFAS	Y	0.5	0	0	0	0	-	0
GW DISCHARGE	Y	PO	0	-	-	-	-	0
URANIUM	Y	0.5	0	0	0	0	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County	***No County additional environmental record sources available for this State.***							
Total:			0	0	0	0	0	0

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

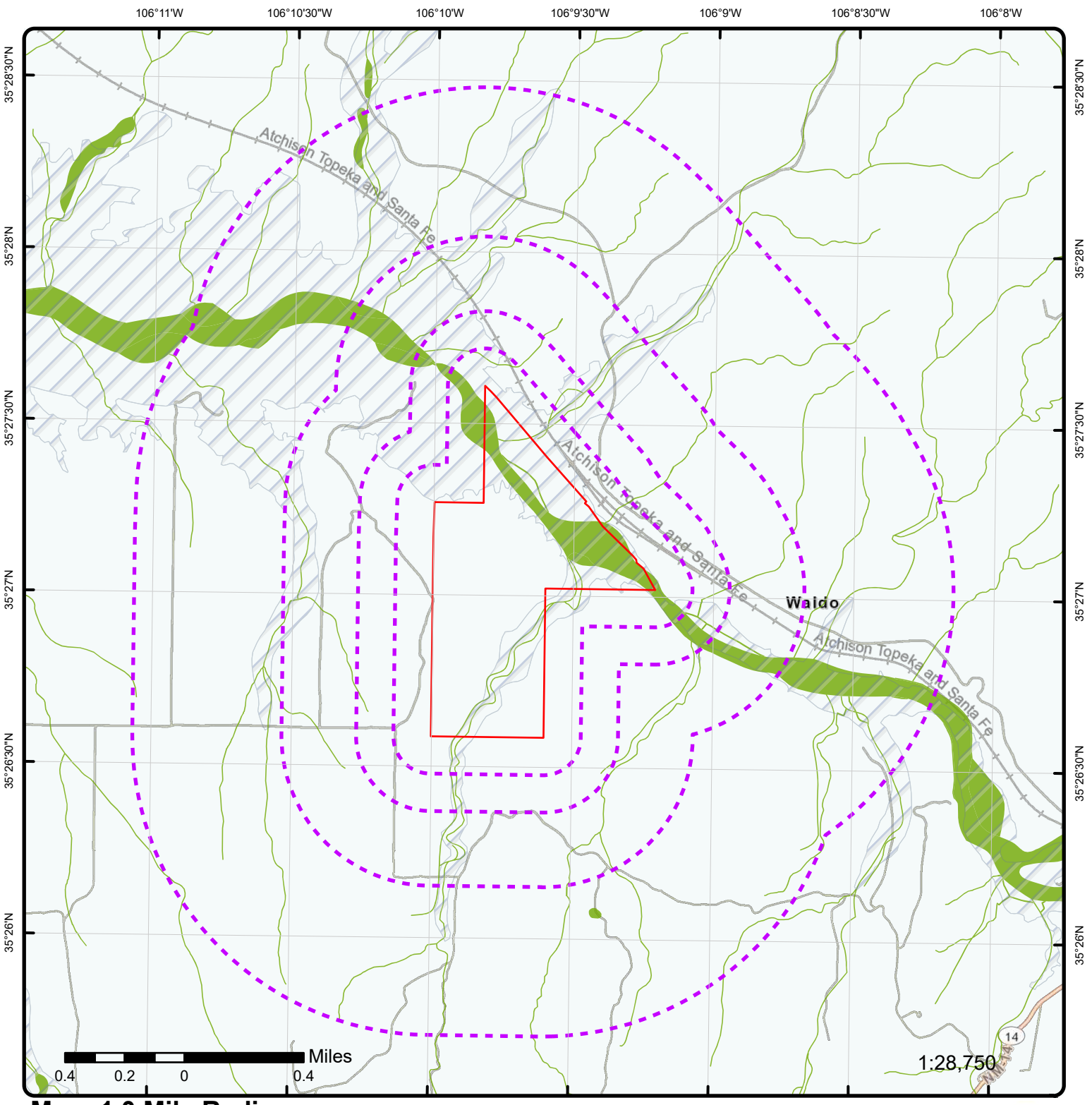
Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the surrounding properties.

Executive Summary: Summary by Data Source

No records found in the selected databases for the project property or surrounding properties.



Map: 1.0 Mile Radius

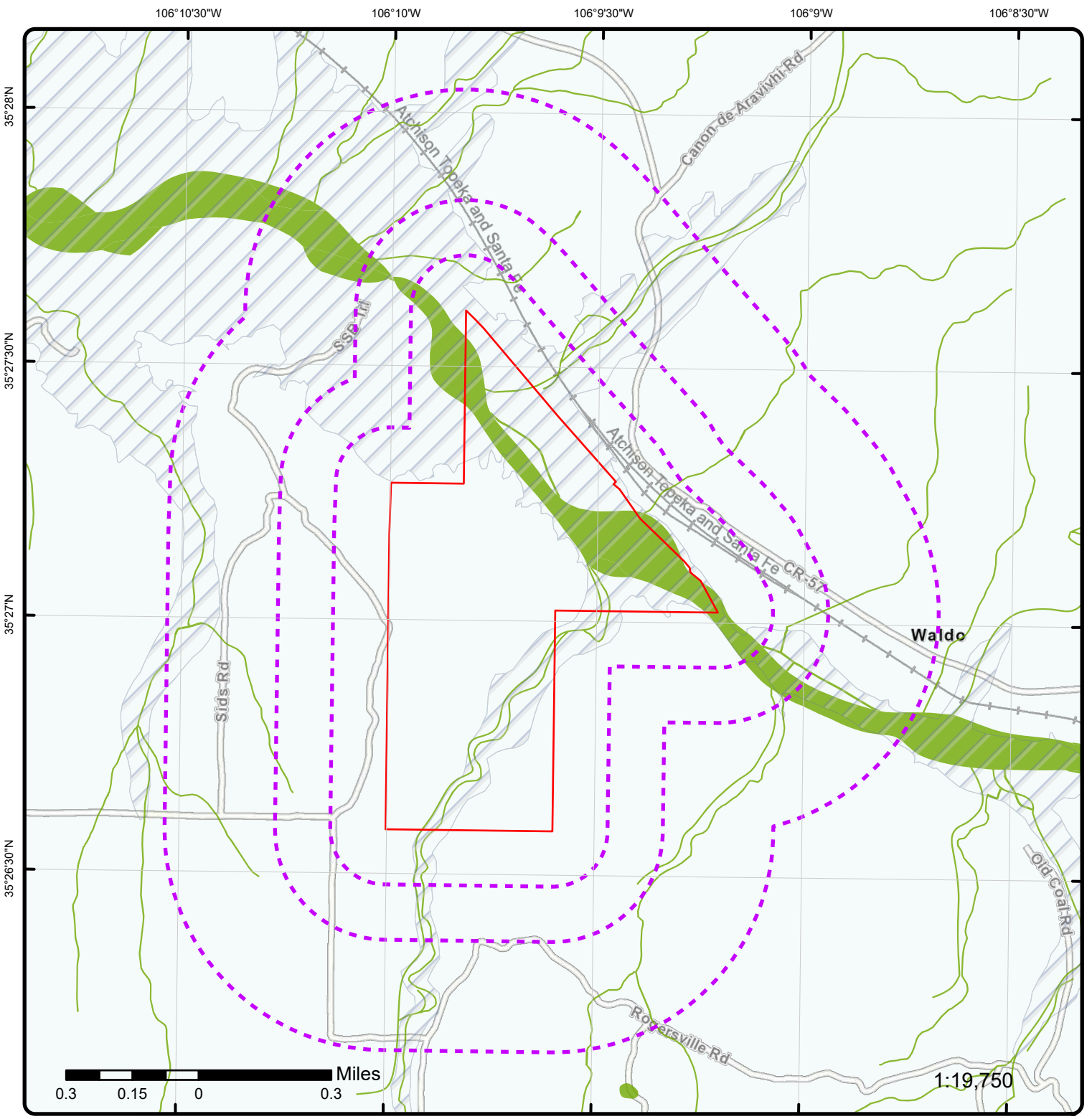
Order Number: 25121700731

Address: Road 57, Waldo, NM

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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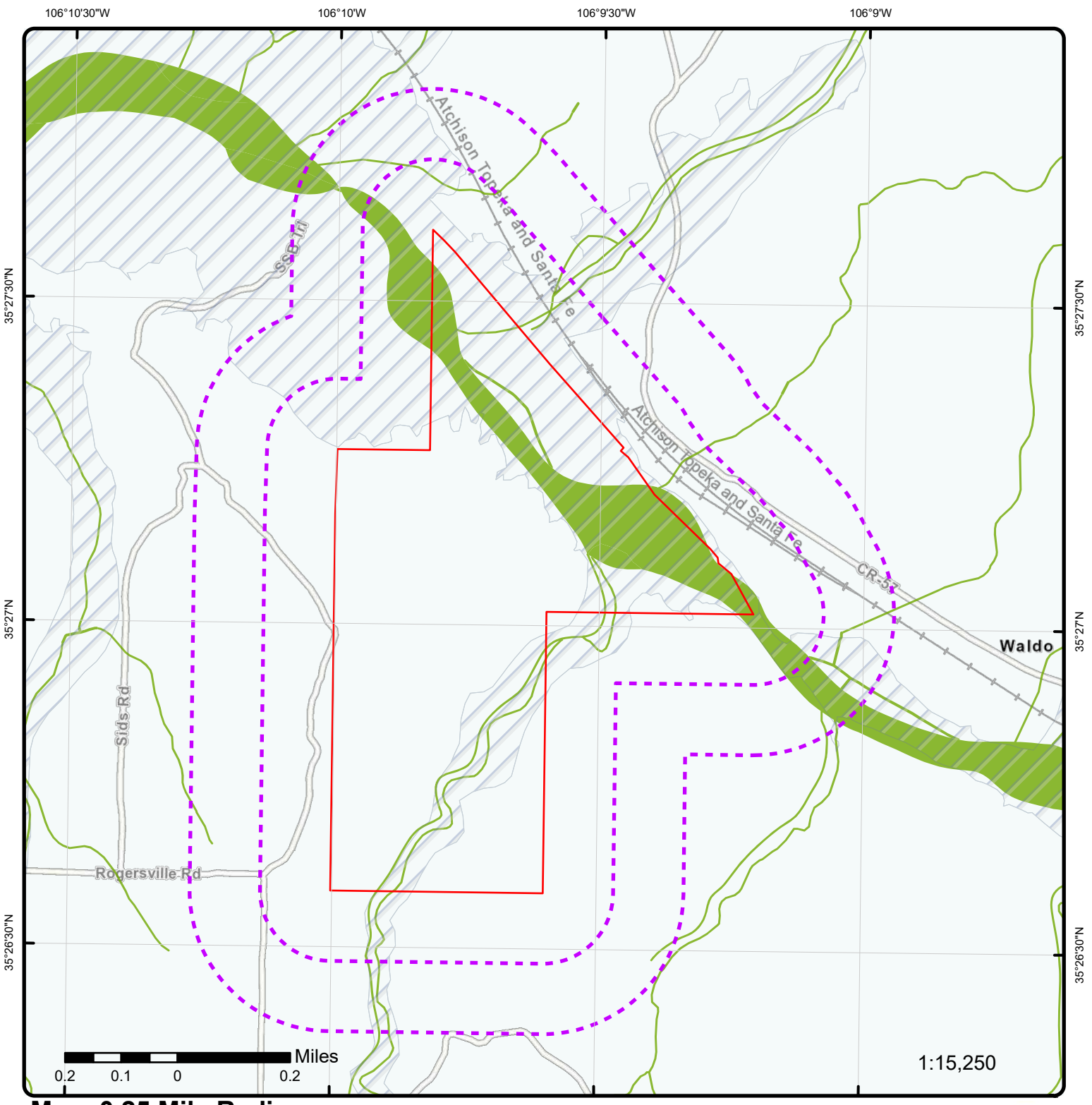
Map: 0.5 Mile Radius

Order Number: 25121700731
Address: Road 57, Waldo, NM

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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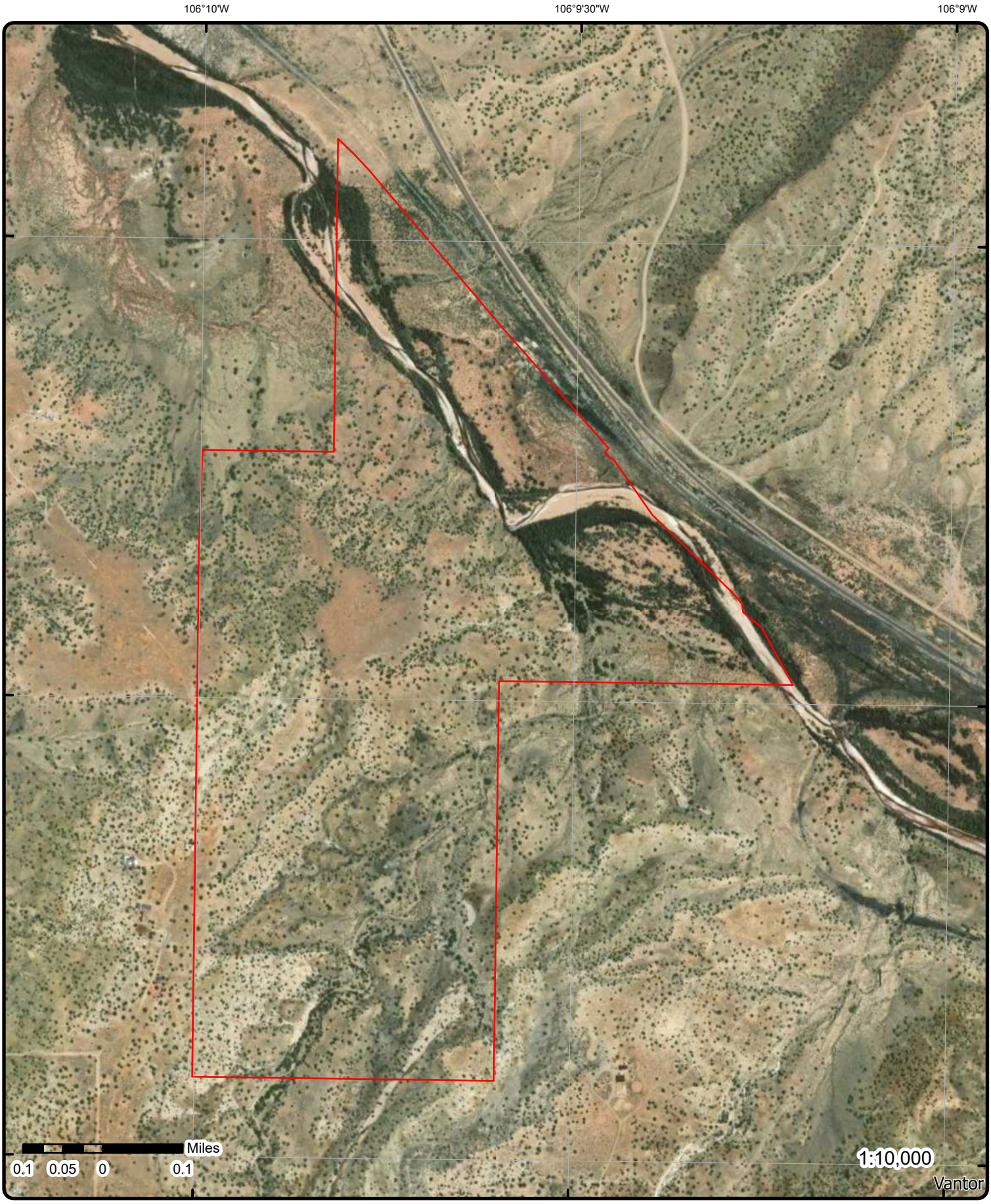
Map: 0.25 Mile Radius

Order Number: 25121700731
Address: Road 57, Waldo, NM

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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Aerial **Year: 2020**

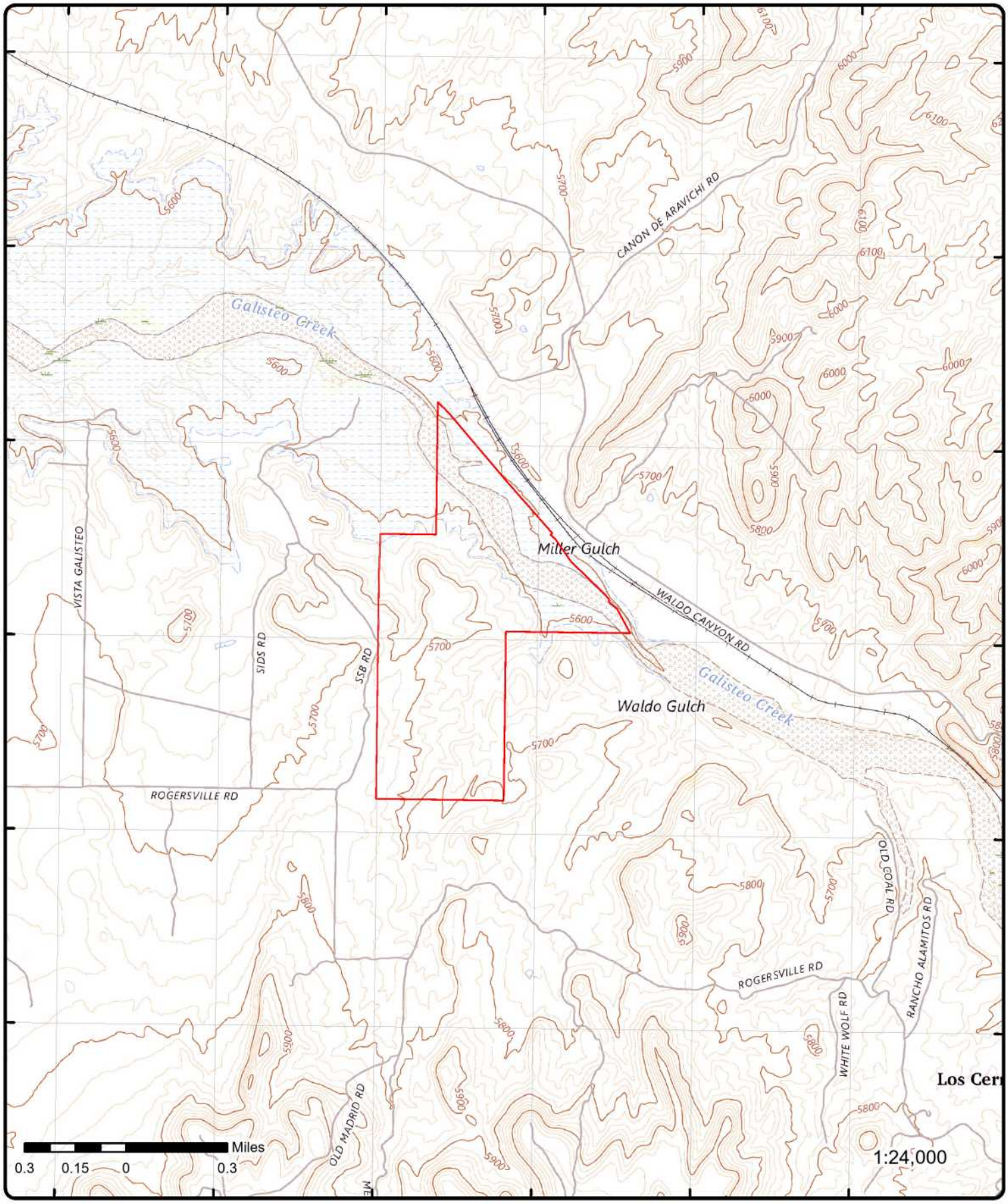
Address: Road 57, Waldo, NM

Source: ESRI World Imagery

Order Number: 25121700731

ERIS

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Topographic Map

Year: 2023

Order Number: 25121700731

Address: Road 57, NM

Quadrangle(s): Madrid NM, Picture Rock NM

Source: USGS Topographic Map

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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

No records found in the selected databases for the project property or surrounding properties.

Unplottable Summary

Total: 2 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
CERCLIS	WALDO ZINC SMELTER	SANTA FE COUNTY ROAD 57 ***Site EPA ID:*** NM0000605582	WALDO NM	87010	818636235
SEMS ARCHIVE	WALDO ZINC SMELTER	SANTA FE COUNTY ROAD 57 ***EPA ID:*** NM0000605582	WALDO NM	87010	828867080

Unplottable Report

Site: ***WALDO ZINC SMELTER***
SANTA FE COUNTY ROAD 57 WALDO NM 87010

CERCLIS

Site ID:	0605582	***RNPL Status Code:***	N
Site EPA ID:	NM0000605582	***NPL Status:***	Not on the NPL
Site Street Address 2:		***RFED Facility Code:***	N
Site County Name:	SANTA FE	***RFED Facility Desc:***	Not a Federal Facility
Site FIPS Code:	35049	***USGS Hydro Unit No.:***	
Region Code:	06	***Site Cong. Dist. Code:***	
Site SMSA No.:		***ROT Desc:***	
Site Prim. Latitude:		***FR NPL Update No.:***	
Site Prim. Longitude:		***RFRA Code:***	
Lat Long Source:			

RNON NPL Status Desc: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS Site Contact Name(s)

Person ID:	6270175.00
First Name:	Philip
Last Name:	Ofosu
Phone No.:	2146653178
Email:	

CERCLIS Site Contact Name(s)

Person ID:	13003780.00
First Name:	Ladonna
Last Name:	Turner
Phone No.:	2146656666
Email:	

CERCLIS Assess History

OU ID:	00	***RALT Short Name:***	EPA Fund
Act Code ID:	001	***Act Start Date:***	
RAT Code:	DS	***Act Complete Date:***	7/24/2002 00:00:00
RAT Short Name:	DISCVRY	***AGT Order No.:***	10
RAT Name:	DISCOVERY	***SH OU:***	
RAT Hist. Only Flag:		***SH Code:***	
RAT NSI Indicator:	B	***SH Seq:***	
RAT Level:	1	***SH Start Date:***	
RAT DEF OU:	00	***SH Complete Date:***	
RFBS Code:		***SH Lead:***	
SPA Code:	13		

RAT Def: The process by which a potential hazardous waste site is brought to the attention of the EPA. The process can occur through the use of several mechanisms such as a phone call or referral by another government agency.

Site Desc:
Site Alias:

CERCLIS Assess History

OU ID:	00	***RALT Short Name:***	State (Fund)
Act Code ID:	001	***Act Start Date:***	
RAT Code:	PA	***Act Complete Date:***	10/22/2007 00:00:00
RAT Short Name:	PA	***AGT Order No.:***	130
RAT Name:	PRELIMINARY ASSESSMENT	***SH OU:***	
RAT Hist. Only Flag:		***SH Code:***	
RAT NSI Indicator:	B	***SH Seq:***	

RAT Level:	1	***SH Start Date:***	
RAT DEF OU:	00	***SH Complete Date:***	
RFBS Code:	P	***SH Lead:***	
SPA Code:	13		
RAT Def:	Collection of diverse existing information about the source and nature of the site hazard. It is EPA policy to complete the preliminary assessment within one year of site discovery.		
Site Desc:			
Site Alias:			

CERCLIS Assess History

OU ID:	00	***RALT Short Name:***	
Act Code ID:		***Act Start Date:***	
RAT Code:		***Act Complete Date:***	
RAT Short Name:		***AGT Order No.:***	0
RAT Name:		***SH OU:***	
RAT Hist. Only Flag:		***SH Code:***	
RAT NSI Indicator:		***SH Seq:***	
RAT Level:		***SH Start Date:***	
RAT DEF OU:		***SH Complete Date:***	
RFBS Code:		***SH Lead:***	
SPA Code:			
RAT Def:			
Site Desc:	The site consists of an abandoned zinc smelter. Remaining structures at the site include several vats and foundations. Waldo has no standing structures and is now a ghost town. Waldo is located approximately 2 miles northwest from the village of Cerril		
Site Alias:	No alias data available		

Site: ***WALDO ZINC SMELTER***
SANTA FE COUNTY ROAD 57 WALDO NM 87010

SEMS ARCHIVE

Site ID:	0605582	***FIPS Code:***	35049
EPA ID:	NM0000605582	***Cong District:***	
Superfund Alte Agr:	No	***Region:***	06
Federal Facility:	No	***County:***	SANTA FE
FF Docket:	No		
NPL:	Not on the NPL		
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information		

Action Information

Operable Units:	00	***Qual:***	N
Action Code:	PA	***SEQ:***	1
Action Name:	PA	***FF:***	No
Start Actual:		***FF Docket:***	No
Finish Actual:	10/22/2007 4:00:00 AM	***Region:***	06
Curr Action Lead:	St Perf		
NPL:	N		

Operable Units:	00	***Qual:***	
Action Code:	DS	***SEQ:***	1
Action Name:	DISCVRY	***FF:***	No
Start Actual:	7/24/2002 4:00:00 AM	***FF Docket:***	No
Finish Actual:	7/24/2002 4:00:00 AM	***Region:***	06
Curr Action Lead:	EPA Perf		
NPL:	N		

Operable Units:	00	***Qual:***	
Action Code:	VS	***SEQ:***	1
Action Name:	ARCH SITE	***FF:***	No
Start Actual:		***FF Docket:***	No
Finish Actual:	11/7/2013 5:00:00 AM	***Region:***	06
Curr Action Lead:	EPA Perf In-Hse		
NPL:	N		

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

The U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL) includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program, based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. This data includes NPL sites represented as polygons, where available, that can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Currently on the Final NPL (F)' and/or the 'Site is Part of NPL Site (A)'. These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. As site investigation and remediation progress, OUs may be added, modified or refined. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Sep 6, 2025

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the U.S. Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Sep 6, 2025

Deleted NPL: DELETED NPL

Sites deleted from the U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL). The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Sep 6, 2025

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)' , 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Aug 27, 2025

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)' , 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Aug 27, 2025

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Sep 1, 2025

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Sep 1, 2025

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste. This list also includes RCRAInfo sites that have notified as LQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: Sep 1, 2025

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month. This list also includes RCRAInfo sites that have notified as SQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: Sep 1, 2025

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Sep 1, 2025

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Sep 1, 2025

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Sep 1, 2025

Federal Engineering Controls-ECs: FED ENG

List of Engineering controls (ECs) made availabe by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Sep 29, 2025

Federal Institutional Controls- ICs: FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Sep 29, 2025

Land Use Controls Information System: LUCIS

The Land Use Controls Information System (LUCIS) database is sourced from the U.S. Department of the Navy (DON). This data contains information for former Base Realignment and Closure (BRAC) properties across the United States. DON's BRAC office was tasked with tracking certain base closures while requiring the prevention of risks to human health and the environment of those properties with LUCs in place. Regarding currently available LUC Sites data, the sites listing is limited to centroid point locations for the overall installation property boundaries. Formerly obtained LUC Sites data may reflect site details that applied previously for a BRAC property.

Government Publication Date: Jun 13, 2024

Institutional Control Boundaries at NPL sites: NPL IC

These boundaries of Institutional Control areas at sites on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL), or as Proposed or Deleted, are sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). The EPA's NPL includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes.

Government Publication Date: Sep 6, 2025

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Sep 7, 2025

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Sep 8, 2025

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. The list includes FRP facilities sourced from the EPA FOIA office and from previously available Homeland Infrastructure Foundation-Level Data (HIFLD) file/s. Disclaimer: Per the EPA FOIA Office, the verification process for current requested FRP data is undergoing review and revision, and any similar reporting will be made public in Fiscal Year 2026. For this reason, the latest available FOIA file may be incomplete.

Government Publication Date: Jun 1, 2025

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jun 1, 2025

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

This list of petroleum refineries is sourced from the U.S. Energy Information Administration (EIA), Refinery Capacity Report. The listing includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year. The geographic area the report covers is the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and other U.S. possessions. Per the EIA, the facility location data represents the approximate location based on research of publicly available information from sources such as Federal agencies, company websites, and satellite images on public websites.

Government Publication Date: Oct 31, 2024

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from Oak Ridge National Laboratory hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Jun 5, 2025

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Aug 27, 2025

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Oct 30, 2025

State

State Cleanup Sites Listing: SCS

List of active and closed State Clean Up Sites made available by the Ground Water Quality Bureau's Remediation Oversight Section of the New Mexico Environment Department (NMED). The Remediation Oversight Section encourages and oversees voluntary efforts to clean up contaminated sites, and administers the Water Quality Control Commission Regulations that require responsible parties to clean up contaminated soil and ground water. This database serves a purpose similar to that of the federal Superfund Enterprise Management System (SEMS), functioning as a state-level counterpart for tracking potential hazardous substance release sites.

Government Publication Date: Feb 4, 2025

Delisted State Cleanup Sites: DELISTED SCS

List of sites removed from State Clean Up Sites made available by the Ground Water Quality Bureau's Remediation Oversight Section of the New Mexico Environment Department (NMED).

Government Publication Date: Feb 4, 2025

Solid Waste Facilities: SWF/LF

List of currently or formerly permitted/registered facilities in New Mexico, including haulers, landfills, transfer stations, collection centers, generators, recycling facilities, and composting facilities. This list includes facilities that are currently open and reporting as well as facilities that are closed but previously held a permit. This list is made available by the New Mexico Environment Department (NMED)'s Solid Waste Bureau.

