

**PHASE I ENVIRONMENTAL SITE ASSESSMENT
NON-FEDERAL PARCEL, CAVE CREEK (6L RANCH)
MARICOPA COUNTY, ARIZONA**
Resolution Copper

Prepared for:



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Project Number: 807.120

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EXPIRES 9/30/2019



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EXECUTIVE SUMMARY

WestLand Resources, Inc. (WestLand) was contracted by Resolution Copper Mining LLC (the “User”) to perform a Phase I Environmental Site Assessment (ESA) for approximately 149 acres referred to as Cave Creek and also known as the 6L Ranch parcel (“the Property”). The Property is a private in-holding within the Tonto National Forest, located along Cave Creek about 6 miles north of the town of Cave Creek. The nearest large metropolitan community is Phoenix, Arizona, located approximately 25 miles south of the Property. The Property is located in a portion of Section 21 of Township 7 North, Range 4 East, in the Gila and Salt River Baseline and Meridian, Maricopa County, Arizona (**Figure 1**). The Maricopa County Assessor Parcel Number (APN) for the Property is 219-09-001.

An aerial photo showing the Property boundaries is included as **Figure 2**. Photographs depicting the site and vicinity are provided in **Appendix A**.

This Phase I ESA has been completed in accordance with the guidelines provided in the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property* (ASTM E 2247-08). The purpose of this work was to identify the presence or potential presence of recognized environmental conditions (RECs) resulting from past or present activities. According to ASTM guidelines, a REC is defined as “...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.”

Findings

Environmental Liens/Activity and Use Limitations. On June 15, 2016, WestLand engaged Environmental Record Search (ERS), to conduct a search of available land title records for environmental liens and activity use limitations (AULs) on the Property. A search was completed for Maricopa County APN 219-09-001 and no records of environmental liens or AULs associated with the Property were identified. There were no title records reviewed that indicated a REC in connection to the Property.

Records Review:

Environmental Records. WestLand contracted with ERS to conduct an electronic search of regulatory agency databases for references to the Property and surrounding lands. The database search was completed on June 13, 2016, by conducting a search from the boundaries of the Property to the minimum search distance recommended by the ASTM standard. The Property did not appear on any of the databases searched and there were not any database records for other properties within the

ASTM-recommended distance of the Property boundaries. No REC were identified in connection to known government records in the vicinity of the Property.

The Mineral Resource Data System reports an old mine site located approximately 0.6 miles south of the Property. Those workings are associated with Silver Cross Mine which operated in the 1950s. Mined commodities were gold, copper and silver. This mine and associated prospects are all located downgradient of the Property and the extent of workings appears to have been limited due to the short timeframe and scale of production. Mine work associated with this record are not considered a REC for the Property.

Prior Environmental Report. A prior Phase I ESA was completed by WestLand in April 2004. The 2004 Phase I ESA revealed no evidence of RECs in connection with the Property.

Physical Setting. The Property is located in the Central Highlands physiographic province in the transition zone between the Basin and Range and Colorado Plateau provinces. The Property is located along the canyon floor and adjacent upland areas of Cave Creek with elevations ranging from 2,560 to 2,800 feet above mean sea level (amsl).

The Property lies in the Galloway Wash-Cave Creek sub-basin within the Salt River Basin surface watershed (HUC 150601). Cave Creek is ephemeral to intermittent, with some perennial reaches in the vicinity of the Property. Cave Creek originally flowed south toward the Salt River in Phoenix. The creek's flow to the Salt River is intercepted by the Cave Creek Dam in the northern Phoenix Metropolitan Area and the canal system in Phoenix, which divert the stream to discharge to the Agua Fria River (WestLand 2004b).

The Property is located in the Carefree sub-basin within the larger Phoenix Active Management Area (AMA) groundwater basin. This basin covers approximately 140 square miles within Maricopa County. The general groundwater flow direction for this sub-basin is to the west-southwest. There are no registered wells within the Property; however, nine wells are registered with the Arizona Department of Water Resources (ADWR) within one mile from the Property boundaries. Available records for these wells indicate that water levels (likely taken at the time of well installation [circa 1990-2000]) vary between 28 and 195 feet below ground surface (bgs) (ADWR 2016).

Historical Use. Modern land use at the Property has been limited to homesteading and cattle ranching. John W. Lewis established a claim to the land pursuant to the Homestead Act, in April 1920. The Property was used for cattle grazing until 2001 when the US Forest Service (USFS) restricted grazing on the public lands (Cartwright allotment of the Tonto National Forest). In the 1930s-1940s, the Property was acquired by the Cartwrights, another cattle rancher in the area. In the 1980s, the Johnson Cattle Company acquired the Property from the Cartwright organization and the current owner, Swift Current Land and Cattle LLC acquired the Property in 2004. There is no evidence of a

formal ranching headquarters that may have stored chemicals at the Property. Development of the Property as a ranch was very limited. Use of the Property as a cattle ranch and homestead did not reveal any REC.

Historical and current land use on land surrounding the Property is largely similar to the Property and may include recreational camping, hunting or hiking.

Site Reconnaissance. Between June 7 and June 9, 2016, and between June 13 through June 15, 2016, WestLand visited the Property to assess existing environmental conditions. Field observations were consistent with the findings of WestLand's historical review of the Property and surrounding properties. The Property is generally characterized as undeveloped open space with evidence of former ranching use.

Several ranching features were observed near the north boundary of the Property which was likely the headquarters for the John Lewis Homestead/Lewis Ranch. Developed features include a concrete watering trough, pipes, a steel cistern, a well, a collapsed dry-laid masonry outbuilding with tin roof, a wooden cattle chute and corral area. WestLand theorizes that the cistern once housed a pump, which drew water from the well and diverted it toward the trough.

It is likely there was not a formal house at the Property though temporary dwellings may have been constructed. The Homestead Act of 1862 allowed settlers to establish homesteads on public lands. In order to successfully apply for a land patent, homesteaders had to “prove up,” or meet the requirements set out by the Homestead Act (Stein 1990). Habitation on a homestead did not necessarily require a permanent structure to be built; many homesteaders dwelt in crude or semi-permanent structures, such as “the tent-house, that semi-portable, canvas-sided abode so popular in Arizona in the late nineteenth and early twentieth centuries” (Stein 1990:12).

There is no evidence of current human occupation or intense recreational use of the site, though dispersed hunting and camping have likely occurred (camp fire rings, bullet holes in cistern -but no shell casings observed).

Prehistorically, the Property was apparently extensively used and occupied by prehistoric cultures, as petroglyphs, stone structures, and grinding areas are present at several locations along Cave Creek and on ridge tops overlooking the stream.

Interviews. Interviews were conducted with several individuals as part of this assessment:

- The report User and Property owner: Ms. Casey McKeon, representative for Resolution Copper Mining;
- Government officials: Representatives from Mayer Fire Department, Black Canyon Fire Department, and El Mirage Fire Department; and

- Mr. Ed Childers, the consultant to Johnson Cattle Company and the site representative in 2004 (interviewed in 2004; WestLand 2004a).

No information provided through the interviews indicate the potential for a REC in connection to the Property.

Recognized Environmental Conditions

WestLand has performed this Phase I ESA in conformance with the scope and limitation of ASTM E 2247-08 for the Property. This assessment has revealed no evidence of RECs in connection with the Property.

I. INTRODUCTION

WestLand Resources, Inc. (WestLand) was contracted by Resolution Copper Mining LLC (RCM; the “User”) to perform a Phase I Environmental Site Assessment (ESA) for approximately 149 acres referred to as Cave Creek, also known as the 6L Ranch parcel (“the Property”). The Property is a private in-holding within the Tonto National Forest, located along the Cave Creek drainage about 6 miles north of the town of Cave Creek. The nearest large metropolitan community is Phoenix, Arizona, located approximately 25 miles south of the Property. The Property is located in a portion of Section 21 of Township 7 North, Range 4 East, Gila and Salt River Baseline and Meridian, Maricopa County, Arizona (**Figure 1**). The Maricopa County Assessor Parcel Number (APN) for the Property is 219-09-001.

I.1. PURPOSE

The purpose of this investigation was to conduct an assessment of the Property and surrounding areas to identify the presence or potential presence of recognized environmental conditions (RECs) potentially resulting in environmental impacts to the Property. According to the American Society for Testing and Materials (ASTM) E 2247-08 guidelines, a REC is defined as: *...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.* This term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do 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 government agencies. Conditions determined to be *de minimis* are not RECs.

The results of an investigation may be utilized as part of the due diligence investigation for prospective property owners promulgated pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, a.k.a. Superfund), the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the Small Business Liability Relief and Brownfield’s Revitalization Act of 2002 (the Brownfield Amendments). This ESA is intended to assist the User in satisfying the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations of CERCLA. In order to qualify for one of the Landowner Liability Protections, the report User must provide certain information to the environmental professional conducting the ESA. This information can be provided by completing the User Questionnaire. Failure to provide this information could result in a determination that the All Appropriate Inquiry is not complete. Additionally, the Property owner has continuing obligations, if applicable, to receive liability protections in addition to the All Appropriate Inquiry. The continuing obligations include: 1) compliance with land use restrictions; 2) not impeding the effectiveness or integrity of institutional controls; 3) taking reasonable steps to prevent releases; 4) providing assistance

and access to the U.S. Environmental Protection Agency (EPA), state, or other parties conducting response or restoration actions; 5) complying with CERCLA information requests and subpoenas; and 6) providing legally required notices.

I.2. SCOPE OF SERVICES

This ESA has been completed in accordance with the guidelines provided in the ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property* (ASTM E 2247-08). This standard satisfies the requirements of the EPA *All Appropriate Inquiry* provisions, which became effective November 1, 2006 (40 CFR Part 312). This protocol requires the review of readily available environmental records, historical and current land use, interviews with persons knowledgeable about the Property, and a field reconnaissance to observe on-site conditions and adjoining properties.

The User of this report has responsibilities for addressing some of the mandatory provisions of the standard. ASTM E 2247-08 Section 6 (User Responsibilities) describes tasks that will help identify the possibility of RECs in connection with the Property that do not require the expertise of an environmental professional, including checking title records for environmental liens and activity and use limitations (AULs). WestLand commissioned a title search for environmental liens and AULs on the User's behalf.

This ESA does not assess ASTM non-scope considerations, including asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality (including vapor intrusion), biological agents, mold, or other nuisances.

I.3. LIMITATIONS AND EXCEPTIONS

This Phase I ESA evaluates potential sources of hazardous substances or petroleum products that could be considered a REC and a liability due to their presence in significant concentrations, or the potential for contamination migration through exposure pathways. Unless otherwise noted, this assessment did not include any testing or sampling of materials. This report is intended to provide further recommendations regarding potential RECs related to the Property; conclusive identification of hazardous substances and petroleum products can be accomplished only through sampling and laboratory analysis.

Field reconnaissance does not provide information regarding potential sources of contamination below the ground surface. However, in cases of subsurface contamination, aboveground indicators such as obvious stress to plant life or staining are noted. All findings are based on observations and

information collected at one point in time and is based on conditions during the site visit. A change of those conditions may alter the findings and conclusions of this report.

A Phase I ESA cannot, within its scope of assessment, wholly eliminate uncertainty regarding the potential presence of RECs. WestLand believes that the information in this report is reliable; however, WestLand cannot guarantee that the information provided by all the sources contained in this report is complete and accurate. This report is intended to decrease, but not eliminate, uncertainty regarding the potential for RECs in connection with a property given reasonable limits of cost and time, and in a manner consistent with the customary practices of the environmental consulting industry, under similar circumstances at the time services were performed and in similar localities. It should be noted that the conditions at the Property could change as a result of natural processes or be altered by human activities at the Property and/or nearby sites.

I.4. SPECIAL TERMS AND CONDITIONS

No special terms or conditions are associated with this report.

I.5. USER RELIANCE

This Phase I ESA has been prepared for use by Resolution Copper Mining LLC. This Phase I ESA may not be relied upon by any other person or entity without the written consent of WestLand.

I.6. CONTINUED VIABILITY

Due to the nature of Phase I ESA inquiries, their useful life is limited. ASTM E 2247-08 guidelines require that certain components of a Phase I ESA be completed less than 180 days prior to the date of acquisition or (if no acquisition is involved) the intended transaction. The following components of the Phase I ESA are presumed valid only within 180 days prior to the date of acquisition or other intended transaction:

- Interviews
- Searches for environmental liens
- Government records review
- Site reconnaissance
- Declaration by the environmental professional

Other components of the Phase I ESA are valid for one year. The above-listed components can be separately updated in order to eliminate redundant environmental due diligence efforts within one year. After one year has passed, all Phase I ESA components should be redone. The prior ESA report may be used as a reference during completion of the new investigation and analysis.

2. SITE DESCRIPTION

This section describes the location, general characteristics, and current uses of the Property. The current uses of adjoining properties are also described.

2.1. LOCATION AND LEGAL DESCRIPTION

The Property is a private in-holding within the Tonto National Forest, located along Cave Creek about 6 miles north of the town of Cave Creek. The nearest large metropolitan community is Phoenix, Arizona, located approximately 25 miles south of the Property. The Property is located in Maricopa County in a portion of Section 21 of Township 7 North, Range 4 East in the Gila and Salt River Baseline and Meridian, in Arizona (**Figure 1**). The Maricopa County APN for the Property is 219- 9- 01.

2.2. SITE AND VICINITY GENERAL CHARACTERISTICS

The Property consists of 149 acres and is located along the canyon floor and adjacent upland areas of Cave Creek with elevations ranging from 2,560 to 2,800 feet above mean sea level (amsl). The Property and surrounding areas are comprised of rugged canyons and mesas formerly used as a homestead and for cattle grazing. The Property and its vicinity are largely devoid of development such as buildings or major earthwork.

2.3. CURRENT USE OF THE PROPERTY

There is no evidence of current human occupation or intense recreational use of the site, though dispersed hunting and camping have likely occurred recently (camp fire rings observed; bullet holes in steel cistern). There has been no recent use of the Property by the current owner.

2.4. DESCRIPTION OF STRUCTURES, ROADS, AND OTHER IMPROVEMENTS ON THE SITE

Several historical ranching features were observed near the north boundary of the Property including a concrete watering trough, pipes, a steel cistern, a hand-dug well, a collapsed dry-laid masonry outbuilding with tin roof, a wooden cattle chute and corral area.

Prehistorically, the Property was apparently extensively used and occupied by prehistoric cultures, as petroglyphs, stone structures, and grinding areas are present at several locations along Cave Creek and on ridge tops overlooking the stream.

2.5. CURRENT USES OF ADJOINING PROPERTIES

Areas surrounding the Property are federal lands managed by US Forest Service (USFS), as part of the Tonto National Forest. The national forest land is currently used for dispersed recreational activities

(primarily hunting, camping, off road vehicle use, and hiking). Cattle grazing was reportedly allowed on the national forest land until 2001. There are no current commercial or industrial uses on adjoining parcels.

3. USER-PROVIDED INFORMATION

The report User is Resolution Copper Mining LLC who provided relevant information about the Property. Swift Current Land and Cattle LLC is the land owner and a subsidiary of Resolution Copper Mining LLC. The User and Owner representative is Ms. Casey McKeon. Copies of the User and Owner Questionnaires are provided as **Appendix B**.

3.1. TITLE RECORDS

The report User provided copies of title information in connection to the Property which was transmitted on April 6, 2004, from the title company (Land America Commercial Services) to Swift Current Land & Cattle LLC. This included a copy of Lawyers Title Cooperation Title Commitment dated March 10, 2004. The accompanying title insurance requirements and exceptions typically list known land encumbrances (i.e., taxes, deed restrictions, easements, liens) and may provide an indication of the potential for contamination at the Property (**Appendix C**). Based on WestLand's review, the listed standard and specific encumbrances do not indicate the release or threat of a release of a hazardous material or petroleum product at the Property.

WestLand reviewed US Department of the Interior Bureau of Land Management General Land Office homestead records and identified a Record of Patent for the Property. This record identifies John W. Lewis as establishing a claim to the land pursuant to the Homestead Act (BLM 2016). The Record of Patent is dated April 28, 1920. In 2004, the then Property owner representative (Mr. Ed Childers) identified Mr. Lewis as the original land landowner. According to Mr. Childers, the land was acquired by the Cartwrights, another cattle rancher in the area, in the 1930s or 1940s and the Johnson Cattle Company acquired the Property from the Cartwright organization in 1980 (WestLand 2004a). This informal chain-of-title record does not indicate the presence of any recognized environmental conditions associated with the Property owners.

3.2. ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

The User is not aware of any environmental liens or AULs for the Property.

WestLand engaged Environmental Record Search (ERS) to conduct a search of available land title records for environmental liens and activity and use limitations (AULs) on the Property on behalf of the User. A search for environmental liens and AULs was completed for each parcel on June 15, 2016; no records of environmental liens or AULs associated with the Property were identified (**Appendix D**). Copies for the deed associated with the Property is included in the environmental lien and AULs report.

WestLand was also provided the current deed for the Property that accompanied the search of available land title records for environmental liens and AULs on the Property (Maricopa County APN

219-09-001). The Special Warranty Deed was executed in July 2004, and recorded the same month, conveying ownership from Johnson Cattle Company to Swift Current Land & Cattle LLC. The deed does not indicate that there are any environmental liens or AULs on the Property. A copy of the deed is included with **Appendix D**.

3.3. SPECIALIZED KNOWLEDGE

The User provided no information regarding specialized knowledge regarding the Property beyond information described as “commonly known” or “reasonable ascertained”, see below.

3.4. COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The User indicated that until 2001 the Property was used for cattle grazing, and to their knowledge, was largely devoid of development such as buildings or major earthwork and that currently the Property is vacant. The User has no knowledge or evidence of chemical storage at the Property. No other commonly known or reasonably ascertainable information relevant to potential RECs was provided by the User.

3.5. VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The User reports that there is no information indicating the value of the Property has been reduced as a result of environmental issues.

3.6. REASON FOR PERFORMING PHASE I

The User states that the Phase I was being performed to identify RECs requiring additional investigation relating to a land exchange property transaction between the USFS and Resolution Copper Mining.

3.7. OTHER

Based on the User’s knowledge of, and experience related to the Property, no obvious indicators point to the presence or likely presence of contamination on the Property of which the User is aware. No other information relevant to potential RECs was provided by the User.

4. RECORDS REVIEW

WestLand reviewed a variety of regulatory records to determine if any past uses of the Property or uses within adjoining areas may have led to RECs on the Property.

4.1. ENVIRONMENTAL RECORD SOURCES

WestLand contracted with ERS to conduct an electronic search of regulatory agency databases for references to the Property and surrounding lands. The database search (Rec Check Area Report Results) was conducted on June 13, 2016, and included standard and additional federal, tribal, state, local, and supplemental database records, as well as ERS proprietary database records. The regulatory agency databases were queried by conducting a search from the boundaries of the Property to the minimum search distance recommended by the ASTM standard. A copy of the ERS environmental reports that describes the databases searched, search distances, record details for the search results, and the dates the databases were last updated are provided in **Appendix E**.

The Property did not appear on any of the databases searched and there were not any database records of other environmental records within the ASTM-recommended distance of the Property boundaries. There were also no un-mappable (orphan) sites identified.

4.2. PRIOR ENVIRONMENTAL REPORTS

A Phase I ESA for the Property was completed in April 2004 (WestLand 2004a). No evidence of any RECs were observed on the Property nor were there any indications of past or current activities leading to RECs on the Property or adjoining parcels. Relevant information from the prior report has been incorporated and referenced for this assessment.

4.3. PHYSICAL SETTING

The Property's physical setting was evaluated by WestLand to gain a comprehensive understanding of the Property's geophysical characteristics. These geophysical characteristics, including surface topography, soils, geology, hydrology, and hydrogeology may relate to the potential migration of hazardous substances and petroleum products.

4.3.1. Topography

The Property is located in the Central Highlands physiographic province in the transition zone between the Basin and Range and Colorado Plateau provinces. The Property is located along the canyon floor and adjacent upland areas of Cave Creek with elevations ranging from 2,560 to 2,800 feet amsl. Cave Creek is the dominant stream in the immediate area; numerous named and unnamed tributaries feed this creek. The main tributaries are Bronco Creek, Springs Wash, Little Maggie May,

Big Maggie May, Grays Gulch, and Mattys Fork. Significant springs in the watershed include Quien Sabe Spring, CP Spring, Walnut Spring, and Maggie May Spring (WestLand 2004a, 2004c). Cave Creek drains the southern portion of the New River Mountains, a rugged range defining the eastern extent of the Agua Fria River valley. Notable peaks in the vicinity of the Property include Skill Mesa (rising to 4,436 feet) immediately east of the Property, Sugarloaf Mountain (rising to 3,875 feet) southwest of the Property, and Black Mesa (rising to 4,745 feet) west and north of the Property.

Within the Property, the topography is comprised of nearly flat floodplains with terraces adjacent to the stream that are up to approximately 6 feet above the active channels. Upland areas displace moderate to steep slopes with some vertical sections where erosion has removed sedimentary (alluvial [stream bed] or lacustrine [lake bed]) deposits (WestLand 2004a, 2004c). The elevation of the Cave Creek channel as it enters the northern (upstream) portion of the Property is about 2,620 feet while the elevation is 2,520 feet at the southern (downstream) portion. The channel bed within the Property is relatively level (0.017 slope), dropping only about 100 feet in 1.05 mi.

4.3.2. Soils

The Arizona Land Resource Information System (ALRIS) General Soils Map indicates that the Property is located within Lithic-Torriorthents-Lithic Haplustolls-Rock Outcrop soil association (HA3) (ALRIS 1975). The soils of this association are well-drained, shallow soils and rock outcrops that occur on semiarid, mid-elevation hills and mountains. These soils formed in residuum weathered from many rock types including granite, gneiss, rhyolite, andesite, tuffs, limestone, sandstone, and basalt. Lithic Torriorthents make up about 30 percent, Lithic Haplustolls 25 percent, rock outcrop about 25 percent, and Haplargids, Torrifluents, and other minor soils make up the other 20 percent of the association. Smoother areas of this soil association have good potential for livestock grazing. Characteristics of these soils that limit their use include steep slopes, shallow depth to bedrock, and rock fragments on the surface (Hendricks 1985).

4.3.3. Geology

The geology of the Cave Creek area within the New River Mesa 7.5-minute quadrangle, and including the Property, has been described as mountainous (Ricketts 1887, Ferguson et al. 1998, Gilbert et al. 1998). Bedrock dominates most of the land surface in this area, with colluvium and alluvium accumulations on valley and canyon floors. Because of the steep slopes, recent colluvium or landslides cover bedrock at the toes of the mesa cliffs and slopes. Alluvium is present only in and along narrow stream channels. The New River Mountains are comprised of Quaternary and Tertiary basalt-covered tablelands cut by mountain-fed streams through Precambrian metamorphic rocks (Chronic 1983). Cave Creek has carved a canyon approximately 1,300 feet deep through large mesa-forming Tertiary lava flows. On the upper slopes of the canyon, the walls are generally steep, even cliff-forming; the

lower slopes are less steep in most places. A notable feature of the lower slopes is the high number of large igneous boulders that have slid, tumbled, or slumped from the mesas above.

The surface geology underlying the majority of the Property is mapped as Middle Miocene to Oligocene Volcanic and Sedimentary Rocks, Undivided (Tsv) (Richard et al. 2000). Middle Miocene to Oligocene Volcanic and Sedimentary Rocks consist of a sequence of diverse volcanic rocks with abundant interbedded sedimentary rocks. A small portion of the northern and southern tips of the Property is mapped as Early Proterozoic Metavolcanic Rocks (Xmv) (Richard et al. 2000). Early Proterozoic Metavolcanic Rocks are weakly to strongly metamorphosed volcanic rocks including basalt, andesite, dacite, and rhyolite deposited as lava or tuff, related sedimentary rock, and shallow intrusive rocks.

Cave Creek itself roughly parallels a Tertiary fault, and the canyon was likely formed by erosion of the weakened rock along the fault line (Ferguson et al. 1998). The fault runs through the extreme northwest corner of the Property. Two earthquakes occurred near Cave Creek on December 19 and 23, 1974 and have been described as 2.5 and 3.0 on the Richter magnitude scale (Sauck 1976). This suggests that deep faults occur in the New River Mesa area and indicate that there are still at least some locally active deep faults in the region of the Property.

4.3.4. Hydrology

The Property lies in the Galloway Wash-Cave Creek sub-basin within the Salt River Basin surface watershed (HUC 150601). Cave Creek originally flowed south toward the Salt River in Phoenix. The creek's flow to the Salt River is intercepted by the Cave Creek Dam in the northern Phoenix Metropolitan Area and the canal system in Phoenix, which divert the stream to discharge to the Agua Fria River (WestLand 2004b).

Cave Creek is ephemeral to intermittent, with some perennial reaches in the vicinity of the Property. The map of the perennial streams of Arizona compiled by Brown et al. (1978) indicate that there is an approximately 4-mile long stretch of Cave Creek upstream of the Property with the lower reach at least 1.5 miles above the northern boundary of the Property. This perennial reach of Cave Creek has been identified by the Arizona Department of Environmental Quality (ADEQ) as "Inconclusive" regarding attainment of water quality standards for designated uses (Fish Consumption, Full Body Contact, Agricultural Livestock Watering, and Aquatic and Wildlife [warm water]) (ADEQ 2016). Additional sampling for a suite of parameters has been recommended.

The National Wetlands Inventory map identifies no wetlands within the Property (USFWS 2015, WestLand 2004a). Hydriparian and mesoriparian habitat is present along the stream channel. Facultative and obligate wetland species, and (to a limited extent) hydric soils, were present surrounding the perennial pools and intermittently along the stream channel. Based on these

observations, an area of approximately one acre of wetlands occurs along Cave Creek within the Property.

The area has been mapped by the Federal Emergency Management Agency as flood Zone D, an area of undetermined flood hazard. Based on field observations, the floodplain within the Property follows the stream channel for the 1.5-mile reach passing through the Property, averaging approximately 0.15 miles wide. Thus, the floodplain within the Property is estimated to encompass 0.2 square miles (WestLand 2004a).

The Property has active, registered surface water rights in the Salt River watershed sourced from the 6L Ranch spring, and another sourced from Cave Creek (WestLand 2004b).

4.3.5. Hydrogeology

The Property is located in the Carefree sub-basin within the larger Phoenix Active Management Area (AMA) groundwater basin. This basin covers approximately 140 square miles within Maricopa County, bounded on the west by the Bradshaw Mountains and on the east by the New River Mountains. Groundwater flow direction for this sub-basin is generally to the west-southwest (ADWR 2014). Recharge to the aquifer occurs primarily along mountain fronts and from streambed recharge. The major aquifers consist of recent stream alluvium and basin fill. Some ground water is found in the sedimentary rock in the area (ADWR 2014).

The ADWR Well Registry spatial database was queried to review any data for wells within the boundaries of the Property. There were no registered wells identified within the Property (ADWR 2016). The searched area was expanded to one mile from the Property and nine registered wells were identified. Available records for these wells indicate that water levels (likely taken at the time of well installation [circa 1990-2000]) vary between 28 and 195 feet below ground surface (bgs) (ADWR 2016). Two of these wells were used for exploration and seven are exempt/domestic wells. There are no records of groundwater monitoring wells on or near the Property (WestLand 2016).