Government Publication Date: Oct 23, 2025

Historical Solid Waste Landfills: HIST LF

List of historical landfill sites provided by the New Mexico Environment Department (NMED) Solid Waste Bureau, and sites from the Bureau of Land Management which were closed prior to 1984. Public Land Survey System (PLSS) locations provided by the source are subject to accuracy limitations inherent to the PLSS system.

Government Publication Date: Aug 21, 2014

Recycling Centers: RECYCLING

List of registered recycling centers made available by the New Mexico Environment Department's (NMED) Solid Waste Bureau.

Government Publication Date: Jul 7, 2025

Leaking Petroleum Storage Tanks: LST

This list of Leaking Petroleum Storage Tank sites is made available by the New Mexico Environment Department's (NMED) Petroleum Storage Tank Bureau (PSTB). Includes records from PSTB listings, and records from the NMED Open Map Portal.

Government Publication Date: Sep 16, 2025

Delisted Active and No Further Action Leaking Tanks: DELISTED LST

This database contains a list of leaking storage tank sites that were removed from the New Mexico Environment Department (NMED)'s Petroleum Storage Tank Bureau.

Government Publication Date: Sep 16, 2025

Leaking Underground Storage Tanks: LUST HIST

Historical list of leaking underground leaking tanks provided by the New Mexico Environment Department (NMED). This list was last updated in August of 2006.

Government Publication Date: Aug 1, 2006

Underground Storage Tanks: UST

List of Underground Storage Tank sites made available by the New Mexico Environment Department (NMED)'s Petroleum Storage Tank Bureau (PSTB). Includes Underground Storage Tank Facilities from the NMED Open Data Portal.

Government Publication Date: Nov 3, 2025

Aboveground Storage Tanks: AST

List of Aboveground Storage Tank sites made available by the New Mexico Environment Department (NMED)'s Petroleum Storage Tank Bureau (PSTB). Includes Aboveground Storage Tank Facilities from the NMED Open Data Portal.

Government Publication Date: Nov 3, 2025

Petroleum Storage Tanks: TANKS

List of Storage Tank Sites made available by the New Mexico Environment Department (NMED)'s Petroleum Storage Tank Bureau. Includes sites with underground and aboveground tanks.

Government Publication Date: Jul 9, 2019

Underground Storage Tanks - Historical: UST HIST

Historical listing of underground storage tanks registered with the New Mexico Environment Department (NMED). This data was last updated in August 2006.

Government Publication Date: Aug 1, 2006

Aboveground Storage Tanks - Historical: AST HIST

Historical listing of aboveground storage tank facilities registered with the New Mexico Environment Department (NMED. This data was last updated in August 2006.

Government Publication Date: Aug 4, 2006

Delisted Tanks: DELISTED TANK

List of Storage Tank Sites removed from the New Mexico Environment Department (NMED)'s Petroleum Storage Tank Bureau's list of underground and aboveground tanks.

Government Publication Date: Nov 3, 2025

Sites with Institutional and Engineering Controls: INST

List of sites in the New Mexico Environment Department (NMED)'s Public Record of Voluntary Remediation Program (VRP) Sites with institutional and/or engineering controls.

Government Publication Date: Sep 30, 2025

Voluntary Remediation Program Sites: VCP

Public Record of Voluntary Remediation Program (VRP) Sites made available by the New Mexico Environment Department (NMED). New Mexico's Voluntary Remediation Program (VRP) provides incentives for the voluntary cleanup of contaminated properties and encourages their redevelopment. VRP participants that complete the program successfully will receive site closure documentation from the NMED including a Certificate of Completion or Conditional Certificate of Completion.

Government Publication Date: Sep 30, 2025

Targeted Brownfields Assessment Sites: BROWNFIELDS

List of Targeted Brownfields Assessment Sites made available by the New Mexico Environment Department (NMED). Brownfields are properties whose redevelopment is complicated by the presence or potential presence of hazardous substances or petroleum products. NMED provides no-cost environmental assessments of brownfield sites to local or tribal governments. NMED also manages a Brownfields Revolving Loan Fund providing low-interest loans for brownfield cleanups where redevelopment is planned.

Government Publication Date: Sep 30, 2025

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 6, which includes New Mexico, is provided by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 21, 2025

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 6, which includes New Mexico, is provided by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 21, 2025

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 22, 2025

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 22, 2025

County

No County databases were selected to be included in the search.

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's (EPA) Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. This dataset is sourced from the EPA's PFAS Analytic Tools, and it includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified as PFAS based on EPA's CompTox Chemicals Dashboard lists of PFAS with defined and undefined structures. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time. Note that some regulatory programs have specified chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard.

Government Publication Date: Oct 7, 2025

On-Scene Coordinator Response Sites: OSC RESPONSE

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

Government Publication Date: Oct 8, 2025

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Oct 10, 2025

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Sep 26, 2025

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

This list of federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS) is made available by the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools data. The EPA outlines that these data are gathered from several federal entities, such as the federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration (NASA), Department of Transportation (DOT), and Department of Energy (DOE). The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2025 per agency entity dataset. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: May 30, 2025

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the PFAS Project Lab, part of the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map by the PFAS-REACH team, credited to PFAS Project Lab, Silent Spring Institute, and PFAS Exchange. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Aug 1, 2025

National Response Center PFAS Spills: PFAS ERNS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam, "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Sep 1, 2025

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Dec 16, 2024

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFAS Water Quality Portal Sampling Data: PFAS WATER

This Per- and Poly-Fluoroalkyl Substances (PFAS) Environmental Media Sampling Data is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The Water Quality Portal (WQP), as a cooperative service sponsored by the United States Geological Survey, the EPA, and the National Water Quality Monitoring Council, is part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations, and individuals submit project details and sampling results to this public repository. Limitations: EPA did not carry out the sampling or testing of a majority of the data in the WQP PFAS dataset. EPA can only speak to the accuracy and completeness of the data from projects like the National Aquatic Resource Surveys for which EPA is the data owner/organization. Data may exist within the file on Quality Assurance Project Plans (QAPPs) and the approving agency of the QAPP, if a QAPP is entered.

Government Publication Date: Jul 21, 2025

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest: PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Oct 4, 2025

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Sep 1, 2025

Hazardous Materials Information Reporting System: HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: May 28, 2025

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act: TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Sep 29, 2025

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: May 3, 2025

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Jul 19, 2025

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites which once appeared on - and have since been removed from - the list of drycleaner facilities included in Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Jul 19, 2025

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: Jul 10, 2025

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Aug 8, 2025

Surface Mining Control and Reclamation Act Sites: SMCRA

This inventory of land and water impacted by past mining (primarily legacy coal mining operations) is maintained by the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE), as it provides information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) Problems, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into e-AMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: Oct 30, 2025

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). The intent of the site location is to provide a general reference point to the site on a national scale. The coordinates of each site point can be the location of a site monument, the centroid of the site boundary, or a general location of the site. This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Nov 6, 2025

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Aug 1, 2025

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Jun 26, 2024

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Sep 26, 2025

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: May 23, 2024

Power Plants: POWER PLANTS

This list of power plants is provided by the U.S. Energy Information Administration (EIA). The listing includes operable electric generating plants in the United States by energy source, originating from the EIA-860, Annual Electric Generator Report; EIA-860M, Monthly Update to the Annual Electric Generator Report; and EIA-923, Power Plant Operations Report. It includes all operable plants by energy source with a combined nameplate capacity of 1 megawatt or more that are operating, are on standby, or out of service for short- or long-term.

Government Publication Date: Jun 5, 2025

Historical Business Activity Risk: HIST RISK

Proprietary list of sites identified as potentially having engaged in business activity that poses a higher-than-normal risk of contamination. Records originate from historical city directories, and are included in this list based on broad business categories Potentially Hazardous Chemical Users and Fuel and Automotive, including but not limited to Dry Cleaners and Fuel Stations, Garages, etc. Inclusion in this listing does not indicate that there is or ever has been contamination; rather, sites are included in this list due to their potential for having engaged in a business activity presenting an elevated risk of contamination. The list was compiled from various city directories including Polks, Millers, Mullin Kille, Interstate Directory, and State Directory Co; spanning roughly 1920s through 1960 depending on information available by city.

Government Publication Date: Jan 1, 1960

State

Hazardous Waste Facilities: HAZ

List of hazardous waste generators and treatment, storage, and disposal facilities overseen by the Hazardous Waste Bureau (HWB), New Mexico Environment Department (NMED).

Government Publication Date: Apr 24, 2018

Spills: SPILLS

A listing of spills included in the New Mexico Environment Department's Environmental Notification Tracking System.

Government Publication Date: May 31, 2025

Spills and Incidents - Oil Conservation Division: SPILLS OIL

List of Spills and Incidents made available by the State of New Mexico Oil Conservation Division.

Government Publication Date: Oct 23, 2025

Clandestine Drug Lab Discoveries: CDL

List of addresses of locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. The sources of the entries are law enforcement agencies, and although the list is made available by the New Mexico Environment Department (NMED), NMED has not verified the data and does not guarantee its accuracy. Sites listed were seized prior to January 1, 2008, were not subject to the New Mexico Clandestine Drug Lab Cleanup Rule.

Government Publication Date: May 17, 2018

Per- and Polyfluoroalkyl Substances (PFAS): PFAS

List of PFAS/PFOS sites of concern and sampling locations made available by the New Mexico Environment Department (NMED). Includes sites known to the NMED where PFAS/PFOS containing material may be of concern, as well as USGS PFAS groundwater sampling locations.

Government Publication Date: Feb 4, 2025

Ground Water Discharge Permits: GW DISCHARGE

The Ground Water Pollution Prevention Section of the New Mexico Environment Department reviews and approves discharges that have the potential to impact ground water quality pursuant to Subparts III and V of the Water Quality Control Commission (WQCC) regulations (20.6.2 NMAC). Ground water discharge permits address a wide variety of discharges including domestic wastewater treatment plants, commercial septic tank leach fields, power generating plants, commercial laundries not served by sanitary sewers, dairies, food processing plants, commercial land farms for treatment of contaminated soil, industrial discharges, injection wells and ground water remediation systems. This list does not include permits for mines or agricultural facilities.

Government Publication Date: Dec 20, 2024

Southwest Research and Information Center Uranium Sites: URANIUM

This database contains information on Northwestern New Mexico uranium projects located in Navajo Country and is maintained by the Southwest Research and Information Center. This organization was founded in 1971 for the purpose of providing information to the public on the effects of energy development and resource exploitation on the people and their cultures, lands, water, and air of New Mexico and the Southwest.

Government Publication Date: Oct 18, 2006

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX I

Supplemental Records

[RESERVED]

APPENDIX J

Photographic Log



Photograph 1. View of the Subject Property from Waldo Canyon Road. Photograph taken northeast of the Subject Property facing southwest with the NMDOT-owned rail line visible. Subject Property begins south of the rail line.



Photograph 2. View of the Subject Property from Waldo Canyon Road. Photograph taken northeast of the Subject Property facing southeast with the NMDOT-owned rail line visible. Slag/material stockpile visible in the left of the photograph immediately beyond the rail spur.



Photograph 3. View of the Subject Property from Waldo Canyon Road. Photograph taken northeast of the Subject Property facing southwest with the NMDOT-owned rail line visible. Foundations of historical buildings were observed in this portion of the Subject Property which begins south of the rail line.



Photograph 4. View of the NMDOT-owned rail line from north of the Subject Property facing south with a perimeter fence visible in the foreground of the photograph.



Photograph 5. View of slag/material storage on the Subject Property immediately south of the NMDOT-owned rail line.



Photograph 6. View of former building foundation/slab south of the NMDOT-owned rail line. Building slab/foundation is identifiable as an earthen mound between the rail line and hillslope.



Photograph 7. Additional view of the Subject Property taken from Waldo Canyon Road facing south across the NMDOT-owned rail line in the area where former building foundations/slabs were observed on historical aerial images.



Photograph 8. View of Waldo Canyon used to access the Subject Property vicinity with the Subject Property visible south of the NMDOT-owned rail line and the Ortiz Mountains in the background of the photograph.

APPENDIX K

Interviews

Matt Hubbard

From: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Sent: Tuesday, January 20, 2026 1:47 PM
To: Matt Hubbard
Cc: Joseph J. Tracy
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED
Attachments: MP 854 WALDO STATION MAP 1 10_30_19.pdf; MP 854 WALDO STATION MAP 2 10_30_19.pdf; MP 854 WALDO STATION MAP 3 2_15_19.pdf; MP 854 WALDO STATION MAP 4 2_14_19.pdf

This sender is trusted.

Matt, thanks. I had no knowledge of any previous assessments of this such as the 2004 assessment and was not aware it was on NMED's relatively recent radar. We bought this property from BNSF in 2007 so 2004 would have still been under BNSF's ownership. It sounds to me like I need to get our environmental folks brought in on this.

NMDOT owns the entire property, depending on what 'entire' means. There is no easement, rather this is fee simple property that became part of the overall Waldo Station Grounds. We purchased this property from BNSF Railway (Waldo Station Grounds) under a QCD deed with BNSF, as part of the purchase of the rail line from BNSF between Belen and Lamy.

Attached is a station grounds map (four parts) of ours that shows this area. The zinc mill is shown on Map 3. The green dashed lines represent our current railroad boundaries. The purple dashed lines represent former railroad right of way that has been disposed of.

The map is created from previous ATSF/BNSF maps and deed descriptions and field notes and not from a direct survey. I should also have the deed trails as well in this area, as noted on the attached station grounds map.

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Matt Hubbard <MHubbard@intera.com>
Sent: Tuesday, January 20, 2026 10:26 AM
To: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

> You don't often get email from mhubbard@intera.com. Learn why this is important

Absolutely Robert, thank you for your quick response!

The NMED would like to perform Phase I and Phase II Environmental Site Assessment at the site to understand the nature and extent of soil contamination and consider a remedial action. I've attached the NMED access agreement form which explains a little more. It is my understanding that the NMED conducted a preliminary assessment back in 2004 that identified surface soil contaminated with heavy metals. A formal plan is not currently in place but we proposed a gridded XRF assessment over the footprint of the facility and surrounding area as the initial step in the Phase II ESA.

Can you expand about NMDOT's ownership? Is it your understanding that NMDOT owns the entire property or parts thereof due to the extent of the easement or was there some other purchase agreement? We obtained access agreements from property owners based on the SF Assessor's parcel maps but that doesn't give me any information about the NMDOT's ownership or easements.

Sincerely,

Matt Hubbard
Environmental Scientist
INTERA Incorporated

512-914-0606 www.INTERA.com

IMPORTANT: The contents of this email and any attachments are confidential. They are intended for the named recipient(s) only. If you have received this email by mistake, please notify the sender immediately and do not disclose the contents to anyone or make copies thereof.

From: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Sent: Tuesday, January 20, 2026 11:02 AM
To: Matt Hubbard <MHubbard@intera.com>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Good morning Matt,

NMDOT owns the land where the former zinc processing plant is as part of its NMRX railroad property it acquired from BNSF in 2007.

I am not aware of an assessment. Can you update me on the background and what is being assessed?

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Matt Hubbard <MHubbard@intera.com>
Sent: Tuesday, January 20, 2026 9:55 AM

To: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

You don't often get email from mhubbard@intera.com. Learn why this is important

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Morning Robert,
Larry Kemp provided your contact information when we asked him about accessing the NMDOT Rail Runner easement to gain access to the former Waldo Zinc Smelter site that the NMED has contracted us to perform assessment. We have access from the property ownership but come to find out they don't physically have a way to access this area of their property. The area is circled in red on the attached Figure G.

We think we may be able to access the area via a gate off FM 57 (Waldo Canyon Rd). The gate in question can be seen in Google maps and in street view if you search these coordinates: **35.450693, -106.149301**

The site is just northwest of that gate, up the rail line next a former spur line. Here are the coordinate for the site: **35.450693, -106.149301**

I've also attached a screenshot of the site on an aerial image, and the gate from street view.

Can you help us out? Feel free to reach out to me as needed. Thanks!
Sincerely,

Matt Hubbard
Environmental Scientist
INTERA Incorporated

9600 Great Hills Trail, Suite 300W, Austin, Texas, 78759
512-914-0606 www.INTERA.com

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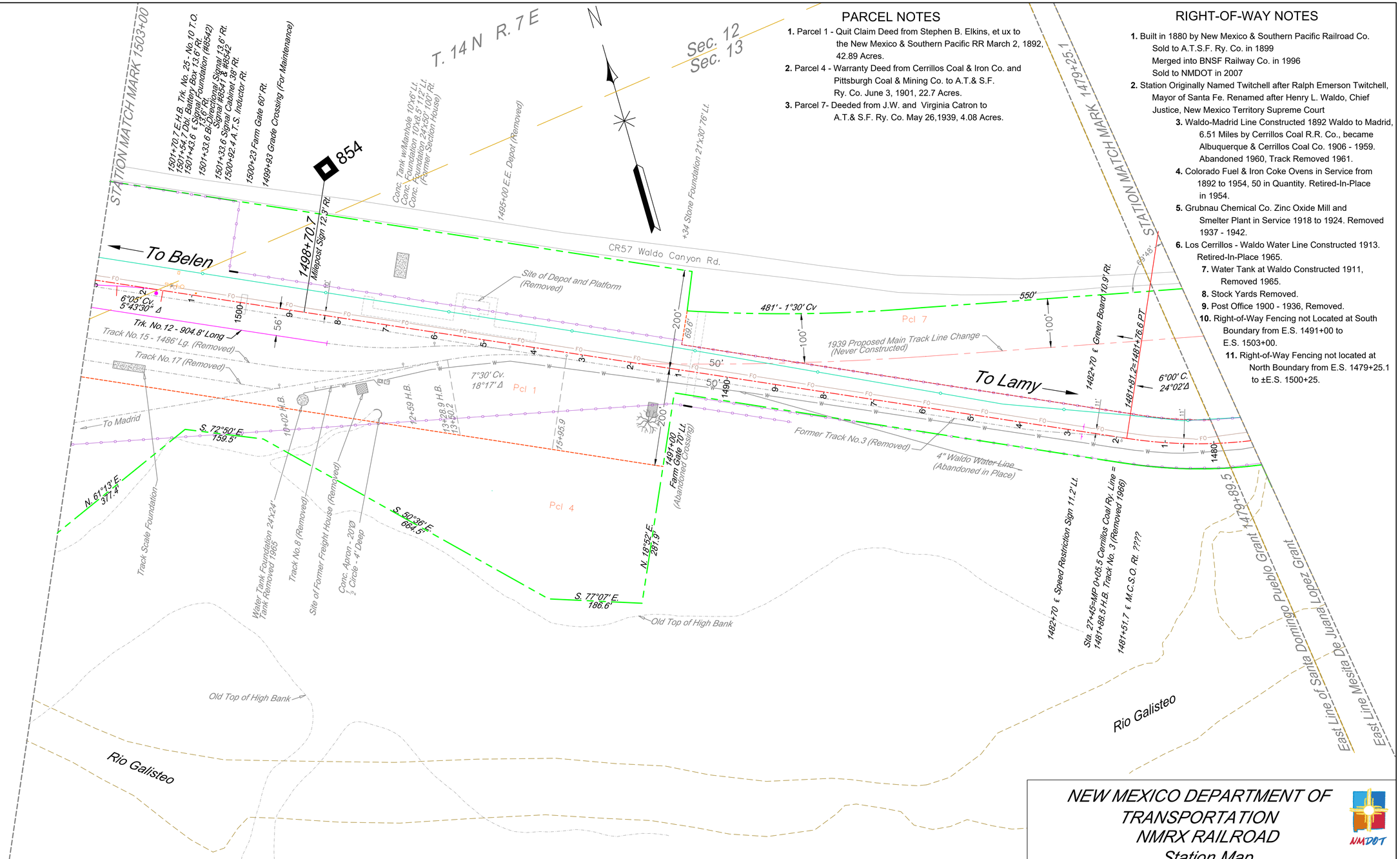
LEGEND

TRACKAGE
- CENTERLINE MAIN TRACK
- CENTERLINE RADIAL
- ORIG. CENTERLINE
- ORIG. CENTERLINE RADIAL
- CONTROLLED SIDING
- YARD TRKS RY. OWNED
- YARD TRKS IND. OWNED
- FOREIGN R.R.
- SWITCH POINT DERAIL
- DERAIL

LAND LINES
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- DEED NUMBER
- PARCEL NUMBER
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- EASEMENT
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- POLE LINE
- NON-RY PARCEL
- CULVERT

UTILITIES
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- FIRE HYDRANT
- SEWER MANHOLE
- SUPPORT COLUMN
- WATER METER
- WATER VALVE

STRUCTURES
- BRIDGE
- CULVERT/CMP
- SIGNAL



PARCEL NOTES

1. Parcel 1 - Quit Claim Deed from Stephen B. Elkins, et ux to the New Mexico & Southern Pacific RR March 2, 1892, 42.89 Acres.
2. Parcel 4 - Warranty Deed from Cerrillos Coal & Iron Co. and Pittsburgh Coal & Mining Co. to A.T.& S.F. Ry. Co. June 3, 1901, 22.7 Acres.
3. Parcel 7- Deeded from J.W. and Virginia Catron to A.T.& S.F. Ry. Co. May 26,1939, 4.08 Acres.

RIGHT-OF-WAY NOTES

1. Built in 1880 by New Mexico & Southern Pacific Railroad Co.
   Sold to A.T.S.F. Ry. Co. in 1899
   Merged into BNSF Railway Co. in 1996
   Sold to NMDOT in 2007
2. Station Originally Named Twitchell after Ralph Emerson Twitchell, Mayor of Santa Fe. Renamed after Henry L. Waldo, Chief Justice, New Mexico Territory Supreme Court
3. Waldo-Madrid Line Constructed 1892 Waldo to Madrid, 6.51 Miles by Cerrillos Coal R.R. Co., became Albuquerque & Cerrillos Coal Co. 1906 - 1959. Abandoned 1960, Track Removed 1961.
4. Colorado Fuel & Iron Coke Ovens in Service from 1892 to 1954, 50 in Quantity. Retired-In-Place in 1954.
5. Grubnau Chemical Co. Zinc Oxide Mill and Smelter Plant in Service 1918 to 1924. Removed 1937 - 1942.
6. Los Cerrillos - Waldo Water Line Constructed 1913. Retired-In-Place 1965.
7. Water Tank at Waldo Constructed 1911, Removed 1965.
8. Stock Yards Removed.
9. Post Office 1900 - 1936, Removed.
10. Right-of-Way Fencing not Located at South Boundary from E.S. 1491+00 to E.S. 1503+00.
11. Right-of-Way Fencing not located at North Boundary from E.S. 1479+25.1 to ±E.S. 1500+25.

LEASE AND LICENSE SCHEDULE

NO.	GRANTOR	GRANTEE	INSTR.	DATE	CONTRACT NO.	REMARKS

NOTE:
SUBJECT TO BNSF RAILWAY FREIGHT RAIL SERVICE EASEMENT AND JOINT USE AGREEMENT DATED 12/05/2005
AS AMENDED.

R/W SUBJECT TO FIBER OPTIC AGREEMENT NO. AT188569 TO S.P. TELECOM, DATED 12/05/1994 FROM DENVER, CO. TO EL PASO, TX., AS SHOWN HEREON.

NEW MEXICO DEPARTMENT OF TRANSPORTATION
NMRX RAILROAD
Station Map
WALDO STATION
Line Segment 7300
Map 1 of 4
Formerly BNSF Ry. Co. (A.T.& S.F. Ry. Co.)

200 100 0 100 200
SCALE

REVISED: 10/20/19

LEGEND

TRACKAGE
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4. Colorado Fuel & Iron Coke Ovens in Service from 1892 to 1954, 50 in Quantity. Retired-In-Place in 1954.

5. Grubnau Chemical Co. Zinc Oxide Mill and Smelter Plant in Service 1918 to 1924. Removed 1937 - 1942.

6. 1966 Main Track Line Change E.S. 1510+78 to E.S. 1530+00

7. Water Tank at Waldo Constructed 1911, Removed 1965.

8. Stock Yards Removed.

9. Post Office 1900 - 1936, Removed.

PARCEL NOTES

1. Parcel 1 - Quit Claim Deed from Stephen B. Elkins, et ux to the New Mexico & Southern Pacific RR March 2, 1892, 42.89 Acres.

2. Parcel 4 - Warranty Deed from Cerrillos Coal & Iron Co. and Pittsburgh Coal & Mining Co. to A.T.& S.F. Ry. Co. June 3, 1901, 22.7 Acres.

3. Parcel 8 - QCD from Martin and Florence Gardesky to A.T.& S.F. Ry. Co. May 26, 1939, 3.61 Acres.

4. Parcel 10 - Warranty Deed from Rio Del Sur Inc. to A.T.& S.F. Ry. Co. October 28, 1988, 6.35 Acres.

5. Parcel 12 - Warranty Deed from Rio Del Sur, Inc. to A.T.& S.F. Ry. Co. October 28, 1988, 41.61 Acres.

6. Parcel 21 - Easement from Sam E.& Billie R. Brown, Billy N. & Jenny J. Brown to United States of America, May 28, 1965.

7. Parcel 21 - QCD from United States of America to A.T. & S.F. Ry. Co., June 26, 1973.

RIGHT-OF-WAY NOTES (CONT.)

10. Right-of-Way Fencing not Located at North Boundary from ±E.S. 1519+97 to E.S. 1530+00.

11. Right-of-Way Fencing not Located at South Boundary from E.S. 1503+00 to E.S. 1530+00.

LEASE AND LICENSE SCHEDULE

NO.	GRANTOR	GRANTEE	INSTR.	DATE	CONTRACT NO.	REMARKS
51	THE A.T.& S.F. RY. CO.	County of Santa Fe	License	6-30-1976	150195	Public Road on Right-of-Way MP 854+3131.5

NOTE:
SUBJECT TO BNSF RAILWAY FREIGHT RAIL SERVICE EASEMENT AND JOINT USE AGREEMENT DATED 12/05/2005
AS AMENDED.

R/W SUBJECT TO FIBER OPTIC AGREEMENT NO. AT188569 TO S.P. TELECOM, DATED 12/05/1994 FROM DENVER, CO. TO EL PASO, TX., AS SHOWN HEREON.

STATION MATCH MARK 1530+00 Br. 854.6

1529+50.2 ℄ 24'x46' CMP - Coated and Paved Grouted Rip Rap Hd. Walls (Pipe under Siding)

1528+33 PT

1527+83 ℄ 'WALDO' Station Sign 23.7' Lt.

1526+80 W.E. Dyke 45' Rt.

1524+70 = 1524+18.6 PC

1521+30 E.E. Dyke 260' Rt.

1520+63.6 PC

STATION MATCH MARK 1503+00

Sec. 12
T. 14 N R. 7 E

Sec. 12
Sec. 13

To Belen

To Lamy

CR57 Waldo Canyon Rd.

Pcl 21

Pcl 8

Pcl 3

Pcl 10

Pcl 12

Pcl 1

Pcl 4

1°30' C.
16°55' Δ

4°00' C.
16°55' Δ

0°45' C.
29°12 30" Δ

3°00' Cv.
20°16' Δ

3°00' Cv.
5°43'30" Δ

15°00 Cv.
76°23' Δ

1966 Line Change to Rosario

Original Main Track Alignment (Removed)

Trk. No.25 - 5360' Long

Former Spur Track

'Big House' Remains

Rio Galisteo

Old Top of High Bank

Top of High Bank

Stock Yard (Retired in Place)

Track No.12 - 1144' Lg. (Removed)

Track No.15 - 1486' Lg. (Removed)

Track No.17 (Removed)

Track No.6 1285' Lg. (Removed)

Track No.6

Track No.9 (Removed)

Rip Rap 4'x12'x347'

Ry. Comm. Pole Line

1511+90.8 ℄ Battery Box 32.9' Lt.

Begin 1966 Line Change
1510+78.2 (Fin.) -
1510+78.4 (Loc.) PC

±1504+22 E.E. Coke Oven Ruins
±360' Long 130' Lt.

1507+16.7 H.B. Track No.12 29.2' Lt.
No.8 T.O.

1504+71.3 ℄ ATS Inductor Lt.
1504+30.8 ℄ Dbl. Battery Box 12.4' Rt.
1504+21.4 ℄ Signal Foundation (Signal Removed) 11' Lt.
1504+21.4 ℄ Signal for Siding (Turned) 34.2' Lt.
1504+17.4 Pot Signal 37.5' Lt.

S. 35°47' W. 208'

S. 42°02' E. 211.3'

S. 37°52' E. 541.4'

N. 71°08' W. 233.9'

N. 35°47' E. 468.1'

S. 51°41' E. 375.1'

N. 35°47' E. 500.6'

N. 58°26' E. 492.5'

S. 72°14' E. 320.5'

S. 39°39' E.

N. 76°44' E. 376.8'

S. 59°37' E. 229.0'

2145.9'

1538 9 8 7 6 5 4 3 2 1 1520 9 8 7 6 5 4 3 2 1 1510 9 8 7 6 5 4 3

135.39'

57.91'

438.35'

54.46'

145.54'

200'

100'

50'

10'

60'

11' 11' 21' 25' 20' 10'

FO

152.3' Tan.

29.5'

361'

5+69.2 PC

4+66.5 PT

0+00 = 1+15 PT

1+74.7 E.E. Br.

NEW MEXICO DEPARTMENT OF TRANSPORTATION
NMRX RAILROAD
Station Map
WALDO STATION
Line Segment 7300
Map 2 of 4
Formerly BNSF Ry. Co. (A.T.& S.F. Ry. Co.)

200 100 0 100 200
SCALE

REVISED: 10/30/19

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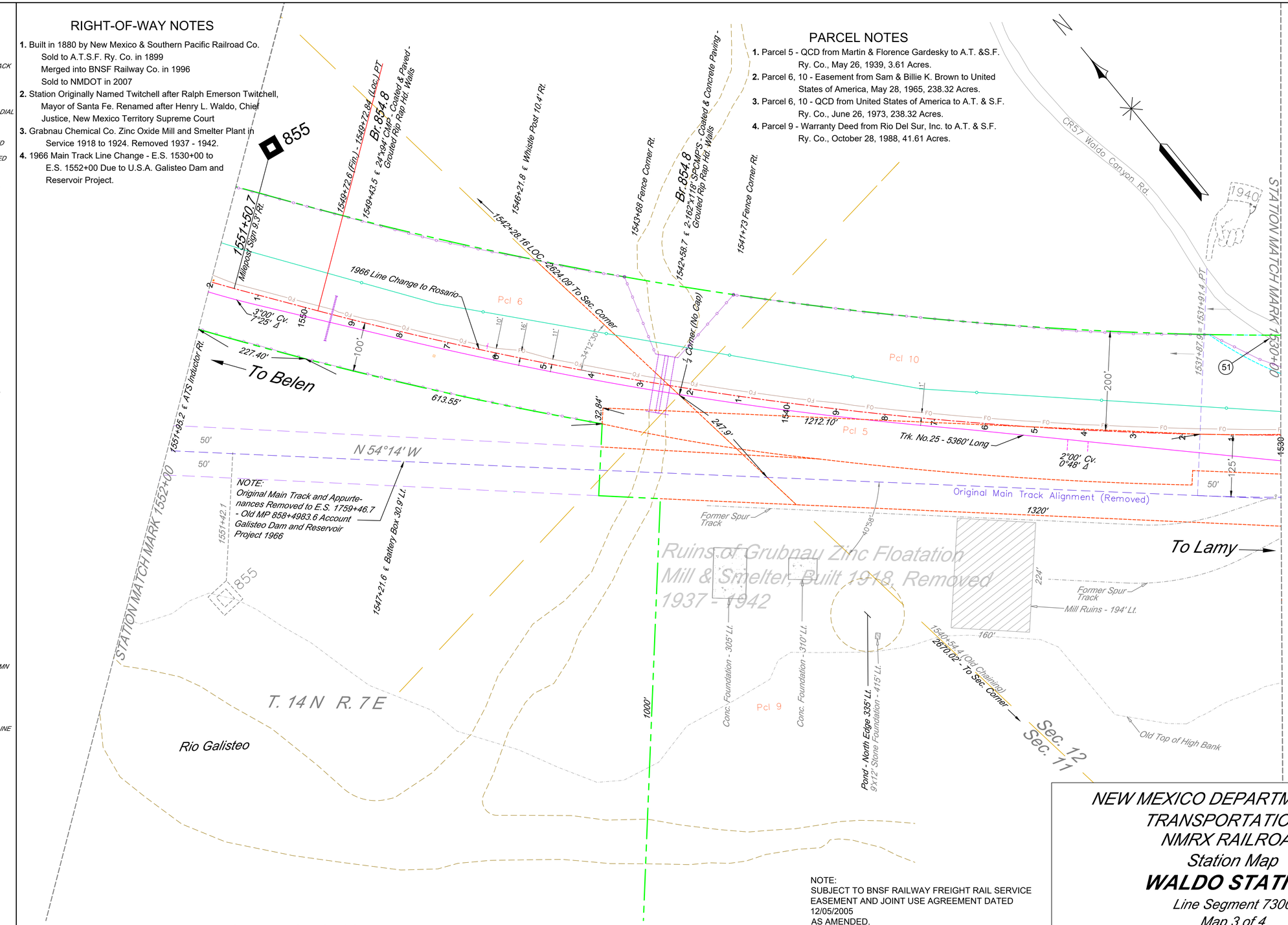
STRUCTURES
- BRIDGE
- CULVERT/CMP
- SIGNAL

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3. Grabnau Chemical Co. Zinc Oxide Mill and Smelter Plant in Service 1918 to 1924. Removed 1937 - 1942.
4. 1966 Main Track Line Change - E.S. 1530+00 to E.S. 1552+00 Due to U.S.A. Galisteo Dam and Reservoir Project.

PARCEL NOTES

1. Parcel 5 - QCD from Martin & Florence Gardesky to A.T. &S.F. Ry. Co., May 26, 1939, 3.61 Acres.
2. Parcel 6, 10 - Easement from Sam & Billie K. Brown to United States of America, May 28, 1965, 238.32 Acres.
3. Parcel 6, 10 - QCD from United States of America to A.T. & S.F. Ry. Co., June 26, 1973, 238.32 Acres.
4. Parcel 9 - Warranty Deed from Rio Del Sur, Inc. to A.T. & S.F. Ry. Co., October 28, 1988, 41.61 Acres.



LEASE AND LICENSE SCHEDULE

NO.	GRANTOR	GRANTEE	INSTR.	DATE	CONTRACT NO.	REMARKS
51	THE A.T.& S.F. RY. CO.	County of Santa Fe	License	6-30-1976	150195	Public Road on Right-of-Way MP 854+3131.5

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NEW MEXICO DEPARTMENT OF TRANSPORTATION
NMRX RAILROAD
Station Map
WALDO STATION
Line Segment 7300
Map 3 of 4
Formerly BNSF Ry. Co. (A.T.& S.F. Ry. Co.)

200 100 0 100 200
SCALE

REVISED: 2/14/19

LEGEND

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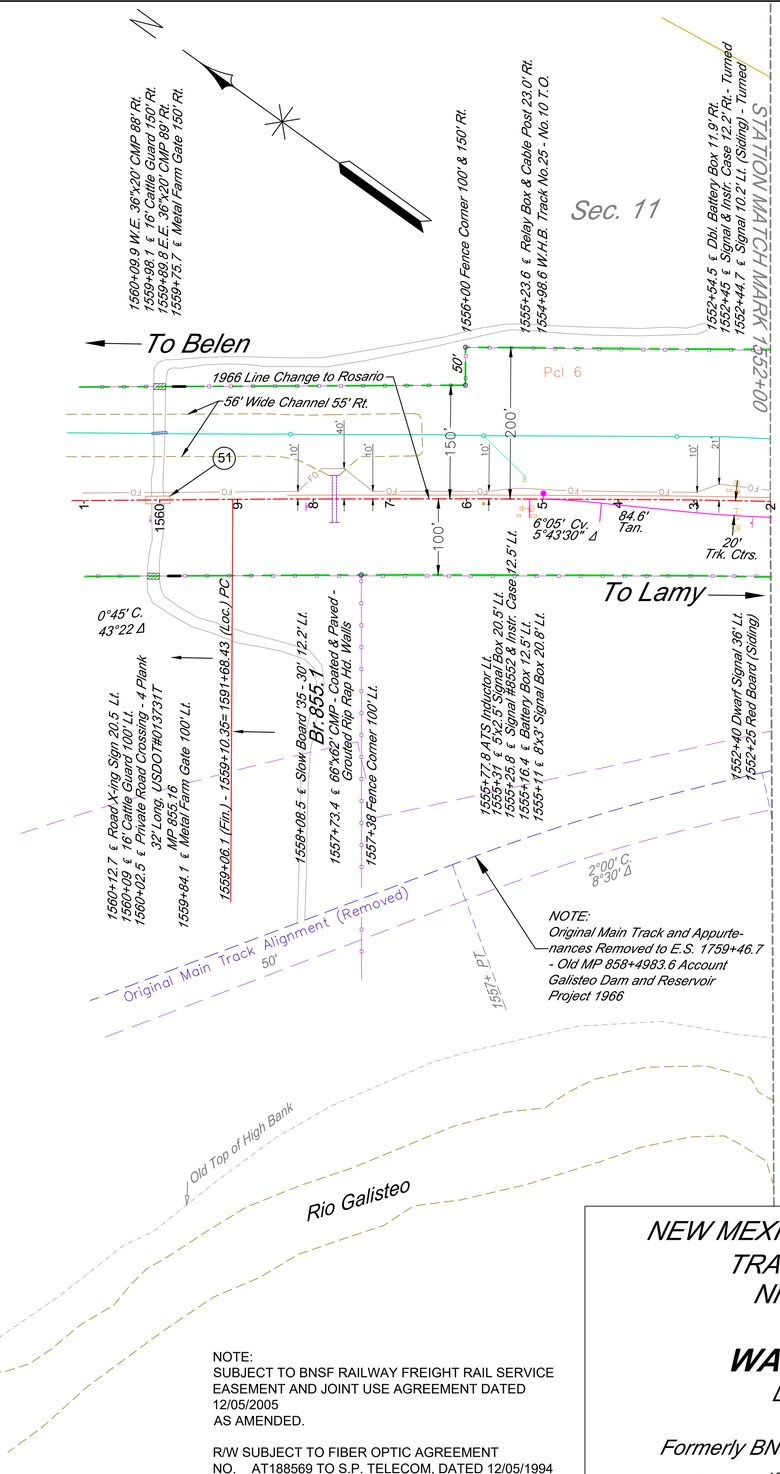
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3. 1966 Main Track Line Change due to the United States of America Galisteo Dam and Reservoir Project.

PARCEL NOTES

1. Parcel 6 - Easement from Sam & Billie K. Brown, Billy N. & Jerry J. Brown to United States of America, May 28, 1965, 238.32 Acres.
2. Parcel 6 - QCD from United States of America to A.T. &S.F. Ry. Co., June 26, 1973, 238.32 Acres.



LEASE AND LICENSE SCHEDULE

NO.	GRANTOR	GRANTEE	INSTR.	DATE	CONTRACT NO.	REMARKS
51	?	?	?	?	?	32' Private Grade X-ing, E.S. 1560+02.5 - MP 855.16 USDOT# 013731T

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200 100 0 100 200
SCALE

REVISED: 2/14/19

Matt Hubbard

From: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Sent: Tuesday, May 26, 2026 6:38 PM
To: Matt Hubbard
Cc: Joseph J. Tracy
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED
Attachments: Waldo_Warranty Deed Rio Del Sur to ATSF 1988.pdf; Pages from 21_5 QC Deed BNSF to NMDOT Bernalillo-Lamy filed Sandoval Countyrf.pdf; 53 MP 852-855.pdf

This sender is trusted.

Ok, here they are.

The first is a deed from 1988 where Atchison, Topeka & Santa Fe had acquired that land.

The second is the deed from BNSF to NMDOT where we bought it in 2007. This is just an extraction from the entire deed and essentially starts at Devil's Throne between Cerrillos and Waldo and proceeds west to Waldo. It describes the entire station grounds that we own reflected on the maps I sent to you, as well as the subject property that the old mill is located on. That land, covered under the 1988 deed in the first attachment, shows up shows up on the last 2 pages of the 2nd attachment, which I have highlighted in yellow.

Also attached (3rd attachment) are the old ATSF/BNSF right of way maps of the area which provide a more condensed view then the detailed maps I previously provided, and shows both Devils Throne and Waldo station grounds. The railroad shown in this map is what NMDOT bought.

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Matt Hubbard <MHubbard@intera.com>
Sent: Tuesday, May 26, 2026 2:49 PM
To: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Hey Robert, thanks for getting back to me. I'm not finding any deeds, I just have the 4 maps you sent in the attached. Would it be possible to send those deeds again?

Understood on the SFC parcel data, this is what I am seeing also.

I spoke with one of the owners of parcel 910011138, the property owned by "Rancho Gaucho". The owners are

- James Schneiderman (james.m.schneiderman@gmail.com; 818-337-9544)
- Jonathan Liebtag (jonliebtag@gmail.com; 917-902-6043)

I only spoke to James, I think it was back in January or February) who told me that they were actually currently in a legal battle with a neighboring property owner to the north over access to that area of their property (i.e., the smelter area). I recall he mentioned a court date in May.

James facilitated an access agreement with Greg (gmesser123@gmail.com; 650-619-9013) & Caroline Messer. I never actually spoke to them but James said they were under the same impression about that being part of their property, though similarly had no way to access the area.

Hope this helps get it sorted – If you don't mind passing along those deeds, I can get it wrapped up with NMED.
Thanks!
Sincerely,

INTERA

Matt Hubbard
Senior Environmental Scientist
INTERA Incorporated

512-914-0606 www.INTERA.com

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From: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Sent: Tuesday, May 26, 2026 3:25 PM
To: Matt Hubbard <MHubbard@intera.com>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Hi Matt,

I had also provided the deeds that support the ownership, do you still have those? That backs up the maps I provided.

The Santa Fe County parcel maps are often incorrect from what I have found. I have had to have them fix a nearby location between Waldo and Cerrillos that was possibly supported by someone else's claim of what we believe is a fraudulent deed.

In looking at the Waldo area property, the county parcel map completely ignores the presence of the railroad property. I will have to work on getting that fixed, but may take some time to do so depending on what the County needs to see.

Who were the folks you spoke to who thought they owned it?

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Matt Hubbard <MHubbard@intera.com>
Sent: Tuesday, May 26, 2026 9:50 AM
To: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Good Morning Robert,
With the revelation that NMDOT owns the Former Waldo Zinc Smelter, it is my understanding that neither INTERA will not be pursuing this work for NMED. I want to thank you for your assistance in keeping our schedule moving forward at that time.

However, I am completing some reporting to document what we had started and I was wondering if you would be able to provide any additional information about NMDOT's ownership of the Waldo Zinc Smelter (i.e., other than the maps you shared previously)? Correct me if I am wrong, but you mentioned that there is not an easement agreement, but when I look at the Santa Fe County property maps the ownership is associated with others. In talking with those property owners some time ago, they were under the assumption that they own the property where the former facility is located.

Thank you!
Sincerely,

INTERA

Matt Hubbard
Senior Environmental Scientist
INTERA Incorporated

512-914-0606 www.INTERA.com

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From: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Sent: Wednesday, February 18, 2026 9:33 AM
To: Matt Hubbard <MHubbard@intera.com>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Good morning Matt,

Thank you for the signed agreement, received.

I need to hold off on fully executing this on our end, as NMED wants to meet to discuss what I presume are some proposed changes to the license agreement that we provided for their review. This contractor right of entry is an exhibit to that license agreement, so it goes hand in hand.

I expect we will be meeting with NMED sometime next week, although a time is not set yet.

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Matt Hubbard <MHubbard@intera.com>
Sent: Monday, February 16, 2026 10:36 AM
To: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Good Morning Robert, please find the ROE agreement signed by INTERA attached, along with our insurance information. Thank you,



Matt Hubbard
Senior Environmental Scientist
INTERA Incorporated

512-914-0606 www.INTERA.com

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From: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Sent: Thursday, January 29, 2026 11:40 AM
To: Matt Hubbard <MHubbard@intera.com>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Good morning Matt,

Attached is the right of entry agreement for Waldo for review.

We still need to consider how to incorporate the NMED language contained on the form you provided me. I presume that it would not be appropriate to include that in our right of entry agreement since it is language required by NMED (It is assumed that the provided form would be between NMDOT and NMED, is this your feeling too?

In that case, it appears we will need to execute a license agreement with NMED to incorporate their language into our standard language. This right of entry agreement/work permit process with you would be a condition of that license with NMED.

Meanwhile, please review the ROE and let me know of any questions.

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Matt Hubbard <MHubbard@intera.com>
Sent: Thursday, January 22, 2026 10:13 AM
To: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Sounds good, Robert.

Here is that information:

INTERA Incorporated
2440 Louisiana Boulevard NE, Suite 700, Albuquerque, New Mexico, 87110
Joseph J. Tracy, Senior Vice President, Principal Geoscientist



Matt Hubbard
Environmental Scientist
INTERA Incorporated

512-914-0606 www.INTERA.com

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From: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Sent: Thursday, January 22, 2026 10:25 AM
To: Matt Hubbard <MHubbard@intera.com>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Good morning Matt,

Yes, if NMED personnel need to access the site, they also need to attend the class to complete the training.

I am consulting with our legal now in terms of how to handle the NMED document you provided. We may need to create and enter into a license agreement with NMED first that would incorporate their terms as well as our terms to cover the general scope, procedure, and access for this project, including any remediation that may be decided upon. This license agreement will also require that NMED causes its contractors to go through the process with NMDOT to receive a work permit. I will update you on our conclusions.

Meanwhile, we can put together a draft of the right of entry agreement for your review. Please provide me with the full legal name of your company, address, and the name and title of the person who will be signing for the company.

Thank you.

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Matt Hubbard <MHubbard@intera.com>
Sent: Thursday, January 22, 2026 8:54 AM
To: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>

Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Good Morning Robert,
Anthony McGlown, Project Manager for NMED, was happy to hear of this development for site access and moving forward with this work. Will you please go ahead and send me the Railroad Right of Entry Agreement so we can review that and get y'all everything you need?

Also, Anthony wanted to know if he and any of his NMED colleagues should plan to complete the training process also in order to visit the site and observe during assessment and any future activities?

Thanks!

Matt Hubbard
Environmental Scientist
INTERA Incorporated

512-914-0606 www.INTERA.com

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From: Matt Hubbard
Sent: Wednesday, January 21, 2026 1:55 PM
To: 'Fine, Robert, DOT' <Robert.Fine@dot.nm.gov>
Cc: Joseph J. Tracy <JTracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Robert,

Thank you for all this information, it clears a lot up for me. I don't think the steps in the permit process you've indicated are prohibitive. I've gone ahead and included the language we provided in our proposal for the Phase II activities, as well as a figure depicting the proposed sample grid scheme. As I mentioned, this is not yet part of a formal plan as the Sampling and Analysis Plan (SAP) development hinges on our ability to access the site.

The proposed assessment is relatively non-invasive, sampling only the top 8 inches of surface soil and not requiring heavy equipment, just passenger vehicles for this phase of work.

Based on our proposed assessment extents, staying 50 ft from the track is not a problem.

I will go ahead and update the NMED PM. If you would kindly go ahead and loop in NMDOT Environmental and whomever else you think is necessary at this time. I imagine NMED would probably still like to have their formal access agreement in place in addition to NMDOT's right of entry agreement that INTERA would complete.

Thanks!

Matt Hubbard
Environmental Scientist
INTERA Incorporated

512-914-0606 www.INTERA.com

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From: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Sent: Tuesday, January 20, 2026 5:38 PM
To: Matt Hubbard <MHubbard@intera.com>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Matt,

Following up on this, to answer your question on right of way access, we would need further detail of what the requested task involves. We would then need to go through a contractor railroad property work permit process that involves the following steps:

- Executing a railroad property right of entry agreement (we would draft that up and send to you for review) Receive and review your insurance COIs as it pertains to the insurance requirements in the agreement Have your employees that would be on-site attend a railroad safety class, conducted by our railroad operator in Albuquerque (typically runs for about 1.5 hours or so, at a cost of $300.00 per class for up to 20 pp)
- Receive a sketch of your proposed access to the sight and what type of equipment/vehicles would be involved.
  Also, I am guessing that your work would not need to be within 50 feet from the track (a railroad flagger would be needed if that were the case).

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Fine, Robert, DOT
Sent: Tuesday, January 20, 2026 12:47 PM
To: 'Matt Hubbard' <MHubbard@intera.com>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Matt, thanks. I had no knowledge of any previous assessments of this such as the 2004 assessment and was not aware it was on NMED's relatively recent radar. We bought this property from BNSF in 2007 so 2004 would have still been under BNSF's ownership. It sounds to me like I need to get our environmental folks brought in on this.

NMDOT owns the entire property, depending on what 'entire' means. There is no easement, rather this is fee simple property that became part of the overall Waldo Station Grounds. We purchased this property from BNSF Railway (Waldo Station Grounds) under a QCD deed with BNSF, as part of the purchase of the rail line from BNSF between Belen and Lamy.

Attached is a station grounds map (four parts) of ours that shows this area. The zinc mill is shown on Map 3. The green dashed lines represent our current railroad boundaries. The purple dashed lines represent former railroad right of way that has been disposed of.

The map is created from previous ATSF/BNSF maps and deed descriptions and field notes and not from a direct survey. I should also have the deed trails as well in this area, as noted on the attached station grounds map.

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Matt Hubbard <MHubbard@intera.com>
Sent: Tuesday, January 20, 2026 10:26 AM
To: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

> You don't often get email from mhubbard@intera.com. Learn why this is important

Absolutely Robert, thank you for your quick response!

The NMED would like to perform Phase I and Phase II Environmental Site Assessment at the site to understand the nature and extent of soil contamination and consider a remedial action. I've attached the NMED access agreement form which explains a little more. It is my understanding that the NMED conducted a preliminary assessment back in 2004 that identified surface soil contaminated with heavy metals. A formal plan is not currently in place but we proposed a gridded XRF assessment over the footprint of the facility and surrounding area as the initial step in the Phase II ESA.

Can you expand about NMDOT's ownership? Is it your understanding that NMDOT owns the entire property or parts thereof due to the extent of the easement or was there some other purchase agreement? We obtained access agreements from property owners based on the SF Assessor's parcel maps but that doesn't give me any information about the NMDOT's ownership or easements.

Sincerely,

Matt Hubbard
Environmental Scientist
INTERA Incorporated

512-914-0606 www.INTERA.com

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From: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Sent: Tuesday, January 20, 2026 11:02 AM
To: Matt Hubbard <MHubbard@intera.com>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: RE: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

Good morning Matt,

NMDOT owns the land where the former zinc processing plant is as part of its NMRX railroad property it acquired from BNSF in 2007.

I am not aware of an assessment. Can you update me on the background and what is being assessed?

Robert E. Fine | Rail Bureau Chief
NMDOT | Rail Bureau | (505) 629-2830

From: Matt Hubbard <MHubbard@intera.com>
Sent: Tuesday, January 20, 2026 9:55 AM
To: Fine, Robert, DOT <Robert.Fine@dot.nm.gov>
Cc: Joseph J. Tracy <jtracy@intera.com>
Subject: [EXTERNAL] ROW Access to Former Waldo Zinc Smelter Site for NMED

You don't often get email from mhubbard@intera.com. Learn why this is important

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Morning Robert,
Larry Kemp provided your contact information when we asked him about accessing the NMDOT Rail Runner easement to gain access to the former Waldo Zinc Smelter site that the NMED has contracted us to perform assessment. We have access from the property ownership but come to find out they don't physically have a way to access this area of their property. The area is circled in red on the attached Figure G.

We think we may be able to access the area via a gate off FM 57 (Waldo Canyon Rd). The gate in question can be seen in Google maps and in street view if you search these coordinates: **35.450693, -106.149301**

The site is just northwest of that gate, up the rail line next a former spur line. Here are the coordinate for the site: **35.450693, -106.149301**

I've also attached a screenshot of the site on an aerial image, and the gate from street view.

Can you help us out? Feel free to reach out to me as needed. Thanks!
Sincerely,

Matt Hubbard
Environmental Scientist
INTERA Incorporated

9600 Great Hills Trail, Suite 300W, Austin, Texas, 78759
512-914-0606 www.INTERA.com

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SF - 1 SHORT FORM WARRANTY DEED—Rev. 5-75—New Mexico Statutory Form THE VALLIANT CO. ALBUQUERQUE, N. M.

WARRANTY DEED

630151

RIO DEL SUR, INC., a New Mexico corporation, for consideration paid, grants to THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, a Delaware corporation, whose address is 314 First Street S.W., Albuquerque, New Mexico 87102, the following described real estate in Santa Fe County, New Mexico:

SEE EXHIBIT "A" ATTACHED HERETO

SUBJECT TO the exception and reservation of all of the oil, gas and other hydro-carbons, ores, minerals, fossils or coal in, under or upon the lands hereinbefore described, contained in that certain Warranty Deed from Gregory Salinas and Janie B. Salinas, his wife, to El Cerro Corporation, dated March 5, 1974, filed March 26, 1974, as Document No. 362,664, records of Santa Fe County, New Mexico;

AND FURTHER SUBJECT TO reservations, restrictions and easements of record;

with warranty covenants.

WITNESS its hand and seal this 28th day of October, 1988.

(Seal) RIO DEL SUR, INC. (Seal)

By Donald J. Wood Pres

(Seal) Its (Seal)

COUNTY CLERK JONA G. ARMIJO COUNTY NEW MEXICO

ACKNOWLEDGMENT FOR NATURAL PERSONS

STATE OF NEW MEXICO }
COUNTY OF } ss.

The foregoing instrument was acknowledged before me this day of, 19,

by (Name or Names of Person or Persons Acknowledging)

My commission expires:
(Seal)

Notary Public

663.236

FOR RECORDER'S USE ONLY

COUNTY OF SANTA FE } ss.
STATE OF NEW MEXICO }

I hereby certify that this instrument was filed for record on the 2 day of NOV A.D. 19 88 at 10:34 o'clock A m. and was duly recorded in book , page — of the records of Santa Fe County.
Witness my Hand and Seal of Office
Jona G. Armijo
County Clerk, Santa Fe County, N.M.
Corinna Lovato
Deputy

ACKNOWLEDGMENT FOR CORPORATION

STATE OF NEW MEXICO }
COUNTY OF Bernalillo } ss.

The foregoing instrument was acknowledged before me this 28th day of October, 1988,

by Donald J. Wood (Name of Officer),

President (Title of Officer) of RIO DEL SUR, INC. (Name of Corporation Acknowledging),

a New Mexico (State of Incorporation) corporation, on behalf of said corporation.

My commission expires:
(Seal)

Barbara Wheat
Notary Public

OFFICIAL SEAL
BARBARA WHEAT
NOTARY PUBLIC - NEW MEXICO
Notary Bond Filed with Secretary of State

11-5-

630152

TRACT I

That certain part of the Juana Lopez Grant at Waldo, Santa Fe County, New Mexico, lying south of the present southerly line of The Atchison, Topeka & Santa Fe Railway Company at Waldo, Santa Fe County, New Mexico, between said railway company's approximate Engineer's Station 1523 and 1543, and extending to a point south of the southerly bank of the Rio Galisteo and more particularly described as follows:

Beginning at a point on the present southerly property line of such railway company, 50 feet southwesterly of and at right angles to the centerline of the main track of said railway company at Construction Station 1529 plus 60, thence continuing at right angles to said centerline, and with a bearing South 35° 47' West, 298 feet;

Thence South 42° 2' East, 211.3 feet; thence South 37° 52' East, 541.4 feet; thence South 51° 41' East, 100 feet;

Thence South 35°47' West, 500.6 feet;

Thence North 54° 13' West, 2145.9 feet; thence North 35° 47' East, 1,000 feet to a point on the present southerly property line of said railway company 50 feet southwesterly of and at right angles to the centerline of the main track of said railway company at Construction Station 1542 plus 80;

Thence South 54° 13' East along the present southerly property line of said railway company, 50 feet from and parallel to the centerline of the main track of said railway company, 1,320 feet to the place of beginning.

The tract of land herein conveyed as above contains 41.61 acres, more or less, and was conveyed to Carl Benjamin Grubnau by the Cerrillos Coal and Iron Company and Cherokee & Pittsburg Coal & Mining Company by deed dated October 27, 1916, and filed of record and recorded in the office of the County Clerk of Santa Fe County on the 9th day of April, A. D. 1917, in Book Q-4 of Miscellaneous Records, Page 595, and subsequently conveyed to SOUTHWEST GRAZING CO., a corporation, by George W. Hilliard, by Deed dated 7 July 1960, and filed of record and recorded in the office of the County Clerk of Santa Fe County on the 1st day of August, A. D. 1960 in Book 168 Misc. Page 566.

TRACT II

That portion of the Juana Lopez Grant at Waldo, Santa Fe County, New Mexico, deeded to Carl August Benjamin Grubnau by The Atchison, Topeka and Santa Fe Railway Company and others by deed dated October 27, 1916, and recorded in the County Clerk's Office of the County of Santa Fe on the 10th day of April, A. D., 1917, in Book Q-4 of the Records of Miscellaneous at Page 598, particularly described as:

Beginning at a point lying 200 feet southwesterly of and at right angles to the center line of the present main tract of said Atchison, Topeka and Santa Fe Railway Company at Construction Station 1529 plus 60; thence continuing on a line at right angles to said center line and with a bearing South 35° 47' West, 148 feet; thence South 42° 2' East, 211.3 feet; thence South 37° 52' East, 541.4 feet; thence South 51° 41' East, 100 feet; thence North 35° 47' East, 488.1 feet to a point lying 200 feet southwesterly of and at right angles to the center line of said main track at Construction Station 1521 plus 76.1; thence North 71° 8' West on a line parallel to centerline of said main track, 233.9 feet; thence on a curve to the right parallel to said centerline and with a radius of 1632.69 feet, 482.1 feet; thence North 54° 13' West, 127 feet, more or less, to the point of beginning. The above tract of land herein conveyed contains 6.35 acres, more or less.