An unregistered hand-dug well was reported in 2004 and observed during the site visit in 2016. This well is located near the north boundary of the Property with other historical ranching features including a concrete watering trough, pipes, a steel cistern, a collapsed dry-laid masonry outbuilding with tin roof, a wooden cattle chute and corral area. WestLand theorizes that the cistern once housed a pump, which drew water from the well and diverted it toward the water trough. The well is lined with stone and was covered with a wooden board. The well is approximately 5 feet in diameter and appears to be approximately 20 feet deep. No water was observed in the well during the site reconnaissance.

4.4. HISTORICAL USE INFORMATION ON THE PROPERTY AND ADJOINING PROPERTIES

The purpose of reviewing historical sources is to develop a history of the previous uses of a property and surrounding area in order to help identify past uses that may have led to RECs in connection with the Property. According to the ASTM standard, obvious uses of a property shall be identified from the present back to the property's first developed use, or back to 1940, whichever is earlier. This requires reviewing only as many standard historical sources as are reasonably ascertainable and likely to be useful.

4.4.1. Historical Topographic Maps

WestLand reviewed USGS topographic maps of the Property and its vicinity dated 1930, 1939, 1964, 1987, 1994, 2006, 2011, and 2014 at various scales (**Appendix F**). Topographic maps depict both natural and developed features, including wells, structures, and other indications of historical use. The summary below presents WestLand's review of the identified mapped features on or near the Property in chronological sequence.

The 1930 30-minute Cave Creek quadrangle (1:96,000 scale) depicts the majority of the Property as undeveloped vacant land. A trail is shown running in a northerly direction through approximately the center of the Property to the northern portion, where the trail turns to the east, exiting the Property before intersecting with a north-south trail outside of the Property boundaries.

The 1939 30-minute Cave Creek quadrangle (1:125,000 scale) depicts the Property in the same conditions as the 1930 map with the exception of a clear depiction of Cave Creek through the center of the Property. The trail shown in the 1930 map is depicted as crossing Cave Creek twice near the center of the Property, but generally is located on the eastern side of the creek. Lewis Ranch is identified and a structure is delineated at the northwestern boundary of the Property. This is the suspected location of the original homestead where several historical features were identified during the site visit.

The 1964 7.5-minute New River Mesa quadrangle (1:24,000 scale) identifies the trail as a "jeep trail" along Cave Creek within the Property boundaries. It also depicts Cave Creek and its tributaries in more detail, showing water features branching from Cave Creek to the west and the east of the Property boundaries. Shrubland along Cave Creek on the Property is shown. A structure is still depicted at the northwest portion of the Property where the road changes from northbound to eastbound. There are several mine prospects identified south of the Property.

The 1987 7.5-minute New River Mesa quadrangle (1:24,000 scale) depicts the same features on the Property and in the surrounding area as the 1964 map.

The 1994 30-minute by 60-minute Theodore Roosevelt Land quadrangle (1:100,000 scale) identifies the road that enters the Property from the east as a four-wheel drive road. This map does not depict the structure previously identified at the Property but appears to provide less detail overall.

The 2006 7.5-minute New River Mesa quadrangle (1:24,000 scale) identifies the road through the center of the Property as an unimproved road as it travels in a north-south direction. Where the road exits the Property near the northern extent in an east-west direction, it is shown as a four-wheel drive road or a trail. It is labeled as a trail outside the Property boundaries where it travels in a north-south direction. The shrubland surrounding Cave Creek is depicted on this map. This map again identifies the structure at the northwest portion of the Property, as shown on the 1987 map.

The 2011 7.5-minute New River Mesa quadrangle (1:24,000 scale) depicts the unimproved north-south road in the center of the Property but does not depict the road traveling east-west at the northern extent of the Property and to the east of the Property. The creek and shrubland are depicted as with the previous maps. This map does not depict the structure foundation on the Property.

The 2014 7.5-minute New River Mesa quadrangle (1:24,000 scale) shows the same road as the 2011 map. No additional roads or structures are depicted on the Property.

4.4.2. Historical Aerial Photographs

WestLand obtained 11 historical aerial photographs depicting the Property and vicinity dating from 1953, 1962, 1965, 1971, 1981, 1992, 1997, 2003, 2009, 2013, and 2016 (**Appendix G**). WestLand reviewed the photographs for evidence of anthropomorphic disturbance and to identify any historical land uses that might have involved the use, treatment, storage, disposal, or generation of hazardous substances, or petroleum products.

As depicted in the aerial photographs, development at the Property is extremely limited. None of the aerial photographs definitively display developed features at the Property other than the roads and trails as previously described on the topographic maps. Roads and trails can be seen on land surrounding the Property in all of the aerial photographs. The locations of these trails and roads correspond to those depicted in the quadrangle maps. The structure shown in the topographic maps is visible in the 1953 and 1962 photographs, but cannot be seen clearly in the later photographs. A developed area approximately 0.6 miles south of the Property, at the end of FR 48, can be seen beginning in the 1981 photograph. This downstream area appears to be a mine site and is likely associated with the prospects first identified on the 1964 topographic maps. This downstream use is not an REC, given its distance and hydrologic location relative to the Property.

4.4.3. Property Tax Files

WestLand obtained the property tax maps for the Property and adjoining areas from the Maricopa County Assessor. The Property map and assessor parcel details are included in **Appendix H**. The files from Maricopa County indicate that the Property is vacant land with no assessed buildings or other improvements.

4.4.4. Local Street Directories

Based on the lack of development in the immediate vicinity of the Property, WestLand did not conduct a city directory search.

4.4.5. Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps typically cover development in the first half of the 20th century. Considering the lack of development at the Property, WestLand did not commission a search for these maps. It is likely no coverage for the Property is available.

4.4.6. US Geological Survey – Mineral Resource Data System

Historical aerial and topographical map review identified several mine prospects and a mine south of the Property. WestLand reviewed the US Geological Survey Mineral Resource Data System (USGS 2016) to review the nature of this mine, situated approximately 0.6 miles south of the Property. This mine is identified as Silver Cross Mine and is also known as Cave Creek and Heck Claims (Record 10046344, ID# M241360). Claims associated with this mine occurred in Sections 27, 28, 29, 32, and 33 of Township 7 North, Range 4 East. This record is for a “past producer” that mined gold, copper and silver. The first reported year of production was in 1957 and the last year was 1959. This mine and the associated prospects are located downgradient of the Property and the workings appears to have been limited. Mine work in the area is not considered a REC for the Property.

5. SITE RECONNAISSANCE

On June 7 through June 9, 2016, and June 13 through June 15, 2016, WestLand staff Mr. Jeff Charest performed a field reconnaissance to assess existing environmental conditions for the Property. Photographs documenting pertinent features are provided in **Appendix A**.

5.1. METHODOLOGY AND LIMITING CONDITIONS

Prior to conducting the site reconnaissance, WestLand reviewed current and historical aerial photographs and topographic maps (described above) to identify the location of any suspect areas, including roadways, cleared areas, disturbed soils, and structures. Areas of known concentrated human activity were assessed in more detail because these areas presented the greatest potential for impacts by hazardous materials and petroleum products.

During the site reconnaissance, WestLand evaluated the suspect areas of site disturbance through pedestrian surveys. WestLand's reconnaissance included the Property, as well as observations of the adjoining properties from publicly accessible areas. Field observations were consistent with the findings of WestLand's historical review of the Property and surrounding properties.

The Property is accessed from the trailhead of the Spur Cross Ranch Recreation Area north of the town of Cave Creek. To reach the recreation area from Cave Creek, WestLand headed north for 4.25 miles on N. Spur Cross Road from the intersection with Cave Creek Road. From the Spur Cross Ranch Recreation Area trailhead, the trail heads north, following the route of Forest Road (FR) 48 for 2.10 miles, then followed TR 4, a narrow trail, for 1.5 miles into the southern end of the Property.

Field reconnaissance does not provide information regarding potential sources of contamination below the ground surface. However, in cases of subsurface contamination, aboveground indicators such as obvious stress to plant life or staining are noted. All findings are based on observations and information collected at one point in time and is based on conditions during the site visit. A change of those conditions may alter the findings and conclusions of this report.

5.2. INDICATIONS OF PAST USES OF THE PROPERTY

The Property is generally characterized as undeveloped open space with evidence of former ranching use. Several ranching features were observed near the north boundary of the Property (**Appendix A, photos 2-6**). This location was likely the headquarters for the John Lewis Homestead/Lewis Ranch. Developed features include a concrete watering trough, pipes, a steel cistern, a well, a collapsed dry-laid masonry outbuilding with tin roof, a wooden cattle chute and corral area. WestLand theorizes that the cistern once housed a pump, which drew water from the well and diverted it toward the trough. The well is lined with stone and covered with a wooden board. The well is approximately 5 feet in

diameter and appears to be approximately 20 feet deep. No water was observed in the well during the site reconnaissance.

It is likely there was not a formal house at the Property though temporary dwellings may have been constructed. The Homestead Act of 1862 allowed settlers to establish homesteads on public lands. In order to successfully apply for a land patent, homesteaders had to “prove up,” or meet the requirements set out by the Homestead Act (Stein 1990). Habitation on a homestead did not necessarily require a permanent structure to be built; many homesteaders dwelt in crude or semi-permanent structures, such as “the tent-house, that semi-portable, canvas-sided abode so popular in Arizona in the late nineteenth and early twentieth centuries” (Stein 1990:12).

There is no evidence of current human occupation or intense recreational use of the site, though dispersed hunting and camping have likely occurred (camp fire rings, bullet holes in cistern -but no shell casings observed).

5.3. EXTERIOR OBSERVATIONS

5.3.1. Hazardous Substances and Petroleum Product Containers in Connection with Identified Uses

No hazardous substances and petroleum product containers in connection with identified uses were observed at the Property or on land immediately adjoining the Property.

5.3.2. Hazardous Substance and Petroleum Product Containers Not in Connection with Identified Uses

No hazardous substances and petroleum product containers not in connection with identified uses were observed at the Property or on land immediately adjoining the Property.

5.3.3. Storage Tanks (Aboveground and Underground)

No indications of above- or underground storage tanks potentially used for hazardous substances or petroleum products were observed on the Property or on adjoining properties.

5.3.4. Unidentified Substance Containers

No unidentified substance containers were observed on the Property or on adjoining properties during the site reconnaissance.

5.3.5. Drums

No drums were observed on the Property or on adjoining properties.

5.3.6. Odors

No strong, pungent, or noxious odors were detected on the Property or on adjoining properties during the site reconnaissance.

5.3.7. Pools of Liquid, Pits, Ponds, or Lagoons

No pools of liquid, pits, ponds, or lagoons were observed on the Property or on adjoining properties. Furthermore, no such features were observed in connection with waste disposal or treatment.

5.3.8. Wastewater

No features associated with wastewater storage and disposal were observed during the site reconnaissance.

5.3.9. Septic Systems

There is no indication that septic systems are present on the Property.

5.3.10. Wells

An unregistered hand-dug well was reported in 2004 and observed during the site visit in 2016. This well is located near the north boundary of the Property with other historical ranching features. The well is lined with stone and was covered with a wooden board. The well is approximately 5 feet in diameter and appears to be approximately 20 feet deep. No water was observed in the well during the site reconnaissance.

5.3.11. Stained Soil or Pavement

No stained soil or pavement was noted.

5.3.12. Stressed Vegetation

Vegetation across the Property appeared to be in good health. There was no indication of stressed vegetation on the Property or adjoining properties likely attributed to hazardous substances, or petroleum products.

5.3.13. Solid Waste Disposal

The Resource Conservation Recovery Act (RCRA) was enacted by Congress in 1976 and amended in 1984. RCRA's primary goal is to protect human health and the environment from the potential hazards of waste disposal. Unauthorized solid waste disposal provides the potential for hazardous and regulated substances to impact a property in the absence of waste-generating activities.

The Property appears to be generally clean of solid waste.

5.3.14. PCB Equipment

Concern over the toxicity and persistence in the environment of polychlorinated biphenyls (PCBs) led Congress in 1976 to enact §6(e) of the Toxic Substances Control Act (TSCA), which included prohibitions on the manufacture, processing, and distribution in commerce of PCBs. Historically, electrical transformers contained a cooling liquid that had PCBs. If present, electrical transformers or hydraulic equipment could provide the potential for release of PCBs onto the Property. In 1984, manufacturers began producing non-PCB transformers that contain less than 50 parts per million of PCBs.

No PCB equipment was observed at the Property.

5.4. INTERIOR OBSERVATIONS

Not applicable.

6. INTERVIEWS

6.1. INTERVIEWS WITH OWNER

On May 10, 2016, Ms. Casey McKeon completed the User questionnaire and the Owner questionnaire. Ms. McKeon indicated that until 2001, the Property was used for cattle grazing, and except for homesteading, was largely devoid of development such as buildings or major earthwork. Currently, the Property is vacant. Based on the User's knowledge of, and experience related to the Property, no obvious indicators point to the presence or likely presence of contamination on the Property of which the User is aware. She is not aware of any indication of above- or underground storage tanks, PCB equipment, wastewater treatment facilities, septic systems, contaminated dirt fill, or drains. She also is not aware of any indications of a petroleum or chemical storage or releases at the Property. She is not aware of any information potentially pointing to a REC for the Property. Responses to specific inquiries are included in **Appendix B**.

6.2. INTERVIEWS WITH OCCUPANTS

There are no current occupants of the Property. See *Interview with Owner* (above).

6.3. INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

WestLand interviewed representatives from the Mayer Fire Department, at (928) 632-9534, Black Canyon Fire Department, at (623) 374-5512, and El Mirage Fire Department, at (623) 500-3000 in May 2016 by phone to inquire whether or not they have responded to fuel/chemical spills or if they were aware of any chemical or petroleum product storage at the Property or adjoining properties. Representatives at all of the departments responded that they have no knowledge of any such spills or storage at the Property or on land in the immediate vicinity. Representatives also stated that their respective departments would likely not respond to the Property based on their district boundaries.

WestLand also inquired to the Tonto National Forest, Cave Creek Ranger District (the District) on June 14, 2016, by telephone and e-mail (ritahunter@fs.fed.us). However, as of the date of this report, WestLand has not received information as to whether or not the District has responded to the Property or adjoining properties with regard to fuel/chemical spills or if they were aware of any chemical or petroleum product storage at the Property.

6.4. INTERVIEWS WITH OTHERS

The prior Phase I ESA (WestLand 2004a) included interviews with the past Property owner's representative, Mr. Ed Childers. In 2004, Ms. Childers reported the original land owner was Mr. Lewis and the land was sold to the Cartwright organization, another rancher in the area, in the 1930s or 1940s. The Property was transferred from the Cartwright organization to Johnson Cattle Company in

the 1980s. The Johnson Cattle Company sold the Property to the current owners in the 2000s. This chain of title record does not indicate use of the Property that is indicative of a REC.

No other individuals were interviewed as part of this investigation.

7. FINDINGS AND OPINIONS

Based on the findings of the environmental records search, historical review, physical setting of the Property, field reconnaissance of the Property, prior reports, and interviews, WestLand provides the following findings and opinions pertaining to the Property:

- On June 15, 2016, WestLand engaged ERS, to conduct a search of available land title records for environmental liens and AULs on the Property. A search was completed for Maricopa County APN 219-09-001; no records of environmental liens or AULs associated with the Property were identified. The current deed for the Property, a Special Warranty Deed, was executed July 28, 2004, and recorded the same month, conveying ownership from Johnson Cattle Company to Swift Current Land & Cattle LLC, the current Property owner.
- WestLand contracted with ERS to conduct an electronic search of regulatory agency databases for references to the Property and surrounding lands. The database search was conducted on June 13, 2016, and included standard and additional federal, tribal, state, local, and supplemental database records, as well as ERS proprietary database records. The regulatory agency databases were queried by conducting a search from the boundaries of the Property to the minimum search distance recommended by the ASTM standard. The Property did not appear on any of the databases searched and there were not any database records within the ASTM-recommended distance of the Property boundaries.
- WestLand obtained the property tax maps and parcel detail reports for the Property. This information indicates that the Property is vacant land with no assessed buildings or other improvements.
- The ADWR Well Registry spatial database was queried to review any data for wells within the boundaries of the Property. There are no registered wells within the Property (ADWR 2016). A hand-dug well was reported in 2004 and observed during the site visit in 2016. This well is located near the north boundary of the Property with other historic ranching features. The well is lined with stone and was covered with a wooden board. The well is approximately 5 feet in diameter and appears to be approximately 20 feet deep. No water was observed in the well during the site reconnaissance.
- On June 7 through June 9, 2016, and June 13 through June 15, 2016, WestLand performed a field reconnaissance to assess existing environmental conditions for the Property. Field observations were consistent with the findings of WestLand's historical review of and interviews about the Property and surrounding properties. The Property is generally undeveloped open space with evidence of homesteading and ranching use. Several ranching features were observed near the north boundary of the Property which was likely the

headquarters for the John Lewis Homestead/Lewis Ranch. Developed features include a concrete watering trough, pipes, a steel cistern, a well, a collapsed dry-laid masonry outbuilding with tin roof, a wooden cattle chute and corral area. WestLand theorizes that the cistern once housed a pump, which drew water from the well and diverted it toward the trough.

It is likely there was not a formal house at the Property though temporary dwellings may have been constructed. The Homestead Act of 1862 allowed settlers to establish homesteads on public lands. In order to successfully apply for a land patent, homesteaders had to “prove up,” or meet the requirements set out by the Homestead Act (Stein 1990). Habitation on a homestead did not necessarily require a permanent structure to be built; many homesteaders dwelt in crude or semi-permanent structures, such as “the tent-house, that semi-portable, canvas-sided abode so popular in Arizona in the late nineteenth and early twentieth centuries” (Stein 1990:12).

There is no evidence of current human occupation or intense recreational use of the site, though dispersed hunting and camping have likely occurred (camp fire rings, bullet holes in cistern -but no shell casings observed). There is no evidence of a formal ranching headquarters that may have stored chemicals associated with ranching.

- Historical aerial and topographical map review identified several mine prospects and a mine approximately 0.5 miles south of the Property. These workings are associated with Silver Cross Mine, also known as Cave Creek and Heck Claims. Claims associated with this mine occurred in Sections 27, 28, 29, 32, and 33 of Township 7 North, Range 4 East. This record is for a “past producer” that mined gold, copper and silver. The first reported year of production was in 1957 and the last year was 1959. This mine and the associated prospects are located downgradient of the Property and the workings appears to have been limited. Mine work in the area is not considered a REC for the Property.
- The report User is also the land owner. Swift Current Land and Cattle LLC is the land owner and a subsidiary of Resolution Copper Mining LLC. Ms. Casey McKeon completed the User questionnaire and provided responses to a separate Owner questionnaire, as a representative of Resolution Copper Mining LLC. Ms. McKeon indicated that until 2001, the Property was used for cattle grazing, and was largely devoid of development such as buildings or major earthwork and that currently the Property is vacant. Based on the User’s knowledge of, and experience related to the Property, no obvious indicators point to the presence or likely presence of contamination on the Property of which the User is aware. No other information relevant to potential RECs was provided by the User.
- WestLand interviewed representatives from the Mayer Fire Department, Black Canyon Fire Department, and El Mirage Fire Department to inquire whether or not they have responded

to the Property or adjoining properties with regard to fuel/chemical spills or if they were aware of any chemical or petroleum product storage at the Property. Representatives at all of the departments responded that the department has no knowledge of any such spills or storage at the Property or on land in the immediate vicinity. Representatives also responded that their respective departments would not respond to the Property based on their district boundaries.

8. CONCLUSION

WestLand has performed a Phase I ESA in conformance with the scope and limitations of ASTM E 2247-08 for the Property (**Figure 1**). Any exceptions to, or deletions from, this practice are described in Section 9 of this report.

WestLand's assessment has revealed no evidence of a potential REC in connection with the Property. WestLand also did not identify any historical recognized environmental conditions, controlled recognized environmental conditions, or *de minimis* conditions for the Property.

9. DEVIATIONS

The purpose of reviewing historical sources is to develop a history of the previous uses of a property and surrounding area in order to help identify past uses that may have led to RECs in connection with the Property. According to the ASTM standard, obvious uses of a property shall be identified from the present back to the property's first developed use, or back to 1940, whichever is earlier. This requires reviewing only as many standard historical sources as are reasonably ascertainable and likely to be useful.

Considering that use of the Property is limited and that the Property is located in a relatively remote area and that there is no documented or suspected use of the Property indicating a REC, WestLand did not conduct a city directory search, Sanborn fire insurance map search, building department record search or other similar historic record searches for this rural property.

At the time this report was completed, the Cave Creek Ranger District had not yet responded to our request for information regarding whether or not they have responded to the Property or adjoining properties for fuel/chemical spills or if they were aware of any chemical or petroleum product storage at the Property.

No other site access limitations, physical obstructions to observations, outstanding information requests, or historical data failure, etc. occurred over the course of this inquiry.

Considering the known history of the Property and results of our site reconnaissance, coupled with the prior Phase I ESA, and other completed research, we do not consider the lack of a response from the Cave Creek Ranger District a data gap; this assessment is considered complete.

10. ADDITIONAL SERVICES

No additional services beyond the standard ASTM scope were considered as part of this assessment.

II. QUALIFICATIONS AND SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

Mr. Mark F. Taylor, P.E. believes that, to the best of his professional knowledge, he meets the definition of “environmental professional” as defined in §312.10 of 40 CFR 312. Mr. Taylor possesses the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject Property. He has developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Mr. Taylor is the leading environmental professional assigned to perform project oversight for this ESA. Mr. Jeff Charest conducted the site reconnaissance under the direction of Mr. Taylor. Ms. Diana Sandoval and Ms. Sarah Richman conducted the interviews, regulatory inquiries, and historical research. Mr. Chris Rife reviewed the findings in this report. Their work was conducted under the supervision of the above-named environmental professional. Mr. Taylor reviewed, interpreted, and declared the information included in this report as complete. Résumés for the key individuals participating in the preparation of this report are provided in **Appendix I**.



Mr. Mark F. Taylor, P.E.

10/4/16

Date

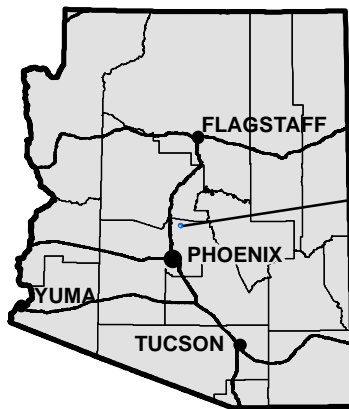
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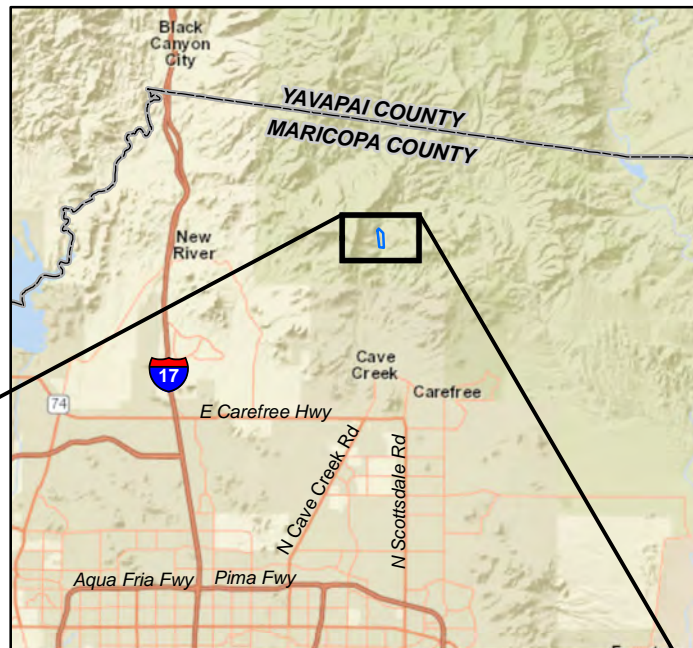
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FIGURES

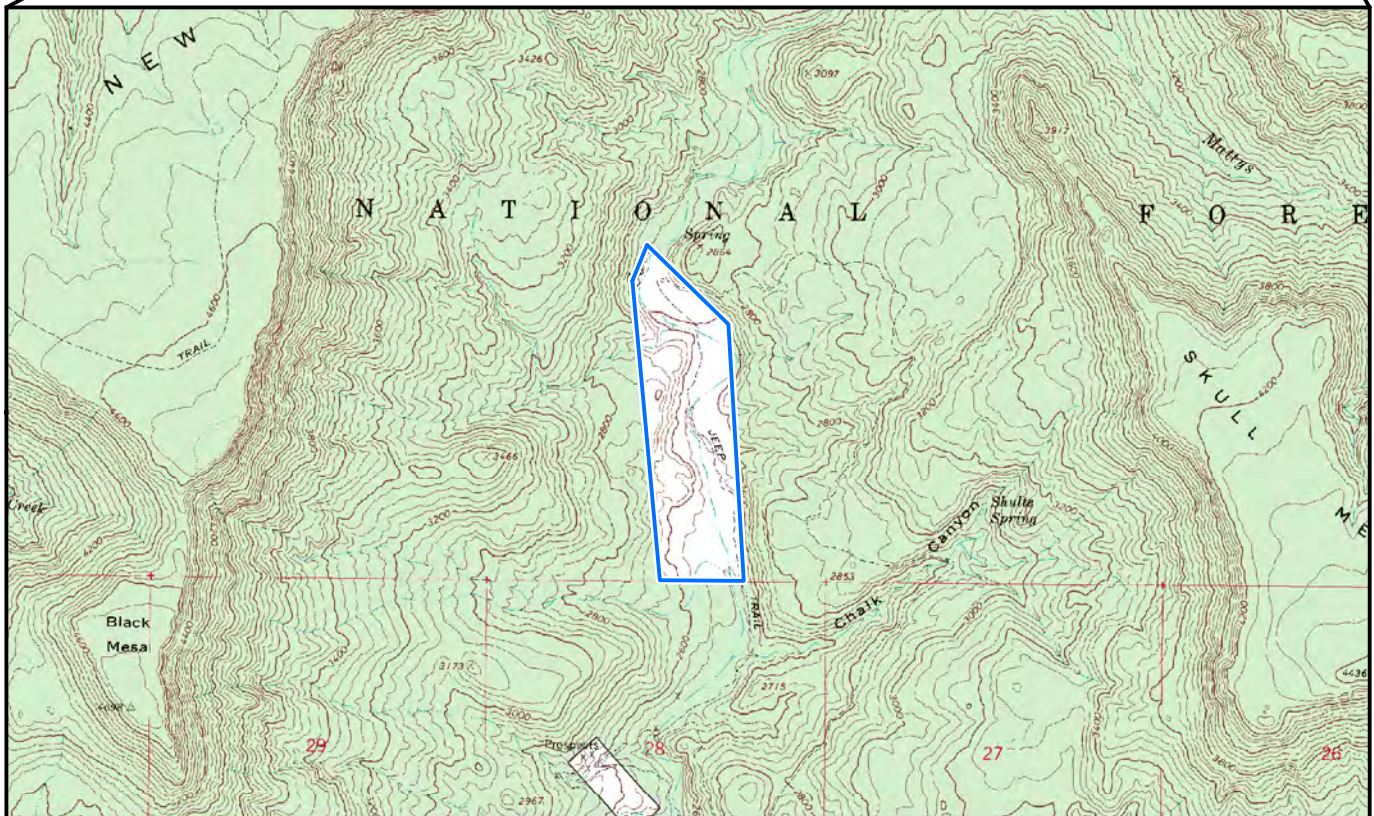
ARIZONA

PROPERTY
LOCATION

NORTHERN MARICOPA COUNTY



Approximate Scale 1 Inch = 10 Miles



T7N, R4E, Portion of Section 21,
Maricopa County, Arizona.
New River Mesa USGS 7.5' Quadrangle.
Data Source: BLM Surface Management (2014),
ESRI World Street Maps

RESOLUTION COPPER



Phase I

Environmental Site Assessment
for the Cave Creek Property

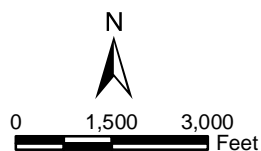
VICINITY MAP

Figure 1

Legend

-  Cave Creek Property
-  Private Land (No Color)
-  US Forest Service (USFS)

WestLand Resources

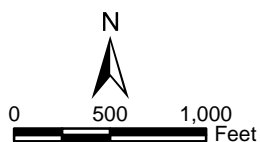




T7N, R4E, Portion of Section 21,
Maricopa County, Arizona.
Image Source: NAIP, 5-29-2015

RESOLUTION COPPER
Phase I
Environmental Site Assessment
for the Cave Creek Property

AERIAL OVERVIEW MAP
Figure 2



Legend

 Cave Creek Property

APPENDIX A

SITE PHOTOGRAPHS



Photo 1. Site overview



Photo 3. Concrete and steel structure



Photo 2. Rock and wire fence



Photo 4. Close up of steel structure. The steel cistern had a bullet holes but no shell casings were observed.



Photo 5. Rock walls



Photo 6. Remnants of a structure with tin roof

APPENDIX B

USER AND OWNER QUESTIONNAIRES

ASTM E 1527-13 & 2247-08

USER QUESTIONNAIRE

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the “Brownfields Amendments”), the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that “all appropriate inquiry” is not complete.

(1). Environmental cleanup liens that are filed or recorded against the *property* (40 CFR 312.25).

Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law? **NO**

(2). Activity and land use limitations that are in place on the Property or that have been filed or recorded against the *property* (40 CFR 312.26).

Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? **NO**

(3). Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

As the user of this ESA do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the *property* or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? **Yes, see number 5 for additional information.**

(4). Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).

Does the purchase price/lease being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*? **No information indicating that the value of the Property had been reduced as a result of environmental issues.**

(5). Commonly known or reasonably ascertainable information about the *property* (40 CFR 312.30).

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user:

- (a.) Do you know the past uses of the *property*? **Until 2001, land was used for cattle grazing, and was largely devoid of development such as buildings or major earthwork. Currently, the Property is unused vacant land.**
- (b.) Do you know of specific chemicals that are present or once were present at the *property*? **No knowledge or evidence of chemicals being stored on the Property.**
- (c.) Do you know of spills or other chemical releases that have taken place at the *property*? **No knowledge or evidence of spills or other chemical releases on the Property.**
- (d.) Do you know of any environmental cleanups that have taken place at the *property*? **No knowledge or evidence of any environmental cleanups on the Property.**

(6). The degree of obviousness of the presence of likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the user of this *ESA*, based on your knowledge and experience related to the *property* are there any obvious indicators that point to the presence or likely presence of contamination at the *property*? **No knowledge of, or evidence of environmental conditions were observed on the property.**

In addition, certain information should be collected, if available, and provided to the environmental professional selected to conduct the Phase I. This information is intended to assist the environmental professional but is not necessarily required to qualify for one of the LLPs. The information includes:

- (a) The reason why the Phase I is required **Support of the land exchange between the US and Resolution Copper Mining**
- (b) The type of *property* and type of *property* transaction, for example, sale, purchase, exchange, etc. **Exchange**
- (c) The complete and correct address for the *property* (a map or other documentation showing *property* location and boundaries is helpful). **Not needed for this questionnaire**
- (d) The scope of services desired for the Phase I (including whether any parties to the *property* transaction may have a required standard scope of services on whether any considerations beyond the requirements of Practice E 1527/2247 are to be considered). **Standard**
- (e) Identification of all parties who will rely on the Phase I report. **Resolution Copper Mining**
- (f) Identification of the site contact and how the contact can be reached. - Are there previous site contacts that should be interviewed? **N/A**
- (g) Any special terms and conditions which must be agreed upon by the environmental professional. **N/A**
- (h) Any other knowledge or experience with the *property* that may be pertinent to the environmental professional (for example, copies of any available prior environmental site assessment reports, documents, correspondence, etc., concerning the *property* and its environmental condition). **N/A**

USER NAME & FIRM: Ms. Casey McKeon, Resolution Copper Mining LLC

DATE: May 10, 2016

PROPERTY: Cave Creek
ENVIRONMENTAL SITE ASSESSMENT

OWNER/ OPERATOR/OCCUPANT QUESTIONNAIRE

The objective of interviews with Past and Present Owners and Occupant is to obtain information indicating recognized environmental conditions in connection with the Property. Past and present owners, operators and occupants shall be interviewed who are likely to have material information regarding the potential for contamination at the property, provided such persons have been identified and the information is not likely to be duplicative of information already obtained from different sources.

Property Location/Address: Cave Creek - 149 acres in Township 7 North, Range 4 East, in a portion of Section 21

Interview Medium (underline one): in person, by telephone, in writing Date: May 10, 2016

Interviewee Relationship to the *property* (underline one): past owner, present owner, operator/manager, tenant, occupant, other.

Please respond to the questions provided below and expand your responses as appropriate:

(1). Please describe the current uses of the *property*, if known.

Vacant, inholding of forest service

(2). Please describe the past/historic use(s) of the *property*, if known.

Until 2001 cattle grazing, devoid of buildings or major earthwork.

(3). Name the current and any past owners or occupants of the *property*, if known.

Current is Swift Current Land and Cattle, LLC. Previous owner is Johnson Cattle Co.

(4). Please describe the past and/or current uses of adjoining properties, if known.

Public lands for recreation and grazing.

(5). Please describe the general past and/or current uses of the surrounding area, if known. (i.e. residential, commercial, agricultural, industrial etc.)

Cattle grazing.

(6). Are you aware of any chemicals/petroleum products in individual containers greater than 5-gallons that are present or once were present at the *property* (including used automotive/industrial batteries, pesticides, paints, solvents acids, bases, antifreeze, gasoline, diesel, fuel oil, kerosene, lubricating oil, benzene, etc)? This includes industrial drums (typically 55-gallons).

Yes _____ No _____ Unknown x _____

(7). Do you know of spills or other chemical releases that have taken place at the *property*?

Yes _____ No _____ Unknown x _____

(8). Do you know of any environmental cleanups that have taken place at the *property*?

Yes _____ No _____ Unknown x _____

(9). Are you aware of any environmental cleanup liens against the *property*?

Yes _____ No x _____ Unknown _____

(10). Are you aware of any engineering controls (capping, slurry walls or water treatment), land use restrictions or institutional controls (deed restriction, restrictive covenants, easements or zoning) intended to reduce exposure of a hazardous substance or petroleum product at the *property*?

Yes _____ No ☒ Unknown _____

(11). Are there any above ground storage tanks, underground storage tanks, vent pipes or access ways indicating storage tanks at the *property*?

Yes _____ No ☒ Unknown _____

(12). Are there any PCBs (transformers, hydraulic equipment) at the *property*?

Yes _____ No _____ Unknown ☒ _____

(13). Have you observed stained soil/pavement, corrosion, or stressed vegetation that may indicate a petroleum or chemical spill at the *property*?

Yes _____ No _____ Unknown ☒ _____

(14). Have you observed pits, ponds, or lagoons associated with wastewater treatment/disposal at the *property*?

Yes _____ No _____ Unknown ☒ _____

(15). Are you aware of any wastewater/stormwater facilities at the *property* (drains, sumps, ditches, washes)?

Yes _____ No _____ Unknown ☒ _____

(16). Are you aware of any wells located at the *property* (dry, irrigation, injection, or abandoned)?

Yes _____ No _____ Unknown ☒ _____

(17). Are you aware of any septic systems at the *property*?

Yes _____ No _____ Unknown ☒ _____

(18). Has the *property* been used for landfill, dump, battery storage, junkyard, or other disposal purposes?

Yes _____ No ☒ Unknown _____

(19). Has dirt fill been brought to the *property* that originated from a site of unknown origin or from a contaminated site?

Yes _____ No _____ Unknown ☒ _____

(20). Are there or has there ever been any flooring, drains, or walls located within the facility that are stained by substances other than water or emitting odors?

Yes _____ No _____ Unknown ☒ _____

(21). Are you aware of any other information that may be pertinent to identifying past and present environmental conditions at the property or copies of any available prior *environmental site assessment reports*, documents, correspondence, etc., concerning the *property* and its environmental condition?

Yes _____ No ☒ Unknown _____

APPENDIX C

TITLES AND ENCUMBRANCES



FILE COPY

1850 North Central Avenue
Suite 300
Phoenix, AZ 85004
Watts 1.800.523.0358
Facsimile 1.602.263.0433
Main 1.602.287.3500

April 6, 2004

HAND DELIVERED

Swift Current Land & Cattle LLC
2525 E. Arizona Biltmore Cr., Suite C-135
Phoenix, AZ 85016

Re: Lawyers Title Insurance Corporation Escrow No.: N04-43147 KLS
Property: H.E.S. 317, Maricopa County, AZ
JOHNSON CATTLE COMPANY/SWIFT CURRENT LAND & CATTLE LLC

Gentlemen:

Enclosed is one copy of Lawyers Title Insurance Corporation Title Commitment No. 1343452 with Effective Date of March 10, 2004. Also enclosed is a copy of the Assessor's Map and one copy of each of the recorded documents referred to in Exceptions No. 3 and 4 of Schedule B-Section II.

If you have any questions regarding these enclosures, please call me at (602) 287-3526, or send via e-mail to: kstockstill@landam.com.

Very truly yours,

LANDAMERICA FINANCIAL GROUP, INC.
for its subsidiary LAWYERS TITLE INSURANCE CORPORATION

A handwritten signature in cursive script, appearing to read 'K. L. Stockstill'.

Karma L. Stockstill
National Accounts Administrator

KLS/hs

cc: James M. Balogh, Esq. (Hand Delivered w/copy of each enclosure)
Johnson Cattle Company (US Mail w/copy of each enclosure)
Mr. Edward Childers, Dan Schwartz Realty (Hand Delivered w/copy of each enclosure)
Mr. Con Engelhorn, Headquarters West, Ltd. (Hand Delivered w/copy of each enclosure)

ISSUED BY
LAWYERS TITLE INSURANCE CORPORATION

Commitment For
Title Insurance



LAWYERS TITLE INSURANCE CORPORATION, a Virginia corporation, herein called the Company, for valuable consideration, hereby commits to issue its policy or policies of title insurance, as identified in Schedule A, in favor of the proposed Insured named in Schedule A, as owner or mortgagee of the estate or interest covered hereby in the land described or referred to in Schedule A, upon payment of the premiums and charges therefor; all subject to the provisions of Schedules A and B and to the Conditions and Stipulations hereof .

This Commitment shall be effective only when the identity of the proposed Insured and the amount of the policy or policies committed for have been inserted in Schedule A hereof by the Company, either at the time of the issuance of this Commitment or by subsequent endorsement.

This Commitment is preliminary to the issuance of such policy or policies of title insurance and all liability and obligations hereunder shall cease and terminate six (6) months after the effective date hereof or when the policy or policies committed for shall issue, whichever first occurs, provided that the failure to issue such policy or policies is not the fault of the Company.

IN WITNESS WHEREOF, LAWYERS TITLE INSURANCE CORPORATION has caused its corporate name and seal to be hereunto affixed by its duly authorized officers, the Commitment to become valid when countersigned by an authorized officer or agent of the Company.

LAWYERS TITLE INSURANCE CORPORATION

Attest:

A handwritten signature in cursive script, appearing to read 'J. D. Webb'.

Secretary



By:

A handwritten signature in cursive script, appearing to read 'Janet A. Albert'.

President

DISCLOSURE NOTICES

Good Funds Law

Arizona Revised Statutes Section 6-843 regulates the disbursement of escrow funds by an escrow agent. The law requires that funds be deposited in the escrow agent's escrow account and available for withdrawal prior to disbursement. Funds deposited with the Company by wire transfer may be disbursed upon receipt. Funds deposited with the Company in the form of cashier's checks, certified checks or teller's checks, or checks which are made by an affiliate of a state or federally regulated depository institution when the check is drawn on that institution, may be disbursed the same day as deposited. If funds are deposited with the Company by other methods, recording and/or disbursement may be delayed.

Privacy Notice (15 U.S.C. 6801 and 16 CFR Part 313):

We collect nonpublic personal information about you from information you provide on forms and documents and from other people such as your lender, real estate agent, attorney, escrow, etc. We do not disclose any nonpublic personal information about our customers or former customers to anyone, except as permitted by law. We restrict access to nonpublic personal information about you to those employees who need to know that information in order to provide products or services to you. We maintain physical, electronic and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

PURCHASER DWELLING ACTIONS NOTICE

Pursuant to Arizona Revised Statutes Section 12-1363.N, notice is hereby provided to the purchaser of a dwelling of the provisions of Arizona Revised Statutes Sections 12-1361, 1362 and 1363. These statutory sections set forth the requirements to be met by a purchaser prior to bringing an action against the seller of a dwelling arising out of or related to the design, construction, condition or sale of the dwelling. "Dwelling" means a single or multifamily unit designed for residential use and common areas and improvements owned or maintained by an association or its members. "Seller" means any person, firm, partnership, corporation, association or other organization engaged in the business of designing, constructing or selling dwellings. The complete statutory sections can be viewed on the Arizona State Legislature's web site: www.azleg.state.az.us/ars/ars.htm.

NOTICE:

Pursuant to Arizona Revised Statutes 11-480, effective January 1, 1991, the County Recorder may not accept documents for recording that do not comply with the following:

- a Print must be ten-point type (pica) or larger.
- b Margins of at least one-half inch along the left and right sides one-half inch across the bottom and at least two inches on top for recording and return address information.
- c Each instrument shall be no larger than 8 ½ inches in width and 14 inches in length.

Karma L. Stockstill
Lawyers Title Insurance Corporation
LandAmerica Commercial Services
1850 N. Central Ave., Suite 300
Phoenix, Az 85004

Escrow no. N04-43147 KLS

COMMITMENT FOR TITLE INSURANCE

Issued by

Lawyers Title Insurance Corporation

SCHEDULE A

1. Effective Date: **March 10, 2004** at 7:30 a.m. File No.: 01343452
2. Policy or Policies to be issued: **ALTA Std. Owners Policy 10-17-92**
Proposed Insured: **Swift Current Land & Cattle LLC,, an Arizona limited liability company**
Liability: **\$1,647,650.00**
Policy or Policies to be issued: **None**
Proposed Insured:
Liability: **\$**
Policy or Policies to be issued: **None**
Proposed Insured:
Liability: **\$**
3. The estate or interest in the land described or referred to in the Commitment and covered herein is **A FEE**.
4. Title to the said estate or interest in said land is at the effective date hereof vested in:
Johnson Cattle Company, an Arizona partnership
5. The land referred to in this Commitment is situated in the County of Maricopa, State of ARIZONA, and is described as follows:
As fully set forth on "Exhibit A" attached hereto and by this reference incorporated herein

Title Officer: **Anthony Choe/TC3**

Typist: **tc3**

Amended: **No.**

EXHIBIT "A"

H. E. Survey No. 317, embracing a portion of, approximately, Section 21, Township 7 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona, more particularly described as follows:

BEGINNING at Corner No. 1, from which U. S. Location Monument No. 317, H.E.S. bears South 59 degrees 57 minutes East 10-58/100ths chains distant;

THENCE South 46 degrees 12 minutes East 26-94/100ths chains to Corner No. 2;

THENCE South 04 degrees 03 minutes East 61 chains to Corner No. 3;

THENCE West 19-84/100ths chains to Corner No. 4;

THENCE North 05 degrees 51 minutes West 71-34/100ths chains to Corner No. 5;

THENCE North 21 degrees 46 minutes East 9-22/100ths chains to Corner No. 1, the POINT OF BEGINNING, according to the Official Plat of the Survey of the said Land, returned to the General Land Office by the Surveyor-General.

SCHEDULE B – SECTION I REQUIREMENTS

The following are the requirements to be complied with prior to the issuance of said policy or policies. Any other instrument recorded subsequent to the date hereof may appear as an exception under Schedule B of the policy to be issued. Unless otherwise noted, all documents must be recorded in the office of the Recorder of the County in which said property is located.

1. PAY second installment 2003 taxes, Parcel No. 219-09-001 7.
2. RECORD Certificate of Partnership executed by all partners for Johnson Cattle Company, an Arizona partnership.
3. Submit fully executed copy of the partnership agreement (and all amendments) of the partnership named below for examination. The right is reserved to make additional requirements upon such examination.

Johnson Cattle Company, an Arizona partnership

4. RECORD Deed from Johnson Cattle Company, an Arizona partnership to buyer(s).

NOTE: ARS 11:1133 may require the completion and filing of an Affidavit of Value.

ACCESS NOTE: A cursory search of the title does not indicate a right of access to this property. In order to identify the properties that need to be searched for the purpose of determining the existence of such right, the company requires a sketch showing the physical route taken to and from said land. No further search for access will be attempted until such sketch is received. In the event this transaction is closed prior to a final determination of the existence of an insurable right of access, exception no. 5 shall remain as an item in Schedule B.

TAX NOTE:

Year	2003
Parcel No.	219-09-001 7
Total Tax	\$102.16
First Half	\$Paid
Second Half	\$51.08

Arb No. 219-09-001

END OF SCHEDULE B – SECTION I

**SCHEDULE B – SECTION II
EXCEPTIONS**

Schedule B of policy or policies to be issued will contain exceptions to the following matters unless the same are disposed of to the satisfaction of the Company:

- A. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed Insured acquires for value of record the estate or interest or mortgage thereon covered by this commitment.
- 1. OBLIGATIONS imposed upon said land by its inclusion within any district formed pursuant to Title 48, Arizona Revised Statutes, excluding however Municipal or County Improvement Districts.
- 2. TAXES AND ASSESSMENTS collectible by the County Treasurer, a lien not yet due and payable for the following year:

2004
- 3. ANY ACTION that may be taken by Flood Control District named below to acquire property or rights of way for flood control as disclosed by instrument:

Recorded in Document No. 98-708623
District Maricopa County
- 4. MATTERS SHOWN ON SURVEY:

Recorded in Book 330 of Maps
Page 38
- 5. THE LACK of a legal right of access recorded in insurable form to and from said land to a public street.

END OF SCHEDULE B – SECTION II

COMMITMENT CONDITIONS AND STIPULATIONS

1. The term mortgage, when used herein, shall include deed of trust, trust deed, or other security instrument.
2. If the proposed insured has or acquires actual knowledge of any defect, lien, encumbrance, adverse claim or other matter affecting the estate or interest or mortgage thereon covered by this Commitment other than those shown in Schedule B hereof, and shall fail to disclose such knowledge to the Company in writing, the Company shall be relieved from liability for any loss or damage resulting from any act or reliance hereon to the extent the Company is prejudiced by failure to so disclose such knowledge. If the proposed insured shall disclose such knowledge to the Company, or if the Company otherwise acquires actual knowledge of any such defect, lien, encumbrance, adverse claim or other matter, the Company at its option may amend Schedule B of this Commitment accordingly, but such amendment shall not relieve the Company from liability previously incurred pursuant to paragraph 3 of these Conditions and Stipulations.
3. Liability of the Company under this Commitment shall be only to the named proposed insured and such parties included under the definition of insured in the form of policy or policies committed for and only for actual loss incurred in reliance hereon in undertaking in good faith, (a) to comply with the requirements hereof, or (b) to eliminate exceptions shown in Schedule B, or (c) to acquire or create the estate or interest or mortgage thereon covered by this Commitment. In no event shall such liability exceed the amount stated in Schedule A for the policy or policies committed for and such liability is subject to the insuring provisions, the Conditions and Stipulations, and the Exclusions from Coverage of the form of policy or policies committed for in favor of the proposed insured which are hereby incorporated by reference and are made a part of this Commitment except as expressly modified herein.
4. Any action or actions or rights of action that the proposed insured may have or may bring against the Company arising out of the status of the title to the estate or interest or the status of the mortgage thereon covered by this Commitment must be based on and are subject to the provisions of this Commitment.

AMERICAN LAND TITLE ASSOCIATION LOAN POLICY (10-17-92)

WITH ALTA ENDORSEMENT-FORM 1 COVERAGE

and

AMERICAN LAND TITLE ASSOCIATION LEASEHOLD LOAN POLICY (10-17-92)

WITH ALTA ENDORSEMENT-FORM 1 COVERAGE

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land, (ii) the character, dimensions or location of any improvement now or hereafter erected on the land, (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part, or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
- (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
 - (a) created, suffered, assumed or agreed to by the insured claimant;
 - (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
 - (c) resulting in no loss or damage to the insured claimant;
 - (d) attaching or created subsequent to Date of Policy, (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material) or
 - (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage which at Date of Policy the insured has advanced or is obligated to advance.
7. Any claim which arises out of the transaction creating the interest of the mortgagee insured by this Policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
 - (a) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer, or
 - (b) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination, or
 - (c) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
 - (i) to timely record the instrument of transfer, or
 - (ii) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

The above policy forms may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following General Exceptions:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests or claim which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.

AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY (10-17-92)

And

AMERICAN LAND TITLE ASSOCIATION LEASEHOLD OWNER'S POLICY (10-17-92)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land, (ii) the character, dimensions or location of any improvement now or hereafter erected on the land, (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part, or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
- (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
 - (a) created, suffered, assumed or agreed to by the insured claimant;
 - (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
 - (c) resulting in no loss or damage to the insured claimant;
 - (d) attaching or created subsequent to Date of Policy, (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material) or
 - (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by the policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
 - (a) the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer, or
 - (b) the transaction creating the estate or interest insured by the policy being deemed a preferential transfer except where the preferential transfer results from the failure:
 - (i) to timely record the instrument of transfer, or
 - (ii) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

The above policy forms may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage Policy will also include the following General Exceptions:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests or claim which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.

**AMERICAN LAND TITLE ASSOCIATION
HOMEOWNER'S POLICY OF TITLE INSURANCE (10/17/98)
EXCLUSIONS**

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from

1. Governmental police power, and the existence or violation of any law or government regulation. This includes ordinances, laws and regulations concerning:
 - a. building
 - b. zoning
 - c. land use
 - d. improvements on the Land
 - e. land division
 - f. environmental protection

This Exclusion does not apply to violations or the enforcement of these matters if notice of the violation or enforcement appears in the Public Records at the Policy Date.
This Exclusion does not limit the coverage described in Covered Risk 14, 15, 16, 17 or 24.

2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not apply to violations of building codes if notice of the violation appears in the Public Records at the Policy Date.
3. The right to take the Land by condemning it, unless:
 - a. a notice of exercising the right appears in the Public Records at the Policy Date, or
 - b. the taking happened before the Policy date and is binding on You if You bought the Land without knowing of the taking.
4. Risks
 - a. that are created, allowed, or agreed to by You, whether or not they appear in the Public Records;
 - b. that are known to You at the Policy Date, but not to Us, unless they appear in the Public Records at the Policy Date;
 - c. that result in no loss to You; or
 - d. that first occur after the Policy Date – this does not limit the coverage described in Covered Risk 7, 8d, 22, 23, 24 or 25
5. Failure to pay value for Your Title.
6. Lack of a right:
 - a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
 - b. in streets, alleys, or waterways that touch the land.

This Exclusion does not limit the coverage described in Covered Risk 14 or 18.

**AMERICAN LAND TITLE ASSOCIATION
RESIDENTIAL TITLE INSURANCE POLICY (6-2-87)
EXCLUSIONS**

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
 - Land use
 - Improvements on the land
 - Land division
 - Environmental protection

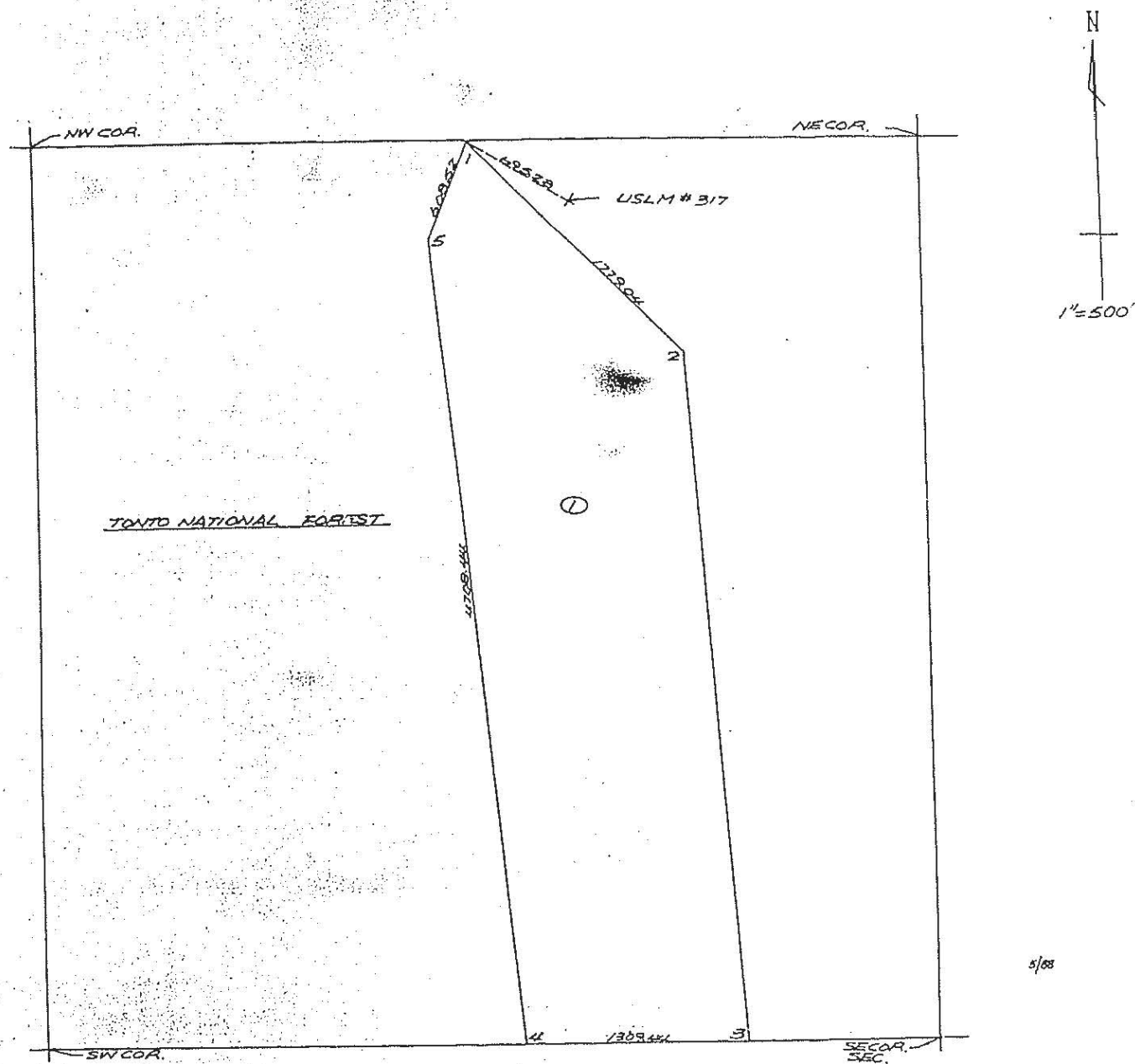
This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date.
This exclusion does not limit the zoning coverage described in items 12 and 13 of Covered Title Risks.