EXHIBIT "A"

Track centerline, as now located and constructed; thence northwesterly, at an angle of 66°54' left from last described course produced and along last said parallel line 1,770 feet, more or less to the southeasterly Boundary of that certain tract of land described in deed dated December 28, 1881 from Stephen B. Elkins to The New Mexico & Southern Pacific Railroad Company recorded January 3, 1882 in Book L, Page 421, records of Santa Fe County, New Mexico; thence southwesterly, along said boundary, 3.9 feet, more or less to a line parallel and/or concentric with and distant Northeasterly 50.0 feet, measured at right angles and/or radially from said Railway Company's Main Track centerline as originally located and constructed; thence southeasterly, along last said parallel line, on a curve to the right with a radius of 1960.08 feet, a distance of 395.7 feet, more or less; thence continuing along last said parallel line, 330 feet, more or less, to a line parallel with and distant Southwesterly 100.0 feet, measured at right angles from said Railway Company's Main Track centerline as now located and constructed; thence southeasterly along last said parallel line 1,130 feet more or less, to the point of beginning; also,

That certain tract of land described in deed dated May 1, 1939 from F. A. Catron to The Atchison, Topeka and Santa Fe Railway Company, recorded May 2, 1939 in Book 16 of Deeds, Page 511, records of Santa Fe County, New Mexico, described as follows:

That certain tract of land lying in Lots 1 and 2 of the SE1/4 of Section 18, Township 14 North, Range 8 East, N. M. P. M., Santa Fe County, New Mexico, more particularly described as follows:

Beginning at the intersection of the east line of said Section 18 and a line parallel and 100 feet northeasterly from, measured at right angle to said Railway Company's Main Track centerline, as originally located and constructed at a point 1,158 feet, more or less, north of the southeast corner of said Section 18; thence southerly along said east line of said Section 18, a distance of 32.6 feet, more or less; thence northwesterly along a line parallel with and distant 70 feet northeasterly from, measured at right angles to said Railway Company's Main Track centerline as originally located and constructed, 719 feet, more or less, to a point opposite Engineer's Profile Station 1419+59; thence southwesterly at right angles to said Railway Company's Main Track centerline as originally located and constructed, 20 feet to a line parallel and/or concentric with and distant northeasterly 50 feet, measured at right angles and/or radially to said Railway Company's Main Track centerline as originally located and constructed; thence northwesterly along last said parallel line, 638.8 feet; thence continuing northwesterly, along last said parallel line, on a curve to the right with a radius of 1,382.69 feet, a distance of 787.4 feet, more or less; thence northwesterly, along last said parallel line, 580 feet, more or less, to a point in the north line of said Lot 2; thence easterly along said north line of Lot 2, a distance of 170 feet, more or less to a line a line parallel and/or concentric with and distant 100 feet northeasterly from, measured at right angles and/or radially to said Railway Company's proposed Main Track centerline; thence southeasterly, along last said parallel and/or concentric line, 444 feet, more or less; thence continuing southeasterly on a curve to the left with a radius of 3,719.83 feet, a distance of 1,641.4 feet, more or less to a point 100 feet northeasterly from, measured at right angles to said Railway Company's Main Track centerline, as originally located and constructed; thence southeasterly parallel to said Railway Company's Main Track centerline, as originally located and constructed, 437 feet, more or less, to the point of beginning; also,

That portion of said Railway Company's 100.0 foot wide Branch Line right of way, being 50.0 feet on each side of said Main Track centerline, as originally located and constructed, upon, over and across Section 17 and Lots 1 and 2 of the SE1/4 of Section 18, all in Township 14 North, Range 8 East, N. M. P. M., Santa Fe County, New Mexico, bounded Southeasterly by a line parallel with and distant 100 feet Southerly from, measured at right angles to said Railway Company's Main Track centerline as originally located and constructed being the southwesterly boundary of said hereinabove described 4.78 acre tract of land, and bounded Northwesterly by the North line of said Lot 2 of the SE1/4 of Section 18, Township 14 North, Range 8 East, N. M. P. M.; also,

SANDOVAL COUNTY
200708903
Book- 410 Page- 8903
13 of 33
03/01/2007 10:19:43 AM

SFC CLERK RECORDED 03/02/2007

SFC CLERK RECORDED 03/02/2007

The SW1/4 of the NW1/4 Section 18, Township 14 North, Range 8 East, N. M. P. M., Santa Fe County, New Mexico; also,

Lots 3 and 4 of the fractional NW1/4 Section 18, Township 14 North, Range 8 East, N. M. P. M., Santa Fe County, New Mexico; also,

That certain 2.46 acre tract of land and that certain 2.89 acre tract of land described as Tract "A" and Tract "B", respectively, in deed dated October 20, 1938 from Mrs. D. L. (Eugenia) Miller et al. to The Atchison, Topeka and Santa Fe Railway Company recorded February 16, 1939 in Book 16 of Deeds, Page 401, records of Santa Fe County, New Mexico, said tracts being described in said deed for reference as follows:

"Tract 'A'

"A strip of land in Lot six (6) of Section eighteen (18), Township fourteen North (T14N) Range eight East (R8E), near Waldo, in Santa Fe County, New Mexico, described as follows:

"A strip of land one hundred (100) feet in width lying between lines parallel with and one hundred (100) feet and two Hundred (200) feet, respectively, southerly from, measured normal to, the center line of the original main track of The Atchison, Topeka and Santa Fe Railway Company and extending from the easterly line of said Lot six (6) in a northwesterly direction to the westerly or northwesterly line of said Lot six (6); said strip of land being one thousand and seventy (1070) feet, more or less, in length, measured along a line parallel with and one hundred fifty (150) feet southerly from, measured normal to, said original main track center line.

"The foregoing described strip of land contains and area of two and forty-six hundredths (2.46) acres, more or less.

"Tract 'B'

"A strip of land over and across Lot one (1) of Section thirteen (13), Township fourteen North (T14N) Range seven East (R7E), near Waldo, in Santa Fe County, New Mexico, described as follows:

"A strip of land two hundred (200) feet in width, the same being one hundred (100) feet on each side of the center line of the relocated main track of The Atchison, Topeka and Santa Fe Railway Company, extending from the east line of said Lot one (1) of Section thirteen (13), which said east line is also the west line of Section eighteen (18) in Township fourteen North (T14N) Range eight East (R8E), in a northwesterly direction to the west line of said Lot one (1), which said west line is also the east line of the Mesita de Juana Lopez Grant.

"Said relocated center line being more particularly described as follows: Beginning at a point in the east line of said Lot one (1), distant four hundred forty (440) feet, more or less, south of the northeast corner thereof; thence northwesterly on tangent a distance of six hundred thirty (630) feet, more or less, to a point in the west line of said Lot one (1), distant two hundred sixty (260) feet, more or less, south of the northwest corner thereof.

"The foregoing described strip of land contains and area of two and eighty-nine hundredths (2.89) acres, more or less."; also,

A strip of land 100.0 feet wide, in Lot 6 of the NW1/4 Section 18, Township 14 North, Range 8 East, N. M. P. M., Santa Fe County, New Mexico, lying Southerly of said Railway Company's Main Track

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centerline, as originally located and constructed, and Northerly of a line parallel with and distant 100 feet Southerly from, measured radially to said Railway Company's Main Track centerline as originally located and constructed, bounded Easterly by the easterly line of said Lot 6, and bounded Westerly by the Westerly line of said Lot 6; also,

That portion of said Railway Company's 100.0 foot wide Branch Line right of way, being 50.0 feet on each side of said Main Track centerline, as originally located and constructed, extending from the easterly line of Lot 1, of Section 13, Township 14 North, Range 7 East, N. M. P. M., in Santa Fe County, New Mexico, in a northwesterly direction to the westerly or northwesterly line of said Lot one (1); also,

That certain 4.08 acre tract of land described first in deed dated May 26, 1939 from J. W. Catron and Virginia F. Catron to The Atchison, Topeka and Santa Fe Railway Company recorded July 24, 1939 in Book 18 of Deeds, Page 29, records of Santa Fe County, New Mexico, described as follows:

That certain tract of land in Lot 3, Section 13, Township 14 North, Range 7 East, N. M. P. M., near Waldo, in Santa Fe County, New Mexico, also being a portion of the Mesita de Juana Lopez Grant, described as follows:

Beginning at the intersection of the east line of the Mesita de Juana Lopez Grant and a line parallel with and 50 feet northerly from, measured at right angles to the centerline of said Railway Company's Main Track centerline, as originally located and constructed; thence northerly along said east line of the Mesita de Juana Lopez Grant, 290 feet, more or less to a point 100 feet northerly from, measured at right angles to the centerline of said Railway Company's proposed Main Track centerline; thence at an angle of 69°48' left, from last described course produced, 550 feet more or less; thence northwesterly on a curve to the right with a radius of 3,719.83 feet, a distance of 461 feet, more or less, to a line perpendicular to said Railway Company's Main Track centerline, as originally located and constructed at Engineer's Station 1491+00; thence southerly along said perpendicular line 69.6 feet to a point 50 feet northerly from, measured at right angles to said original main track centerline; thence southeasterly on a line parallel with the said original main track centerline, 923.4 feet, more or less; thence southeasterly on a curve to the left with a radius of 905.37 feet a distance of 225 feet, more or less, to the point of beginning; also,

That portion of said Railway Company's 100.0 foot wide Branch Line right of way, being 50.0 feet on each side of said Main Track centerline, as originally located and constructed, lying in the NE1/4 of the NE1/4 Section 13, Township 14 North, Range 7 East, N. M. P. M., also being in the Mesita de Juana Lopez Grant, Santa Fe County, New Mexico extending from the east line of said Mesita de Juana Lopez Grant, in a northwesterly direction to a line perpendicular to said Railway Company's Main Track centerline, as originally located and constructed at Engineer's Station 1491+00; also,

That portion of said Railway Company's original 400.0 foot wide Branch Line right of way, being 200.0 feet on each side of said Main Track centerline, as originally located and constructed, lying in the S1/2 of Section 12 and the N1/2 Section 13, Township 14 North, Range 7 East, N. M. P. M., also being in the Mesita de Juana Lopez Grant, Santa Fe County, New Mexico, extending from a line perpendicular to said Railway Company's Main Track centerline, as originally located and constructed at Engineer's Station 1491+00, in a northwesterly direction to a line perpendicular to said Railway Company's Main Track centerline, as originally located and constructed at Engineer's Station 1524+10; also,

That portion of said Railway Company's 100.0 foot wide Branch Line right of way, being 50.0 feet on each side of said Main Track centerline, as originally located and constructed, lying in Section 11, and the SW1/4 of the SW1/4 Section 12, Township 14 North, Range 7 East, N. M. P. M., also being in the Mesita de Juana Lopez Grant, Santa Fe County, New Mexico, extending from a line perpendicular to said Railway Company's Main Track centerline, as originally located and constructed at Engineer's Station

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1524+10, in a westerly direction to the Easterly boundary of that certain 39.17 acre strip of land described in deed dated March 27, 1974 from The Atchison, Topeka and Santa Fe Railway Company to United States of America, said Easterly boundary also being the East line of the NW1/4 of the NW1/4 of said Section 11; also,

That portion of that certain 21.42 acre tract of land described in deed dated July 8, 1938 from Martin Gardesky and Florence Gardesky to The Atchison, Topeka and Santa Fe Railway Company recorded August 16, 1938 in Book 16 of Misc. Records, Page 207, records of Santa Fe County, New Mexico, described as follows:

That certain tract or parcel of land lying and situate in the SE1/4 of the SW1/4 of Section 2 and the N1/2 of Section 11, all in Township 14 North, Range 7 East, N. M. P. M., and also being a part of the Mesita de Juana Lopez Grant in Santa Fe County, New Mexico, more particularly described as follows:

Commencing at a point in the northerly line of said Railway Company's 100 foot wide Branch Line right of way, as originally located and constructed, said point being North 3°45'30" West, 50 feet from Engineer's Profile Station 1609+00 and North 88°19' West, 552.7 feet, more or less, from the southeast corner of Section 3, Township 14 North, Range 7 East, N. M. P. M.; thence North 3°45'30" West, at right angles to the centerline of said Branch Line, 100.0 feet; thence North 86°14'30" East, 890.3 feet, more or less to a point at the beginning of a curve, thence easterly along a curve to the right with a radius of 4764.72 feet, a distance of 1028.93 feet to a point in the East line of the SW1/4 of the SW1/4 of said Section 2, said point being the Point of Beginning for the parcel herein described; thence continuing easterly along said curve having a radius of 4764.72 feet, a distance of 3365.07 feet; thence South 49°05' West, 100 feet; thence South 40°55' East, 511.5 feet, more or less, to a point in the northerly line of said 100 foot wide Branch Line right of way, from which point Engineers Profile Station 1552+90 bears South 49°05' West, 50 feet; thence westerly along said northerly line of said 100 foot wide Branch Line right of way the following courses and distances, to wit:
Along a curve to the left with a radius of 2914.93 feet a distance of 432.4 feet, more or less; thence North 49°25' West, 1594 feet, more or less; thence along a curve to the left with a radius of 1482.69 feet, a distance of 890.9 feet, more or less; thence North 83°51' West, 831 feet, more or less to the Easterly boundary of that certain 8.68 acre tract of land described in deed dated March 27, 1974 from The Atchison, Topeka and Santa Fe Railway Company to United States of America, said Easterly boundary also being the East line of the SW1/4 of the SW1/4 of said Section 2, and the East line of the NW1/4 of the NW1/4 of said Section 11; thence North 0°03' East, along said Easterly boundary, the East line of the NW1/4 of the NW1/4 of Section 11 and along said East line of the SW1/4 of the SW1/4 of Section 2, a distance of 265.91 to the Point of Beginning; also,

A tract of land being that portion of said Railway Company's Waldo Station Grounds property in the SE1/4NE1/4 and the NE1/4 of the SE1/4 of Section 11 and the W1/2 of Section 12, all in Township 14 North, Range 7 East, N. M. P. M., Santa Fe County, New Mexico, lying Northeasterly of a line parallel and/or concentric with and distant Northeasterly feet 50 feet from, measured at right angles and/or radially to said Railway Company's Main Track centerline as originally located and constructed and Southwesterly of a line parallel and/or concentric with and distant 200 feet Northeasterly from, measured at right angles and/or radially to said Railway Company's Main Track centerline as now located and constructed, bounded Southeasterly by a line perpendicular to said Railway Company's Main Track centerline, as now located and constructed at Engineer's Station 520+00 and bounded Northwesterly by a line perpendicular to said Railway Company's Main Track centerline, as originally located and constructed at Engineer's Station 1544+00, Excepting, that portion of said hereinabove described 400 foot wide right of way lying within said tract; also

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That certain 22.7 acre tract of land described in deed dated June 3, 1901 from The Cerrillos Coal and Iron Company and the Cherokee & Pittsburg Coal and Mining Company to The Atchison, Topeka and Santa Fe Railway Company recorded in Book N-1, Page 56, records of general deeds in the office of the Probate Clerk and Recorder, Santa Fe County, New Mexico, being a tract of land in the County of Santa Fe, State of New Mexico (formerly Territory of New Mexico), said tract being described in said deed for reference as follows:

"All that portion of the Juana Lopez Grant lying between the present south line of right of way of The Atchison, Topeka and Santa Fe Railway Company at Waldo, in said County and Territory, and the north bank of the Galisteo River, and between lines at right angles to the track of The Atchison, Topeka and Santa Fe Railway Company at stations fourteen hundred and ninety-one (1491) and fifteen hundred and twenty-nine plus sixty (1529+60) and more particularly described as follows:

"Beginning at a point on the south right of way line of The Atchison, Topeka and Santa Fe Railway Company opposite station fifteen hundred and twenty-nine plus sixty (1529+60), fifty (50) feet from and at right angles to the centerline of the main line track of The Atchison, Topeka and Santa Fe Railway Company; running thence south thirty-five (35) degrees forty-seven (47) minutes west two hundred and ninety-eight (298) feet; thence south forty-two (42) degrees two (2) minutes east two hundred and eleven and three-tenths (211.3) feet; thence south thirty-seven (37) degrees fifty-two (52) minutes east five hundred and forty-one and four-tenths (541.4) feet; thence south fifty-one (51) degrees forty one (41) minutes east three hundred and seventy-five and one-tenth (375.1) feet; thence north fifty-eight (58) degrees twenty-six (26) minutes east four hundred and ninety-two and five-tenths (492.5) feet; thence south seventy-two (72) degrees fourteen (14) minutes east three hundred and twenty and five-tenths (320.5) feet; thence south thirty-nine (39) degrees thirty-nine (39) minutes east six hundred and fifty-four (654) feet; thence south fifty-nine (59) degrees thirty-one (31) minutes east two hundred and twenty-nine (229) feet; thence north seventy-six (76) degrees forty four (44) minutes east three hundred and seventy-eight and eight-tenths (378.8) feet; thence north sixty-one (61) degrees thirteen (13) minutes east three hundred and seventy-seven and four-tenths (377.4) feet; thence south seventy-two (72) degrees fifty (50) minutes east one hundred and fifty-nine and five-tenths (159.5) feet; thence south fifty (50) degrees thirty-six (36) minutes east six hundred and sixty-four and five-tenths (664.5) feet; thence south seventy-seven (77) degrees seven (7) minutes east one hundred and eighty eight and six-tenths (188.6) feet; thence north eighteen (18) degrees fifty-two (52) minutes east two hundred and eight-one and nine-tenths (281.9) feet to a point on the south right of way line of The Atchison Topeka and Santa Fe Railway Company two hundred (200) feet from and at right angles to the center line of The Atchison, Topeka and Santa Fe Railway Company at station fourteen hundred and ninety-one (1491); thence north seventy-one (71) degrees eight (8) minutes west three thousand three hundred and ten (3310) feet along the south right of way line of The Atchison, Topeka and Santa Fe Railway Company; thence north eighteen (18) degrees fifty-two (52) minutes east one hundred and fifty (150) feet also along the right of way line of The Atchison, Topeka and Santa Fe Railway Company; thence in a northwesterly direction on a curve fifty (50) feet from and parallel to the center line of the main line track of The Atchison, Topeka and Santa Fe Railway Company, which is on a four (4) degrees curve to the right a distance of four hundred and thirty-seven and five-tenths (437.5) feet; thence north fifty-four (54) degrees thirteen (13) minutes west one hundred and twenty-seven (127) feet to the place of beginning; containing twenty-two and seven-tenths (22.7) acres, more or less." EXCEPTING THEREFROM, That certain 6.35 acre tract of land described in deed dated October 27, 1916 from The Atchison, Topeka and Santa Fe Railway Company, The Cerrillos Coal, Iron Company and the Cherokee & Pittsburg Coal and Mining Company to Carl August Benjamin Grubneau; also,

That certain 41.61 acre tract of land described as Tract I in deed dated October 28, 1988 from Rio Del Sur, Inc. to The Atchison, Topeka and Santa Fe Railway Company recorded November 2, 1988 in Book

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630, Page 151, records of Santa Fe County, New Mexico, said 41.61 acre tract of land being described in said deed for reference as follows:

"That certain part of the Juana Lopez Grant at Waldo, Santa Fe County, New Mexico, lying south of the present southerly line of The Atchison, Topeka & Santa Fe Railway Company at Waldo, Santa Fe County, new Mexico, between said railway company's approximate Engineer's Station 1523 and 1543, and extending to a point south of the southerly bank of the Rio Galisteo and more particularly described as follows:

"Beginning at a point on the present southerly property line of such railway company, 50 feet southwesterly of and at right angles to the centerline of the main track of said railway company at Construction Station 1529 plus 60, thence continuing at right angles to said centerline, and with a bearing South 35° 47' West, 298 feet;

"Thence South 42° 2' East, 211.3 feet; thence South 37° 52' East, 541.4 feet; thence South 51° 41' East, 100 feet;

"Thence South 35° 47' West, 500.6 feet;

"Thence North 54° 13' West, 2145.9 feet; thence North 35° 47' East, 1,000 feet to a point on the present southerly property line of said railway company 50 feet southwesterly of and at right angles to the centerline of the main track of said railway company at Construction Station 1542 plus 80;

"Thence South 54 ° 13' East along the present southerly property line of said railway company, 50 feet from and parallel to the centerline of the main track of said railway company, 1,320 feet to the place of beginning."; also,

Those certain tracts of land described in deed dated June 26, 1973 from Department of the Army of the United States of America to The Atchison, Topeka and Santa Fe Railway Company recorded June 17, 1974 in Book 312, Page 619, records of Santa Fe County, New Mexico, said tracts being described in said deed for reference as follows:

"Tract No. 111E

"A tract of land situate within the boundaries of the Mesita de Juana Lopez Grant; Sections 29, 32, 33 and 34, Township 15 North, Range 7 East, and Sections 2, 3, 11, and 12, Township 14 North, Range 7 East of the new Mexico Principal Meridian, Santa Fe County, New Mexico, being more particularly described as follows:

"Beginning at a point on the north right-of-way line of The Atchison, Topeka and Santa Fe Railway Company opposite Engineer's Station 1841 plus 91.39; said point of beginning being 225 feet from and at right angles to the centerline of the main track of said Railway Company and bearing S. 00 ° 01' W. a distance of 358.04 feet and S. 76 ° 09'45" E., a distance of 120.47 feet from a Government Land Office brass-capped monument marking the quarter (¼) corner common to Sections 29 and 30, Township 15 North, Range 7 East, N.M.P.M.; said point of beginning is also on a grant boundary common to Mesita de Juana Lopez Grant to the east and the Santo Domingo Indian reservation to the west of said grant boundary: thence S. 76 ° 09'45" E., a distance of 210.64 feet to a point of curve opposite Engineer's Station 1839 plus 80.75, 225 feet from and at right angles to the centerline of the main track; thence in a southeasterly direction of a curve to the right with a radius of 15,851.15 feet, a distance of 1,502.06 feet to a point opposite Engineer's Station 1825 plus 00, 225 feet from and at right angles to the centerline of the main track; thence in a northeasterly direction a distance of 125 feet to a point 350 feet from and at right

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LEGEND

TRACKAGE

- ORIG. CENTERLINE (LVL 54)
- ORIG. CENTERLINE RADIALS (LVL 54)
- YARD TRKS RY. OWNED (LVL 9)
- YARD TRKS IND. OWNED (LVL 9)

LAND LINES

- R.O.W. LINES (LVL 16)
- PARCEL LINES (LVL 15)
- DEED* DEED NUMBERS (LVL 25)
- PCL * PARCEL NUMBER (LVL 25)
- FORMER R/W LINES (LVL 15)
- AREA SOLD (LVL 62)
- EASEMENTS (LVL 18)
- LEASE LINES (LVL 20)
- BASE & MERIDIAN (LVL 19)
- PARRISH & TOWNSHIP (LVL 19)
- SECTION (LVL 19)
- CITY LIMITS (LVL 19)
- BLOCK LINES (LVL 19)
- LOT LINES (LVL 19)
- ROAD CENTERLINES (LVL 30)
- NON-RY PARCELS (LVL 19)
- CULVERT (LVL 34)
- CB&Q RR PREDECESSOR RAILROAD (LVL 58)
- STATE (LVL 58)
- IL-4A VALUATION SECTION (LVL 58)
- S-19 VALUATION MAP (LVL 58)

HAZ. UTILITIES

LVL 42- RY. CO. OWNED
LVL 43- IND. CO. OWNED

- FUEL LINE
- GAS LINE
- OIL LINES
- TOX.CHEM. TOXIC CHEMICAL LINES
- TOX.GAS TOXIC GAS LINES
- GAS METER
- GAS VALVE
- HAZ MTL VALVES
- HAZ MTL SUPPORT CLMN

NON-HAZ. UTILITIES

LVL 38- RY. CO. OWNED
LVL 39- IND. CO. OWNED

- AIR LINES
- CABLE TV LINES
- ELECTRIC LINES
- HIGH VOLTAGE ELEC. LINES
- SEWER LINES
- STEAM LINES
- STORM LINES
- TELEPHONE LINES
- WATER LINES
- C.B. CATCH BASIN
- F.H. FIRE HYDRANT
- M.H. SEWER MANHOLE
- SUPPORT COLUMNS
- WATER METER
- WATER VALVE
- FIB.OPT. FIBER OPTIC LINES (LVL 41)

LEASE AND LICENSE SCHEDULE

NO.	GRANTOR	GRANTEE	INSTRUMENT	DATE	SECY'S NO.	REMARKS
50	THE A.T. & S.F. RY. CO.	S.P. TELECOM	AGREEMENT	12/5/94	188569	FIBER OPTIC LINE XING

NOTE: See Deed 52482 For Original Claim of Property Between AT & SF and Pueblo of San Felipe in Val Sec NM 2, Map 23-28

SECY'S NO. 50356

NOTE: R/W SUBJECT TO FIBER OPTIC AGREEMENT NO. AT 188569 TO S.P. TELECOM, DATED 12/5/1994 FROM DENVER, CO.TO EL PASO, TX., AS SHOWN HEREON.

BNSF RAILWAY #53
Right of Way and Track Map
Line Segment 7300
M.P. 852 to M.P. 855
Formerly AT&SF RY

400 SCALE 400
800 0 800

Chief Engineer's Office | Sheet 1 of 1 | C.E. 133027

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Revised: 09-20-2005

APPENDIX L

Qualifications of Environmental Professionals



Matt Hubbard
Senior Environmental Scientist

Years of Experience: 14

Education:

- BS, Environmental Science, University of Texas at Austin

Professional Registrations/Affiliations:

- TCEQ Leaking Petroleum Storage Tank (LPST) Project Manager, License No. PM0000720, 2022

Professional History:

2026 – Present	Senior Environmental Scientist – INTERA Incorporated, Austin, TX
2018 – 2025	Environmental Scientist – INTERA Incorporated, Austin, TX
2017 – 2018	Environmental Specialist – City of Austin, Development Services Department, Austin, TX
2013 – 2017	Project Manager / Engineering and Corrective Action Specialist – Texas Commission on Environmental Quality, Remediation Division, Superfund Section, Austin, TX
2012 – 2013	Work Lead / Licensed Electrician – Wells Solar and Electrical Services, Austin, TX
2012	Field Research Assistant – University of Texas, Austin, TX

Training:

- MSHA Part 48 Surface New Miner Training, 2019-2023
- 40-Hour General Site Workers Training, OSHA 29 CFR 1910.120(e)(3), 2013
- 8-Hour Refresher, OSHA 29 CFR 1910.120, 2013 – 2025
- Hydrogen Sulfide (H2S) Training, 2018
- CPR, First Aid, and Bloodborne Pathogens Training, 29 CFR 1910.1030, 2024
- ArcGIS Pro, WinSitu, Strater®, Grapher™, Surfer®, PLog, LogPlot
- Land Science® Certified Vapor Barrier Inspector, 2020

Matt Hubbard is a Senior Environmental Scientist at INTERA with a BS degree in environmental science and 14 years of experience investigating and remediating contaminated sites. He serves in several capacities including Project Manager, Technical Lead, Field Lead, and Health and Safety Lead. Matt develops and implements highly technical work plans for complex technical projects and provides subject matter expertise to clients and senior leadership. His project experience includes state and federal Superfund, Brownfields, voluntary cleanup program (VCP), petroleum storage tank (PST), Phase I and Phase II Environmental Site Assessment (ESA), and imminent threat/removal assessments. Matt is an expert in field methods including sampling of surface and subsurface environmental media, field screening techniques, environmental drilling, and well construction. He has worked on contaminated sites associated with metals including hexavalent chromium, petroleum hydrocarbons, chlorinated solvents, polychlorinated biphenyls (PCBs), organochlorine and organophosphorus compounds (pesticides and herbicides), dioxins/furans, and per- and polyfluoroalkyl substances (PFAS). Matt has significant experience designing assessments and implementing innovative methods, including incremental sampling methodology (ISM), field portable x-ray fluorescence (XRF), passive soil gas (PSG), ground-penetrating radar (GPR), and electromagnetic mapping. He is also experienced in water resources development, including oversight and support of production well drilling and installation, aquifer performance analysis, dynamic flow profiling, and mass balance chemical analysis.

Project Experience – Environmental

ChemFab Phase I Environmental Site Assessment, ChemFab, LLC., Clute, TX. 2026. *Project Manager.* Conducted a Phase I ESA for a fabrication facility and an adjoining property in accordance with ASTM Standard Practice E1527-21.

Southside Storage Phase I Environmental Site Assessments, Southside Wrecker, Inc., Austin, TX. 2025 – 2026. *Project Manager.* Conducted two Phase I ESAs: one at a vacant property that was previously a sand and gravel mine and subsequently filled via unpermitted landfilling operations and another at an automotive repair and maintenance facility. The Phase I ESAs were conducted in accordance with ASTM Standard Practice E1527-21.

Hornsby Bend Biosolids Management Plant, City of Austin Water, TX. 2023 – 2026. *Project Manager.* Coordinated and led quarterly groundwater monitoring and annual soil sampling in support of the requirements of the Texas Commission on Environmental Quality (TCEQ) permit to process wastewater treatment plant sewer sludge, land apply wastewater treatment plant sewage sludge, and irrigate lagoon supernatant under provisions of Chapter 26 of the Texas Water Code, Chapter 361.121 of the Texas Health and Safety Code, and Chapter 312 of the Texas Administrative Code. Conducted independent data usability review for each quarterly groundwater event. Prepared quarterly updates to groundwater potentiometric elevation maps.