2. The right to take the land by condemning it, unless:
 - A notice of exercising the right appears in the public records on the Policy Date
 - The taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking
3. Title Risks:
 - That are created, allowed, or agreed to by you
 - That are known to you, but not to us, on the Policy Date – unless they appeared in the Public Records
 - That result in no loss to you
 - That first affect your title after the Policy Date – this does not limit the labor and material lien coverage in Item B of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
 - To any land outside the area specifically described and referred to in Item 3 of Schedule A
 - OR
 - In streets, alleys, or waterways that touch your land

This exclusion does not limit the access coverage in Item 5 of Covered Title Risks

BOOK 219
MAP 9

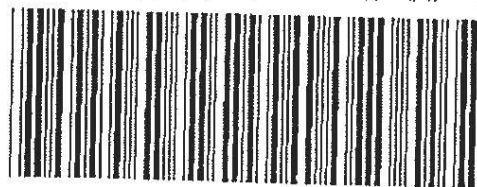
ASSESSOR'S MAP



When recorded mail to:

FLOOD CONTROL

JOHN PALMERI



OFFICIAL RECORDS OF
MARICOPA COUNTY RECORDER
HELEN PURCELL

98-0708623 08/13/98 08:35

CATHY 2 OF 2

CAPTION HEADING: _____

DO NOT REMOVE

This is part of the official document.

hazard along Cave Creek from Cave Buttes Dam north to the County boundary. The Study shall recommend a preferred alternative for alleviating the flooding hazard; and,

BE IT FURTHER RESOLVED that the Chief Engineer and General Manager is directed to negotiate and prepare intergovernmental agreements with the City of Phoenix and others, if appropriate, for the coordination of the Upper Cave Creek Watercourse Master Plan Study; subject to the ratification and approval of this Board; and,

BE IT FURTHER RESOLVED that the Chief Engineer and General Manager is hereby authorized and directed to negotiate with landowners and/or appropriate agencies to obtain rights-of-entry and all other necessary land rights required for the Upper Cave Creek Watercourse Master Plan Study at locations identified as below; and,

BE IT FURTHER RESOLVED that the Chief Engineer and General Manager of the District is hereby authorized and directed to hire, retain, or otherwise utilize the professional services of the County Attorney's Office or private counsel to initiate and prosecute actions and proceedings in the manner required by law to condemn any and all rights-of-entry, easements, or real property required for the Upper Cave Creek Watercourse Master Plan which cannot be obtained by donation or purchase in the following locations:

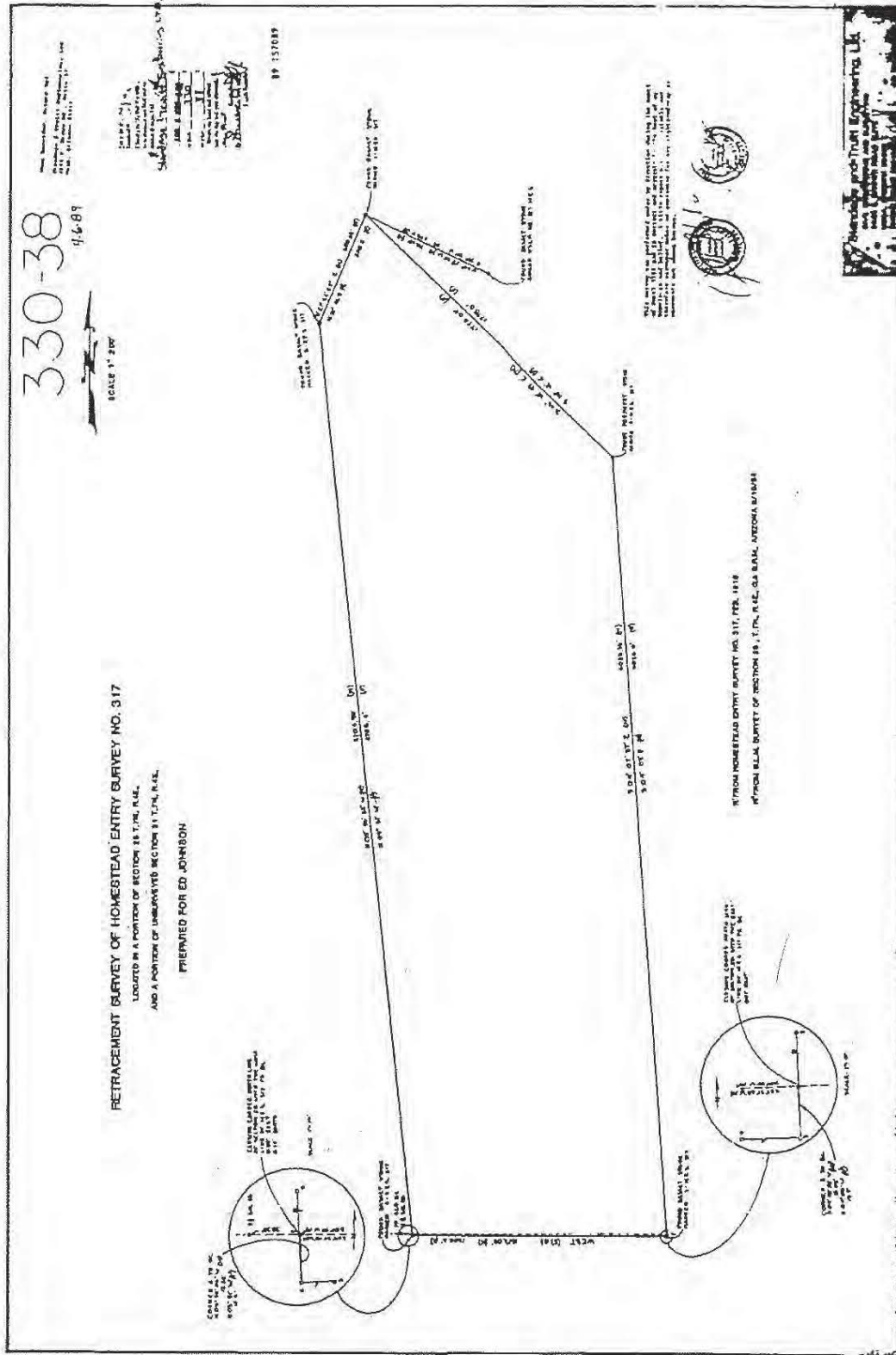
Sections 2, 3, 4, Township 4 North, Range 3 East,
Sections 1, 2, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26, 27, 28, 32, 33, 34, 35,
Township 5 North, Range 3 East,
Sections 4, 5, 6, 7, 8, 18, Township 5 North, Range 4 East,
Section 36, Township 6 North, Range 3 East,
Sections 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32, 33,
Township 6 North, Range 4 East,
Sections 1, 2, 3, 4, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 27, 28, 29, 32,
33, 34, Township 7 North, Range 4 East,
Sections 4, 5, 6, 7, 8, 9, 16, 17, 18, Township 7 North, Range 5 East,
Sections 28, 29, 30, 31, 32, 33, Township 8 North, Range 5 East; of the Gila and
Salt River Base and Meridian, Maricopa County, Arizona.

Dated this 5th day of November, 1997.

ATTEST:


Chairman, Board of Directors


Clerk of the Board

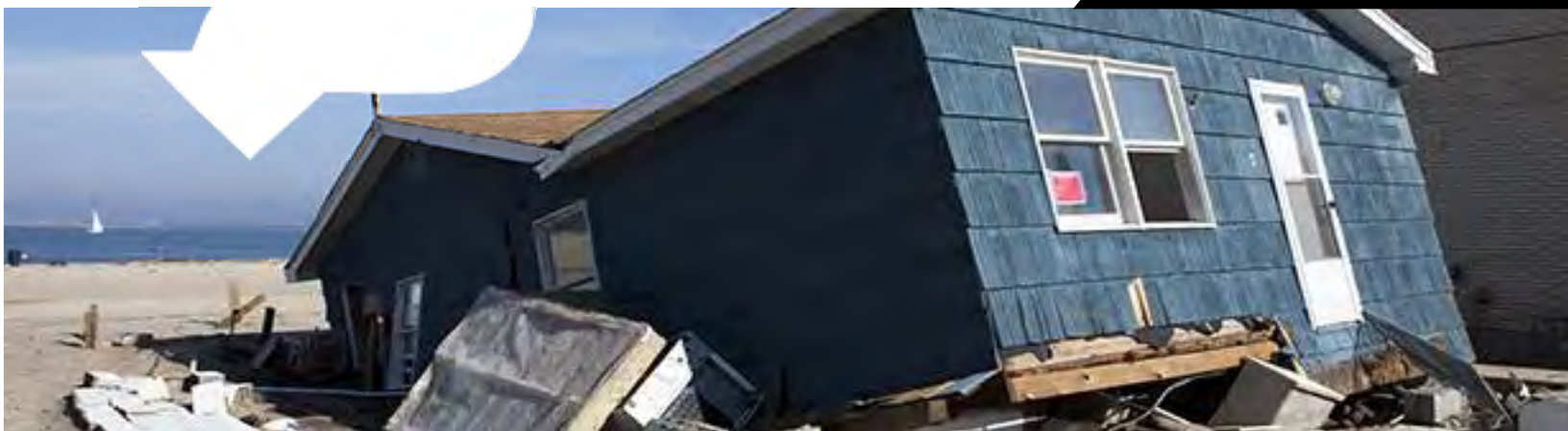


APPENDIX D

**ERS
ENVIRONMENTAL
LIENSEARCH
REPORT WITH
RECORDED DEEDS**

Environmental Lien Research

REPORT RESULTS



Report Results for:

Sarah Richman
WestLand Resources
4001 E Paradise Falls Drive
Tucson, AZ 85712
2104669095 EL
June 15, 2016

Subject Site:

Clients Project #: **807.120**
Address: **Forest Road 48 and Trail 4**
City, State Zip: **Cave Creek, AZ**

ERS Order #:

2104669095 EL

Prepared For:

Name: Sarah Richman
Company: WestLand Resources
Address: 4001 E Paradise Falls Drive
City, State Zip: Tucson, AZ 85712

Date:

June 15, 2016



The NETR Environmental Lien Search Report

**FOREST ROAD 48 AND TRAIL 4
CAVE CREEK, ARIZONA**

Tuesday, June 14, 2016

Project Number: L16-01592

2055 East Rio Salado Parkway
Tempe, Arizona 85281

Telephone: 480-967-6752
Fax: 480-966-9422

ENVIRONMENTAL LIEN REPORT

The NETR Environmental LienSearch Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls 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 recorders' office, registries of deed, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved and description); and
- provide a copy of the deed or cite documents reviewed;

Thank you for your business

Please contact NETR at 480-967-6752
with any questions or comments

Disclaimer - Copyright and Trademark Notice

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ENVIRONMENTAL LIEN REPORT

The NETR Environmental Lien Search Report is intended to assist in the search for environmental liens filed in land title records.

TARGET PROPERTY INFORMATION

ADDRESS

Forest Road 48 and Trail 4
Cave Creek, Arizona

RESEARCH SOURCE

Source: Maricopa County Assessor
Maricopa County Recorder

DEED INFORMATION

Type of Instrument: Special Warranty Deed

Grantor: Johnson Cattle Company, an Arizona general partnership

Grantee: Swift Current Land & Cattle LLC, an Arizona limited liability company

Deed Dated: 07/30/2004
Deed Recorded: 07/30/2004
Instrument: 20040883014

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in Section 21, Township 7 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, State of Arizona

Assessor's Parcel Number(s): 219-09-001

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found ☐ Not Found ☒

LAWYERS TITLE OF ARIZONA, INC.
WHEN RECORDED MAIL TO:

SWIFT CURRENT LAND & CATTLE LLC
2525 E. ARIZONA BILTMORE CR.
SUITE C-135
PHOENIX, AZ 85016
HOLD FOR KARMA S.
PHX NCS OFC.

ESCROW NO.: N0443147 - 001 - KLS

OFFICIAL RECORDS OF
MARICOPA COUNTY RECORDER

HELEN PURCELL
20040883014 07/30/2004 10:54
ELECTRONIC RECORDING

1343452-2-2-1--
Hoyp

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Special Warranty Deed

For the consideration of Ten Dollars, and other valuable considerations,

JOHNSON CATTLE COMPANY, an Arizona general partnership,

does hereby convey to

SWIFT CURRENT LAND & CATTLE LLC, an Arizona limited liability company,

the following real property situated in **Maricopa** County, Arizona:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF FOR LEGAL DESCRIPTION OF SUBJECT PROPERTY.

SUBJECT TO: Current taxes and other assessments, reservations in patents and all easements, rights of way, encumbrances, liens, covenants, conditions, restrictions, obligations, and liabilities as may appear of record.

And the Grantor hereby binds itself and its successors to warrant and defend the title, against all acts of the Grantor herein, and no other, subject to the matters set forth.

Effective as of: July 30, 2004

GRANTOR:

JOHNSON CATTLE COMPANY,
an Arizona general partnership

By: Earl C. Johnson

Earl C. Johnson, Partner

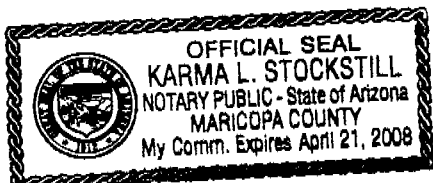
By: Clifford K. Johnson

Clifford K. Johnson, Partner

State of ARIZONA
County of Maricopa

} SS

This instrument was acknowledged before me this 28 day of
July, 2004, by **EARL C. JOHNSON** and **CLIFFORD K. JOHNSON** as the Partners of **JOHNSON CATTLE COMPANY**, an Arizona general partnership



Karma L. Stockstill
Notary Public

My commission will expire 4-21-2008

EXHIBIT "A"
(Legal Description)

H. E. Survey No. 317, embracing a portion of, approximately, Section 21 and 28, Township 7 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona, more particularly described as follows:

BEGINNING at Corner No. 1, from which U. S. Location Monument No. 317, H.E.S. bears South 59 degrees 57 minutes East 10-58/100ths chains distant;

THENCE South 46 degrees 12 minutes East 26-94/100ths chains to Corner No. 2;

THENCE South 04 degrees 03 minutes East 61 chains to Corner No. 3;

THENCE West 19-84/100ths chains to Corner No. 4;

THENCE North 05 degrees 51 minutes West 71-34/100ths chains to Corner No. 5;

THENCE North 21 degrees 46 minutes East 9-22/100ths chains to Corner No. 1, the POINT OF BEGINNING, according to the Official Plat of the Survey of the said Land, returned to the General Land Office by the Surveyor-General.

APPENDIX E

ERS RECCheck AREA REPORT RESULTS

RecCheck

The Standard for ASTM/AAI Radius Searches

(One Mile Environmental Records Search, Exceeds ASTM 1527/1528 and EPA All Appropriate Inquiry)

Area Report Results

REPORT RESULTS



Site Location:

Forest Road 48 And Trail 4

Cave Creek, AZ 00199

(N 33-56-10, W 111-57-2) NAD83

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EXECUTIVE SUMMARY

INFORMATION ON THE REQUESTED LOCATION

Site Address:	Forest Road 48 And Trail 4 Cave Creek, AZ 00199
Client Project Name/Number:	Cave Creek 807.120
Coordinates:	N 33-56-10, W 111-57-2 (NAD 83) 33.9360144337753, -111.950443654205
Date of Report	June 13, 2016
ERS Project Number:	2104669094
Subject Site Listed on the following lists:	Not Listed
Subject Site Listed as Map ID#:	N/A
USGS 7.5 Minute Quad Map:	New River Mesa
Subject Site Located within a Potential Area of Concern:	No
Township, Section and Range:	Township: 07N Range: 04E Section: 021
Site Elevation: (feet above or below (-) mean sea level)	Approximately 2560 ft near the center of the area.
Flood Zone: (FEMA Q3 Digital Data)	Panel: 04013C0490L, Effective Date: 10/16/2013 Zone D - Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.
Fire Insurance Map Coverage:	No
Radon Information:	EPA Radon Zone: 2 (Predicted avg for county: 2 to 4 pCi/L)
Search Radius Expansion Size: (In Miles)	0
Soil Type: (USDA Soil Survey Geographic Database) (SSURGO)	FRAGUA 40% to 70% slopes, 40% of total LAMA 0% to 50% slopes, 30% of total ROCK OUTCROP 80% to 99% slopes, 30% of total

Zip Codes Searched for "Un-Mappable" Sites:	00199
Occurrence Count:	0

SUMMARY OF OCCURRENCES

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
N/A						

POTENTIAL AREAS OF CONCERN/CONTAMINATION SUMMARY

DATABASE SEARCHED	SUBJECT SITE WITHIN POTENTIAL AREA OF CONCERN	AREAS FOUND WITHIN 1-MILE RADIUS
Brownfields-AZ	No	0
Close-WQARF-AZ	No	0
NPL-R9-US	No	0
DOD-AZ	No	0
EpaNPL-AZ	No	0
WQARF-AZ	No	0

DATABASE OCCURRENCE SUMMARY

HIGH RISK* OCCURRENCES IDENTIFIED IN REQUESTED SEARCH RADIUS		
DATABASE SEARCHED	DISTANCE SEARCHED (MILES)	HIGH RISK OCCURRENCES FOUND
ASPL-AZ	0.5	0
BF-Open-AZ	0.5	0
CERCLIS-US	0.5	0
LUST-Open-AZ	0.5	0
NPL-US	1	0
Proposed-NPL-US	1	0
RemOther-Open-AZ	0.5	0
SAA-Agreements-US	1	0
Tribal-LUST-Open-Reg9	0.5	0
VCP-Open-AZ	0.5	0

* For the purposes of this report, "high risk" occurrences are those that have known contamination and have not received a "case closed" or "no further action" status from the agency that maintains the records.

ASTM/AAI STANDARD RECORD SOURCES SUMMARY

STANDARD ENVIRONMENTAL RECORD SOURCES	ASTM MIN. SEARCH DIST. / ERS SEARCH DIST. (MILES)	ERS DATABASE NAME	TOTAL LISTINGS	MAP ID #'S
Federal NPL site list	1.0 / 1.0	NPL-US	0	None Listed
		Proposed-NPL-US	0	None Listed
Federal Delisted NPL site list	0.5 / 1.0	Delisted-NPL-US	0	None Listed
Federal CERCLIS list	0.5 / 0.5	CERCLIS-US	0	None Listed
Federal CERCLIS NFRAP site list	0.5 / 0.5	CERCLIS-Archived-US	0	None Listed
Federal RCRA CORRACTS facilities list	1.0 / 1.0	RCRA-COR-US	0	None Listed
Federal RCRA non-CORRACTS TSD facilities list	0.5 / 0.5	RCRA-TSD-US	0	None Listed
Federal RCRA generators list	Property and	RCRA-CESQG-US	0	None Listed

	adjoining properties / 0.25			
		RCRA-LQG-US	0	None Listed
		RCRA-NON-US	0	None Listed
		RCRA-SQG-US	0	None Listed
Federal Inst/Eng control registries	Property Only / 0.25	Controls-RCRA-US	0	None Listed
		Controls-US	0	None Listed
		Hist-US-EC	0	None Listed
		Hist-US-IC	0	None Listed
		LIENS-US	0	None Listed
		ERNS-US	0	None Listed
Federal ERNS list	Property Only / 0.0625			
State and Tribal-Equivalent NPL	1.0 / 1.0	Not Reported by Agency	0	None Listed
State and Tribal-Equivalent CERCLIS	0.5 / 0.5	ASPL-AZ	0	None Listed
		SS-AZ	0	None Listed
State and Tribal landfill and/or solid waste disposal sites	0.5 / 0.5	ALF-AZ	0	None Listed
		CLF-AZ	0	None Listed
		Debris-US	0	None Listed
		Hist-Dumps-US	0	None Listed
		Transfer-AZ	0	None Listed
		Tribal-ODI-US	0	None Listed
		LUST-Closed-AZ	0	None Listed
		LUST-Open-AZ	0	None Listed
State and Tribal Leaking Storage Tank Lists	0.5 / 0.5	Tribal-LUST-Closed- Reg9	0	None Listed
		Tribal-LUST-Open- Reg9	0	None Listed
		AST2-AZ	0	None Listed
		AST-AZ	0	None Listed
		FEMA-UST-US	0	None Listed
State and Tribal Registered Storage Tank Lists	Property and adjoining properties / 0.25	Tribal-UST-Reg9	0	None Listed
		UST-AZ	0	None Listed
		Controls-AZ	0	None Listed
State and Tribal Inst/Eng Control Registries	Property Only / 0.5			
State and Tribal Voluntary Cleanup Sites	0.5 / 0.5	Tribal-VCP-US	0	None Listed
		VCP-Closed-AZ	0	None Listed
		VCP-Open-AZ	0	None Listed
State and Tribal Brownfield Sites	0.5 / 0.5	BF-Closed-AZ	0	None Listed
		BF-Open-AZ	0	None Listed
		BF-US	0	None Listed
		Tribal-BF-US	0	None Listed

FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
BF-US	0.5	0	0	0	0	-	0
CERCLIS-Archived-US	0.5	0	0	0	0	-	0
CERCLIS-US	0.5	0	0	0	0	-	0
Controls-RCRA-US	0.5	0	0	0	0	-	0
Controls-US	0.5	0	0	0	0	-	0
Debris-US	0.5	0	0	0	0	-	0
Delisted-NPL-US	1	0	0	0	0	0	0
ERNS-US	0.0625	0	0	-	-	-	0
FEMA-UST-US	0.25	0	0	0	-	-	0
FTTS-ENF-US	0.0625	0	0	-	-	-	0
Hist-Dumps-US	0.5	0	0	0	0	-	0
Hist-US-EC	0.5	0	0	0	0	-	0
Hist-US-IC	0.5	0	0	0	0	-	0
HMIS-US	0.0625	0	0	-	-	-	0
LIENS-US	0.0625	0	0	-	-	-	0
NPL-US	1	0	0	0	0	0	0
PADS-US	0.0625	0	0	-	-	-	0
PCB-US	0.25	0	0	0	-	-	0
Proposed-NPL-US	1	0	0	0	0	0	0
RCRA-CESQG-US	0.25	0	0	0	-	-	0
RCRA-COR-US	1	0	0	0	0	0	0
RCRA-LQG-US	0.25	0	0	0	-	-	0
RCRA-NON-US	0.25	0	0	0	-	-	0
RCRA-SQG-US	0.25	0	0	0	-	-	0
RCRA-TSD-US	0.5	0	0	0	0	-	0
SAA-Agreements-US	1	0	0	0	0	0	0
Tribal-BF-US	0.5	0	0	0	0	-	0
Tribal-LUST-Closed-Reg9	0.5	0	0	0	0	-	0
Tribal-LUST-Open-Reg9	0.5	0	0	0	0	-	0
Tribal-ODI-US	0.5	0	0	0	0	-	0
Tribal-UST-Reg9	0.25	0	0	0	-	-	0
Tribal-VCP-US	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
ALF-AZ	0.5	0	0	0	0	-	0
ASPL-AZ	0.5	0	0	0	0	-	0
AST2-AZ	0.25	0	0	0	-	-	0
AST-AZ	0.25	0	0	0	-	-	0
BF-Closed-AZ	0.5	0	0	0	0	-	0
BF-Open-AZ	0.5	0	0	0	0	-	0
CLF-AZ	0.5	0	0	0	0	-	0
Controls-AZ	0.5	0	0	0	0	-	0
Hist-SPILLS-AZ	0.0625	0	0	-	-	-	0
LUST-Closed-AZ	0.5	0	0	0	0	-	0
LUST-Open-AZ	0.5	0	0	0	0	-	0
Manifest2-RI	0.0625	0	0	-	-	-	0
Oil-Centers-AZ	0.5	0	0	0	0	-	0
RemOther-Closed-AZ	0.5	0	0	0	0	-	0
RemOther-Open-AZ	0.5	0	0	0	0	-	0
SS-AZ	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES

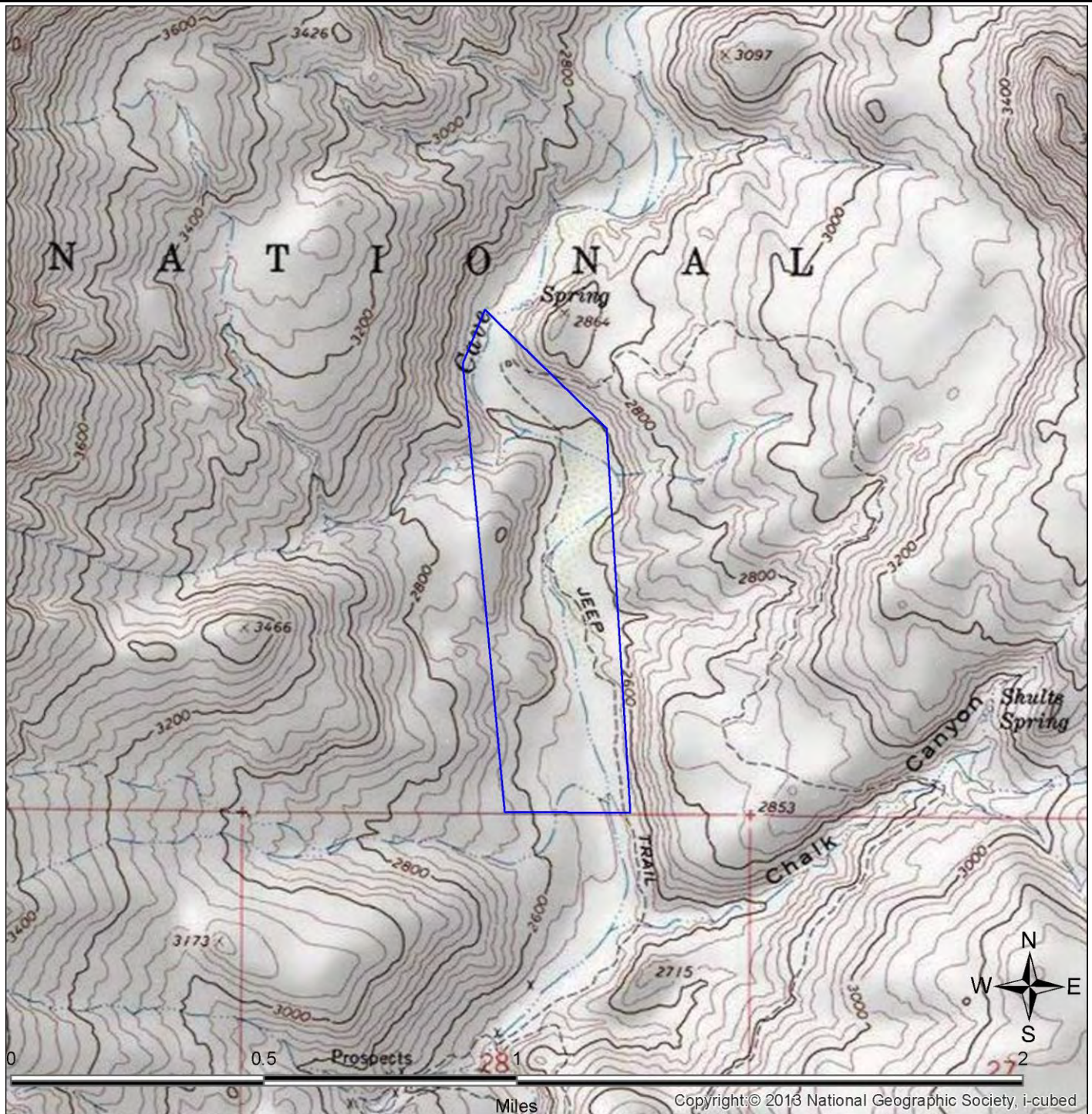
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Transfer-AZ	0.5	0	0	0	0	-	0
UST-AZ	0.25	0	0	0	-	-	0
VCP-Closed-AZ	0.5	0	0	0	0	-	0
VCP-Open-AZ	0.5	0	0	0	0	-	0

SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Air-AZ	0.25	0	0	0	-	-	0
Allfac-AZ	0.25	0	0	0	-	-	0
BioFuel-US	0.25	0	0	0	-	-	0
CDL-AZ	0.0625	0	0	-	-	-	0
CDL-US	0.0625	0	0	-	-	-	0
Coal-Ash-AZ	0.5	0	0	0	0	-	0
Coal-Ash-Dams-US	0.5	0	0	0	0	-	0
Dams-AZ	0.25	0	0	0	-	-	0
DryCleaners-AZ	0.25	0	0	0	-	-	0
DryWell-AZ	0.25	0	0	0	-	-	0
EGRID-US	0.5	0	0	0	0	-	0
EPA-Watch-List-US	0.25	0	0	0	-	-	0
FA-HW-US	0.0625	0	0	-	-	-	0
FA-UST-AZ	0.0625	0	0	-	-	-	0
FRS-US	0.0625	0	0	-	-	-	0
FTTS-INSP-US	0.0625	0	0	-	-	-	0
FUDS-US	1	0	0	0	0	0	0
Hist-AFS2-US	0.25	0	0	0	-	-	0
Hist-AFS-US	0.25	0	0	0	-	-	0
Hist-AZ	0.0625	0	0	-	-	-	0
Hist-DryWells-AZ	0.25	0	0	0	-	-	0
Hist-FIFRA-US	0.25	0	0	0	-	-	0
Hist-LUST-AZ	0.25	0	0	0	-	-	0
HIST-MLTS-US	0.25	0	0	0	-	-	0
Hist-US	0.0625	0	0	-	-	-	0
Hist-UST-AZ	0.25	0	0	0	-	-	0
ICIS-Air-US	0.0625	0	0	-	-	-	0
ICIS-FEC-US	0.0625	0	0	-	-	-	0
ICIS-NPDES-US	0.0625	0	0	-	-	-	0
Lead-Smelter-2-US	0.25	0	0	0	-	-	0
Lead-US	0.25	0	0	0	-	-	0
Mines-AZ	0.0625	0	0	-	-	-	0
MINES-US	0.0625	0	0	-	-	-	0
MLTS-US	0.0625	0	0	-	-	-	0
MRDS-US	0.25	0	0	0	-	-	0
NPDES-AZ	0.0625	0	0	-	-	-	0
OGW-AZ	0.0625	0	0	-	-	-	0
PCS-US	0.25	0	0	0	-	-	0
RADINFO-US	0.0625	0	0	-	-	-	0
RFG-Lab-US	0.25	0	0	0	-	-	0
RMP-US	0.0625	0	0	-	-	-	0
ROD-US	0.5	0	0	0	0	-	0
SDWIS-US	0.25	0	0	0	-	-	0
SSTS-US	0.0625	0	0	-	-	-	0
SWT-AZ	0.25	0	0	0	-	-	0

SUPPLEMENTAL DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Tribal-Air-US	0.25	0	0	0	-	-	0
TRIS2000-US	0.0625	0	0	-	-	-	0
TRIS2010-US	0.0625	0	0	-	-	-	0
TRIS80-US	0.0625	0	0	-	-	-	0
TRIS90-US	0.0625	0	0	-	-	-	0
TSCA-US	0.0625	0	0	-	-	-	0
UIC-AZ	0.0625	0	0	-	-	-	0
UMTRA-US	0.0625	0	0	-	-	-	0
USGS-Waterwells-US	0.0625	0	0	-	-	-	0
Vapor-Intrusions-US	0.5	0	0	0	0	-	0
Waste-tire-AZ	0.5	0	0	0	0	-	0
Wells-AZ	0.0625	0	0	-	-	-	0

PROPRIETARY HISTORIC DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-Agriculture	0.0625	0	0	-	-	-	0
Hist-Auto Dealers	0.0625	0	0	-	-	-	0
Hist-Auto Repair	0.25	0	0	0	-	-	0
Hist-Chemical Manufacturing	0.0625	0	0	-	-	-	0
Hist-Chemical-Storage	0.0625	0	0	-	-	-	0
Hist-Cleaners	0.25	0	0	0	-	-	0
Hist-Convenience	0.0625	0	0	-	-	-	0
Hist-Disposal-Recycle	0.0625	0	0	-	-	-	0
Hist-Food-Processors	0.0625	0	0	-	-	-	0
Hist-Gun-Ranges	0.0625	0	0	-	-	-	0
Hist-Machine Shop	0.0625	0	0	-	-	-	0
Hist-Manufacturing	0.0625	0	0	-	-	-	0
Hist-Metal Plating	0.0625	0	0	-	-	-	0
Hist-Mining	0.0625	0	0	-	-	-	0
Hist-Mortuaries	0.0625	0	0	-	-	-	0
Hist-Oil-Gas	0.0625	0	0	-	-	-	0
Hist-OilGas-Refiners	0.0625	0	0	-	-	-	0
Hist-Paint-Stores	0.0625	0	0	-	-	-	0
Hist-Petroleum	0.0625	0	0	-	-	-	0
Hist-Post-Offices	0.0625	0	0	-	-	-	0
Hist-Printers	0.0625	0	0	-	-	-	0
Hist-Rental	0.0625	0	0	-	-	-	0
Hist-RV-Dealers	0.0625	0	0	-	-	-	0
Hist-Salvage	0.0625	0	0	-	-	-	0
Hist-Service Stations	0.25	0	0	0	-	-	0
Hist-Steel-Metals	0.0625	0	0	-	-	-	0
Hist-Textile	0.0625	0	0	-	-	-	0
Hist-Transportation	0.0625	0	0	-	-	-	0
Hist-Trucking	0.0625	0	0	-	-	-	0
Hist-Vehicle-Parts	0.0625	0	0	-	-	-	0
Hist-Vehicle-Washing	0.0625	0	0	-	-	-	0



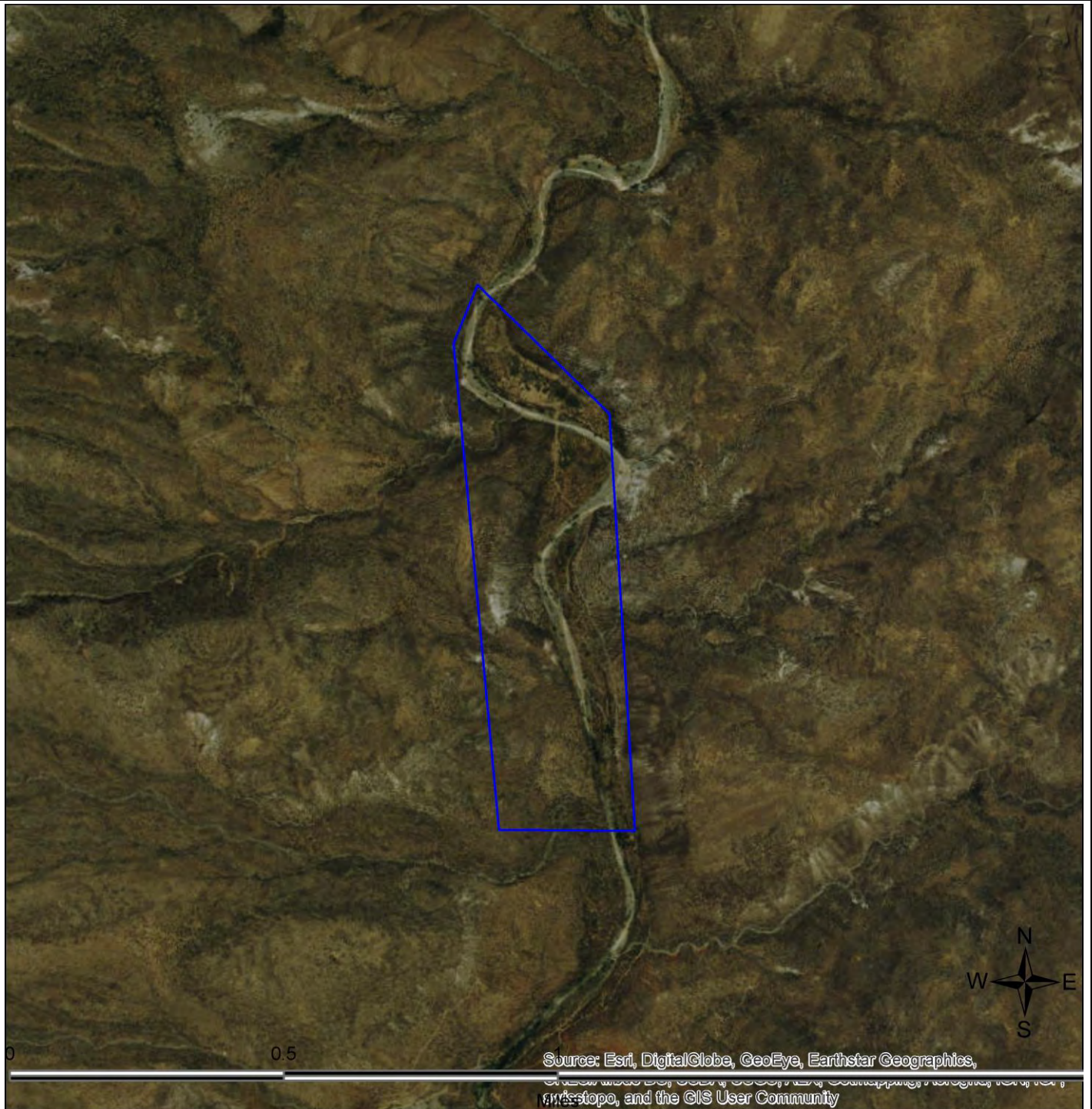
SITE LOCATION TOPOGRAPHIC MAP

U.S. Geological Survey. New River Mesa Quadrangle, 7.5 Minute Series

WestLand Resources

Forest Road 48 And Trail 4
Cave Creek, AZ 00199

FIGURE: 1
JOB: 807.120
DATE: 6/13/2016



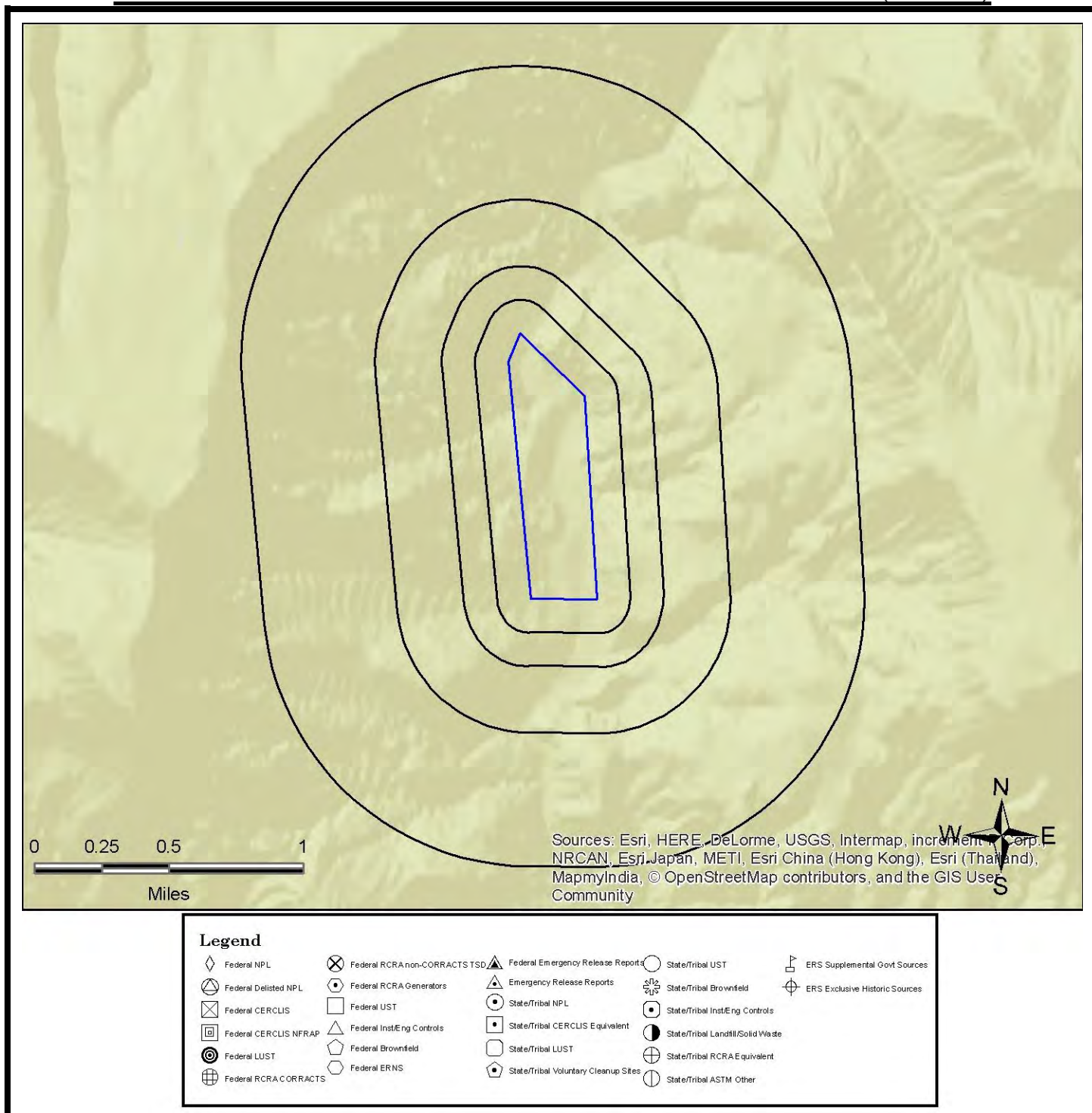
SITE LOCATION MAP

WestLand Resources

Forest Road 48 And Trail 4
Cave Creek, AZ 00199

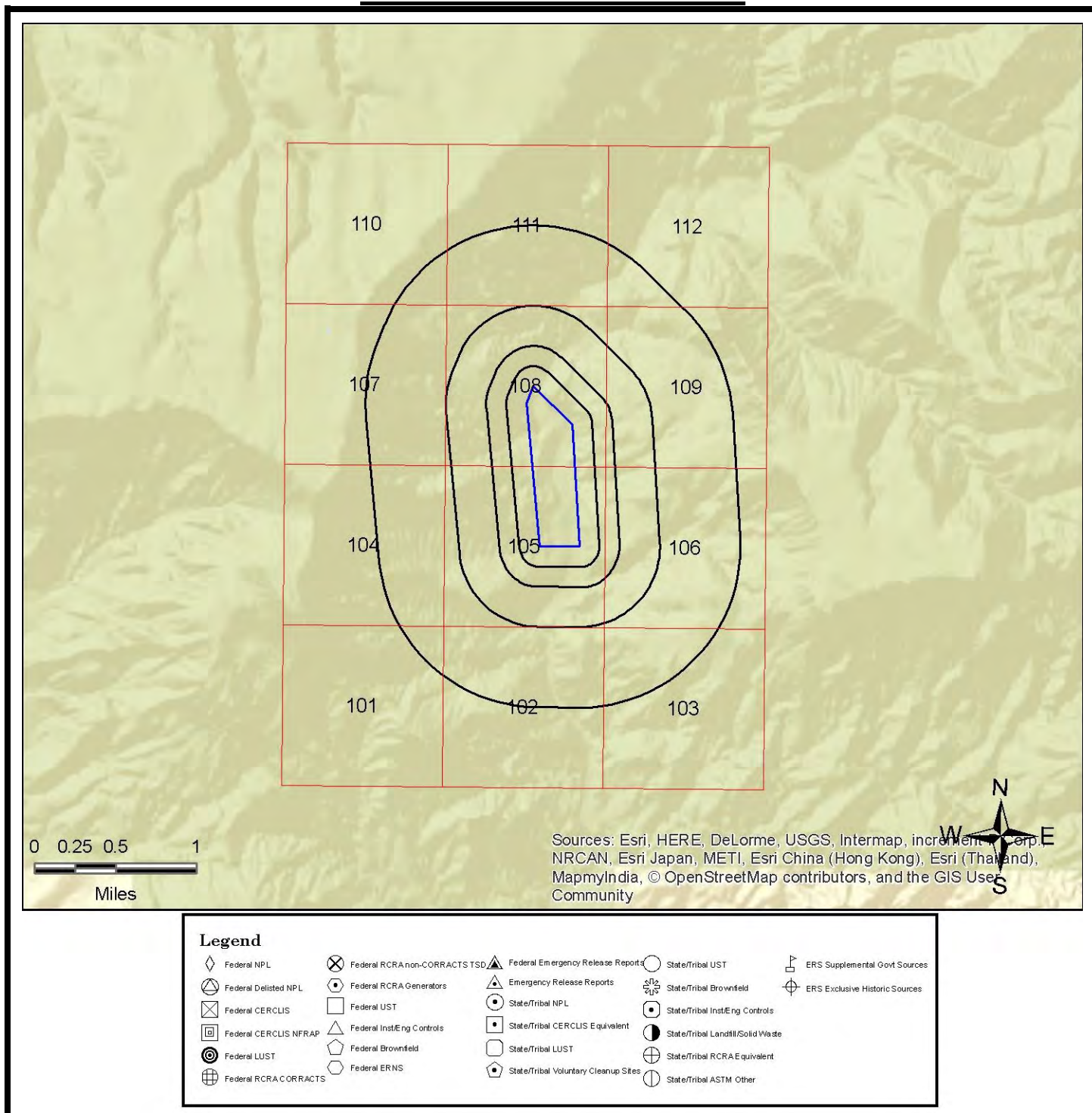
FIGURE: 2
JOB: 807.120
DATE: 6/13/2016

1-MILE RADIUS STREET MAP W/OCCURRENCES (MAP1)



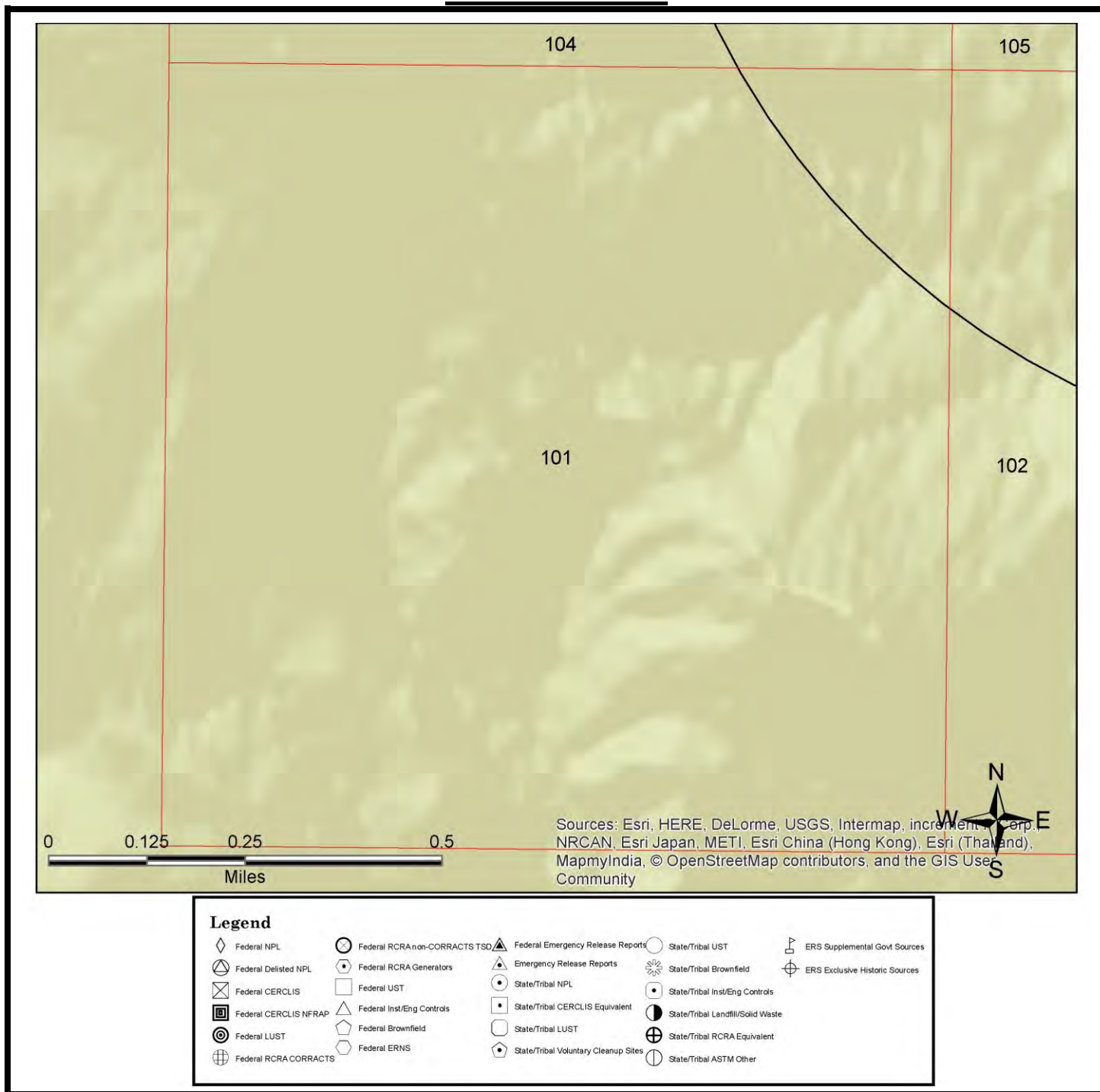
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID LAYOUT MAP KEY



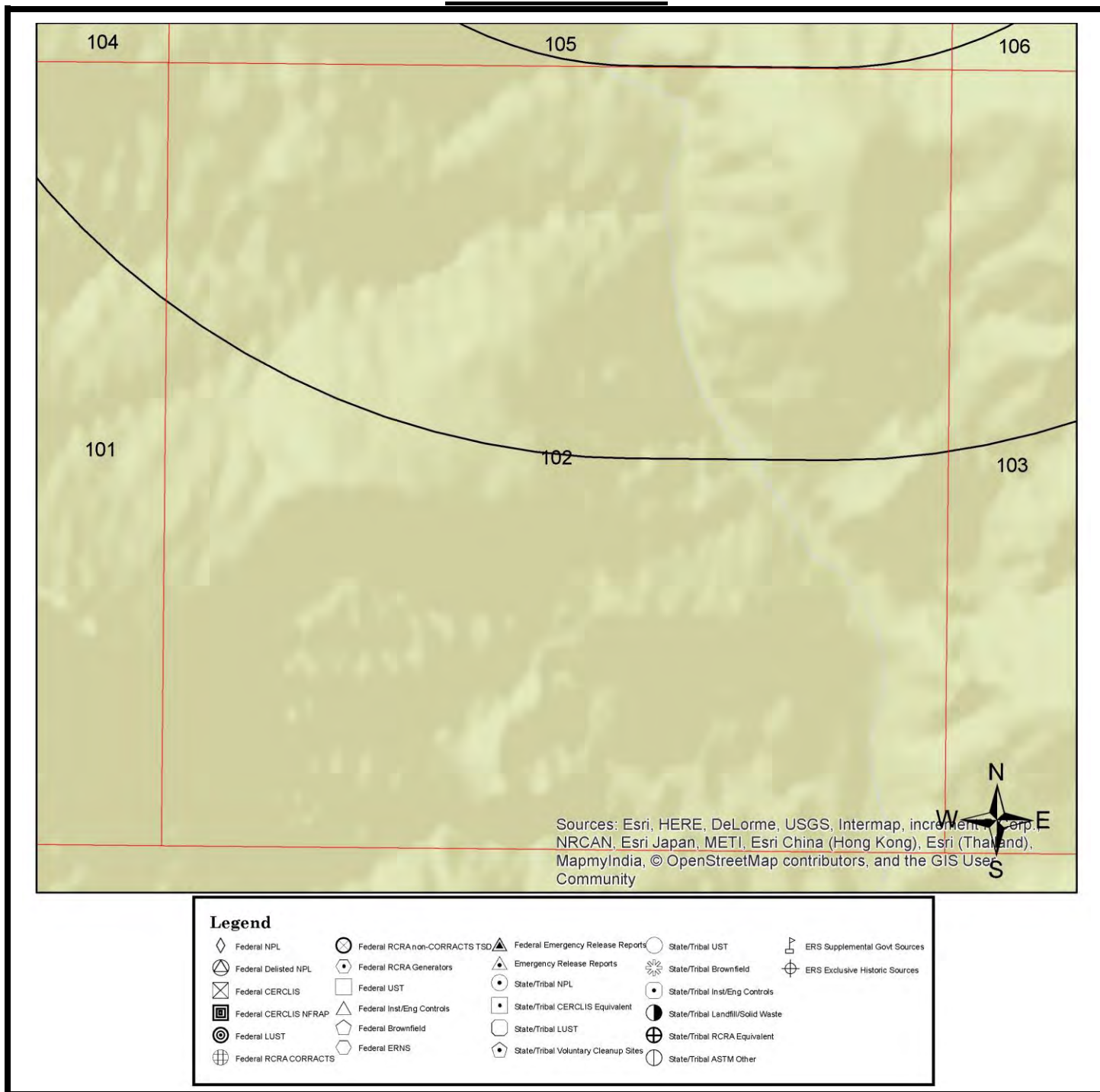
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 101