Prepared annual report for submittal to the TCEQ. Performed supplemental historical data review and assessment in support of additional reporting requested by special provision of the 2025 permit renewal and was the primary author of the supplemental report.

Jensen Drive Scrap State Superfund Site, 3603 Jensen Drive LLC, Harris County, TX. 2018 – 2026. *Environmental Scientist and Field Lead.* Drafted Annual Post Closure Care Report and Data Usability Summary for annual 2018, 2019, 2020, and 2025 site activities, which included groundwater monitoring, potentiometric mapping, and engineer's inspection of the site waste containment unit. Coordinated and conducted 2019, 2020, and 2025 groundwater monitoring events, including low-flow sampling for PCBs.

BAE TRACOR Phase I and Phase II Environmental Site Assessment, City of Austin Brownfields, TX. 2025. *Project Manager.* Conducted a Phase I ESA for the City of Austin (COA) Brownfields Program in accordance with ASTM Standard Practice E1527-21. The approximately 140-acre facility had 12 permanent structures and was formerly used for military research and development. Coordinated all aspects of project work to meet the City's expedited timeline within the 120-day due diligence period. Developed the rationale and scope of the Phase II ESA and designed the sampling plan. Soil and groundwater investigation included the installation of soil borings and monitor wells for sampling and analysis of soil and groundwater for contaminants including PFAS and nitroaromatics and nitramines. Directed the INTERA team and subcontractors for the multi-phased progressive tasks in support of the overall objective and made necessary and defensible modifications to the plan, as needed, to meet budget and scheduling restraints. Authored the Phase II ESA and provided support to the COA during negotiations leading up to and culminating with the acquisition of the property.

411 Chicon, City of Austin Brownfields, TX. 2024 – 2025. *Project Manager.* Conducted a Phase I ESA for the COA Brownfields Program in accordance with ASTM Standard Practice E1527-21. Oversaw a geophysical survey of the subsurface and an exploratory investigation to determine the presence or absence of underground storage tanks.

Former Travis County Landfill, Moo Moo Meadows, LLC., Austin, TX. 2024 – 2025. *Project Manager.* Reviewed available data to determine groundwater conditions and assess landfill permittee's responsibilities for management. Provided expert environmental support in a contested dispute for site development under 30 Texas Administrative Code (TAC) 330 Subchapter T – Use of Land Over Closed Municipal Solid Waste Landfills.

Austin Bergstrom International Airport Augmented Staff, City of Austin Aviation Department, TX. 2023 – 2025. *Environmental Scientist and Field Lead.* Provided as-needed consulting and field assistance in support of ongoing development at Austin Bergstrom International Airport. Conducted liquid and solid waste sampling for disposal and consulting for the remediation of bulk PFAS chemical and PFAS-containing water in emergency response vehicles. Provided oversight and project coordination for PFAS-contaminated stockpile relocation, monitor well drilling and installation, and soil and groundwater sampling for PFAS.

In-Situ Anaerobic Bioremediation Pilot Study, Chemical Waste Management, Corpus Christi, TX. 2024. *Environmental Scientist.* Conducted baseline groundwater monitoring in support of the pilot study that was performed to evaluate in-situ anaerobic bioremediation as a remedial method groundwater contamination.

Pollution Prevention Plan, Precise Hard Chrome, LLC., Waco, TX. 2024. *Environmental Scientist.* Authored the five-year Pollution Prevention Plan for the Precise Hard Chrome facility in Waco, Texas in accordance with 30 TAC Chapter 335, Subchapter Q (*Pollution Prevention: Source Reduction and Waste Management*). The plan identified all activities that generated hazardous waste or resulted in a release of Toxic Release Inventory reportable chemicals and a prioritized list of economically and technologically feasible source reduction and waste minimization projects.

Peaceful Hill, Graham Development, Austin, TX. 2024. *Project Manager.* Assessed the regulatory framework for proposed stormwater injection to aquifer recharge wells on a commercial development (Class V Injection Well). The assessment included siting and hydrogeologic analysis and provided recommendations for additional investigation in support of implementation.

Rio Grande Coop Phase I Environmental Site Assessment, City of Austin Brownfields, TX. 2024. *Project Manager.* Conducted a Phase I ESA for the COA Brownfields Program in accordance with ASTM Standard Practice E1527-21.

Anita Ferrales Coy Phase I Environmental Site Assessment and Asbestos/Lead Survey, City of Austin Brownfields, TX. 2024. *Project Manager.* Conducted a Phase I ESA for the COA Brownfields Program in accordance with ASTM Standard Practice

E1527-21. Facilitated asbestos containing material and lead-containing paint survey and preparation of project remediation specifications.

McAlpine Lease Third Party Release Assessment Review, E&W Law, Stanton, TX. 2024. *Environmental Scientist and Data Reviewer.* Conducted data usability review of laboratory analytical results and senior review of the assessment review report for a crude oil and produced water release. Evaluated data relative to Railroad Commission of Texas (RRC) guidance.

Town Lake Metro Park Youth Hostel Phase I Environmental Site Assessment, City of Austin Parks and Recreation Department, TX. 2024. *Environmental Scientist.* Conducted a Phase I ESA in accordance with ASTM Standard Practice E1527-21 in support of planned redevelopment.

Environmental Impacts Assessment, Cooks Branch Conservancy, Montgomery, TX. 2024. *Environmental Scientist.* Oversaw drilling and installation of three monitoring wells. Lithologically logged each well in accordance with ASTM D2488-17e1 and Unified Soil Classification System (USCS). Conducted groundwater and surface water sampling and assessment for a range of analytes to determine impacts from a nearby mining operation. Provided technical support and senior review of data and deliverables.

Geotechnical Investigation for a Potential Compost Facility, Confidential Client, TX. 2024. *Environmental Scientist.* To determine a proposed site's suitability for TCEQ permitting of a compost facility, conducted a subsurface investigation focused on identifying shallow, low permeability clays suitable for use as an in-situ clay liner. Installed and lithologically logged 12 soil borings using the USCS. Collected soil samples from each boring at low permeability clay intervals based on field observations. Sent select samples to a geotechnical laboratory for analysis.

North Railroad Avenue Plume Superfund Site, New Mexico Environment Department, Española, NM. 2024. *Environmental Scientist and Field Lead.* Served as field lead for roto-sonic drilling and installation of a monitoring well in support of an New Mexico Environmental Department (NMED)-led cleanup at a former drycleaner site contaminated with tetrachloroethene (PCE) and its degradation products. Logged continuous core (ASTM D2488-17e1 / USCS) to 257 feet below ground surface (bgs), screened heated headspace soil samples with a photoionization detector, collected push-ahead groundwater samples at discrete depth intervals during drilling, and oversaw analysis of push-ahead groundwater samples via a FROG-5000 portable gas chromatograph. Identified the target hydrostratigraphic unit and informed the selection of the well screen interval. Assisted in work plan creation and annual reporting including software-based boring logs and potentiometric surface elevation mapping.

Per- and Polyfluorinated Substances Risk Assessment, California American Water, Duarte, CA. 2023 – 2024. *Environmental Scientist.* Assisted in the development of custom-built vadose-zone PFAS analytical solution tool to assess the vulnerability of existing and potential well sites to contamination. Identified potential contamination sources by evaluating records on former and current regulated facilities with current or former operations known to be or commonly associated with the use of PFAS. This information was used together with the spatial vulnerability analysis to assess the relative risk of PFAS contamination to existing and potential well sites. The analysis was used to develop recommendations for engineering and operational measures to mitigate the risk and impacts of future contamination. Measures could include changes in operation of existing wells, treatment, or replacement of wells that have reached the end of their service life. Prioritized recommendations for investigation and test drilling at new well sites based on operational benefits, cost, and risk of current or future contamination. The environmental data gathered for the study was provided for future use in permitting selected well sites.

JV DIRT, American AllWaste, Austin, TX. 2023 – 2024. *Environmental Scientist.* Conducted video well survey with a downhole camera. Conducted groundwater sampling. Prepared an update and revision to the site geologic/hydrogeologic report and groundwater protection plan in support of a permit renewal application for composting activities.

Remedial Investigation at Scrub-A-Dubb Barrel Company Site, Texas Commission on Environmental Quality, Lubbock, TX. 2020 – 2024. *Environmental Scientist.* Designed and conducted a remedial investigation, which was a targeted surface soil assessment in compliance with the site-specific field sampling plan (FSP) and the quality assurance program plan developed for the former drum recycling site utilizing ISM for the TCEQ Superfund Section. The primary contaminants of concern included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals. Used direct-push methodology to collect over 700 soil increments (aliquots) to generate data to assess soils down to five feet bgs for the entirety of the five-acre site during one field mobilization. Collected replicate data to determine statistically if data generated for each ISM decision unit (DU) were representative and defensible. The field activity report was finalized and approved by the TCEQ in March 2022.

Data evaluation confirmed the success of the ISM approach. Authored an affected property assessment report for the TCEQ Remediation Division, compiling data from assessment over an approximately five-year span including soil, sediment, and groundwater.

Voluntary Cleanup Program Post-Response Assistance, Ice Man, Inc., Belton, TX. 2023. *Environmental Scientist.* Conducted on-site review and documentation of the condition of the side slope of an engineering control cap constructed and the adjacent creek bank at a TCEQ VCP site as part of the required post-response care actions. Prepared a memorandum describing the observations made and recommended future actions.

St. Johns Redevelopment Site, City of Austin Economic Development Department via the Austin Brownfield Revitalization Office, TX. 2023. *Project Manager.* Designed and implemented a Limited Phase II ESA for the assessment of a former industrial facility and TCEQ Leaking Petroleum Storage Tank site for planned redevelopment as residential multifamily affordable housing. The assessment included (1) third-party review and assessment of previous site investigation data to identify potential data gaps and areas of concern relative to potential contaminant impacts and (2) soil gas sampling and assessment to assess the potential vapor exposure risk to occupants of future site buildings. Installed a grid of 31 passive soil gas sampling devices over the former site operations area and assessed the laboratory analytical results after a 14-day uptake period, compared to United States Environmental Protection Agency (EPA) Vapor Intrusion Screening Levels. Prepared report documenting the assessment and recommended future actions and guidelines for the Austin Economic Development Department's agreement with the site developer.

Fairfield Lake State Park Environmental Assessment, Texas Parks and Wildlife Department, Freestone County, TX. 2023. *Environmental Scientist.* Provided technical support in discussions with client regarding conduct of Phase I and Phase II ESAs in aid of State of Texas eminent domain condemnation procedures for approximately 5,000 acres, including Fairfield Lake and the immediate surrounding property that was formerly designated as Fairfield Lake State Park. Of specific concern was possible impacts to surface water, sediments, and aquatic life from heavy metals and PCBs related to a former coal-fired power plant located along the northern end of the property. Conducted the site reconnaissance and prepared the Phase I ESA (ASTM Standard E1527-21), which identified several Recognized Environmental Conditions (RECs); however, additional work to address the RECs was halted when Texas Parks and Wildlife Department decided to end condemnation procedures.

Langford Elementary Phase I Environmental Site Assessment, City of Ausitn Brownfields Program, TX. 2023. *Environmental Scientist.* Conducted a Phase I ESA for the COA Brownfields Program in accordance with ASTM Standard Practice E1527-21.

Whisper Valley, City of Austin Brownfields Program, TX. 2023. *Environmental Scientist.* Conducted a Phase I ESA for the COA Brownfields Program in accordance with ASTM Standard Practice E1527-21.

Emergency Response Waste Sampling at the Mexican American Cultural Center, City of Austin, TX. 2023. *Environmental Scientist.* Conducted emergency sampling of uncovered landfill waste material during the redevelopment of the Mexican American Cultural Center in downtown Austin, Texas.

Limited Phase II Environmental Site Assessment, American AllWaste, Lake Charles, LA. 2023. *Environmental Scientist.* Developed and sampled groundwater for VOCs, SVOCs, metals, petroleum hydrocarbons, pesticides, herbicides, PCBs, and PFAS. Prepared the report documenting the analytical results including a data usability summary. Provided recommendations for additional assessment based on the client's proposed property transaction.

Austin Nature Science Center Outpost, Soil Assessment, City of Austin Parks Department, TX. 2022 – 2023. *Environmental Scientist.* Performed soil assessment to delineate polycyclic aromatic hydrocarbons and heavy metals to Texas Risk Reduction Program (TRRP) Tier 1 Residential Total-soil-combined protective concentrations levels (PCLs) related to former skeet and firing range operations. This work was conducted in support of the implementation of a forthcoming removal action to restore the site to residential standards. Sampling approaches included ISM and ex-situ XRF methods. Authored the work plan and assessment report for this project.

Limited Phase II Environmental Site Assessment for Shield Park, Texas Commission on Environmental Quality Brownfields Program, Galveston, TX. 2022 – 2023. *Project Manager*. Oversaw completion of a geophysical survey implementing GPR and electromagnetic mapping to assess the presence of suspected underground storage tanks (USTs). Provided technical review and implemented TCEQ's soil assessment strategy including installing, screening, and sampling 20 soil borings. Logged each

boring according to the USCS. Prepared the Limited Phase II ESA report documenting site activities and analytical results for VOCs, SVOCs, metals, PCBs, and total petroleum hydrocarbons (TPH). Conducted technical data review and usability assessment and prepared a memorandum in accordance with the TCEQ Quality Assurance Project Plan and applicable EPA guidance.

Limited Phase II Environmental Site Assessment for Hargrave Fleet Services Property, City of Austin Brownfields Program, TX. 2022 – 2023. *Environmental Scientist.* The scope of the Phase II ESA included a full asbestos and lead-containing paint inspection survey, soil gas, surface soil, and groundwater assessment. Contaminants of concern included heavy metals, VOCs, SVOCs, dioxins/furans, and PFAS. Authored the work plan and led the field event to install passive soil gas sampling devices, groundwater monitoring wells, and soil borings. Categorized the groundwater in the shallow groundwater bearing in accordance with TRRP guidelines.

Phase I and II Environmental Site Assessment, Foundation Communities Brownfields Redevelopment Project - Airport Boulevard, Austin, TX. 2022. *Environmental Scientist.* Performed Phase II ESA in preparation for the development of an affordable housing apartment complex by Foundation Communities. Activities assessed two vapor encroachment conditions and two RECs. Deployed a total of 20 PSGs to assess soil gas. Installed four soil borings to assess site soils and the shallow groundwater-bearing unit.

Phase I Environmental Site Assessment, Tract 1-B: Paseo del Pueblo Sur and Los Pandos Road, Taos Hotel Associates, LLC., Taos, NM. 2022. *Environmental Scientist.* Conducted and prepared a Phase I ESA report in accordance with ASTM Standard E1527-21 and resultant volume estimate for a proposed removal of identified petroleum-contaminated soil more than the NMED action level of 100 parts per million by volume.

Scrub-A-Dubb Barrell Company Proposed State Superfund Site, Texas Commission on Environmental Quality, Lubbock County, TX. 2019 – 2023. *Environmental Scientist.* Drafted the TCEQ State Superfund FSP to implement assessment of on- and off-site soils for metals and VOCs referencing Interstate Technology Regulatory Council ISM. The ISM protocol would be used to assess risk to nearby human health and sensitive environmental receptors and to support a potential removal action. Results were compared to TRRP action levels.

Groundwater Sampling & Reporting, Chemical Waste Management, Port Arthur, Texas. 2022. *Environmental Scientist*. Conducted quarterly groundwater monitoring activities for a closed hazardous waste landfill facility. Sampling included groundwater collection at approximately 30 site monitoring wells for VOCs and arsenic.

Gem Dandy 14 Phase I Environmental Site Assessment, Texas Commission on Environmental Quality Brownfields Program, Hamilton, TX. 2022 – 2023. *Project Manager.* Conducted a Phase I ESA for the TCEQ Brownfields Program in accordance with ASTM Standard Practice E1527-21. Oversaw completion of a geophysical survey implementing GPR and electromagnetic mapping to confirm the presence of a UST. Conducted removal of one 12,000-gallon UST and associated infrastructure. Prepared and submitted a report in accordance with TCEQ Regulatory Guidance (RG) 411 documenting removal and restoration activities.

IWC Winters Landfill, Texas Commission on Environmental Quality Superfund Site Discovery and Assessment Program, Orange, TX. 2022 – 2023. *Project Manager.* Designed and conducted initial assessment of this former industrial waste landfill that had become partially submerged and had a history of fires near Adams Bayou in Orange, TX. Sampling of soil, sediment, groundwater, and surface water was conducted for VOCs, SVOCs, organochlorine and organophosphorus pesticides, metals, PCBs, dioxins/furans, and PFAS. Prepared the assessment report including technical data review in accordance with the TCEQ Quality Assurance Project Plan and applicable EPA guidance for all media and analytes.

Former Frank Ortiz Landfill, City of Santa Fe Environmental Services Division, NM. 2021 – 2023. *Environmental Scientist*. Prepared Stage 1 Abatement Plan Quarterly Monitoring Reports detailing ongoing monitoring efforts at the site including soil vapor sampling, groundwater monitoring, and landfill gas monitoring.

Rockwool Industries Federal Superfund Site, Texas Commission on Environmental Quality, Bell County, TX. 2018 – 2023. *Project Manager.* Conducted annual groundwater monitoring and semi-annual site inspections, provided oversight for site maintenance, and drafted the annual reports including potentiometric surface and isoconcentration maps, documenting all site activities, and providing conclusions and recommendations for future site activities.

Calhoun and Griggs Soil Assessment, Texas Commission on Environmental Quality, Houston, TX. 2022. *Project Manager.* Designed and conducted a soils assessment for metals and prepared a report documenting the findings.

Magic Tunnel Geophysical Survey, Texas Commission on Environmental Quality Brownfields Program, Texarkana, TX. 2022. *Project Manager*. Oversaw the completion of a geophysical survey implementing GPR and electromagnetic mapping to determine the presence of suspected USTs.

Former Nursing Home Phase I Environmental Site Assessment, Texas Commission on Environmental Quality Brownfields Program, Hamilton, TX. 2022. *Project Manager.* Conducted a Phase I ESAs for the TCEQ Brownfields Program in accordance with ASTM Standard Practice E1527-21.

Kirtland Air Force Base Environmental Baseline Surveys, Albuquerque Bernalillo County Water Utility Authority, NM. 2020 – 2022. *Environmental Scientist.* Authored and certified two Environmental Baseline Survey (EBS) Reports to meet appropriate property due diligence practices for the easement between Albuquerque Bernalillo County Water Utility Authority (ABCWUA) and Kirtland Air Force Base (KAFB), in accordance with Air Force Instruction 32-7066. The property locations included a 5.29-mile-long easement and a 24-acre parcel, all located on KAFB and Department of Energy property. The project included installing an interceptor pipeline and booster station by ABCWUA, with INTERA responsible for all federal due diligence requirements associated with construction projects occurring on federal facilities. Air Force EBS reports are generally comparable to an environmental due diligence report (Phase I ESA) but also include National Environmental Policy Act review, including cultural natural/biological resource review. Updated the sewer interceptor line easement in February 2022. The EBS reports were approved by the ABCWUA and KAFB in 2022.

Former Santa Fe Generating Station, Public Service Company of New Mexico, Santa Fe County, NM. 2018 – 2022. *Environmental Scientist*. Provided data review services of laboratory analytical and field and laboratory quality assurance/quality control for periodic groundwater monitoring. Reviewed figures and tables and created contaminant trends time series data visualizations with Grapher™ software for quarterly progress reporting (2019-2022). Conducted groundwater monitoring (2021) for VOCs and nitrate/nitrite utilizing piston driven Bennett Pump. Conducted a detailed review of historical aerial photographs for evidence of potential sources to petroleum contamination at the site. Drafted a report including a detailed spatiotemporal summary of findings with correlation to historical documentation.

South State Highway 16, Texas Commission on Environmental Quality Superfund Site Discovery and Assessment Program, San Antonio, TX. 2021. *Project Manager.* Designed and conducted a Superfund Site Discovery and Assessment Program (SSDAP) Eligibility Sampling groundwater assessment in the vicinity of a former illegal dump site used by a pesticide applicator to assess impacts to nearby human health receptors at target sole source water wells.

Airline & Aldine, Texas Commission on Environmental Quality Superfund Site Discovery and Assessment Program, Houston, TX. 2021. *Project Manager.* Designed and conducted a State Screening groundwater assessment in the vicinity of a former public water supply well with chlorinated solvent contamination to assess impacts to human health receptors at target sole source water wells.

Elm Street Phase I Environmental Site Assessments, Texas Commission on Environmental Quality Brownfields Program, Texarkana, TX. 2021. *Environmental Scientist.* Conducted two Phase I ESAs for the TCEQ Brownfields Program in accordance with ASTM Standard Practice E1527-13.

Site Investigation of Former Drilling Fluids Disposal Pit, Mo-Vac Service Company, Alice, TX. 2021. *Environmental Scientist.* Conducted a site investigation of a former drilling fluids disposal pit pursuant to an RRC letter to INTERA's client. Conducted a pump test to properly classify the groundwater and conducted groundwater sampling.

Covenant Testing Technologies Railroad Commission of Texas Pit Closure, Covenant Testing Technologies, Midland, TX. 2021. *Environmental Scientist*. Conducted sampling event to close an in-ground steel tank and wash pads that were used to collect hydrocarbon contaminated equipment wash water. Assisted in preparing submittal to the RRC documenting that the site met RRC closure criteria.

Wally's Flying Service Superfund Site Discovery and Assessment Program Site, Texas Commission on Environmental Quality, Uvalde County, TX. 2020. *Environmental Scientist.* Prepared the site-specific health and safety plan (SSHASP) and FSP. Conducted field event including groundwater sampling for SVOCs by method 8270E, organochlorine pesticides by method 8081B, and organophosphorus pesticides by method 8141B. Target contaminants of concerns, glyphosate and endothall, were also sampled and analyzed via EPA drinking water methods 547 and 548.1, respectively. Prepared the final SSDAP Letter Report documenting sampling and comparing analytical results to TRRP PCLs.

G&L Spraying Superfund Site Discovery and Assessment Program Site, Texas Commission on Environmental Quality, Tom Green County, TX. 2020 – 2021. *Project Manager.* Designed and conducted a State Screening groundwater assessment in the vicinity of a former pesticide applicator with a history of releases to the ground surface to assess impacts to human health receptors at target sole source water wells. Conducted groundwater sampling for metals (primarily arsenic) and SVOC pesticides pendimethalin and trifluralin.

Jain Lane / Govalle Soil Vapor Assessment and Vapor Intrusion Mitigation Assistance, Cesar Chavez Foundation, Austin, TX. 2019 – 2021. *Environmental Scientist.* Prepared an updated FSP to conduct soil vapor assessment for a proposed multi-unit residential development. Conducted soil vapor sampling to assess soil vapor impacts from hydrocarbon-affected groundwater from an adjoining, upgradient site. Prepared a Limited Phase II Report for soil vapor assessment concluding potential risk of vapor intrusion to the proposed development and provided recommendations for a vapor barrier system to mitigate potential impacts. Provided mitigation design assistance during the planning stages for construction. Provided certified third party inspection during vapor barrier and venting system installation for a multi-tenant residential complex. Provided final report documenting mitigation effort to satisfy requirements to obtain financial assistance.

Former First Baptist Church, University of New Mexico, Albuquerque, NM. 2020. *Environmental Scientist.* Prepared and submitted a Phase I ESA Report in accordance with ASTM Standard Practice E1527-13. Reviewed available historical records evaluated site visit findings to identify, to the extent possible, any RECs, as defined by ASTM. The Subject Property consisted of mixed use educational, residential, and creative space development. The development is in a highly developed area of Albuquerque and is also immediately south of a chlorinated solvent groundwater plume that is part of a federal superfund site on the national priority list.

Hospital Drive, Anchorum St. Vincent c/o Colliers International, Santa Fe, NM. 2020. *Environmental Scientist.* Prepared and submitted a Phase I ESA Report in accordance with ASTM Standard Practice E1527-13. Reviewed available historical records evaluated site visit findings to identify, to the extent possible, any RECs, as defined by ASTM. The Subject Property consisted of an outpatient medical facility in a mixed commercial and residential area.

Oltorf Street Phase I Environmental Site Assessment, City of Austin, TX. 2020. *Environmental Scientist*. Prepared and submitted a Phase I ESA Report in accordance with ASTM Standard Practice E1527-13. Reviewed available historical records conducted site visit to identify, to the extent possible, any RECs, as defined by ASTM. The Subject Property consisted of a 2.57-mile corridor through commercial and residential areas for a proposed reclaimed water main project.

Loco Ocho Hydrogeologic Assessment, Confidential Client, Wimberly, TX. 2020. *Environmental Scientist*. Conducted groundwater sampling at a private water supply well to establish baseline water quality.

Frank's Conoco, New Mexico Environmental Department Petroleum Storage Tank Bureau, Las Cruces, NM. 2020.
Environmental Scientist. Prepared Groundwater Monitoring Report for a petroleum hydrocarbons release site where INTERA gauged depth to water/light non-aqueous phase liquid (LNAPL) collected groundwater samples. Groundwater was analyzed for VOCs. Reporting included calculating and graphically depicting the groundwater gradient and potentiometric surface. Analytical results were compared to New Mexico Water Quality Control Commission (NMWQCC) standards.

Highway Texaco, New Mexico Environmental Department Petroleum Storage Tank Bureau, Las Cruces, NM. 2020.
Environmental Scientist. Prepared a work plan and cost estimate to conduct a single groundwater monitoring event including monitoring well gauging, sampling, and analysis for dissolved iron and manganese, and VOCs. Analytical results were compared to NMWQCC standards. The sampling monitored petroleum hydrocarbon contaminants in groundwater associated with releases from a former gasoline service station.

Corrales Chevron, New Mexico Environmental Department Petroleum Storage Tank Bureau, Corrales, NM. 2020.
Environmental Scientist. Prepared a work plan and cost estimate to conduct a semi-annual groundwater monitoring at an active gasoline service station with historical releases from the former operations of a preceding service station. The scope of work for this project included monitoring petroleum hydrocarbon contamination in groundwater from a series of 10 monitoring wells and from six nearby water supply wells (i.e., wells with a sealed wellhead). Analytical results of sampling conducted for VOCs were compared to NMWQCC standards.

Caldwell Motor Company, New Mexico Environmental Department Petroleum Storage Tank Bureau, Belen, NM. 2020.
Environmental Scientist. Prepared a work plan and cost estimate to conduct a semi-annual groundwater monitoring at a

former gasoline service station with a historical presence of LNAPL and an undefined dissolved phase contaminant plume. The sampling monitored the contaminant plume from the existing four monitoring wells and compared analytical results to NMWQCC standards.

Old Exxon Jobber Site, Texas Commission on Environmental Quality, San Patricio County, TX. 2019 – 2020. *Environmental Scientist.* Conducted site reconnaissance and scoping meeting with TCEQ to facilitate preparation of the FSP for tank removal activities and release determination sampling. Prepared FSP in accordance with TCEQ Regulatory Guidance 411 (RG-411) to conduct permanent tank removal activities for two registered 22,000-gallon USTs, and all associated components, and to conduct confirmation and surface release assessment. Conducted field oversight for removal of the tanks and collected confirmation samples for petroleum hydrocarbon contaminants including benzene, toluene, ethylbenzene, xylenes (BTEX), methyl-tert butyl ether (MTBE) via EPA Method 8260/5035, polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8270D, and TPH via TCEQ Method 1005. Prepared and submitted a Release Determination Report in accordance with applicable standard (TCEQ-00621)

Union Pacific Rail Yard, Texas Commission on Environmental Quality, Cameron County, TX. 2019. *Environmental Scientist*. Conducted a Phase I ESA and prepared and submitted a Phase I ESA Report in accordance with ASTM Standard Practice E1527-13. Reviewed available historical records and conducted a site visit to identify, to the extent possible, any RECs, as defined by ASTM. The Subject Property consisted of approximately 25.5 acres of land within an urban mixed residential and commercial industrial area that was formerly a train depot and railway switchyard.

Texaco Building, Texas Commission on Environmental Quality, Cameron County, TX. 2019. *Environmental Scientist.* Conducted a Limited Phase II ESA in which 8,000-gallon steel tank and one 12,000-gallon steel tank and associated piping and conducted sampling and analysis in accordance with TCEQ RG-411. Collected confirmation samples for petroleum hydrocarbon contaminants including BTEX, MTBE via EPA Method 8260/5035, PAHs via EPA Method 8270D, and TPH via TCEQ Method 1005. Prepared and submitted an Release Determination Report in accordance with applicable standard (TCEQ-00621).

City of Hondo Landfill Superfund Site Discovery and Assessment Program Site, Texas Commission on Environmental Quality, Medina County, TX. 2019. *Environmental Scientist.* Prepared the SSHASP and FSP. Conducted field event including groundwater sampling for metals, VOCs, SVOCs, and PCBs. Prepared the final SSDAP Letter Report documenting sampling and comparing analytical results to TRRP PCLs.