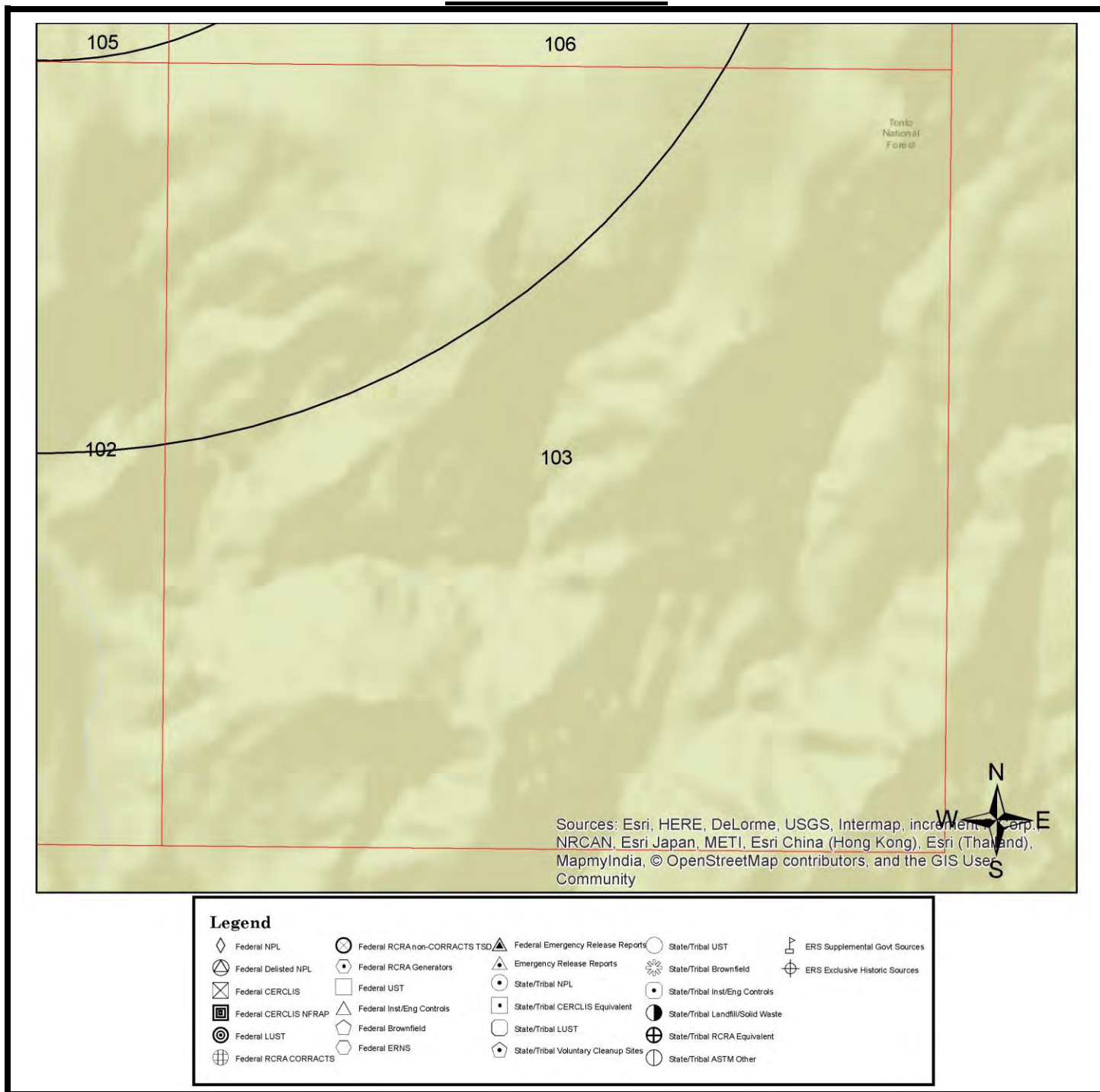
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 102



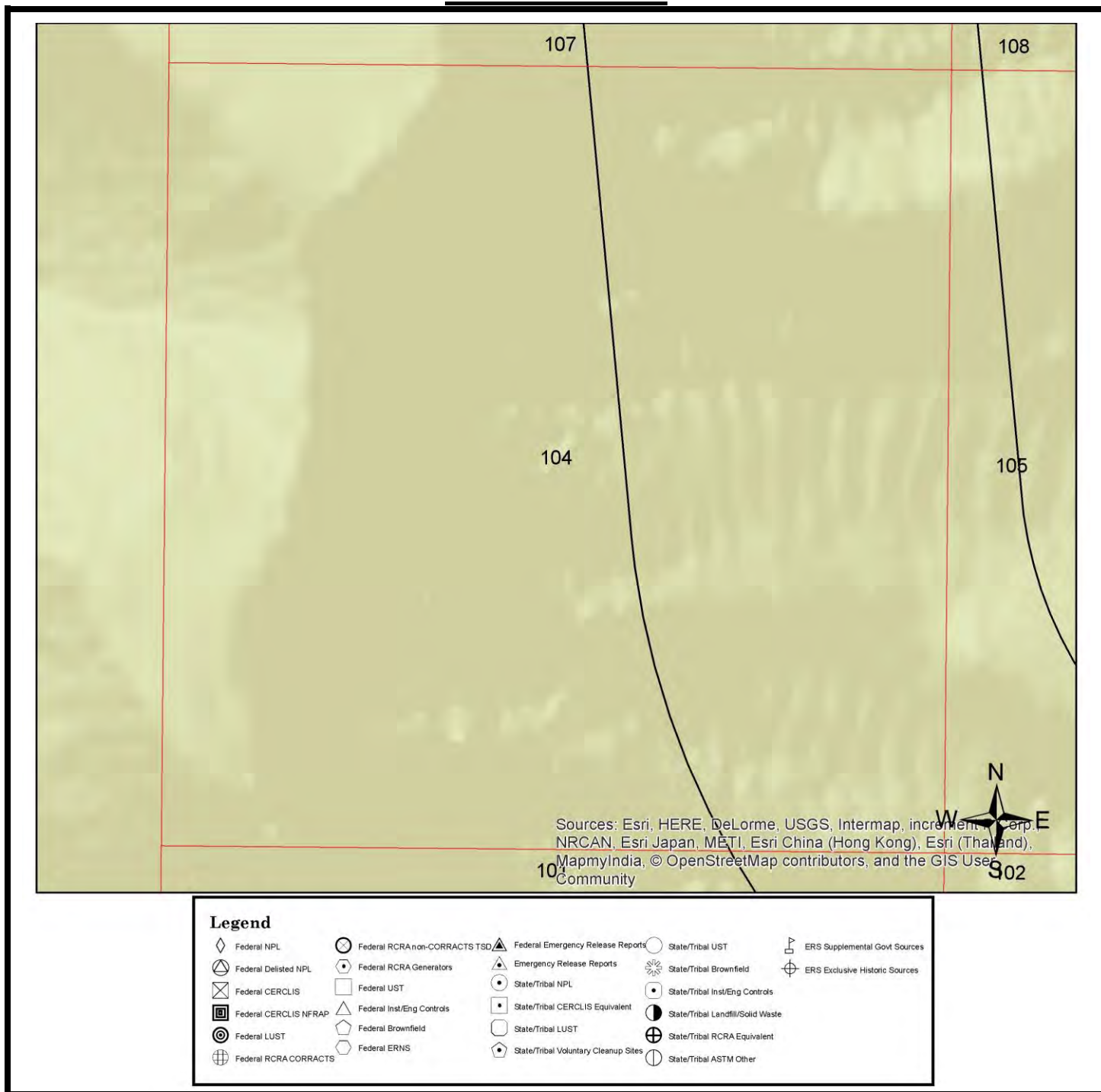
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 103



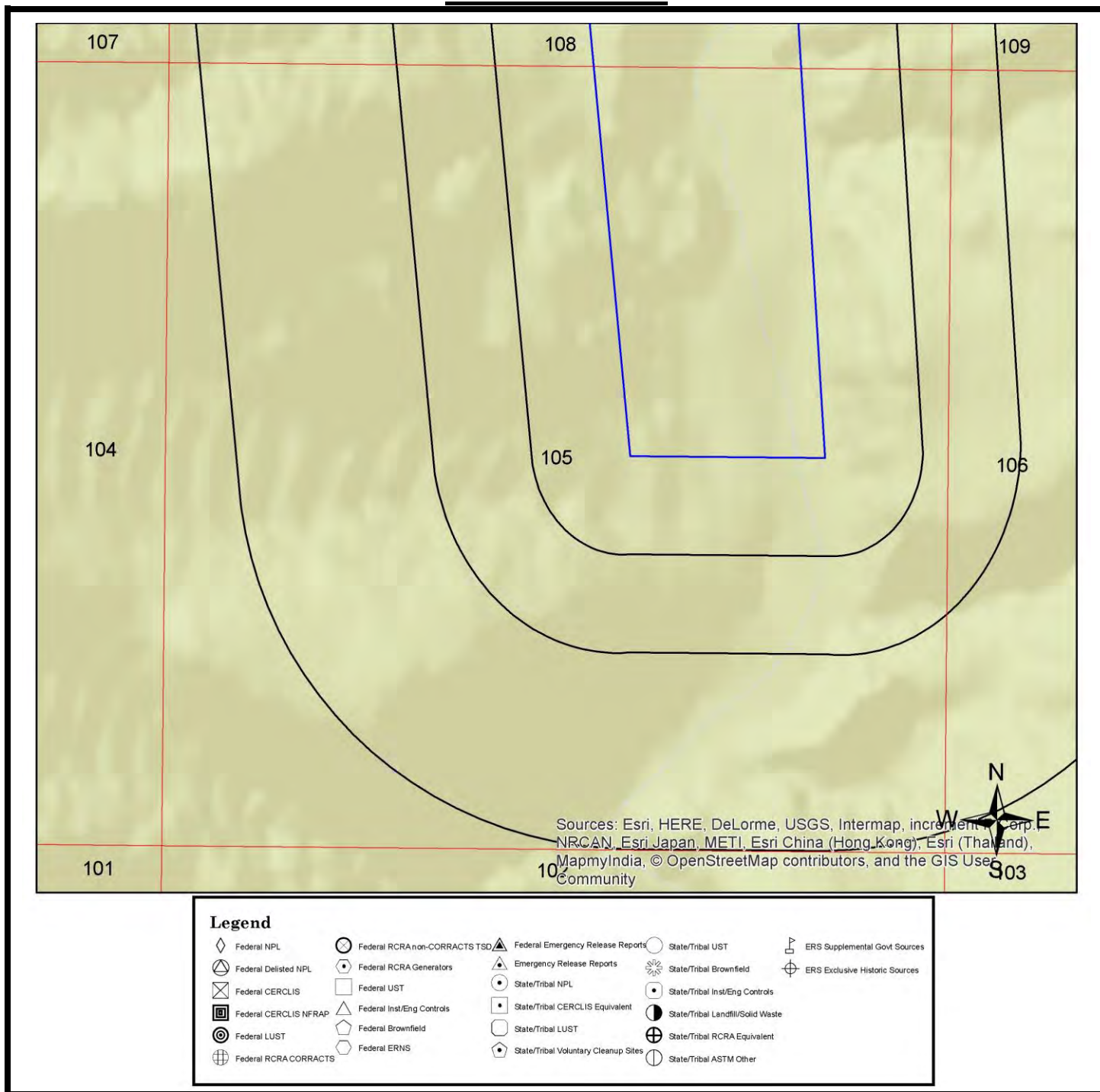
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 104



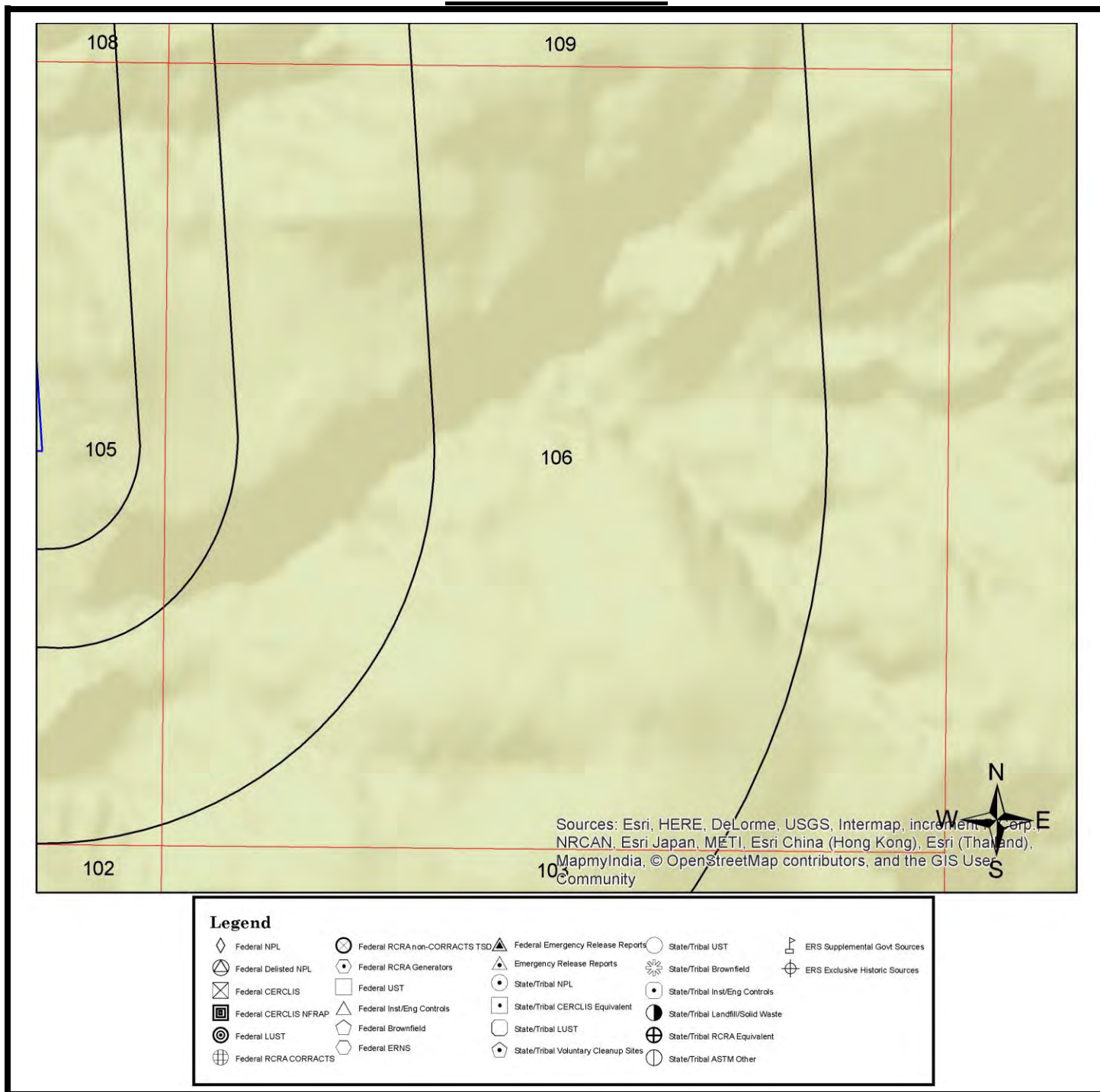
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 105



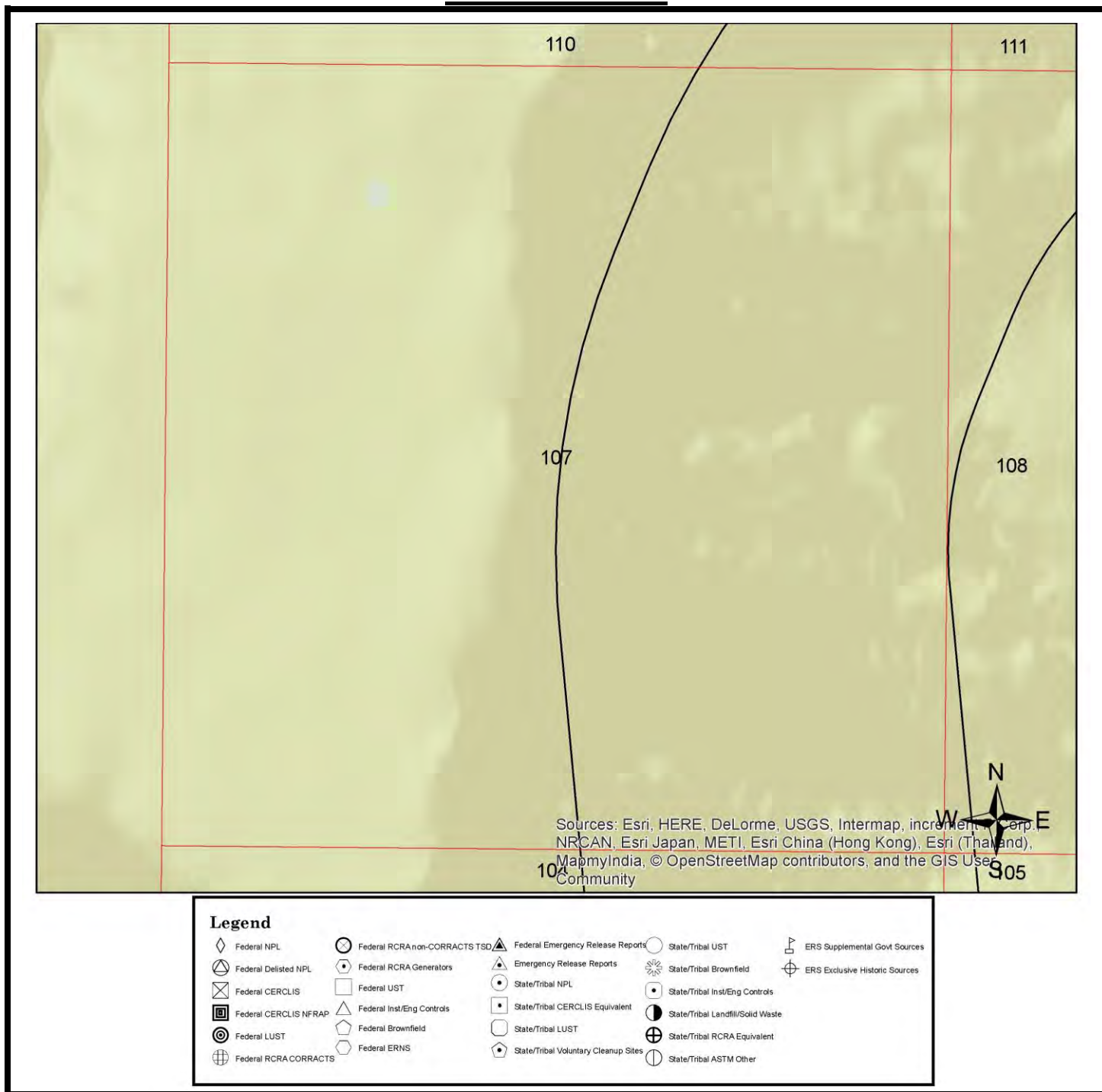
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 106



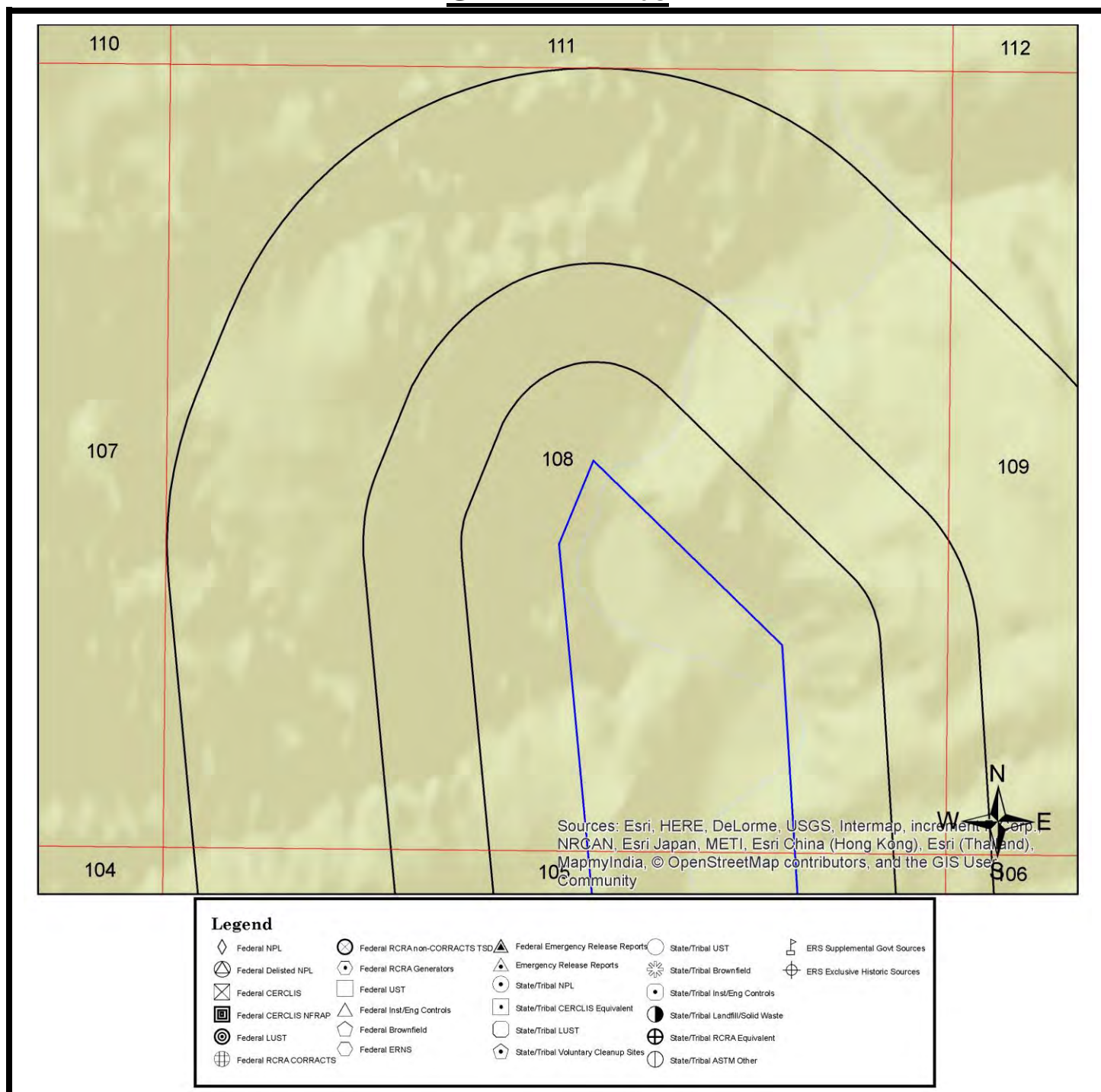
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 107



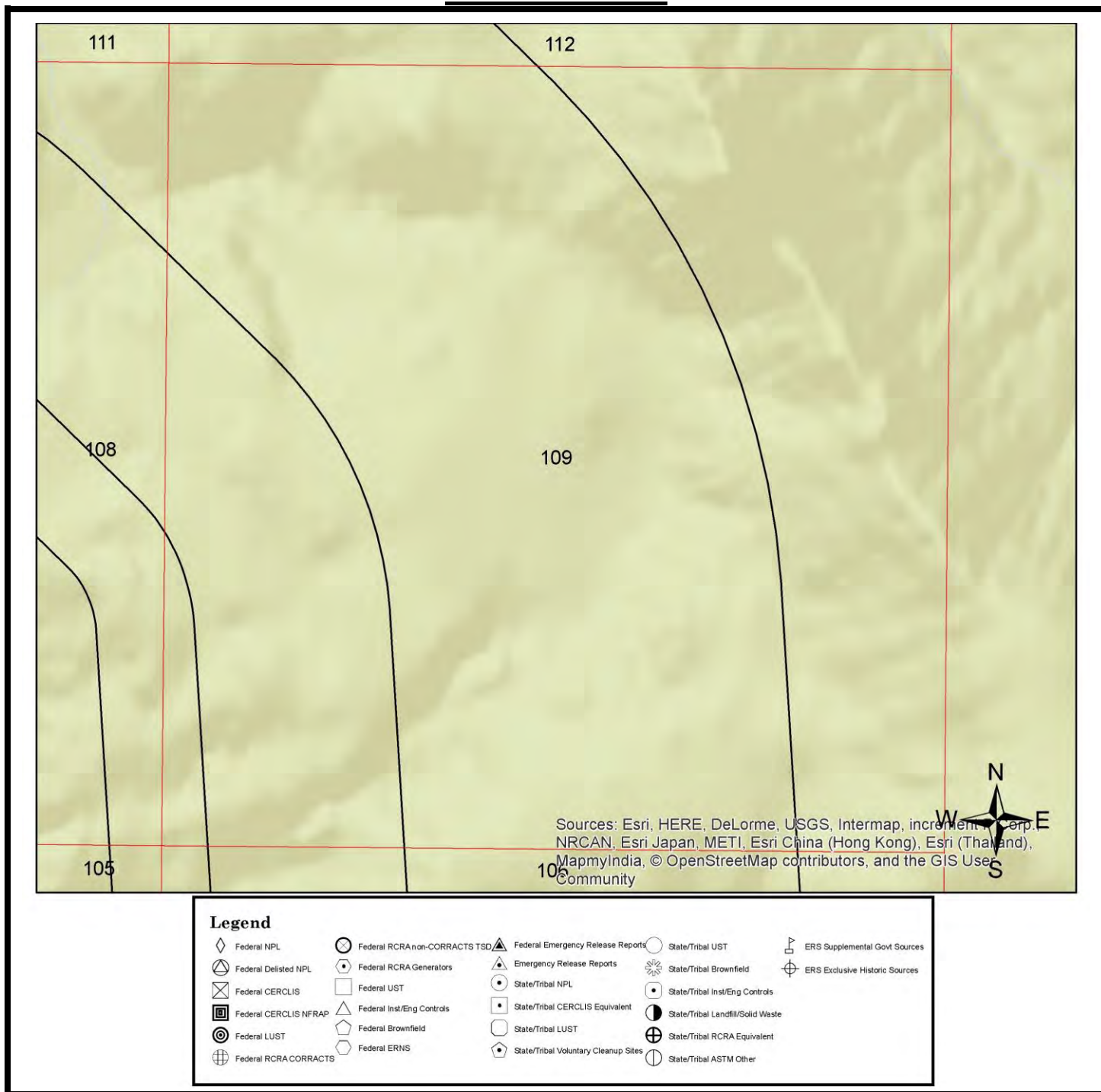
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 108



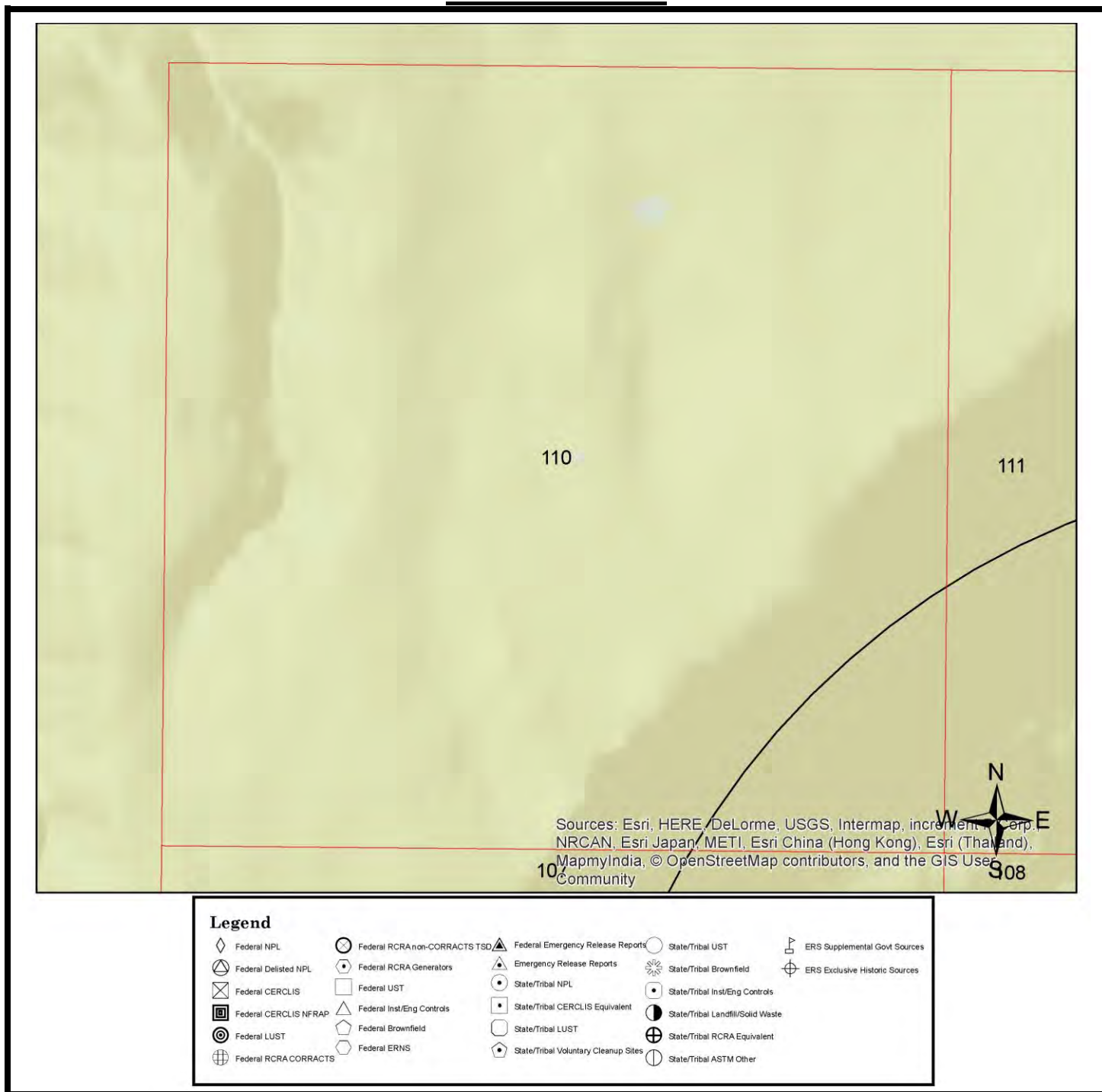
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 109



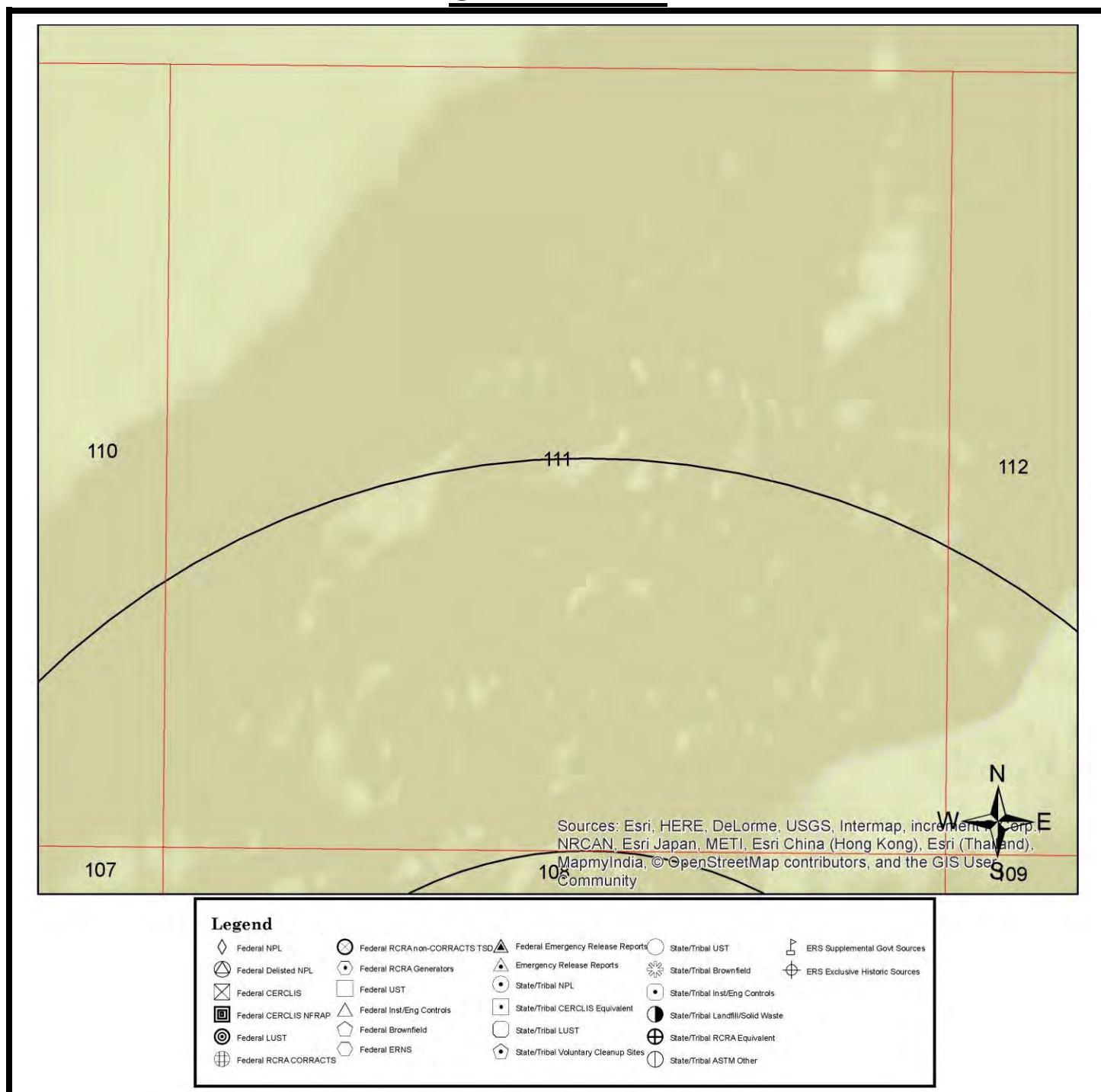
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 110



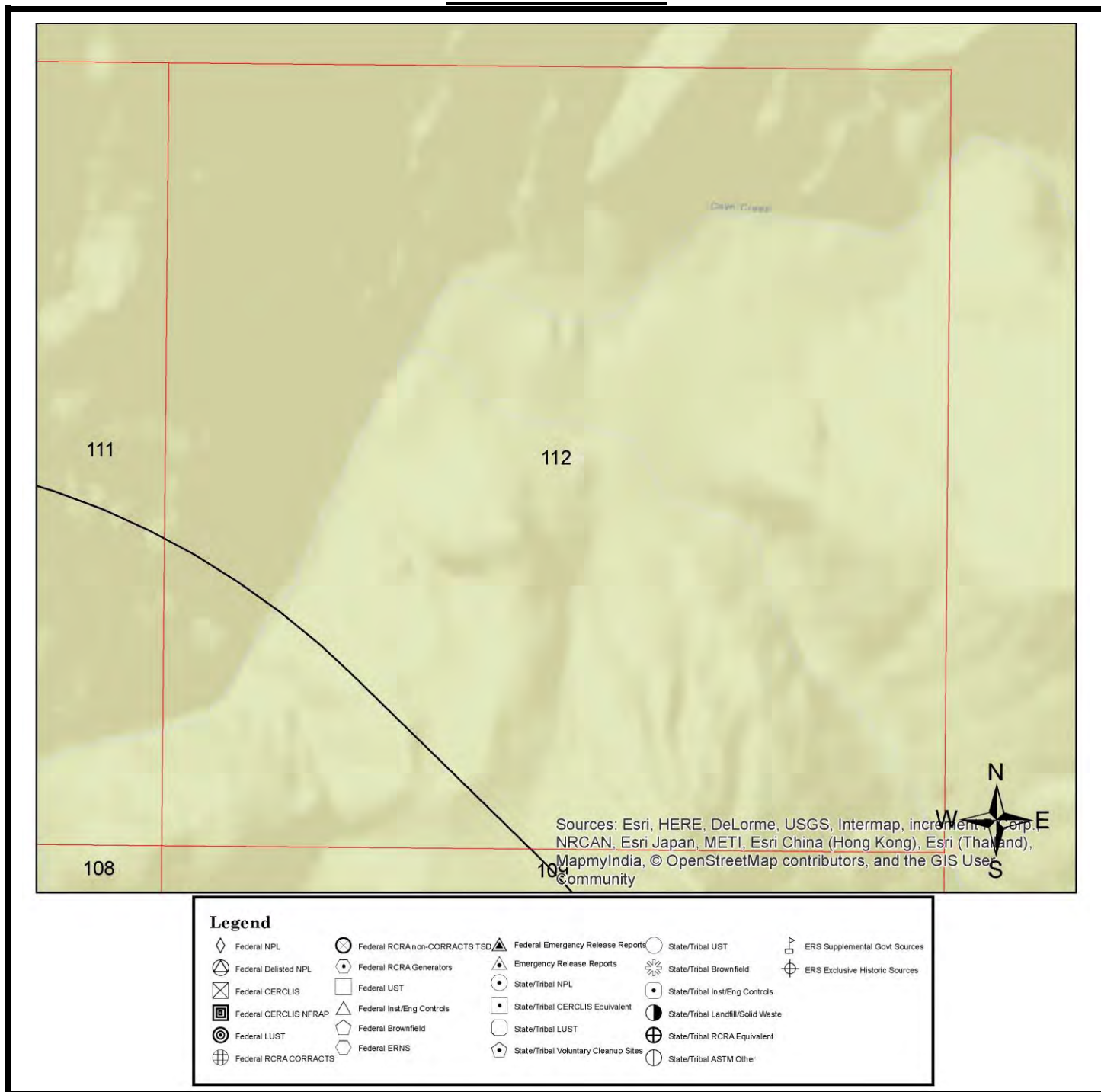
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 111



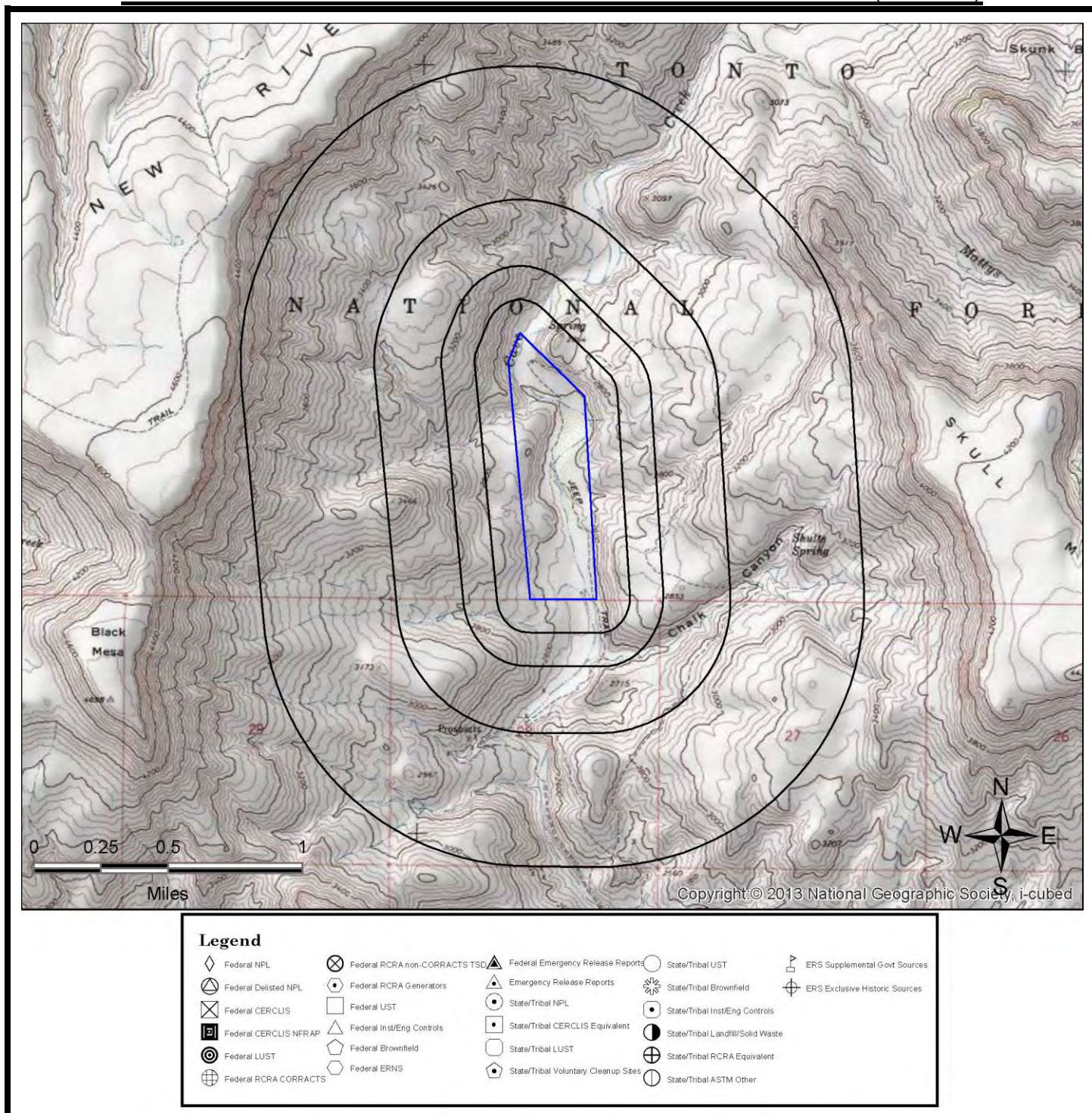
All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

GRID MAP 112



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

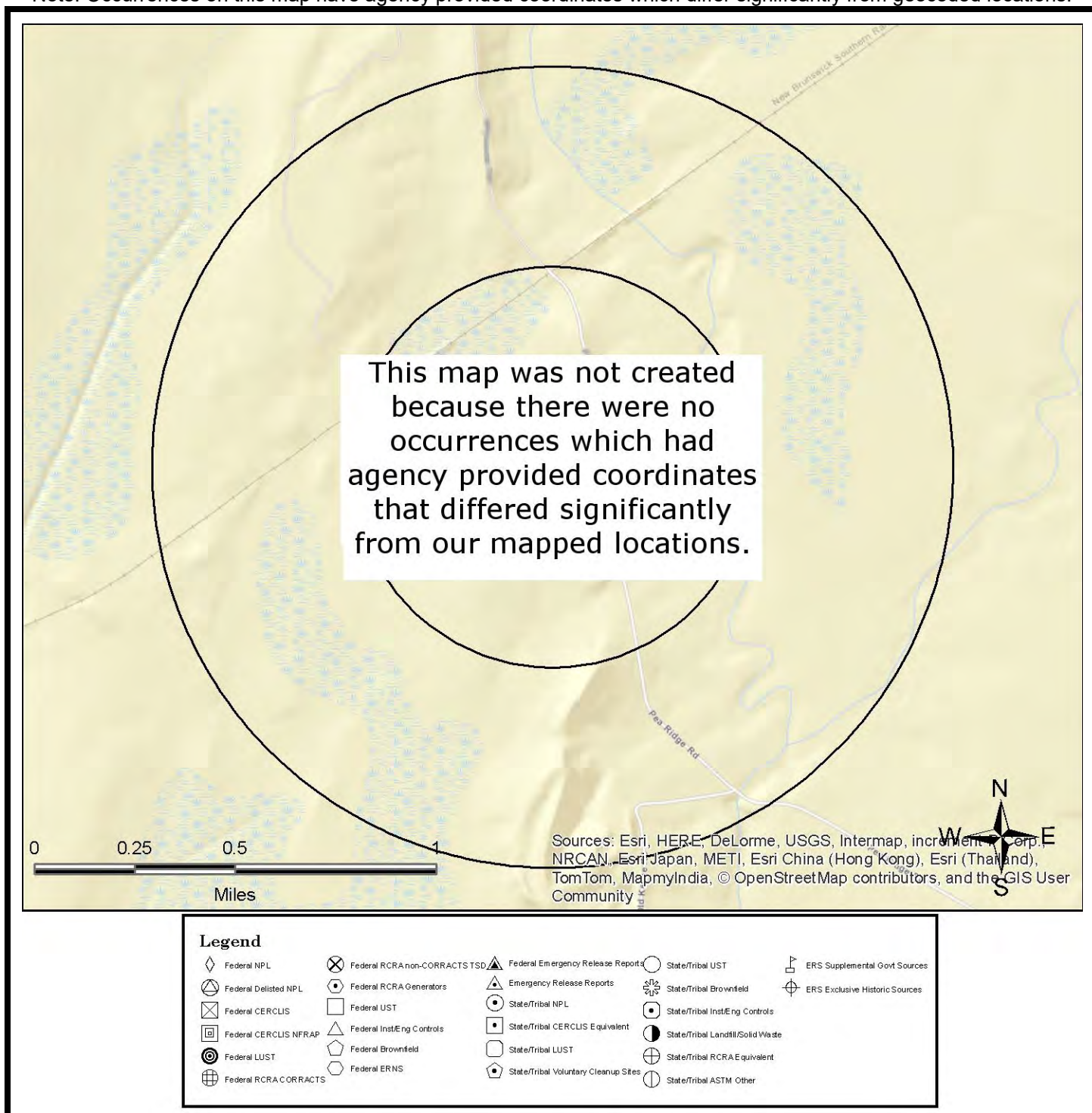
1-MILE TOPOGRAPHIC MAP W/OCCURRENCES (MAP3)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

AGENCY DIFFERENCES IN MAPPED LOCATIONS (MAP4)

Note: Occurrences on this map have agency provided coordinates which differ significantly from geocoded locations.



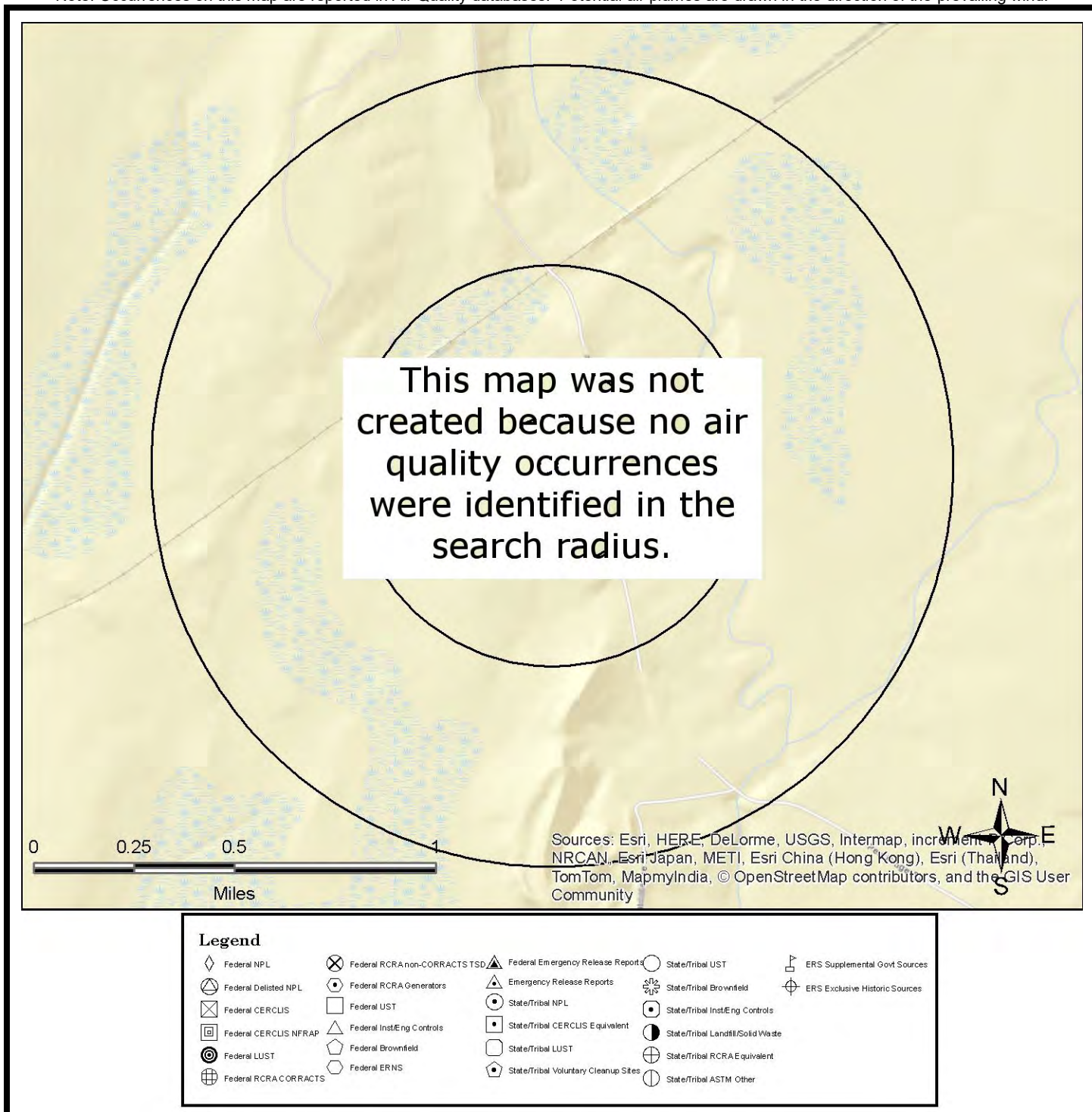
This "AGENCY DIFFERENCES IN MAPPED LOCATIONS (MAP 4)" is fully protected against reproduction in any way, shape or form by ERS Environmental Record Search. ALL applicable laws, copyrights, pending copyrights, trademarks, and any and all applicable Federal and State laws apply at all times. These protections include the concept, procedures, processes, layout, vision, color scheme, mapping layout, legends, data, any and all verbiage, and the entire concept.

SUMMARY OF AGENCY DIFFERENCES

MAP ID	ID / SITE NAME	ADDRESS / DATABASE	AGENCY COORDINATES	DISTANCE (MILES)	DIRECTION
N/A	No occurrences were identified where the agency provided coordinates that differed significantly from our mapped locations.				

MAPPED AIR PERMITS WITH POTENTIAL DISPERSION (MAP5)

Note: Occurrences on this map are reported in Air Quality databases. Potential air plumes are drawn in the direction of the prevailing wind.



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency/source. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. Potential air dispersion plumes are depicted to graphically show the direction contaminants may travel based on prevailing wind data and provide a visual screening tool only. Actual direction will vary especially by season. Depending on the actual contaminate, amount released, and other variables, the distance from the source the contaminate may travel can and will vary. Interpretation and review of all the actual relevant data by an environmental professional is recommended before making any decisions, conclusions or otherwise based on the map depictions, air data, and potential air dispersion plumes.

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LISTED OCCURRENCE DETAILS

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
N/A				
SITE NAME			MAPS	ID
ADDRESS			CITY	ZIP
DETAILS				
No listed sites were found.				

RECORDS SOURCES SEARCHED

Air-AZ

Arizona Air Permits

Category: ERS Supplemental Govt Sources

Description: This database contains permitted facilities in Arizona. These sites are active and have received ADEQ air permits.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712331

Date last updated: 9/18/2015

Date last checked: 9/18/2015

Distance searched: 0.25 miles

Sites:

None Found

ALF-AZ

Active Landfills

Category: State/Tribal Landfill/Solid Waste

Description: This database contains a listing of Active Solid Waste Landfills.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712221

Date last updated: 5/19/2016

Date last checked: 5/11/2016

Distance searched: 0.5 miles

Sites:

None Found

Allfac-AZ

Arizona Permits

Category: ERS Supplemental Govt Sources

Description: This database contains facilities that have been issued a Arizona DEQ permit at some point in time. Facilities listed can be in any of the following programs: Air, Chemical Release, Drinking Water, Hazardous Waste, Solid Waste, Surface Water, UST, Waste Water, and Remediation and Redevelopment.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712300

Date last updated: 11/18/2015

Date last checked: 11/24/2015

Distance searched: 0.25 miles

Sites:

None Found

ASPL-AZ

Arizona Superfund Program List

Category: State/Tribal CERCLIS Equivalent

Description: This database contains WQARF Registry Sites, National Priorities List (NPL) sites and Department of Defense (DOD) sites requiring SPS oversight as reported by the Arizona Department of Environmental Quality.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714340

Date last updated: 4/19/2016

Date last checked: 4/19/2016

Distance searched: 0.5 miles

Sites:

None Found

AST2-AZ**Aboveground Storage Tanks**

Category: State/Tribal UST

Description: This database contains aboveground storage tanks as reported by the Department of Fire, Building and Line Safety.

Agency: Department of Fire, Building and Line Safety

Phone Number: 6023641003

Date last updated: 5/4/2016

Date last checked: 4/28/2016

Distance searched: 0.25 miles

Sites:

None Found

AST-AZ**Aboveground Storage Tanks**

Category: State/Tribal UST

Description: This database contains a listing of Aboveground Storage Tanks reported by Arizona Department of Environmental Quality.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712300

Date last updated: 5/20/2016

Date last checked: 5/4/2016

Distance searched: 0.25 miles

Sites:

None Found

BF-Closed-AZ**Brownfield Sites, Closed Cases**

Category: State/Tribal Brownfield

Description: This database contains a listing of Brownfield Closed Sites where the contamination on the property has been cleaned up.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714153

Date last updated: 7/13/2015

Date last checked: 6/29/2015

Distance searched: 0.5 miles

Sites:

None Found

BF-Open-AZ

Brownfield Sites, Open Cases

Category: State/Tribal Brownfield

Description: Brownfield Open Sites where the contamination on the property has not been cleaned up.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714153

Date last updated: 7/13/2015

Date last checked: 6/29/2015

Distance searched: 0.5 miles

Sites:

None Found

BF-US

A Listing of Brownfields Sites

Category: Federal Brownfield

Description: This database contains a listing of Brownfields sites listed under the "Cleanups in My Community" program maintained by EPA.

Agency: U.S. Environmental Protective Agency

Phone Number: 2025662777

Date last updated: 6/6/2016

Date last checked: 5/25/2016

Distance searched: 0.5 miles

Sites:

None Found

BioFuel-US

Bio Diesel Fuel

Category: ERS Supplemental Govt Sources

Description: This database contains a listing of EPA Fuels Programs facilities.