Russell Flying Service Superfund Site Discovery and Assessment Program Site, Texas Commission on Environmental Quality, Medina County, TX. 2019. *Environmental Scientist.* Prepared the SSHASP and FSP. Conducted field event including groundwater sampling for metals including hexavalent chromium, SVOCs, VOCs, pesticides, and herbicides. Prepared the final SSDAP Letter Report documenting sampling and comparing analytical results to TRRP PCLs.

The Word Church Phase II Environmental Site Assessment, Texas Commission on Environmental Quality, Bexar County, TX. 2019. *Environmental Scientist.* Provided oversight of drilling via solid stem auger and installation of a monitoring well. Conducted well development and collected a representative groundwater sample via low-flow technique.

Sand Hill Energy Center Release Assessment in Support of Affected Property Assessment Report, City of Austin, TX. 2019. *Environmental Scientist.* Provided oversight for hydro-vac to clear utilities down to six feet at the facility, drilling via hollow-stem auger, and installing and developing three monitoring wells. Collected soil and groundwater samples for analysis of TPH and PAHs. Assisted in preparing an affected property assessment report for submission to TCEQ.

Mineral Wool Insulation Manufacturing Company Proposed State Superfund Site Additional Offsite Evaluation in Support of Remediation, Texas Commission on Environmental Quality, Bell County, TX. 2018 – 2019. *Environmental Scientist.* Conducted detailed overland migration characterization and subsurface sediment sampling using a gravity core sampling device deployed from a boat. Drafted report documenting field activities and providing comprehensive descriptions of the migration pathway with estimation of anticipated volumes for removal based on impacted soils above site specific ecological PCLs. Also collected agricultural samples for nutrient analysis to determine the viability and practicality of repurposing on and offsite soils in the design of a containment cell cap with effective vegetative growth.

Schumann Property Petroleum Storage Tank Removal and Brownfields Site Assessment, Texas Commission on Environmental Quality, Concho County, TX. 2018. *Environmental Scientist.* Prepared the FSP based on TCEQ Regulatory Guidance RG-411. Implemented the FSP including oversight of PST removal (550-gallon "ghost tank"), conducted field screening and

confirmation sampling. Prepared the Release Determination Report documenting removal activities and analytical results with respect to PST Action Levels.

Hamlin Municipal Development District Phase I Environmental Site Assessment, Texas Commission on Environmental Quality, Jones County, TX. 2018. *Environmental Scientist.* Conducted the Phase I ESA site reconnaissance to identify and document RECs.

West Texas Phase I Environmental Site Assessment, Confidential Client, Loving County, TX. 2018. *Environmental Scientist.* Provided historical document review and drafted the historical portion of the Phase I ESA Report for approximately 50 square miles of property in accordance with Standard Practice E2247-16 of ASTM International.

Medical Drive Groundwater Plume Superfund Site Discovery and Assessment Program Site, Texas Commission on Environmental Quality, Bexar County, TX. 2018. *Environmental Scientist.* Conducted groundwater sampling at public and domestic drinking water wells for PCE on rapid 24-hour turnaround time (EPA Drinking Water Method 524.2) and drafted the report to document the release and impacts to receptors in the critical pathway of exposure to facilitate Hazard Ranking System scoring.

South Austin Regional Wastewater Treatment Plant Phase I Environmental Site Assessment, City of Austin Public Works, TX. 2018. *Environmental Scientist*. Conducted the Phase I ESA historical document review and site reconnaissance to identify and document RECs.

The Word Church Phase II Environmental Site Assessment, Texas Commission on Environmental Quality, Bexar County, TX. 2018. *Environmental Scientist*. Provided oversight of environmental borehole drilling with direct push technology for the collection of soil samples to a depth of 15 feet. Assisted in lithological logging, field screened and sampled for VOCs or petroleum products. Drafted the Phase II ESA Report. Work was conducted in accordance with Standard Practice E1903-11 of ASTM International. Provided oversight of drilling via solid stem auger and installation of a monitoring well. Conducted well development and collected a representative groundwater sample via low-flow technique.

Cass County Treating Company State Superfund Site Immediate Removal Action, Texas Commission on Environmental Quality, Cass County, TX. 2016 – 2017. *Project Manager*. Coordinated and provided oversight for removal of soils affected with pentachlorophenol and dioxins/furans at a residential property. The scope of the project included air sampling for the development of protective particulate monitoring action levels, confirmation sampling via ISM including development of a pentachlorophenol screening level concentration indicative of dioxins/furans concentrations as a screening tool, and site restoration.

North Andrews Highway Health and Safety Plan and Preliminary Assessment, U.S. Environmental Protection Agency, Ector County, TX. 2016 – 2017. *Project Manager*. Developed the site health and safety plan. Authored the preliminary assessment report based on research and available site information, including consolidating and analyzing historical site knowledge and analytical data, describing the geologic setting and aquifer characteristics, evaluating major migration and exposure pathways, and producing figures and tables.

Harvey Industries State Superfund Site, Texas Commission on Environmental Quality, Henderson County, TX. 2016 – 2017. *Project Manager*. Coordinated and oversaw operations and maintenance activities at the site including soil gas monitoring and cap inspection/maintenance.

First Quality Cylinders State Superfund Site, Texas Commission on Environmental Quality, Bexar County, TX. 2014 – 2017. *Assistant Project Manager and Project Manager.* Coordinated and provided oversight for the continuous removal of affected groundwater contained behind a slurry wall from on-site extraction wells. Reviewed engineering documents and assisted in project management for the implementation of the final remedy which included groundwater remediation via direct push in-situ chemical reduction of hexavalent chromium in the shallow groundwater bearing unit and the installation of a continuous onsite pump and treat system. Managed operations and maintenance activities for the on-site treatment system.

Jerrell B Thompson Battery State Superfund Site, Texas Commission on Environmental Quality, Van Zandt County, TX. 2013 – 2017. *Project Manager.* Conducted annual inspection to ensure site controls for waste remained undisturbed and in good condition as part of operations and maintenance activities.

JCS Company State Superfund Site, Texas Commission on Environmental Quality, Van Zandt County, TX. 2013 – 2017. *Project Manager.* Coordinated and provided oversight for annual operations and maintenance activities at the site including cap inspection and maintenance as well as groundwater monitoring activities.

Deepwater Horizon RESTORE Act Proposal Evaluations, Texas Commission on Environmental Quality Natural Resource Damage Assessment, Austin, TX. 2016. *Evaluator.* Was selected to be part of a six-member interdisciplinary committee that evaluated more than 200 proposals requesting funds allocated to the state by the RESTORE Act for the Deepwater Horizon oil spill.

Schaefer Road Drum Immediate Removal Action, Texas Commission on Environmental Quality, Bexar County, TX. 2016. *Project Manager.* Coordinated and provided oversight for HAZCAT classification, removal, and proper disposal of abandoned bulk and containerized wastes, and affected site soils. Authored legal documents for cost recovery.

Methodist Hospital Health and Safety Plan and Preliminary Assessment, U.S. Environmental Protection Agency, Bexar County, TX. 2016. *Project Manager*. Developed the site health and safety plan. Authored the preliminary assessment report based on site reconnaissance, research, and available site information including consolidating and analyzing historical site knowledge and analytical data, describing the geologic setting and aquifer characteristics, evaluating major migration/exposure pathways, and producing figures and tables.

Highway 18 Groundwater Plume Expanded Site Investigation, U.S. Environmental Protection Agency, Winkler County, TX. 2016. *Field Project Manager.* Responsible for the field event, which included coordination and sampling of soils at potential source locations and sampling sole source water wells for evaluation of impact to human health receptors in the groundwater migration pathway.

Lane Plating Works Site Investigation, U.S. Environmental Protection Agency, Dallas County, TX. 2016. *Field Project Manager*. Acted as Project Manager for the field event, which included identifying representative sampling locations in the field and sampling of soils, sediments, and surface water.

Southwestern Plating Works Immediate Removal 2015, Texas Commission on Environmental Quality, Lubbock County, TX. 2015 – 2016. *Project Manager*. Coordinated and provided oversight for the classification, removal, and proper disposal of abandoned plating vats and containerized wastes. Conducted SSDAP state screening activities, including soil and groundwater sampling and analysis and authored legal documents for cost recovery.

Ector Drum Site Investigation, U.S. Environmental Protection Agency, Ector County, TX. 2015 – 2016. *Project Manager*. Conducted the field effort, including sampling of residential and commercial sole source groundwater wells. Analyzed the collected groundwater data, compared data to EPA Maximum Concentration Levels, and authored the final technical report.

Absolute Fuels Superfund Site, Texas Commission on Environmental Quality, Lamb County, TX. 2015. *Project Manager*. Coordinated and provided oversight for the assessment and investigation of impact to human health receptors via the groundwater pathway and the completion of the final Removal Action Report. Authored legal documents, including a property lien for cost recovery.

Industrial Waste Control Superfund Site Discovery and Assessment Program Site, Texas Commission on Environmental Quality, Orange County, TX. 2015. *Project Manager*. Coordinated and provided oversight for the assessment and investigation of impact to human health receptors in the groundwater migration pathway. Analyzed and compared data to TRRP PCLs to provide conclusions and site recommendations.

Browning Ferris Industries Landfill Superfund Site Discovery and Assessment Program Site, Texas Commission on Environmental Quality, Orange County, TX. 2015. *Project Manager.* Coordinated and provided oversight for the assessment and investigation of impact to human health receptors in the groundwater migration pathway. Analyzed data, compared data to TRRP PCLs, and provided conclusions and site recommendations.

Lonesome Trail Site Investigation, U.S. Environmental Protection Agency, Bexar County, TX. 2014. *SI Team Member*. Conducted soil and groundwater sampling to assist in the completion of the Site Investigation.

River City Metal Finishing Superfund Site, Texas Commission on Environmental Quality, Bexar County, TX. 2014. *Project Manager.* Conducted closeout activities, including authoring legal documents and notices including a restrictive covenant and property lien.

Battery Recyclers of Houston Superfund Site, Texas Commission on Environmental Quality, Brazoria County, TX. 2014. *Project Manager.* Coordinated and provided oversight for the assessment and investigation of impact to human health receptors in the groundwater and soils migration pathways. Analyzed data, compared data to TRRP protective concentration levels, and provided conclusions and site recommendations.

Sampling of Vegetation Transects in the Okavango Delta, Dr. Kelley Crews and Dr. Thoralf Meyer, Undergraduate Research, Botswana, Africa. 2012. *Field Research Assistant.* Conducted sampling in remote parts of Botswana, Africa as part of a ground truthing effort for remotely sensed data. Responsibilities included gathering data using high resolution spectral imagery as well as identifying and measuring woody vegetation across ecological regimes. Applied data gathered for analyzing carbon sequestration in above ground woody biomass using the allometric relation of basal area to biomass.

Project Experience – Water Resources

Vertical Flow Profiling for Production Well, Porter Special Utility District, TX. 2021. *Environmental Scientist.* Provided oversight for "lift and shift" and ultimately the complete removal and reinstallation of a 560 ft, 10-inch pump column. Conducted vertical flow profiling utilizing BESST's upgraded and proprietary version of the U.S. Geological Survey tracer flowmeter and targeted depth interval groundwater sampling using the BESST HydroBooster sampling pump. Analytes included hydrogen sulfide (H2S), adenosine triphosphate (ATP), sulfate reducing bacteria (SRBs), iron reducing bacteria (IRBs), dissolved sulfide, total sulfides, total iron, total organic carbon, methane, chloride, sodium, oxidation/reduction potential (ORP), and specific conductivity. Field testing was also performed including H2S, ORP, dissolved oxygen (DO), pH, temperature, turbidity, and specific conductivity. Wellhead samples were also collected, representing blended composites of zonal chemical mass contribution from each contributing flow interval.

Evangeline Laguna Borehole Surveys and Pump Testing, Confidential Client, San Patricio County, TX. 2020. *Environmental Scientist*. Performed video surveys of wells to determine conditions and screened intervals. Conducted oversight of pump removal and installation and 36-hour pump tests in three wells with In-Situ Trolls and WinSitu software while obtaining manual water level and flow measurements. Collected water samples to analyze water chemistry before, during, and after pump tests.

Dynamic Flow and Water Chemistry Profiling, West Harris County Municipal Utility District, Houston and Katy, TX. 2020. *Environmental Scientist.* Conducted downhole investigation at two public water supply wells to: (1) measure zonal flow contribution within the well under steady-state pumping conditions; (2) characterize zonal chemical contribution of arsenic, iron, and exsolved methane; and (3) determine viable economical options to physically modify the well screen to reduce or eliminate treatment for arsenic and iron and to mitigate methane influx. Conducted dynamic flow profiling to calculate zonal flow contributions over hundreds of feet of intermittently perforated well screen by injecting rhodamine dye at discrete depth intervals and measuring peak return rates at the surface via fluorometer. Conducted depth-dependent groundwater sampling to characterize zonal chemical contribution.

New Braunfels Utilities Aquifer Storage and Recovery Monitoring, ARCADIS, New Braunfels, TX. 2020. *Environmental Scientist.* Provided oversight for drop pipe and transducer installation at monitoring wells supporting aquifer storage and recovery monitoring.

Constant Rate Test for Turtle Creek No. 3 Pump Station, San Antonio Water System, Bexar County, TX. 2019. *Environmental Scientist.* Provided oversight for the constant rate test at 7,000 gallons per minute.

El Dorado Sand Mine Water Supply Wells Development and Performance Analysis, Black Mountain Sand, Winkler County, TX. 2019. *Environmental Scientist.* Provided well development (bailing and airlifting) and pump installation oversight, including water quality monitoring; conducted step drawdown tests to assess supply well performance; and collected aquifer test data for four wells using water level meters and multiple transducers. Collected data using In-Situ Trolls and WinSitu software.

Observation Well Drilling Oversight and Sampling - Oversight for Vertical Flow Profiling for Production Well, Confidential Client, San Patricio County, TX. 2018 – 2019. *Environmental Scientist.* Provided oversight for well drilling activities of observation well to depth greater than 1,000 feet bgs and collected mud rotary cuttings samples for sieve analysis. Provided oversight for BESST, Inc. implementing their ambient flow profiling service using the DyeTracer system developed by the U.S. Geological Survey.

Bigfoot Sand Mine Water Supply Well Installation, Turnkey Processing Solutions, Atascosa County, TX. 2018. *Environmental Scientist.* Provided well drilling and installation oversight. Logged drilling cuttings, conducted step drawdown tests, and collected aquifer test data using water level meters and multiple transducers.



Joseph Tracy, PG

Principal Geologist | Senior Vice President

Years of Experience: 31

Education:

- BS, 1993, Environmental Geology, Ohio University

Professional Registrations/Affiliations:

- Professional Geologist, AZ, 2003, No. 38741
- Professional Geologist, TN, 1999, No. TN4417
- Professional Geologist, TX, 2013, No. 11588

Professional History:

2000 – Present	Senior Vice President, Principal Geologist – INTERA Incorporated, Albuquerque, NM
1999 – 2000	Environmental Specialist – GeoTek Insite, Albuquerque, NM
1997 – 1999	Staff Geologist – Professional Services Industries, Inc. (PSI), Cleveland, OH
1994 – 1997	Staff Geologist – Terranext, Inc., Denver, CO

Training:

- OSHA Health and Safety Training, 29 CFR 1910.120, (40-Hour), 1994
- OSHA Health and Safety Training, Annual Refresher, (8-Hour), current
- DOT HM 126 Hazardous Material Transportation Training, 49 CFR 172.700, 1996
- Confined Space Entry Training, 29 CFR 1910.140, 1995
- National Ground Water Association – Fate and Transport of Light Non-Aqueous Phase Liquids/Dense Non-Aqueous Phase Liquids (LNAPLs/DNAPLs) Training, 1995
- Asbestos Inspector and Management Planner (Toxic Substance Control Act Sec. 206, Title II) Training, 1997
- Asbestos Contractor Supervisor (Toxic Substance Control Act Title II and AHERA) Training, 2000
- Vapor Intrusion Training, 2011
- Red Cross First Aid/CPR Training, current
- Sulfuric Acid Handling Training, 2013
- Interstate Technology Regulatory Council (ITRC) Training – Vapor Intrusion Pathway: Investigative Approaches for Typical Scenarios (2008)

Joseph "Joe" Tracy is a Principal Geologist and Senior Vice President at INTERA with a BS degree in environmental geology and over three decades of consulting experience focused on environmental assessments, site investigations, remedial planning, and site remediation. He has evaluated the environmental impacts to soil and groundwater at leaking petroleum storage tank (PST) sites, Superfund sites, Brownfield sites, and a variety of operational and former industrial properties and facilities. Mr. Tracy leads multidisciplinary teams of scientists and engineers to complete investigations and remediation of contaminants that include petroleum hydrocarbons, heavy metals, chlorinated solvents, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substance (PFAS), and asbestos. He develops remedial plans under voluntary remediation and Superfund programs and prepares and implements work plans, quality assurance project plans, and remedial action plans for Brownfields and other redevelopment projects. Mr. Tracy's experience also includes performing investigations and related work at municipal landfills where activities have included the installation and monitoring of landfill gas (LFG) probes, preparing landfill management plans, operation and maintenance of LFG extraction/destruction systems, developing and implementing grading and drainage plans, and profiling the nature and extent of landfill wastes. Mr. Tracy is a Senior Vice President within INTERA's Southwest Region, where he oversees multi-site contracts with state, county, and municipal agencies, and is responsible for directing all environmental services marketing efforts within the INTERA Mining and Environmental Line of Business Unit.

Project Experience – Environmental

Santa Fe County Investigation of Per- and Polyfluoroalkyl Substance Contaminants in Domestic Wells, Santa Fe County, NM. 2024 – Present.

Project Manager. Santa Fe County The sampling and analysis of drinking water in October 2023 from six domestic wells within the communities of La Cienega and La Cieneguilla, Santa Fe County discovered PFAS at concentrations above the safe drinking water standards recently established by the USEPA. Driven by the health concerns related to this discovery, the County, in collaboration with the New Mexico Environment Department (NMED) Construction Programs Bureau (CPB) and the City of Santa Fe, successfully acted to obtain a USEPA grant to help fund the assessment of the potential PFAS impacts to area groundwater. Mr. Tracy is leading the INTERA Team to achieve the overarching project goals of determining the extent of the PFAS contamination in groundwater and developing alternatives for mitigation and/or remediation of the contamination. Mr. Tracy is currently assisting the County with the initial project activities including the development of a conceptual site model (CSM) and selecting additional domestic wells for PFAS sampling. In addition, Mr. Tracy is working with INTERA subcontractor, John Shomaker and Associates, Inc. (JSAI), in the development of a groundwater flow model, in an effort to determine preferential flow paths for underlying PFAS contamination in ground water.

Environmental Investigations, City of Albuquerque – Department of Municipal Development, Albuquerque, NM. 2005 – 2018 and 2023 – Present. *Contract Manager and Project Manager.* Contract Manager City of Albuquerque Department of Municipal Development Environmental On-Call Services contract. Performed Phase I and Phase II Environmental Site Assessments (ESAs) for the City of Albuquerque (COA) as part of this contract. In addition, provided environmental assistance to the COA Department of Municipal Development on an as-needed basis as project environmental issues develop. Environmental issues included extraction well evaluation at the former Los Angeles Landfill, maintenance and monitoring services at the former Los Angeles Landfill, geophysical investigations in the downtown Albuquerque area, micro-turbine analysis at the former Los Angeles Landfill, engineering evaluation/cost analysis (EE/CA) for the Hotel La Posada del Albuquerque, conducting a soil vapor survey at the City of Albuquerque 1st and Central Site which is located adjacent to the former BNSF East Bound Fueling Facility, ambient air monitoring within residential houses in the Albuquerque area, and asbestos and lead-based paint surveys at several city facilities (i.e., Los Duranes Community Center, Jeanne Bellamah Community Center, Holiday Park Community Center, Barelas Community Center, Mesa Verde Community Center, APD Education Building, Dennis Chavez Community Center, Rio Grande Fire House, Pino Yard Senior Games Building, North Valley Senior Center, Palo Duro Senior Center, Environmental Health Department offices), city-owned former historic hotels (El Vado and De Anza), and city-acquired properties (Brown Property, Caravan Building, Loan Pawn Shop). Facilitated on-call projects such as the development of a CSM for the Kirtland Air Force Base Fuel Spill, development of a voluntary remediation approach for at the Marble-Arno Property and the downtown Railyard, locating a new COA storm water facility, conducting an archaeological survey at the Singing Arrow Community Center, and several landfill maintenance projects for the COA Solid Waste Division Cerro Colorado landfill. Currently projects for the COA include the assessment of asbestos and lead-based paint in several buildings at the COA BioPark (Zoo), which is undergoing a full-scale remodeling and renovation, as well as continuing groundwater monitoring activities at the Marble-Arno Property under the Voluntary Remediation Program (VRP). Secured an additional environmental services on-call contract with the COA in late 2023 and work began in 2024. Mr. Tracy is currently leading the environmental surveys associated with the renovation of the COA Gibson Health Hub (GHH) and several COA community centers and libraries.

Santa Fe Well-S (Santa Fe Generating Station) Petroleum Storage Tank Investigation, Public Service Company of New Mexico, Santa Fe, NM. 2018 – Present. *Project Principal.* Providing contract support for the investigation of fuel and chlorinated solvent release at a former power generating station and other, off-site sources. The release(s) have impacted a City of Santa Fe municipal supply well, causing production of drinking water from this well to be discontinued. The investigation includes the installation of 25 monitoring wells to depths ranging from approximately 300 to over 400 feet using roto-sonic drilling and sampling techniques. Portable gas chromatography and a photoionization detector are being used to analyze soil and groundwater samples in the field so that contaminated zones can be identified, and real-time, informed decisions can be made concerning screen intervals. The results of the in-field screening have identified zones, some as thin as three feet, containing mobile light non-aqueous phase liquid (LNAPL) and conveying highly contaminated groundwater. Responsibilities have included contract and technical discussions with the client and project team as well as attending several scoping and status meetings with Public Service Company of New Mexico, the City, and NMED representatives. In addition to providing support of environmental services associated with the fuel plume, also reviewing efforts associated with State 1 abatement plan (S1AP) investigations regarding chlorinated solvents and nitrates contamination present in ground water at the site.

Hop Canyon/Waldo Mill Site Phase II Site Investigation and Voluntary Remediation Program Activities, ASARCO, Magdalena, NM. 2000 – 2002 and 2018 – Present. *Project Principal, Project Manager, and Staff Geologist.* Implemented a Work Plan to characterize an American former Smelting and Refining Company (ASARCO) mining mill tailings site in Magdalena, New Mexico. The voluntary remediation activities included characterization and removal of affected soil and construction of an onsite tailings impoundment capped with clean soil. Surface drainage issues included interfacing with the U.S. Army Corps of Engineers to present erosion of the impoundment cap and surrounding soils. Initiated additional work at this site on behalf of the ASARCO Trust in 2018. INTERA is currently responsible for Site Caretaker Operations, which are essentially weekly Site visits to make certain the tailings impoundment cover remains in good condition. INTERA will prepare a VRP Work Plan to guide the repair work of the tailing impoundment cover. NMED and/or the ASARCO Trust identified several areas of the tailings impoundment cover in 2017 that are recommended for repair. The remainder of the ASARCO property at the site was legally transferred into ASARCO Trust ownership in late 2023. Currently working with ASARCO Trust representatives and the INTERA Project Team to design and conduct cap repair activities and secure a VRP Conditional Certificate of Completion (CCOC).

Las Vegas Patrol Yard Groundwater Remediation System Operation and Maintenance, New Mexico Department of Transportation, Las Vegas, NM. 2017 – Present. *Project Principal.* Began operation and maintenance (O&M) activities of a groundwater remediation system associated with the two contaminant plumes: an inorganic (chloride and total dissolved solids [TDS]) plume and organic (petroleum and chlorinated compound) plume located at the New Mexico Department of Transportation (NMDOT) Las Vegas Patrol Yard. The groundwater remediation system was originally operated by another firm but due to performance issues INTERA was asked to conduct O&M activities at the site. The groundwater remediation system consists of five interceptor trenches (four of the trenches focus on capturing the inorganic and petroleum plume and one focuses on capturing the chlorinated solvent plume) which capture contaminated groundwater and convey the water to two treatment containers. The treatment system consists of a filter media capable of removing iron and manganese, an air stripper which targets volatile organic compounds (VOCs), and reverse osmosis (RO) membranes which removes TDS and chlorides. The treated groundwater is reinjected into the subsurface via three infiltration trenches. Monthly influent and effluent samples are collected from the groundwater remediation system to ensure the system is operating effectively and that the effluent water quality meets the approved discharge permit requirements. O&M activities include maintaining all parts (pumps, inline sensors, filters) of the system, monitoring the dosing rate of the system additives (sodium hypochlorite, sodium metabisulfite, caustic soda, and anti-scaling agent), analyzing field water quality parameters/compounds (pH, TDS, free chlorine, total iron, total manganese) using handheld meters or Hach kits, replacing filters, monitoring system pressures, maintaining adequate additive volumes in vessels, and performing high- and low-pH cleaning of the RO membranes when necessary. The data collected during O&M activities and recorded remotely using a programmable logic controller is tracked and analyzed on a weekly basis to make sure the system is operating as designed. Treatment system operation has been suspended in recent years due to a discharge permit issue, but are estimated to be re-started in 2024.

Investigation of the Former Frank Ortiz Landfill, City of Santa Fe, NM. 2016 – Present. *Project Manager.* The Frank Ortiz Landfill operated as a City of Santa Fe municipal landfill between 1954 to 1968. Since no solid waste management regulations were in place during this period of operation, the landfill is not regulated by the NMED Solid Waste Bureau. The landfill site was re-developed by the city with soccer fields from 1987 to 1993 and currently serves as a dog park. In April 1993, soil vapor samples were collected from the fill and soil cover areas. Laboratory analysis of the samples showed that they contained hydrocarbons, chlorinated solvents, and chlorinated solvent degradation products. Concentrations of some of the contaminants exceeded 1,000 parts per billion. A single groundwater monitoring well (Ortiz Park No. 1) was installed approximately 500 feet southwest of the landfill in 2004. A groundwater sample collected from the well indicated that groundwater had been impacted from VOCs, hydrocarbons, metals, and nitrogen believed to have originated at the landfill site. Periodic groundwater and soil vapor sampling have continued at the site since 2004. An S1AP was developed for the Site in 2010 and submitted to NMED for review and approval. In 2013, NMED issued a letter noting several deficiencies in the S1AP including: the lack of a plan for maintenance of a two-foot cap over the former landfill; inadequate definition of the nature and extent of the landfill waste; inadequate definition of contaminant concentrations in the vadose zone below the waste; inadequate definition of the potential contaminant impacts to groundwater; the lack of a long-term monitoring program; and the need for a quality assurance project plan, health and safety plan, and a schedule for implementing the additional investigation activities and analyses necessary to address the identified deficiencies.

In 2015, at the request of NMED, the City conducted a geophysical investigation to define the areal extent of buried waste at the landfill. INTERA was awarded a contract from the City in September 2016 to help address the remaining S1AP deficiencies. Helped develop and reviewed an integrated Sampling and Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP) for the former landfill that was submitted to and approved by NMED. The SAP outlined several steps for the City to address the noted NMED concerns, including: installation of test pits to determine type and extent of waste; the collection of soil samples to determine the impact to soil immediately below the buried waste (extent of contamination in the vadose zone); installation of groundwater monitoring wells; groundwater sample collection; and an approach for a long-term groundwater monitoring program. Field sampling activities associated with the SAP/QAPP were completed in July 2017. Met with the NMED to go over the report findings and discuss recommendations for next steps. The investigation revealed the approximate extent and depth of buried waste, determined the extent of the vapor plume, and provided information on the landfill cover content and thickness. To address NMED's final concern, additional groundwater monitoring wells co-located with three soil vapor monitoring wells and an additional soil vapor monitoring well were recommended and the approximate locations were determined.

The additional wells were installed at the Ortiz Landfill in late 2019 and early 2020 and a final report was submitted to by INTERA to NMED in May 2020. The report findings indicated a direct impact to Site soil vapor likely from the presence of the buried waste, but it appears that Site groundwater is largely unimpacted. INTERA has successfully negotiated with NMED a period of monitoring work for the three years and includes the addition of Surface Emission Monitoring (SEM) on a quarterly basis of the entire Ortiz Landfill property (historic fill area and adjacent land within the property boundary). Once this period has expired, Mr. Tracy will work with City and NMED representatives to determine the need and location(s) for any future additional groundwater and soil vapor monitoring well installations.

The INTERA former Frank Ortiz Landfill work is being conducted in concert with additional investigation and monitoring activities at the adjacent Paseo de Vista (PDV) Landfill. The monitoring and maintenance of the PDV Landfill was added to the INTERA Ortiz Landfill contract by the City in 2019. The work at PDV has largely been conducted by personnel from INTERA's partner, Parkhill, under INTERA oversight. All PDV deliverables are prepared by Parkhill and reviewed by Mr. Tracy prior to submittal to the City and NMED. Mr. Tracy currently leads the long-term monitoring (LTM) activities at both landfills on behalf of the City and manages subcontractor Parkhill. The City of Santa Fe has requested that INTERA assist with NMED updated S1AP activities which are scheduled to begin in July 2025. This will consist of the installation of an additional ground water monitoring well, several LFG monitoring wells, and sampling ground water for PFAS in addition to the required analysis suite.

North Railroad Avenue Plume Superfund Project, New Mexico Environment Department - Groundwater Quality Bureau, Española, NM. 2016 – Present. *Project Principal*. A bio-amendment injection event was performed to remediate residual contamination (tetrachloroethene [PCE] and daughter products) in discrete intervals of fine-grained material identified in the source area (SA) and hot spot (HS) of the site. INTERA evaluated available data, identified six treatment areas, determined targeted treatment intervals, selected emulsified soybean oil as the carbon substrate, and devised an injection method to ensure that the substrate is delivered precisely. INTERA oversaw the bio-amendment substrate injection event which was conducted in two separate events: the first was completed in April 2017 via a direct-push injection tool within sonic casing and the second event was conducted with direct sonic injection in September 2017. INTERA conducted follow-up performance groundwater monitoring. Results of the performance monitoring events confirmed the successful distribution of the carbon substrate through the presence of the dye tracer (Rhodamine WT) and elevated total organic carbon (TOC) in monitoring wells within the anticipated radius of influence (ROI). Additionally, the groundwater analytical results from the first performance monitoring event provided evidence that in-situ reductive dichlorination was enhanced through the injection of the carbon substrate. Performance monitoring is currently ongoing. Serves as a Project Principal for INTERA's NMED contract, which includes INTERA's work at the NRAP site as well as INTERA's work at the Eagle Picher site in Socorro, New Mexico.

Former Central Works Equipment Facility Remediation Activities "COA Rail Yards," City of Albuquerque, NM. 2006 – Present. *Project Manager.* Managed the removal of contaminated soil at the former Central Works Equipment (CWE) facility in Albuquerque, New Mexico. The project included the removal of approximately 600 cubic yards of lead-contaminated soil previously stockpiled at the site. Developed a Work Plan to investigate petroleum-hydrocarbon and metals contamination at this site using Targeted Brownfields Assessment (TBA) funding. Led an additional Phase II investigation at the site in 2012. The Phase II investigation consisted of surface and subsurface soil sampling, building sub-slab vapor sampling, and groundwater sampling. This effort was conducted to determine what impacts (if any) the historical operations of the site as a railyard would have on future redevelopment. It was determined that a petroleum-hydrocarbon plume was present at the southwest corner of the site. Limited impacts were present in surface and subsurface soils. Developed several cost estimates for the remediation of soil and groundwater at the site for the city to use depending on the redevelopment scenario they selected. Further site investigation work was completed in 2012 as the city moved toward redevelopment of the site. Served as Project Manager for an Additional Site Investigation (ASI) that included completing a data evaluation/remediation options document to compile and analyze all existing contaminant data for the entire city railyard, which included former tank areas, oil/water separator, and a former locomotive roundhouse, among others. The evaluation resulted in identifying several data gaps which were investigated during the ASI. Contaminants of concern for this site included VOCs, TPH, PAHs, lead, and arsenic. The site investigation included (1) collecting surface soil samples from thirteen locations, (2) drilling oversight of 18 soil borings using direct push technology methods, (3) collection and screening of soils samples using a photoionization detector (PID) and Dexsil PetroFLAG field test kit to aid in selection of samples for laboratory analysis, (4) collection of eleven groundwater samples with the SP-16 sampler, temporary monitoring wells, and

existing monitoring wells, (5) installation of a soil vapor sample point, and (6) collection of a soil vapor sample using a Vapor PinTM. INTERA provided the client with a completed report, which included several remediation scenarios based on various redevelopment options.

Oversaw the remediation of the Blacksmith Shop building at the CWE facility in 2013. The remediation work consisted of the abatement of asbestos as well as the encapsulation of lead-based paint on the ceiling of the Blacksmith Shop. The Blacksmith Shop was redeveloped by COA into an open-air market following remediation activities. The redeveloped Blacksmith Shop opened in June 2013.

Worked with the COA selected developer, Samitaur, on a VRP approach for all portions of the Railyard property. This included a multi-option remediation approach as several redevelopment options (residential, commercial, open space) will be implemented at the site. Oversaw the development of a CSM for the site. INTERA compiled all available information related to environmental site conditions such as historical soil and groundwater data to help determine the nature and extent of the contamination across the site with regard to depth and COCs in the CSM to provide a foundation for remedial action decisions. Activities completed as part of the CSM included developing a database in Microsoft Access, connecting the database to ArcGIS to allow for visual data analysis, and identifying key data gaps. The CSM was also used as a foundation for development of a remediation work plan required to address data gaps at the site. The remediation work plan was developed in conjunction with potential redevelopment scenarios identified for the site. Implementation of the remediation work plan was completed early 2017 and included the collection of soil samples, soil vapor samples, groundwater samples, sub-slab soil vapor samples, and the completion of asbestos and lead-based paint surveys on all site buildings. The results of the data collection were compiled into ten different reports, one for each of the 10 railyard parcels. The intent of separate reporting for each of the 10 parcels was to allow phased development of the site over a lengthier time period than is customary under the VRP.

Contracted in late 2018 to develop a revised VRP Application and Preliminary Work Plan for the COA Rail Yards, splitting the COA Rail Yards into two VRP sites (COA Rail Yards North and COA Rail Yards South). Currently, the COA Rail Yards North has received conditional eligibility to enter the VRP and Public Notice and a Public Meeting was held in April 2019 to outline for the public the proposed remedial actions. Assisted with the Public Notice requirements for the COA Environmental Health Department personnel. The COA implemented soil removal activities within the COA Rail Yards North in May and June 2019.

Contracted in early 2020 to help the COA develop a VRCR for the COA Rail Yards North and to implement an off-Site groundwater monitoring well installation Preliminary Work Plan for the COA Rail Yards South. INTERA developed a VRCR for the COA Rail Yards North and submitted it to NMED in September 2020. INTERA also, as requested by the COA, developed, submitted to NMED, and received NMED approval for a Contaminated Soil Management Plan (SMP) in July 2020. This SMP will be followed as additional impacted soil is excavated at the COA Rail Yards. Either developed or provided final review of this documents. INTERA installed 5 ground water monitoring wells at off-site locations surrounding the COA Rail Yards South. These monitoring wells were installed in February 2021. Provided interface with the client during the field work and also provided daily direction to the INTERA field team. Finally, INTERA will work with the COA's Rail Yards management team to develop the remediation approaches for the COA Rail Yards South depending on the selected future development. Secured a VRP CCOC for the Rail Yards North in 2021. Currently leading the LTM activities associated with ground water and soil vapor at the Site and leading efforts to secure a CCOC for the Rail Yards South. In addition to LTM activities, currently providing quality assurance inspections for the installation of a soil vapor mitigation system in the Boiler Shop, prior to it's redevelopment as a movie studio for CNM (abqrailyards.com).

Technical Support Services for the Red Hill Bulk Fuel Storage Facility, Honolulu Board of Water Supply, Honolulu, HI. 2015 – Present.
Project Manager. Providing third-party technical review of technical documents and data produced and collected by the U.S. Navy and its contractors at the Red Hill Bulk Fuel Storage Facility (RHBFSF). The RHBFSF contains 20 large field-constructed underground storage tanks, each containing approximately 12.5 million gallons of fuel. These tanks are located at depths ranging from 120 to 175 feet below ground surface within the Koolau Basalt and lie 100 feet above the aquifer. Fuel leaks from the facility both historic and recent (January 2014 – 27,000-gallon release) have impacted the underlying EPA-designated Sole Source Southern Oahu Basal Aquifer and are potentially threatening the Honolulu Board of Water Supply (BWS) water supply wells and production shaft. The 2014 release resulted in the Navy, the EPA, and the Hawaii Department of Health (DOH) signing an Administrative Order on Consent (AOC) to assess the RHBFSF and determine what impact this release and previous releases have had on the environment and to determine what the appropriate tank

upgrade solution may be. Activities included reviewing technical reports and extracting and compiling data collected at the RHBFSF from these reports. Reviewed and provided over 135 comment letters to date to the DOH and the EPA on various Navy work plans and reports. Led the INTERA Team's development of a CSM that describes the processes and features controlling the migration of fuel contamination and identifies potential exposure pathways and receptors. Additionally, supported the development of a Monitoring Well Construction and Installation Plan, sampling plan, and quality assurance plan for several sentinel wells installed by INTERA for the BWS. The first monitoring well was completed in 2017, and quarterly groundwater monitoring was in 2017 and 2018. Semi-annual sampling of this monitoring well began in 2019 and continues in 2021. Hired Exponent as a subcontractor and oversee their technical work associated with tank infrastructure, release detection, corrosion and metal fatigue, risk assessment, and toxicology services. This expertise has been needed on various comment letters developed by INTERA for the BWS since the initiation of the contract. Representing BWS interest in numerous technical working meetings associated with the Red Hill AOC and the AOC Statement of Work (SOW) since contract initiation in 2015. Participates in Groundwater Modeling Working Group meetings to review the progress of the Navy's flow and transport groundwater model. Assists the BWS with the development of community meeting and BWS Board presentations and regularly attends all public meetings in California and/or Hawaii held by the EPA, DOH, and the Navy on the Red Hill matter. Negotiated a 2020 contract renewal with BWS that extended INTERA's work on this project for the next several years.

Led INTERA's efforts in 2021 and 2022 to support the BWS in response to the Red Hill Hawaii Department of Health (DOH) Emergency Order which requires the complete defueling of the facility by June 2024 (defueling was completed by the Navy in March 2024). These efforts have included reviewing and commenting on Navy deliverables (Defueling Plan, Closure Plan, Notice of Intent [NOI] data reports, groundwater flow model reports, etc.) and providing this information to BWS. In addition, because of the May and November 2021 fuel releases at Red Hill, the BWS has been forced to shut down several drinking water sources in the area. Mr. Tracy is currently focused on supporting the BWS with the identification of monitoring well and exploratory production well sites and working with the INTERA Project Team to design each monitoring and exploratory well and exploratory well pumping tests. INTERA has developed well designs for over ten monitoring wells and four exploratory well locations and is currently developing the drilling plans and testing plans associated with these wells. Assisting the BWS with the development of bid documents to procure drilling services for monitoring and exploratory well installations. Providing management and scheduling assistance for INTERA field teams overseeing well installation activities by BWS general and drilling contractors.

Sites Assessments, New Mexico Department of Transportation, Various Locations, NM. 2015 – Present. *Principal in Charge.* Provides senior technical review of Initial Site Assessments (ISAs), preliminary site investigations (PSIs) and Detailed Site Investigations (DSI) at several NMDOT construction project sites in New Mexico. These NMDOT projects involve the evaluation of properties either NMDOT-owned or NMDOT right-of-way (ROW) acquisitions as part of highway improvement projects. The ISAs completed generally follow the ASTM Standard E1527-13 and the NMDOT Handbook for site assessments. The PSIs and DSI include Phase II activities (investigative excavations, soil boring drilling, soil sampling, and geophysical surveys) for further evaluation of NMDOT property. Supervises the field teams conducting this work and provides senior technical review of all project deliverables. Manages overall contract issues and interfaces directly with the INTERA Project Manager and NMDOT management. Most of these assessments are completed in areas where NMDOT is going to expand their infrastructure with either additional traffic lanes or an upgrading of their maintenance yards.

Site Monitoring and Emergency Response Contract, New Mexico Environment Department - Petroleum Storage Tank Bureau, Various Locations, NM. 2014 – Present. *Project Principal.* Providing administrative and technical review of work conducted for contaminant characterization investigations and groundwater monitoring activities. These activities seek to determine the nature and extent of subsurface petroleum hydrocarbon contamination originating from above ground and underground storage tank sites. Investigations include the analysis of soil, groundwater, and soil vapor impacts to these various sites across New Mexico. Work includes the following partial listing of INTERA Petroleum Storage Tank Bureau (PSTB) state-led sites: Barelas Bridge Site in Albuquerque, New Mexico; Bell Gas Site in Truth or Consequences, New Mexico; Brewer Self-Serve Site in Roswell, New Mexico; City Market Site in San Miquel, New Mexico; Frank's Conoco Site in Bernalillo, New Mexico; Corrales Chevron in Corrales, New Mexico; Robinson Texaco in Taos, New Mexico; Rodgers Drilling Site in Albuquerque, New Mexico; Village Market and the Former Caldwell Motors sites in Belen, New Mexico; and the Montoya Well Site in El Prado, New Mexico.

Dry Cleaning Site Investigation and Remediation of Tetrachloroethene Contamination, Elite Laundry and Cleaning, Gallup, NM. 2013 – Present. *Project Manager.* Leading efforts to investigate and remediate groundwater impacted by PCE as a result of previous releases from this operating dry-cleaning facility. The impacted groundwater was discovered during a Phase II ESA conducted on an adjacent property. In response to a letter from NMED to address the contamination, efforts have included providing technical support and advice to Elite Laundry and Cleaners representatives to determine the most appropriate path forward. This included addressing the identified contamination under the NMED VRP. Prepared and submitted a VRP work plan and VRP application to NMED. The proposed VRP investigation activities include the installation of monitoring well on- and offsite to characterize and delineate the PCE in groundwater contamination. The field activities identified in the VRP Work Plan were initiated in late 2018 and early 2019, which included the installation of additional monitoring wells as well as subsurface soil and indoor air vapor sampling activities. Off-site passive vapor sampling activities were completed by INTERA under Mr. Tracy's oversight at the Site and within the area in 2020. Additional site characterization activities and preliminary design for a remediation system to prevent the off-site migration of contaminants in soil vapor and ground water are planned for 2025, including the installation of a soil vapor extraction system for the removal of VOCs in soil gas to prevent the potential for offsite migration.

Judge Steve Herrera Judicial Complex Site Investigation, Remediation, and Monitoring, Santa Fe County, NM. 2009 – Present. *Contract Manager and Project Manager.* Leads INTERA's efforts to develop a remedial solution for the Santa Fe County Judicial Complex which involves interfacing with both the NMED VRP and PSTB. INTERA was contracted by Santa Fe County in March 2009 to support their efforts to re-develop a Brownfields property comprising a three-story judicial complex and associated plaza and subsurface parking garage in downtown Santa Fe, New Mexico. A large excavation and steel/wood shoring system was constructed beginning in the fall of 2008. During shoring activities, a two-foot layer of LNAPL was discovered near the water table. INTERA performed additional site investigation activities and determined that the LNAPL plume was predominately present in the proposed location of a subsurface two-story parking garage. Construction of the garage and associated judicial complex was delayed, enabling the county and NMED's PSTB to develop an appropriate response action. PSTB subsequently designed and is operating a soil vapor extraction system for the areas outside of the judicial complex excavation to remediate the historic contamination. The county was responsible for the remediation of their property even though they were not a responsible party. Led the development of a petroleum contaminated soil (PCS) work plan including development of a dewatering plan, excavation and removal of over 20,000 tons of PCS, installation of a vapor intrusion/ground water barrier (liner) on all parts of the development located below grade, and development of a vapor monitoring system for the final development of the site. The Work Plan was approved by VRP and PSTB. The excavation work is complicated because of two primary factors: (1) soil must be excavated below the water table requiring dewatering for safe removal; and (2) construction activities are scheduled to take place immediately following soil remediation efforts, requiring that dewatering continue for several months until construction infrastructure can be put in place below the water table for the two-story parking garage. Helped initiate the development of a soil gas passive venting system around the subsurface parking garage and initiated the installation of this system in January 2012.

Additionally, prepared and submitted a VRP application to secure a certificate of completion for the remediation work; supervised risk assessors in the development of a document pertaining to future building occupancy and currently participates in numerous stakeholder meetings with the county and PSTB representatives. Either conducted or supervised INTERA staff employees or subcontractors in assessing, reviewing, and selecting mitigation measures for the complex; identifying and developing measures to isolate the proposed infrastructure from contacting LNAPL remaining in the plume around the building (i.e. liner selection process); LNAPL sampling and characterization; air emissions testing and permitting; waste profiling; preparation and submittal of a groundwater discharge permit application; LNAPL removal and disposal; LNAPL bail-down testing; a Phase I ESA of the site; slug testing to determine aquifer properties; weekly VRP update reporting, and subcontractor oversight of remediation activities. The PCS removal activities were completed at the site in February 2011. Continues to work with the county to develop a VRP Completion Report and secure a CCOC for the site. The judicial complex was completed in February 2013 and began operating in June 2013. Continues to oversee quarterly groundwater monitoring activities at the site as part of the county's VRP Work Plan. Secured a Voluntary Remediation Agreement (VRA) for the site on July 9, 2015. Completed the Voluntary Remediation Completion Report (VRCR) for the site in February 2016 and assisted the county in obtaining a VRP CCOC from NMED also in February 2016. Groundwater monitoring activities were completed by INTERA at the site in October 2016. Currently assisting the county by reviewing the work conducted by the PSTB at the site and providing status reports to the county. For example, observed multi-dual phase extraction activities conducted by PSTB and their contractor at the site in 2017. The final goal is to assist the county in

securing a VRP CCOC with only a land use restriction in 2024. Helped the County discontinue the NMED judicial complex discharge permit (NMED DP-1747) in late 2023 and currently negotiating on the County's behalf with NMED to modify the VRP CCOC in 2025.

SunZia Transmission Line Phase I Environmental Site Assessment, New Mexico and Arizona Approximate 550-Mile Corridor. 2021 – 2024. *Project Principal*. INTERA was retained by SunZia Transmission, LLC located in Albuquerque, New Mexico to perform a Phase I ESA for a 550-mile corridor starting southeast of Phoenix, Arizona and terminating in Corona, New Mexico. The proposed transmission line would ultimately aid in the transportation of wind farm produced electricity across New Mexico and into the Tucson area of Arizona. Provided Project Principal review and contract management duties for the project. Worked with the Project Team to develop Phase II site characterization goals for the recognized environmental conditions (RECs) identified during the Phase I ESA work. The Phase II recommendations included geophysical surveys for two former bombing ranges that the Project Corridor intersects in New Mexico and for soil cleanup of an above-ground storage tank release at a commercial agriculture operation at a property in Arizona. The geophysical investigations for the two former bombing ranges were completed in 2023 (no mitigation needed) and the soil cleanup for the Arizona commercial agriculture operation is scheduled to be conducted in 2024.

Data Gap Monitoring Well for the Albuquerque Bernalillo County Water Utility Authority, Albuquerque, NM. 2022 – 2023. *Project Manager.* The Albuquerque Bernalillo County Water Utility Authority (ABCWUA) received funding from the State of New Mexico CPB in 2021 to drill, install, and sample a monitoring well downgradient of the ethylene dibromide (EDB) and petroleum hydrocarbon plumes in groundwater migrating offsite from Kirtland Air Force Base (KAFB). Provided technical input on recommended location and design of a >500-ft deep monitoring well to address a potential data gap toward the distal end of the known EDB plume. Led the installation of the monitoring well (sonic drilling methods) and initial well development which was completed in April 2022. Led initial one-year long-term monitoring activities of the data gap monitoring well in late 2022 and early 2023 until the LTM duties were shifted from INTERA to an ABCWUA on-call contractor.

Kirtland Air Force Base Environmental Baseline Surveys, Albuquerque Bernalillo County Water Utility Authority, NM. 2018 – 2022. *Project Principal.* Provided technical oversight and review of final deliverables for the INTERA effort to conduct two Environmental Baseline Surveys (EBS) for the ABCWUA to meet appropriate property due diligence practices for the easement agreement between ABCWUA and KAFB. The property locations included a 5.29-mile-long easement and a 24-acre parcel, all located on KAFB and Department of Energy (DOE) property. The project includes the ABCWUA installing an interceptor pipeline and booster station and INTERA is responsible for all federal due diligence requirements associated with construction projects occurring on federal facilities. Responsible for internal team communications, client meetings, and final review of the two EBS reports. The EBS reports were completed and approved by the ABCWUA and KAFB in 2022.

Phase I Environmental Site Assessment of Mt. Chalchihuitl and Cerrillos Gravel Products Properties, Santa Fe County, Cerrillos, NM. 2004 – 2022. *Project Manager.* Project Manager for the Phase I ESA of the combined 745-acre Mt. Chalchihuitl and Cerrillos Gravel Products properties. Assessment activities are being conducted using the EPA's All Appropriate Inquiry (AAI) and ASTM Standard E1527-05 as guidance. Performed risk assessment and remediation alternative analysis activities at the Mt. Chalchihuitl portion of the site (545 acres) in 2004. The entire site was historically used for mining activities, located at the center of the Cerrillos Mining District South area. Santa Fe County plans to re-develop the site as open space by incorporating it into the Cerrillos Hills Historic Park, and INTERA continues to work with Santa Fe County to determine remediation options for the site. The development objective is to include these properties in the Cerrillos Hills Mining District Open Space Park.

Developed a VRP Work Plan for the site in 2012, which selected a previously determined remedial option and submitted the Work Plan to Santa Fe County for review. The selected remediation includes the construction of tailings impoundment and cap in a former gravel pit and long-term monitoring to make certain the cap integrity is secured. The remainder of the site will be used as a public open space, allowing the public to observe some of the oldest mines in North America. Completed and submitted the VRP Application and Preliminary VRP Work Plan for this Site in September 2017. The county would like to acquire the properties in 2018 and begin soil remediation as soon as possible after property acquisition. Currently assisting the county legal team with the development of a VRA between the county and NMED. Also, were recently awarded a contract to sample soils in the arroyo to the south of the Cerrillos Gravel Products property and to sample three area drinking water wells to determine any potential water quality impacts.

Responded to a Letter of Interest (LOI) released by the County in 2019 to assess ground water conditions at the Mt. Chal site. After selection by the County in response to the LOI, led the INTERA Team in sampling an upgradient private water well and a monitoring well at the Cerrillos Gravel Products property. Determined elevated metals concentrations are present in site groundwater and offered recommendation to the County for addition work at the site and the potential installation of a new monitoring well in a down gradient location. Due to a disagreement on overall value with the landowner (both property and mineral rights), the County passed a resolution and discontinued their Mt. Chalchihuitl acquisition initiatives in 2022.

Redevelopment of the Former First Baptist Church Site, Lobo Development, Albuquerque, NM. 2013 – 2021. *Project Manager.* Provided oversight for voluntary remediation activities associated with redevelopment of this property in downtown Albuquerque. Previously conducted Phase I and II ESAs and identified subsurface soil and groundwater contamination that was believed to be the result of a diesel fuel release at the adjacent Burlington Northern Santa Fe (BNSF) Railway Railyard. Evaluated site investigation data and determined that the property had been impacted by both off-site sources and historic site uses that required limited remediation prior to site redevelopment. The site was entered in the NMED VRP to secure a Certification of Completion (COC) to facilitate redevelopment. Activities included interaction with NMED to ensure the COC was issued in a timely manner and assisting in obtaining a Covenant Not to Sue (CNS). After receiving the COC and CNS, Lobo Development acquired the property in 2014 and the site was re-developed as part of the City of Albuquerque's "Innovate ABQ" development initiative. Worked with the Innovate ABQ development team to manage the environmental risks associated with the planned redevelopment of the Site. Assisted the Site developer (Signet) with renovation and demolition activities completed within the former First Baptist Church in 2016. Assisted the developer with VRP reporting activities in 2016, 2017, and 2018 associated with the construction of a three-story building at the site. VRP reporting activities are required in order to maintain the COC by guiding the developer to implement the proper engineering controls. The newly constructed three-story commercial building is known as the "Lobo Rainforest" and serves as an entrepreneur center for business associated with "Innovate ABQ," a downtown Albuquerque technology park. Led a team that updated the Phase I ESA in 2020 on behalf of the University of New Mexico (UNM). Also helped secure a U.S. Environmental Protection Agency (EPA) "Comfort Letter" for UNM and a CNS prior to the property transfer. UNM assumed ownership of the site in late December 2020.

Redevelopment of the Former Galles Chevrolet Automobile Dealership Property, University of New Mexico, Albuquerque, NM. 2018 – 2020. *Project Manager.* Provided oversight for voluntary remediation activities associated with redevelopment of this property in the UNM area of Albuquerque. Previously conducted Phase I and II ESAs identified subsurface soil and groundwater contamination that was believed to be the result of gasoline and diesel fuel releases from former underground storage tanks (USTs) located at the property. Additional environmental contamination was also identified by the operation of over 70 underground hydraulic lifts as well as five former oil/water separators (OWS) in use at the property. Evaluated site investigation data and determined that the property has been impacted by historic site uses that required limited remediation prior to site redevelopment. The site was entered in the NMED VRP to secure a COC to facilitate redevelopment. Activities included interaction with the NMED to ensure the COC was issued in a timely manner and assisting in obtaining a CNS. The issuance of the COC and CNS are still pending. Conducted an on-site soil vapor survey to determine areas of elevated soil vapor concentrations and developed a plan for the construction and use of vapor intrusion barriers for any newly constructed buildings at the Site. Evaluated the remediation activities conducted by the landowner (Sandia Corporation) to determine what impact, if any, the remedial work may have on future UNM activities at the site. Worked with subcontractor DC Environmental to prepare a cost estimate associated with the asbestos and lead-based paint abatement at current Site buildings prior to demolition and/or renovation. UNM leased the property in late 2019. Worked with UNM Medical Center personnel to assist with the development of short-term uses for the site prior to full-scale redevelopment.

Investigation of the Santa Fe River Targeted Brownfields Assessment Area, City of Santa Fe, NM. 2010 – 2019. *Project Manager.* Led an investigation in the downtown Santa Fe area to (1) develop a better understanding of groundwater flow within the area so that appropriate decisions can be made about remediation of petroleum hydrocarbons and other groundwater contaminants, (2) determine what impact, if any, will occur within the shallow groundwater aquifer if stream flow in the Santa Fe River is increased, and (3) determine the nature and extent of petroleum hydrocarbon contamination so engineering controls can be evaluated for future development within the TBA area. Activities included developing a geologic model and implementing a drilling program to confirm model accuracy. Field investigations showed that the

geologic model is accurate, and the City of Santa Fe and NMED used the geologic model to guide additional investigations being conducted by NMED and EPA in the downtown Santa Fe area. These investigations were completed to identify sources of petroleum hydrocarbon as well as chlorinated hydrocarbon contamination in ground water in the downtown Santa Fe area. Activities in 2016 and 2017 included the installation of additional groundwater monitoring wells, groundwater sampling, installation of soil vapor monitoring wells, soil vapor sampling, indoor air sampling, and groundwater sampling of additional monitoring wells owned by several different entities in the downtown Santa Fe area to determine groundwater characteristics and the potential sources of identified contamination. Subsurface soil gas sampling was conducted at this Site in June 2019 using "Waterloo Membrane Samplers" placed at several facilities within the TBA area that may have been sources of the underlying ground water contamination. Helped NMED develop a report for the 2019 sampling event and discussed the findings with NMED.

Proposed Belen Fire Station Property Investigation and Remediation, Molzen Corbin, Belen, NM. 2017 – 2018. *Project Manager.* Supervised Site investigation and remediation services at the proposed new Belen Fire Station property located in Belen, New Mexico. Prior to site redevelopment activities, Molzen Corbin Engineers contracted INTERA to conduct site investigation activities to determine if any impact from petroleum hydrocarbons occurred at the Site during historical activities (automobile repair activities) and to conduct geophysical investigation work to determine if any relic USTs were present at the site. INTERA advanced 15 soil borings at the site using geoprobe investigation methods to collect soil and groundwater samples. Investigation results determined that approximately 2,800 cubic yards of PCS were present at the site and one UST was in the northwest corner of the property. INTERA provided a map of the locations of the PCS and the UST. The PCS and UST were removed by City of Belen contractors in 2017. In addition, groundwater impacts by petroleum hydrocarbons were also verified, but no concentrations identified were above New Mexico Water Quality Control Commission (NMWQCC) standards or PSTB action levels. Continued to provide consulting services to Molzen Corbin at the Site as Fire Station building construction was initiated in 2017. INTERA recommended removal of the PCS and installation of a vapor intrusion barrier and sub-slab venting system to protect future building occupants and Site users. INTERA developed specification documents for both PCS removal and vapor intrusion barrier installation and provided to Molzen Corbin Engineers to include in the general contractor bid package. Construction of the Belen Fire Station was completed in 2018. The Belen Fire Station redevelopment project received the "Environmental" award from the New Mexico Chapter of the American Council of Engineering Companies in September 2020.

Investigation of Perchloroethylene Contamination at the Griggs and Walnut Superfund Site, Confidential Client, Las Cruces, NM. 2015 – 2018. *Senior Scientist.* Assisted the technical team evaluating the release timing and locations of PCE contamination in the area of the Griggs Street and Walnut Avenue intersection in the northern section of the City of Las Cruces. The timing information was critical in demonstrating occurrences for insurance reimbursement purposes. Assisted in the development of the CSM for the potential release sites in the area. The CSM would be used by Dona Ana County and the City to help further their understanding of the Superfund site.

Facility Environmental Audits and Stormwater Management Plans, Wood Group/TurboCare Generator Services/Ethos Energy, Farmington, NM. 2010 – 2018. *Project Manager.* Performed environmental audits of three electric generator parts manufacturing facilities, focused on determining volumes of hazardous waste generated at each facility. Reviewed information to calculate volumes to determine the correct generator status (conditionally exempt, small or large), obtain a correct hazardous waste generator identification number, and calculate and pay the associated hazardous waste fees to the NMED Hazardous Waste Bureau for each facility. After calculating these volumes, the Wood Group reported previous quantities of generated waste and paid current and past hazardous waste-generation fees, bringing the facilities back into regulatory compliance. Prepared stormwater pollution protection plans (SWPPPs) for each facility and provided ongoing support with stormwater issues. Due to facility operator transfer and the closing of the two of the facilities, worked with INTERA staff in 2017 and 2018 to update the SWPPP and file Notice of Termination of discharge and NOI to discharge for the new ownership group (Ethos Energy).

Reclamation of the San Vicente Mill Site, New Mexico Environment Department, Silver City, NM. 2013 – 2016. *Project Manager.* Led environmental investigation and remediation/reclamation activities to address an above-grade tailings pile, resulting from former milling and smelting operations for lead, silver, copper, and gold that operated from the 1880s to the 1940s. The tailings pile contained metals (e.g., arsenic and lead) at levels exceeding established human health standards. Water quality had been impacted by the erosion of the tailings pile and the subsequent transport of contaminated material to an adjacent creek. Groundwater also contains elevated concentrations of metals. Project activities included negotiating access

agreements, as portions of the site were on private property; determining the extent of tailings and contaminated soils on-site and offsite; organizing and holding a community meeting to inform property owners as well as Town of Silver City representatives and citizens of potential community impacts; providing contractor oversight for removal of contaminated materials (approximately 50,000 cubic yards); transporting and disposing of contaminated materials at a nearby operational mine site; restoring disturbed areas with placement of soil cover; and reseeding with a native seed mixture. Implemented a reclamation approach that included performing additional characterization efforts while removal of the main tailings area material was being conducted. The single mobilization resulted in cost savings and a project that was completed ahead of schedule. Responsible for developing the Final Removal Assessment Report which documented the quantity of tailings removed and the restoration activities including clean fill placement, grading, and institution of property engineering controls.

Environmental Site Assessments, Los Alamos County, NM. 2005 – 2016. *Contract Manager and Project Manager.* Served as Contract Manager for Los Alamos On-Call Services contract. Investigated and characterized the environmental conditions at several Los Alamos County and Los Alamos School District properties. These properties were formerly operated by Los Alamos National Laboratory. Currently managing this work, which includes Phase I and Phase II ESAs, asbestos and lead-based paint surveys, archaeological investigations, archaeological stabilization activities, surface water sampling, and other general environmental consulting activities. Special projects have included a hazardous materials survey at the Los Alamos County Golf Course, an Environmental Assessment (EA) of the Los Alamos County Canyon Dam site, and a NMED VRP application for the Los Alamos County Trinity Redevelopment site.

Designed and constructed a stormwater detention pond engineering controls at the Trinity Redevelopment site in 2012. The pond was constructed as a solution to an NMED action that required the county to control stormwater runoff into the canyon to the south of the site. Managed the project that included engineering design, construction, and reporting to NMED. Following the construction of the drainage improvement, Los Alamos County began redeveloping the site with a shopping center to include a grocery store, small businesses, and restaurants.

Provided oversight of the removal of a historic OWS from the Trinity Redevelopment Site in 2013. The OWS was discovered during redevelopment construction activities. Secured a subcontractor and provided the county with expedited services during the OWS removal and subsequent sampling so that the construction activities scheduled for the site were not compromised.

Former Eubank Landfill Assessment of Remediation Alternatives, City of Albuquerque/New Mexico Environment Department, NM. 2003 – 2016. *Project Manager.* Led an effort on behalf of the COA and NMED to characterize the nature and extent of landfill gas contamination at the former Eubank Landfill (northeast fill area). Also worked at this site on behalf of Albuquerque Public Schools, an owner of an adjacent property; Bernalillo County, a stakeholder related to the Eubank Landfill; the U.S. Army Corps of Engineers; and the New Mexico State Land Office. The northeast fill area of the former COA Eubank Landfill was operated between 1963 and 1973 on property leased from the New Mexico State Land Office. The Eubank Landfill northeast fill area was unlined and covered approximately 21 acres, with a waste depth in the range of approximately 30 to 40 feet. Material placed at the Eubank Landfill was reported to be mainly residential and commercial waste.

Conducted an assessment of the former Eubank Landfill southwest fill area in 2011 for the proposed future development as a solar panel system field. Worked for a private solar development company along with the COA to evaluate this use of the site and how this use may be impacted by the potential migration of landfill gas. Also worked with INTERA engineers in the development of a final landfill gas management plan as well as a surface grading and drainage plan. In 2012, managed the project, which included additional grading plans for several types of solar panel designs selected for the site. This included the development of a Waste Excavation Plan (WEP). The WEP included the use of waste as fill material, the first of its kind in the State of New Mexico.

Developed an approach for Emcore Solar Power to install and operate a solar panel field at the surface of the former Eubank Landfill southwest fill area. This included LFG investigation activities as well as a geotechnical investigation conducted in order to develop recommendations for landfill gas control measures as well as geotechnical foundation of the solar panel trackers. This work included communicating with civil engineers, architects, electricians, and others to facilitate the successful project. The solar field is currently online and provides power to the Emcore manufacturing facility located

adjacent to the former landfill. Responsible for final reporting and periodic site inspections concerning the condition of the landfill surface.

Hyder Property Site Investigation, City of Albuquerque, NM. 2003 – 2016. *Project Manager.* Developed the investigation work plan at this Brownfield redevelopment property which was the site of a former dry-cleaning facility. The work plan included the execution of a geophysical survey as well as investigative digging to find historic underground solvent storage tanks. Investigative excavations were constructed at the Hyder property, and six USTs were discovered. Conducted a Phase II site investigation at the Hyder property, which included the collection of surface soil, subsurface soil, soil gas, and groundwater samples. Wrote the VRP Completion Report for this site; property received a Certificate of Completion from the NMED VRP. Worked with the site developer, YES Housing, to oversee excavation of soils to determine if contamination was present during construction in late 2014. Site redevelopment as the Imperial Building began in early 2015. Worked with the construction contractor to address environmental contamination (removal of petroleum-contaminated soils and two underground storage tanks) during building excavation and construction work. Submitted the VRCR for the site to NMED in December 2015. Assisted the site developer in securing a CNS from the NMED VRP in early 2016. The Imperial Building includes residential housing on the two upper floors and a community garden on the roof, with commercial spaces (including a grocery store) on the first floor. One level of parking is included in a subsurface parking lot located below the building. The Imperial Building officially opened in September 2016.

500 Copper Square Property Soil Vapor Investigation, First Financial, Albuquerque, NM. 2014 – 2015. *Project Manager.* Led efforts to determine presence of VOCs in site soil vapor. Collected sub-slab soil gas samples at locations within the building basement and compared analytical results to EPA's recommended commercial and residential vapor intrusion screening levels (VISLs) to determine whether VOC contaminants were impacting air quality in the building. Tetrachloroethene (PERC)—a dry cleaning solvent—was present in several of the soil vapor samples, but concentrations did not exceed applicable VISLs for PERC. Entered site into the state VRP in order to obtain a COC to document that current conditions meet applicable environmental quality standards and provide liability protection for lenders. NMED issued at COC in 2015, and a CNS can be transferred to any lender or future owner of the property.

Former Sterling Manufactured Gas Plant Voluntary Cleanup Program Site, Centennial Mental Health Center, Sterling, CO. 2014 – 2015. *Senior Technical Advisor.* Assisted with additional site investigation activities within the VCP investigation and remediation activities at the former Sterling Manufactured Gas Plant site. This site was remediated through the Colorado Department of Public Health and the Environment (CDPHE) VCP for future development into a parking lot for use by the future landowner and neighboring facility, Centennial Mental Health Center. The initial site investigation and targeted brownfields assessment were completed by CDPHE and identified polyaromatic hydrocarbons (PAH) organics and metals contamination above the regulatory limits in the site soils. Project tasks have included potholing of site soils to define further the extent of soil contamination, sampling of an upgradient groundwater monitoring well to determine if metals contamination can be attributed to an off-site source, determination of the most cost-effective method to sample near and around a transformer on site, and completion of the work plan, cost estimate, and health and safety plan for the excavation of site contaminated soils. To accommodate funding schedules, the remediation activities, which consisted of excavation, hauling, and off-site disposal of 814.5 cubic yards of soils contaminated with PAHs, were performed using a phased approach and were completed in 2015. A No Action Determination (NAD) was submitted and formal acceptance of the NAD by CDPHE was received in December 2015.

Characterization and Remediation of the Former Bell Trading Post Property, City of Albuquerque, NM. 2001 – 2005 and 2015. *Project Manager.* Developed a Work Plan to characterize this facility adequately for ultimate inclusion into the VRP. The Bell Trading Post building was formerly a jewelry manufacturing facility as well as a photograph development facility. Heavy metals and solvents were in use at this historic facility. The Work Plan included Geoprobe soil boring installations, subsurface soil sampling, and groundwater sample collection. In addition, on behalf of the COA, supervised a subcontractor conducting a limited asbestos survey at the Bell Trading Post facility building. Completed the VRP Application for this site and developed a VRP Work Plan for the remedial work, which included an integrated QAPP. The remediation consisted of contaminated soil removal as well as the remediation of asbestos and lead-based paint. This was the first Work Plan/QAPP developed for asbestos/lead-based paint remediation in EPA Region VI. Provided oversight of the remediation work and documented the progress on behalf of the COA and its developer, Family Housing Development Corporation. Remediation work completed included the cleaning of a substantial amount of pigeon droppings, asbestos and lead-based paint abatement, lead-in-soil removal, and the removal of all light ballasts from the building. Wrote the VRCR for this facility and

helped the COA obtain a Certificate of Completion from the NMED VRP. This facility was later renovated and developed with residential housing units and commercial office space. Lead a soil vapor intrusion assessment of the renovated building on behalf of the NMED in 2015.

Municipal Separate Storm Sewer System Audit and Application, Santa Fe County, NM. 2012 – 2013. *Project Manager.* Led efforts to assist the county in submitting a municipal separate storm sewer system (MS4) application to the EPA. Reviewed and evaluated documents regarding the history of the MS4 and the NOI Plan; prepared summary report for the county to document current status of the EPA requirements for the MS4 Plan and NOI and define options, deliverables, action items, and schedules/timelines; and helped the county resubmit the MS4 Application to EPA. By working cooperatively with both the county and EPA, helped avoid financial penalties for the county.

Phase I and Phase II Assessments, Northwest New Mexico Council of Governments, Gallup, NM. 2010 – 2013. *Contract Manager and Project Manager.* Contract Manager for Northwest New Mexico Council of Governments (NWNMCOG) On-Call Services contract. This contract was established by the NWNMCOG to evaluate potential Brownfields within the NWNMCOG area (Gallup, San Juan, and Cibola counties). Performed Phase I and Phase II Assessments for the NWNMCOG as part of this contract. Brownfield site characterization activities are the general focus of the contract for those sites located within the NWNMCOG area. Phase II activities conducted under this contract included hollow-stem and air rotary drilling, geophysical survey using electromagnetic (EM) and ground-penetrating radar (GPR) equipment, surface and subsurface soil sampling, groundwater sampling, and investigative excavations using a backhoe.

An example of a NWNMCOG project is the Coal & Puerco Site in Gallup, New Mexico. This site is proposed to be redeveloped with a live/work facility by Community Area Resource Enterprise 66. A dry-cleaning facility is located immediately north of the site. Led INTERA's efforts to investigate the redevelopment site and determine what remedial actions or engineering controls would need to be implemented at the site to although for safe and cost-effective redevelopment. INTERA conducted surface and subsurface soil sampling, soil vapor sampling, and groundwater sampling at the site. PERC was identified in site groundwater and soil vapor. Based on findings of the investigation, recommended that a vapor intrusion barrier be placed below the proposed site building to prevent impacted soil vapor from entering building indoor air. Additionally, worked with the NWNMCOG and NMED to investigate impacts to groundwater in the immediate area surrounding the site and determined that PERC was present in several off-site areas. INTERA is currently working with NMED and the responsible party to determine the vertical and lateral extent of the PCE groundwater plume and determine remedial options.

4407 Lomas Boulevard Site Investigation, Parnell Lomas, Albuquerque, NM. 2012. *Project Manager.* Led a Phase II Site Investigation at this site to determine if former operations as a gasoline service station had negatively impacted soil, soil vapor, or groundwater. The site included an office building and the client was trying to decide whether to purchase the property. After the investigation, it was determined that the site had not been negatively impacted by former operation as a gasoline service station, but that soil vapor was impacted with PCE, most likely from off-site historical dry cleaners. It was concluded that PCE could enter the current office building at levels above EPA screening levels. A proposal was prepared for a vapor mitigation system. Client decided not to purchase the property due to the cost of implementing the vapor mitigation system and associated ongoing monitoring.

Former Tulip Drive Landfill Phase I ESA and Phase II Site Investigation Activities, Luna County, Deming, NM. 2010 – 2012. *Project Manager.* Served as INTERA's Project Manager for the performance of a Phase II ESA performed at the 75-acre tract of land, including the Former Tulip Drive Landfill, located in Deming, Luna County, New Mexico. The Phase II ESA was performed for the county and city using funds provided by the EPA Brownfields Assessment Grant Program. Responsible for the development of a site-specific SAP, which guided field activities. The site was a vacant tract of land owned by the city located southeast of the intersection of New Mexico Highway 26 and U.S. Highway 180, along the Mimbres River. It was the city's and county's intent to redevelop the site as recreational open space; therefore, the objective of the Phase II ESA was twofold: (1) obtain additional information regarding the character of the former Tulip Landfill, such as cover thickness, depths and types of waste, and the extent of the former Tulip Landfill area, and (2) determine if soil and/or groundwater impacts exist from the recognized environmental concerns identified as part of the Phase I ESA completed by INTERA in 2011. INTERA conducted the following Phase II ESA field activities in 2012: (1) investigative excavation of 15 test pits located within the footprint of the former Tulip Drive Landfill, (2) hollow-stem auger (HSA) drilling and sampling of eight shallow exploratory soil borings, (3) HSA drilling and sampling of three deep soil borings, (4) installation and development of three

groundwater monitoring wells (within the deep soil borings), and (5) a single groundwater sampling event. Due to only minimal exceedances of applicable standards in site soil and no exceedances in site groundwater, recommended proceeding with site development upon completion of the following additional remediation/characterization activities:

- Consolidation of the numerous surface litter and debris piles scattered through the vacant lot to within the confines of the former Tulip Drive Landfill
- Preparation of preliminary design and installation of an evapotranspirative cap over the consolidation area to (a) minimize exposure to potentially harmful waste and (b) stabilize waste to deter further offsite transport of site contaminants via surficial processes (i.e., storm water, wind)
- Provision of bank stabilization and erosion control of property land located along the Mimbres River to mitigate the negative effects of progressive undercutting by seasonal surficial processes and help minimize future transport of site contaminants off-site
- Securing the site to prevent future indiscriminate dumping
- Installation of at least one additional ground water monitoring well in the northeast corner of the site to confirm groundwater remained unimpacted by the presence of the landfill
- Completion of one or more additional groundwater sampling events to further assess and monitor groundwater site conditions
- Completion of all additional site remediation/characterization efforts through participation in the NMED VRP.

Hotel La Posada de Albuquerque Redevelopment, City of Albuquerque, NM. 2007 – 2011. *Project Manager.* Developed a QAPP and asbestos specifications for the removal of asbestos from the Hotel La Posada de Albuquerque. Also developed an EE/CA that evaluated the remediation options for the renovation of this historic hotel. Significant quantities of asbestos and lead-based paint were present within La Posada. The EE/CA was used to support the use of the COA Brownfields Cleanup Revolving Loan Fund for a portion of the remediation. Through the EE/CA report, documented the alternative selection process for a non-time-critical removal action that was completed in accordance with 40 CFR 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan. The Hotel La Posada de Albuquerque was successfully remediated, renovated, and reopened as the Andaluz Hotel in October 2009. Prepared a self-certification document in 2011 that was submitted to the EPA for the voluntary remediation conducted at this building. Site was renamed the "Hotel Andaluz."

Casa Grande Property/El Vado Hotel Phase I Environmental Site Assessment, and Phase II Site Investigation, City of Albuquerque, NM. 2009 – 2010. *Project Manager.* Led an environmental evaluation of the Casa Grande Property on behalf of the COA. The COA proposed redeveloping the Casa Grande Property/El Vado Hotel located at 2500 Central Avenue with mixed use development (residential/commercial) and contracted INTERA to perform a National Environmental Policy Act (NEPA) Environmental Assessment, a Phase I ESA, and a Phase II Site Investigation at the site. The Phase I ESA and Phase II Site Investigation were performed with support from other key INTERA staff members. The Phase I ESA identified a historical property use (gasoline pumps at the El Vado Hotel) and a historic gasoline release at the Casa Grande Chevron located across the street as potential recognized environmental conditions and recommended subsurface soil borings as well as a geophysical investigation be completed at the property. Eight subsurface soil borings were completed at the site in areas believed to have been potentially impacted by historical property and area uses. No impact from petroleum hydrocarbons in soils and/or groundwater was identified. In addition, the geophysical investigation, conducted by Sunbelt Geophysics, did not identify any evidence of abandoned USTs at the site.

Managed the completion of a NEPA Environmental Assessment at the site as prescribed by the lead federal agency, which in this case was the Department of Housing and Urban Development. The EA was completed with support from Parametrix (cultural and biological surveys). The ESA was required to release Community Development Block Grant funds for the property purchase and additional property redevelopment work.

New Mexico Rail Runner Site Assessments, Parsons Brinckerhoff Quade & Douglas, Santa Fe, NM. 2006 – 2009. *Project Manager.* INTERA was retained by Parsons Brinckerhoff Quade & Douglas (PB) in 2006 to perform ISAs for Phase 2 of the Mid-Region Council of Governments/ NMDOT Belen to Santa Fe New Mexico Rail Runner Express Commuter Rail Project. Performed an ISA for the existing BNSF railroad line from Bernalillo to Lamy, New Mexico, and an ISA for the proposed commuter rail line from La Bajada Hill to downtown Santa Fe, New Mexico. Acted as the designated INTERA Project Manager for each ISA

project. The ISA included the assessment of existing railroad lines and facilities (BNSF and Santa Fe Southern), as well as several miles of railroad tracks constructed on undeveloped ranch land to facilitate commuter rail service between Albuquerque and Santa Fe. Project management duties included developing and implementing the schedule for the records reviews, field reconnaissance, and report development. Led field activities for each ISA (the combined assessment length of the two ISA totals over 70 miles) and coordinated with the PB Project Manager, the NMDOT Environmental Geology Section representatives, and NMDOT legal counsel with the finals of each ISA Report. The New Mexico Rail Runner Express began operations in 2009.

Landfill Gas Assessment of Five Formerly City-Owned and/or Operated Landfills, New Mexico Environmental Health Department, Albuquerque, NM. 2003 – 2009. *Contract Manager and Project Manager.* Contract Manager for INTERA's COA landfill gas assessment project. Over 100 landfill gas monitoring wells have been installed to monitor landfill gas migration at five of the COA formerly owned and/or operated solid waste landfills under direction. Managed the landfill gas monitoring well installation and supervised landfill gas sample collection. Other duties conducted include contract budget tracking, future landfill gas monitoring well locating, and landfill gas sample results interpretation. Developed the current COA landfill gas well installation report format as well as the format used for the landfill gas monitoring reports. Also developed landfill management plans to guide development on and adjacent to the former Eubank and San Antonio landfills.

Former Peru Hill Mill Site Phase I Environmental Site Assessment and Phase II Site Investigation and Remediation, New Mexico Environment Department, Deming, NM. 2001 – 2008. *Project Manager.* Performed a Phase I ESA and Phase II Site Investigation of the former Peru Hill Mill mining mill facility in Deming, New Mexico. The Peru Hill Mill primarily processed zinc sulfide ore. Peru Mining Company, a subsidiary of Illinois Zinc Company, constructed the Peru Hill Mill and operated it from 1928 to 1967. Barite of America acquired the facility in 1979 and operated it intermittently until 1985, when the company filed for bankruptcy. Luna County acquired the property in 2001 and deeded it to the City of Deming. The major environmental concerns at the site were uncontained tailings in a 104-acre impoundment and redistributed tailings transported from the impoundment by wind erosion and surface water runoff. The tailings formed dunes around the impoundment that blanketed an area of approximately 161 acres. The total area of the tailings impoundment and redistributed tailings was approximately 265 acres.

Prior to initiating the site investigation, a Phase I ESA was completed at the site. Used the results of the Phase I efforts to complete a work plan and QAPP for the Phase II Site Investigation. Soil sampling results indicated lead, arsenic, and zinc concentrations in surficial soils were in excess of NMED soil screening levels (SSLs). Recommended that surficial soils containing metals concentrations above SSLs be placed within a site tailings impoundment area and that the tailings be capped with soil to prevent further migration by wind and/or water erosion. Secured an engineering firm to design the tailings impoundment cap and a soil consolidation plan. Prior to implementation, the City ultimately used the Phase I ESA report and the information in the site investigation report to submit a VRP application to NMED.

Excavation activities were completed by the City and the tailings were excavated and redistributed to the designated tailings impoundment area. Helped develop a confirmation soil sampling plan to assure that the tailings removal effort was successful. Directed Neptune and Company (subcontractor) in the development of a site-specific remedial action goal for arsenic at the site. Remediation efforts were completed according to plan at Peru Hill Mill and a VRP Completion Report was developed for this facility in 2008. The site received a Conditional Certificate of Completion from VRP in 2009.

Plaza Del Sol Property Site Investigation, City of Albuquerque, NM. 2001 – 2008. *Project Manager.* Led the investigation of this Brownfields redevelopment site, which was believed to be impacted by a historic petroleum hydrocarbon release in the local area. Investigation activities included the preparation of a Phase I ESA, installation of monitoring wells, and groundwater sample collection. Completed additional work at this site on behalf of the COA and private developers in 2008 and developed a VRP Completion Report for the site. The site received a Certificate of Completion from the NMED VRP in 2008 and has since been developed with residential housing.

City of Santa Fe Railyard (including Phillips Petroleum) Brownfields Investigation, City of Santa Fe/New Mexico Environment Department, NM. 2000 – 2008. *Project Manager.* Led several stages of work completed at the City of Santa Fe Railyard for either the City of Santa Fe or the NMED. The work included the development of a Phase I ESA for a 33-acre portion of the site, a preliminary evaluation of groundwater impacts, a subsurface soil clean-up of tar, and the development of a VRP Completion Report. The Phase I ESA focused on identifying more fully potential responsible parties so that the City could consider this information in its Brownfields redevelopment strategies. The City development plan was to redevelop the underutilized

railyard with a railyard park to include open space and trails, green space, and a farmer's market area. A VRP Application and Work Plan were developed by the City and the site was accepted into the VRP.

Construction at the site began in 2006, and tar was discovered in subsurface soils during archaeological excavation work being conducted at the site. Provided the planning and oversight of the removal of subsurface soil containing tar at the site in 2006 and 2007. Developed a report which was submitted to NMED documenting the tar removal activities completed on behalf of the City.

Performed a Phase I ESA at the Phillips Petroleum site, which is located within the Santa Fe Railyard. Completed a VRP application and developed a work plan to address petroleum hydrocarbon contamination in surface soils located at the Phillips Petroleum site. The work plan included additional groundwater monitoring, but no other work was recommended. The Phillips Petroleum site was incorporated into the Santa Fe Railyard Certificate of Completion once the VRP Completion Report was developed and submitted. After receiving a NMED VRP Certificate of Completion and Covenant Not to Sue, this site is now completely redeveloped.

Tender Loving Care Cleaners Phase I Environmental Site Assessment, New Mexico Department of Transportation, Belen, NM. 2006. *Project Manager.* Conducted a Phase I ESA at the former Tender Loving Care (TLC) Dry Cleaning facility located in Belen, New Mexico. Conducted the Phase I ESA to meet the assessment and EPA AAI requirements of the ASTM Standard E1527-05, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" and the reporting requirements of the NMDOT 1999 Hazardous Waste Assessment Handbook. The site operated as a dry cleaner under the name "Sunshine Cleaners" from 1987 to 1990 and as TLC Cleaners from approximately 1990 to 1997. NMED conducted a Phase II Site Investigation at the facility and determined that chlorinated solvent contamination was present in subsurface soils and groundwater. The Phase I ESA developed recommended additional sampling to delineate the extent of soil and groundwater contamination. NMDOT ultimately decided not to acquire the property for use as a New Mexico Rail Runner stop.

Former Hillcrest Hospital Facility Site Characterization, New Mexico Environment Department, Silver City, NM. 2004 – 2006. *Project Manager.* Managed the characterization of an abandoned hospital building proposed to be redeveloped as a library. The site characterization included the evaluation of the building for the presence of asbestos and lead-based paint. Additional work included the characterization of site soils for asbestos contamination as well as excavations completed to find an abandoned petroleum storage tank. Developed the QAPP to guide sampling to adequately characterize the facility. Prepared the integrated work plan for the remedial efforts and assisted the Town of Silver City in the selection of a remediation contractor. Managed the remediation work which included asbestos and lead-based paint abatement, as well as a clean-up for pigeon droppings. After successful remediation, the building was demolished and the site was considered ready for redevelopment.

Proposed Rio Grande Silvery Minnow Sanctuary, U.S. Department of Interior - Bureau of Reclamation, Albuquerque, NM. 2005. *Project Manager.* Served as the project manager for a Phase II site investigation evaluating a proposed site for use as a minnow sanctuary. Developed the work plan and provided oversight for the field work consisting of soil, subsurface soil, surface water, and groundwater sampling. Performed an additional site investigation using biological testing of fish to further evaluate the site for suitability as a minnow sanctuary. The site was ultimately selected by the Bureau of Reclamation for the location of the Rio Grande Silvery Minnow Sanctuary.

Phase II Site Investigation and Soil Remediation Activities at Former Araho Well Injection Disposal Facility, New Mexico Oil Conservation Division, Lovington, NM. 2003 – 2005. *Project Manager.* Managed a Phase II site investigation and subsequent soil remediation activities at a former well injection facility. Evaluated the site for the presence of petroleum hydrocarbons and chloride content in soil and then developed a work plan for remediation. Supervised the soil remediation efforts including soil excavation, transportation, and disposal and the subsequent placement of clean fill. Assisted engineers in the development of a cap for the site and provided oversight for the cap construction.

Former San Antonio Landfill Phase II Site Investigation, City of Albuquerque, NM. 2002 – 2003. *Project Manager.* Led a geophysical investigation at the former San Antonio Landfill on behalf of the COA and NMED to determine the volume of waste and thickness of cover at the site. The landfill consisted of approximately 42.5 acres in northeast Albuquerque in an area that was once on the outskirts of town but later became a residential and commercial area. Owned partially by the COA and partially by private landowners, the landfill reportedly accepted municipal waste from 1968 until 1970, at which time it was

capped and informally closed. Data from the geophysical survey provided enough evidence to conclude that the depth of soil cover across the San Antonio Landfill ranged from 2 to 6 feet. Based on the geophysical evidence of the thickness of the soil cover, it was determined it was very unlikely that landfill-related waste was present in surface soils at the site. The results of this investigation were subsequently used several times to help the COA guide development work on and near the former landfill.

Voluntary Remediation Program Assistance (Brownfields Awareness), New Mexico Environment Department, Santa Fe, NM. 2002. *Project Manager.* Managed a NMED project to increase awareness of the number of brownfields sites within New Mexico and the funding assistance available to New Mexico municipalities for brownfields site investigation and remediation. Project included extensive file review, database management, and coordination of a conference for public and private sector representatives. Consistent interaction with the VRP manager and VRP staff was essential to complete this task.

Historic Waterworks Property Site Investigation, New Mexico Environment Department, Silver City, NM. 2002. *Project Manager.* Led investigation to characterize site for inclusion in the state VRP. Site characterization activities included surface soil sampling, soil boring installation, subsurface soil sampling, and groundwater sample collection. In addition, asbestos and lead-based paint sampling were conducted in the historic building located on the site. Site characterization activities required interaction with NMED and the State Historic Preservation Officer.

Old Silver City Landfill Site Investigation, Town of Silver City, NM. 2000 – 2002. *Project Manager.* Led a Phase II Site Investigation of the closed municipal waste landfill known as the Old Silver City Landfill on behalf of the Town of Silver City and the NMED in 2000. The landfill operated from 1968 to 1993 and was historically used by the Town of Silver City and Grant County residents and businesses. The landfill was unlined and placed over arroyos and suspected to be serving as a source for methane gas and groundwater contaminants. Performed an evaluation of potential sources for chlorinated solvents in the vicinity of the landfill that might have been related to groundwater contamination in the area. This task was completed by collecting surface soil samples at an onsite machine shop; subsequent analysis of these samples showed the machine shop was not a source of the contamination.

In addition, the Town of Silver City and NMED asked for an evaluation of viability of harnessing the methane gas from the landfill for energy purposes to be conducted. As a first stage of this work, performed a site reconnaissance of the landfill with landfill engineers, collected landfill gas samples, and reviewed all the available existing records on disposal history and methane gas detection. This information was used to estimate the landfill gas volume and methane concentration using industry-accepted methods. It was determined that there was not enough landfill gas available to provide a viable energy source.