Agency: U.S Environmental Protection Agency

Phone Number: 2023439303

Date last updated: 7/27/2015

Date last checked: 7/8/2015

Distance searched: 0.25 miles

Sites:

None Found

Brownfields-AZ**Brownfield Site Boundaries****Category:** State/Tribal Brownfield**Description:** This database contains Brownfield site boundaries.**Agency:** Arizona Department of Environmental Quality**Phone Number:** 6027714153**Date last updated:** 5/3/2016**Date last checked:** 4/21/2016**Distance searched:** 1 mile**Sites:**

None Found

CDL-AZ**Clandestine Drug Labs****Category:** ERS Supplemental Govt Sources**Description:** This database contains a listing of seized illegal drug laboratory sites where drug manufacturing chemicals were seized. These sites are reported to meet the S.R.S. 12-990(1) definition of a "clandestine drug laboratory."**Agency:** Arizona State Board of Technical Registration**Phone Number:** 6023644948**Date last updated:** 6/17/2015**Date last checked:** 6/10/2015**Distance searched:** 0.063 miles**Sites:**

None Found

CDL-US**National Clandestine Drug Lab Register****Category:** ERS Supplemental Govt Sources**Description:** National Clandestine Drug Lab Register. This database contains a listing of 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.**Agency:** United States Drug Enforcement Administration**Phone Number:** 2023071000**Date last updated:** 7/28/2015**Date last checked:** 7/8/2015**Distance searched:** 0.063 miles**Sites:**

None Found

CERCLIS-Archived-US**CERCLIS sites that have been archived**

Category: Federal CERCLIS NFRAP

Description: The Superfund Enterprise Management System (SEMS). The reports produced by SEMS contain information on the assessment and remediation of current and archived hazardous waste sites. The archived 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), unless information indicates that this decision was not appropriate or other considerations require a recommendation for listing at a later time. Information provided to the previous CERCLIS Legacy System has been added to the details of the sites.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 3/22/2016

Date last checked: 5/23/2016

Distance searched: 0.5 miles

Sites:

None Found

CERCLIS-US

Comprehensive Environmental Response, Compensation, and Liability Information System

Category: Federal CERCLIS

Description: The Superfund Enterprise Management System (SEMS). The reports produced by SEMS contain information on the assessment and remediation of current hazardous waste sites. Information provided to the previous CERCLIS Legal System has been added to the details of the sites.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 6/6/2016

Date last checked: 5/26/2016

Distance searched: 0.5 miles

Sites:

None Found

CLF-AZ

Closed Landfills

Category: State/Tribal Landfill/Solid Waste

Description: This database contains a listing of Closed Solid Waste Landfills.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712221

Date last updated: 5/19/2016

Date last checked: 5/9/2016

Distance searched: 0.5 miles

Sites:

None Found

Close-WQARF-AZ

Closed Water Quality Assurance Revolving Fund (WQARF) Sites

Category: State/Tribal NPL

Description: The database includes the closed Water Quality Assurance Revolving Fund (WQARF).

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714340

Date last updated: 4/21/2016

Date last checked: 4/21/2016

Distance searched: 1 mile

Sites:

None Found

Coal-Ash-AZ

Coal Ash Disposal Sites

Category: ERS Supplemental Govt Sources

Description: This database contains coal ash disposal sites.

Agency: EarthJustice

Phone Number: 8005846460

Date last updated: 11/18/2015

Date last checked: 11/24/2015

Distance searched: 0.5 miles

Sites:

None Found

Coal-Ash-Dams-US

Coal Ash Contaminated Sites and Hazard Dams

Category: ERS Supplemental Govt Sources

Description: This database contains coal ash contaminated sites and hazard dams. Coal combustion waste sites have contaminated groundwater, wetlands, and rivers. The U.S. EPA rates coal ash ponds according to a National Inventory of Dams criteria that categorizes the ponds by the damage that would occur in the event of a dam failure. This database contains High Hazard and Significant Hazard dams.

Agency: EarthJustice

Phone Number: 8005846460

Date last updated: 10/20/2015

Date last checked: 10/12/2015

Distance searched: 0.5 miles

Sites:

None Found

Controls-AZ

Environmental Use Restriction Sites

Category: State/Tribal Inst/Eng Controls

Description: Arizona DEQ maintains a DEUR Tracking Database that lists all sites with Environmental Use Restrictions and Voluntary Environmental Mitigation Use Restrictions. This database contains listings of both types.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714397
Date last updated: 6/1/2016
Date last checked: 6/1/2016
Distance searched: 0.5 miles
Sites:
None Found

Controls-RCRA-US

Federal RCRA with Controls

Category: Federal Inst/Eng Controls

Description: This database contains RCRA facilities that have Inst/Eng Controls placed on them as identified by the EPA.

Agency: Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 3/24/2016

Date last checked: 2/29/2016

Distance searched: 0.5 miles

Sites:

None Found

Controls-US

Controls List

Category: Federal Inst/Eng Controls

Description: This database contains a listing of Voluntary Action Program Sites with Engineering Controls and/or Institutional Controls placed on them and were identified by the Environmental Protection Agency.

Agency: Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 5/9/2016

Date last checked: 5/9/2016

Distance searched: 0.5 miles

Sites:

None Found

Dams-AZ

Arizona Dams

Category: ERS Supplemental Govt Sources

Description: This database contains dam locations in Arizona. The data is provided by the University of Arizona Institutional Repository and has not been updated since 1996.

Agency: United States Environmental Protection Agency

Phone Number: 2022607301

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Debris-US

Debris Sites

Category: Federal Solid Waste

Description: This database contains the Torres Martinez Reservation Illegal dump sites reported by the United States Environmental Protection Agency.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.5 miles

Sites:

None Found

Delisted-NPL-US

Delisted NPL Sites

Category: Federal Delisted NPL

Description: The Superfund Enterprise Management System (SEMS). The reports produced by SEMS contain information on the assessment and remediation of current hazardous waste sites. This database contains a listing of Delisted NPL sites. These are facilities that have been removed from the NPL list. The EPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment.

Agency: Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 6/6/2016

Date last checked: 5/26/2016

Distance searched: 1 mile

Sites:

None Found

DOD-AZ

Department of Defense Sites

Category: ERS Supplemental Govt Sources

Description: The database includes the Arizona Department of Defense Sites (DOD).

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714340

Date last updated: 4/21/2016

Date last checked: 4/21/2016

Distance searched: 1 mile

Sites:

None Found

DryCleaners-AZ**Dry Cleaner Facilities**

Category: ERS Supplemental Govt Sources

Description: This database contains a listing of drycleaners reported by the Arizona Department of Environmental Quality.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712221

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

DryWell-AZ**DryWells**

Category: ERS Supplemental Govt Sources

Description: This database contains drywell locations reported by the Arizona Department of Environmental Quality.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714686

Date last updated: 2/25/2016

Date last checked: 2/25/2016

Distance searched: 0.25 miles

Sites:

None Found

EGRID-US**Emissions & Generation Resource Facilities**

Category: ERS Supplemental Govt Sources

Description: Emissions & Generation Resource Integrated Database (eGRID) is a comprehensive source of data on the environmental characteristics of almost all electric power generated in the United States.

Agency: Environmental Protection Agency

Phone Number: 2023439340

Date last updated: 11/24/2015

Date last checked: 11/12/2015

Distance searched: 0.5 miles

Sites:

None Found

EpaNPL-AZ**Arizona National Priority List**

Category: State/Tribal NPL

Description: The database includes the Arizona NPL sites as provided by the Arizona DEQ.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714340
Date last updated: 4/21/2016
Date last checked: 4/21/2016
Distance searched: 1 mile
Sites:
None Found

EPA-Watch-List-US

EPA Watch List

Category: ERS Supplemental Govt Sources

Description: This database contains facilities listed on the Clean Air Act, Clean Water Act, and RCRA Watch List. These reports are now considered archived and will no longer be updated. Being on the Watch List may not mean that the facility has actually violated the law only that an evaluation or investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. The Watch List does not identify which alleged violations of environmental laws may pose the greatest risk to public health or the environment. It is an automated report based on data from the Air Facility System (AFS), which is used by federal, state and local agencies to track environmental enforcement and compliance information.

Agency: Environmental Protection Agency

Phone Number: 2025661667

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:
None Found

ERNS-US

Emergency Response Notification System

Category: Federal ERNS

Description: The primary function of the National Response Center is to serve as the sole national point of contact for reporting all oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. This database contains a listing of discharge locations.

Agency: National Response Center

Phone Number: 8004248802

Date last updated: 4/26/2016

Date last checked: 5/25/2016

Distance searched: 0.063 miles

Sites:
None Found

FA-HW-US

Financial Assurance, Hazardous Waste

Category: ERS Supplemental Govt Sources

Description: This database contains Financial Assurance facilities listed under the Hazardous Waste program as reported by the United States Environmental Protection Agency.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 7/27/2015

Date last checked: 6/23/2015

Distance searched: 0.063 miles

Sites:

None Found

FA-UST-AZ

Financial Assurance for Underground Storage Tanks

Category: ERS Supplemental Govt Sources

Description: This database identifies facilities with Underground Storage Tanks that have financial assurance as reported by the Arizona Department of Environmental Quality.

Agency: Arizona Department of Environmental Quality

Phone Number: 7852961684

Date last updated: 10/19/2015

Date last checked: 10/7/2015

Distance searched: 0.063 miles

Sites:

None Found

FEMA-UST-US

FEMA Underground Storage Tanks

Category: Federal UST

Description: This database contains Federal Emergency Management Agency (FEMA) owned and operated underground storage tanks. The report was published in 2006.

Agency: Environmental Protection Agency

Phone Number: 7036037165

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

FRS-US

Facility Registry Index (FINDS)

Category: ERS Supplemental Govt Sources

Description: The Facility Registry System (FRS) is a centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest.

Agency: Environmental Protection Agency

Phone Number: 2022720167

Date last updated: 8/3/2015
Date last checked: 7/8/2015
Distance searched: 0.063 miles
Sites:
None Found

FTTS-ENF-US

FIFRA/TSCA Tracking System (FTTS) Enforcement Actions

Category: Federal ASTM Other

Description: The FIFRA/TSCA Tracking System (FTTS) is a regional system used to track compliance activities such as inspections, case review, enforcement actions taken, samples collected, and pesticide grants and cooperative agreement information. The compliance monitoring and enforcement activities are tracked from the time an inspector conducts (or schedules) an inspection until the time the case is closed or the enforcement action is settled. Specific legal citations include, but are not limited to: Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA), and Emergency Planning and Community Right-to-Know Act (EPCRA).

Agency: United States Environmental Protection Agency

Phone Number: 2025642501

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:
None Found

FTTS-INSP-US

FIFRA/TSCA Tracking System (FTTS) Inspections

Category: ERS Supplemental Govt Sources

Description: The FIFRA/TSCA Tracking System (FTTS) is a regional system used to track compliance activities such as inspections, case review, enforcement actions taken, samples collected, and pesticide grants and cooperative agreement information. The compliance monitoring and enforcement activities are tracked from the time an inspector conducts (or schedules) an inspection until the time the case is closed or the enforcement action is settled. Specific legal citations include, but are not limited to: Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA), and Emergency Planning and Community Right-to-Know Act (EPCRA).

Agency: United States Environmental Protection Agency

Phone Number: 2025642501

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:
None Found

FUDS-US

Formerly Used Defense Sites

Category: ERS Supplemental Govt Sources

Description: The Department of Defense (DoD) is responsible for environmental restoration of properties that were formerly owned by, leased to or otherwise possessed by the United States and under the jurisdiction of the Secretary of Defense. Such properties are known as Formerly Used Defense Sites (FUDS). The Army is the executive agent for the program and the U.S. Army Corps of Engineers manages and directs the program's administration. The scope and magnitude of the FUDS program are significant, with more than 9,900 properties identified for potential inclusion in the program. Information about the origin and extent of contamination, land transfer issues, past and present property ownership, and program policies must be evaluated before DoD considers a property eligible for Defense Environment Restoration Account (DERA) funding under the FUDS program. Environmental cleanup procedures at FUDS are similar to those at active DoD installations.

Agency: Department of Defense

Phone Number: 2025284285

Date last updated: 5/24/2016

Date last checked: 5/24/2016

Distance searched: 1 mile

Sites:

None Found

Hist-AFS2-US

Air Facility System for Clean Air Act stationary sources

Category: ERS Supplemental Govt Sources

Description: AFS 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 (automobiles and other mobile air pollution sources are tracked by a different AIRS subsystem (AMS).

Agency: Environmental Protection Agency

Phone Number: 2025645962

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-AFS-US

Air Facility System for Clean Air Act stationary sources

Category: ERS Supplemental Govt Sources

Description: AFS 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 (automobiles and other mobile air pollution sources are tracked by a different AIRS subsystem (AMS).

Agency: Environmental Protection Agency

Phone Number: 2025645962

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-Agriculture

Ranches/Farms, Livestock/Agriculture

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Ranches, Farms, Livestock, and/or Agriculture.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Auto Dealers

Auto and Truck Dealers

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Auto Dealers.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Auto Repair

Automotive Repair

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Auto Repair and Tire Dealers.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-AZ

Previously Listed Arizona Sites

Category: ERS Supplemental Govt Sources

Description: ERS has compiled records that have been previously listed in other agency databases. When ERS updates an agency database, if there is a record that was in the older version but the record is not found in the newer version, it is put into this database. The site may have been completely removed, or there was a significant change in the record such as Name, ID, or Address. The information from the old listing is preserved in this database along with which database it was originally in. It is also possible that it was moved from one database to another such as a LUST Open site receiving closure and now being listed in the LUST Closed database.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Chemical Manufacturing

Manufacturing and Distribution of Chemicals, Gases, and/or Solids

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Manufacturing and Distribution of Chemicals, Gases, and/or Solids.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Chemical-Storage

Chemical/Hazardous Use Storage

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes chemical storage facilities.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Cleaners

Laundry, Cleaners, and Dry Cleaning Services

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites, such as: Laundry, Cleaners, and Dry Cleaning Services.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-Convenience

Convenience Store with Possible Gas

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes convenience stores with possible gas use.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Disposal-Recycle

Hazardous Disposal/Recycle and Dumps/Waste

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes hazardous disposal facilities.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-DryWells-AZ**Dry Well Registration List**

Category: ERS Supplemental Govt Sources

Description: This database contains drywell locations reported in 1998 by the Arizona Department of Environmental Quality.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714686

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-Dumps-US**Dumps Inventory of 1985**

Category: Federal Solid Waste

Description: This database contains Dumps as reported on the Inventory of Open Dumps from 1985. This report was published by the Office of Solid Waste, EPA.

Agency: Environmental Protection Agency

Phone Number: 2025660200

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.5 miles

Sites:

None Found

Hist-FIFRA-US**Case Administration Data from National Compliance Database (Federal Insecticide, Fungicide, and Rodenticide Act)**

Category: ERS Supplemental Govt Sources

Description: This database is no longer maintained by EPA since 2006. The system tracked compliance monitoring and enforcement activities from the time an inspector conducts an inspection until the inspector closes the case or settles any resulting enforcement action(s). EPA now has the ICS database to track this information.

Agency: U.S. Environmental Protection Agency

Phone Number: 2025642501

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-Food-Processors**Food Processing Manufacturers**

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes food processors.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Gun-Ranges**Gun Ranges/Clubs**

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes gun ranges/clubs.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-LUST-AZ**LUST File Listing**

Category: ERS Supplemental Govt Sources

Description: Leaking Underground Storage Tank listing reported in 1998 by the Arizona DEQ, UST Compliance Unit.

Agency: Arizona Department of Environmental Quality

Phone Number: 6022074345

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-Machine Shop

Machine Shops, Welding, Machine Repair

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites, such as: Machine shops, welding shops and machine repair.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Manufacturing**Historic Sources US: Manufacturing**

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes manufacturing sites.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Metal Plating**Metal Plating**

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes metal plating sites.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Mining**Mining Operations**

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Mining facilities.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

HIST-MLTS-US

Material Licensing Tracking System

Category: ERS Supplemental Govt Sources

Description: This database contains facilities listed on the Material Licensing Tracking system that possess or use radioactive materials as reported by the U.S. Nuclear Regulatory Commission. In late 2012, the agency changed from MLTS to WBL system and no longer keep track of certain information that was available in the old MLTS system.

Agency: U.S. Nuclear Regulatory Commission

Phone Number: 3014157169

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-Mortuaries

Crematories/Mortuaries

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Mortuaries and Crematories.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Oil-Gas

Oil and Gas Well Related Facilities

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Oil and Gas Well related facilities.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-OilGas-Refiners

Oil/Gas Refiners/Manufacturers/Plants

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Oil and Gas Refiners and/or plants.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Paint-Stores

Paint Stores

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes paint stores.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Petroleum

Petroleum Refining/ Manufacturing/ Chemicals

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Petroleum Refining, Manufacturing, and/or processing Chemicals.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Post-Offices

Post Offices

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes post offices.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Printers

Printers and Publishers

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Printers and Publishers.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Rental

Rental Equipment & Yards

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes rental equipment facilities and yards.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-RV-Dealers

Trailer and Recreational Vehicle Dealers

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Trailer and Recreational Vehicle Dealers.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Salvage

Vehicle Salvage Yards or Wreckers

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Vehicle Salvage Yards or Wreckers.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Service Stations

Service Stations/Vehicle Fueling

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Service Stations/Vehicle Fueling Stations.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-SPILLS-AZ

Arizona Spills Reported

Category: Emergency Release Reports

Description: This database includes the incidents identified in the Hazardous Material Logbook reported by the Arizona Department of Environmental Quality. The data only reports incidents prior to November 22, 2001.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714380

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Steel-Metals

Steel Mills/Manufacturers/Foundries/Smelters

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes steel metal manufacturers, foundries, and smelters.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Textile

Textile Mills/Manufacturers

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes textile mill manufacturers.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Transportation

Transportation Facilities

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Airports and other facilities that may handle hazardous materials and petroleum products.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Trucking

Trucking, Shipping, Delivery, and/or Storage

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Trucking, Shipping, and/or Delivery Storage.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-US

Previously Listed Federal Sites

Category: ERS Supplemental Govt Sources

Description: ERS has compiled records that have been previously listed in other agency databases. When ERS updates an agency database, if there is a record that was in the older version but the record is not found in the newer version, it is put into this database. The site may have been completely removed, or there was a significant change in the record such as Name, ID, or Address. The information from the old listing is preserved in this database along with which database it was originally in. It is also possible that it was moved from one database to another such as a LUST Open site receiving closure and now being listed in the LUST Closed database.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-US-EC

Engineering Controls Sites List

Category: Federal Inst/Eng Controls

Description: This database contains a listing of Voluntary Action Program Sites with Engineering Controls placed on them and were identified by the Environmental Protection Agency.

Agency: Environmental Protection Agency

Phone Number: 8004249346

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.5 miles

Sites:

None Found

Hist-US-IC

Sites with Institutional Controls

Category: Federal Inst/Eng Controls

Description: This database contains a listing of Voluntary Action Program Sites with Institutional Controls placed on them and were identified by the Environmental Protection Agency.

Agency: Environmental Protection Agency

Phone Number: 8004249346

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.5 miles

Sites:

None Found

Hist-UST-AZ

UST Tank Listing

Category: ERS Supplemental Govt Sources

Description: UST-DMS facility tank data listing reported in 1998 by the Arizona DEQ, UST Compliance Unit.

Agency: Arizona Department of Environmental Quality

Phone Number: 6022074345

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Hist-Vehicle-Parts

Vehicle Parts

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Vehicle Parts Dealers.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

Hist-Vehicle-Washing

Vehicle/Truck Washing Facilities

Category: ERS Exclusive Historic Sources

Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes vehicle washing facilities.

Agency: Environmental Record Search (ERS)

Phone Number: 8003772430

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

HMIS-US

Hazardous Materials Information System

Category: Federal Emergency Release Reports

Description: Data includes spills, releases, or other incidents involving hazardous materials in commerce during the course of transportation. All modes of transportation are included except pipeline and bulk marine transportation. Data represent a census of all incidents reportable to the U.S. Department of Transportation This database contains a listing of spills. (DOT). U.S. federal regulations require all spills meeting the following criteria to be reported, in writing, to DOT's Office of Hazardous Materials Safety.

Agency: US Department of Transportation Pipeline and Hazardous Materials Safety Administration

Phone Number: 2023664433

Date last updated: 4/25/2016

Date last checked: 6/1/2016

Distance searched: 0.063 miles

Sites:

None Found

ICIS-Air-US

Integrated Compliance Information System for Air

Category: ERS Supplemental Govt Sources

Description: The Integrated Compliance Information System for Air (ICIS-Air) data exchange allows all State, Local, and Tribal Air agencies providing air stationary source enforcement and compliance data to submit their data to EPA via the Exchange Network.

Agency: Environmental Protection Agency

Phone Number: 2025645962

Date last updated: 9/8/2015

Date last checked: 7/15/2015

Distance searched: 0.063 miles

Sites:

None Found

ICIS-FEC-US

Integrated Compliance Information System for Federal Enforcement Data

Category: ERS Supplemental Govt Sources

Description: The Integrated Compliance Information System (ICIS) tracks all formal administrative and judicial enforcement actions taken by the U.S. EPA and is used as the system of record to provide official enforcement data.

Agency: Environmental Protection Agency

Phone Number: 2025646962

Date last updated: 7/29/2015

Date last checked: 7/20/2015

Distance searched: 0.063 miles

Sites:

None Found

ICIS-NPDES-US

National Pollutant Discharge Elimination System (NPDES)

Category: ERS Supplemental Govt Sources

Description: The National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. This database contains a listing of permit holders.

Agency: United States Environmental Protection Agency

Phone Number: 2022720167

Date last updated: 5/5/2016

Date last checked: 4/7/2016

Distance searched: 0.063 miles

Sites:

None Found

Lead-Smelter-2-US

Lead Smelter Sites

Category: ERS Supplemental Govt Sources

Description: This database contains 464 sites that were reported as potential lead smelters sites in research conducted by the EPA Superfund Program and other sources. The sites are listed on the 2007 published report by the EPA Superfund Program.

Agency: Environmental Protection Agency

Phone Number: 7034129810

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:

None Found

Lead-US

Lead Smelter Sites

Category: ERS Supplemental Govt Sources

Description: This database contains lead smelter sites reported by the Environmental Protection Agency. This database is provided by the Superfund Enterprise Management System (SEMS).

Agency: Environmental Protection Agency

Phone Number: 2025645962

Date last updated: 11/24/2015

Date last checked: 11/10/2015

Distance searched: 0.25 miles

Sites:

None Found

LIENS-US

Federal LIEN Sites

Category: Federal Inst/Eng Controls

Description: This database contains sites that have had Federal Liens filed on them as reported by the EPA.

Agency: U.S. Environmental Protection Agency

Phone Number: 8004249346
Date last updated: 5/9/2016
Date last checked: 5/9/2016
Distance searched: 0.063 miles
Sites:
None Found

LUST-Closed-AZ

Leaking Underground Storage Tanks, Closed Cases

Category: State/Tribal LUST

Description: This database contains a listing of LUST Closed cases where remediation cleanup is complete.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712300

Date last updated: 6/6/2016

Date last checked: 5/24/2016

Distance searched: 0.5 miles

Sites:

None Found

LUST-Open-AZ

Leaking Underground Storage Tanks, Open Cases

Category: State/Tribal LUST

Description: This database contains a listing of Open LUST cases where remediation cleanup is not complete.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712300

Date last updated: 6/6/2016

Date last checked: 2/10/2016

Distance searched: 0.5 miles

Sites:

None Found

Manifest2-RI

Hazardous Waste Manifest

Category: State/Tribal RCRA Equivalent

Description: The Rhode Island Department of Environmental Management, Hazardous Waste Manifest System lists sites from all over the country, not just Rhode Island. To be thorough, ERS has searched the data subset that includes North Dakota sites for listings on or near the subject site that are listed in the Rhode Island Department of Environmental Management, Hazardous Waste Manifest System.

Agency: Rhode Island Department of Environmental Management

Phone Number: 4012222797

Date last updated: 2/19/2016

Date last checked: 2/19/2016

Distance searched: 0.063 miles

Sites:

None Found

Mines-AZ

Arizona Mines

Category: ERS Supplemental Govt Sources

Description: This database contains arizona mine sites reported by the Arizona State Land Department.

Agency: Arizona State Land Department.

Phone Number: 6025424631

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

MINES-US

Mines Master Index File

Category: ERS Supplemental Govt Sources

Description: The Master Index file contains mine identification numbers issued for mines active or opened since 1971.

Agency: United States Department of Labor

Phone Number: 8777786055

Date last updated: 8/13/2015

Date last checked: 7/27/2015

Distance searched: 0.063 miles

Sites:

None Found

MLTS-US

Material Licensing Tracking System

Category: ERS Supplemental Govt Sources

Description: This database contains facilities listed on the Material Licensing Tracking system that possess or use radioactive materials as reported by the U.S. Nuclear Regulatory Commission.

Agency: U.S. Nuclear Regulatory Commission

Phone Number: 3014157169

Date last updated: 8/12/2015

Date last checked: 8/10/2015

Distance searched: 0.063 miles

Sites:

None Found

MRDS-US

Mineral Resources Data System (MRDS)

Category: ERS Supplemental Govt Sources

Description: 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.

Agency: U.S. Geologic Survey

Phone Number: 8882758747

Date last updated: 4/28/2016

Date last checked: 2/26/2016

Distance searched: 0.25 miles

Sites:

None Found

NPDES-AZ**National Pollutant Discharge Elimination System (NPDES)**

Category: ERS Supplemental Govt Sources

Description: This database contains a listing of National Pollutant Discharge Elimination System (NPDES) permit program facilities.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714334

Date last updated: 6/16/2015

Date last checked: 6/4/2015

Distance searched: 0.063 miles

Sites:

None Found

NPL-R9-US**NPL Region 9 Site Boundaries**

Category: Federal NPL

Description: This database contains the boundaries of the NPL sites within the specified EPA region.

Agency: Environmental Protection Agency

Phone Number: 4159478000

Date last updated: 6/5/2016

Date last checked: 5/31/2016

Distance searched: 1 mile

Sites:

None Found

NPL-US**National Priorities List**

Category: Federal NPL

Description: The National Priorities List is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. This database contains a listing of NPL sites.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 6/6/2016

Date last checked: 5/26/2016

Distance searched: 1 mile

Sites:

None Found

OGW-AZ

Arizona Oil and Gas Wells

Category: ERS Supplemental Govt Sources

Description: This database contains a listing of Oil and Gas Wells identified by the Arizona Geological Survey.

Agency: Arizona Geological Survey

Phone Number: 5207703500

Date last updated: 6/17/2015

Date last checked: 6/4/2015

Distance searched: 0.063 miles

Sites:

None Found

Oil-Centers-AZ

Used Oil Collection Centers

Category: State/Tribal ASTM Other

Description: This database contains a listing of registered Used Oil Collection Centers in Arizona.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714140

Date last updated: 5/12/2016

Date last checked: 5/12/2016

Distance searched: 0.5 miles

Sites:

None Found

PADS-US

PCB Registration Database System

Category: Federal ASTM Other

Description: This database contains a listing of generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Agency: Environmental Protection Agency

Phone Number: 2025660500

Date last updated: 3/21/2016
Date last checked: 6/6/2016
Distance searched: 0.063 miles
Sites:
None Found

PCB-US

PCB Transformers

Category: Federal ASTM Other

Description: PCB Transformer Registration Database. This database indicates the best known current status of registered PCB transformers

Agency: U.S Environmental Protection Agency

Phone Number: 7033088404

Date last updated: 3/1/2016

Date last checked: 3/1/2016

Distance searched: 0.25 miles

Sites:
None Found

PCS-US

Permit Compliance System for Clean Water Act

Category: ERS Supplemental Govt Sources

Description: PCS is an information management system maintained by the Office of Compliance to track permit compliance and enforcement status of facilities regulated by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act. PCS is designed to support the NPDES program at the state, regional, and national levels.

Agency: Environmental Protection Agency

Phone Number: 2025640221

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.25 miles

Sites:
None Found

Proposed-NPL-US

Proposed NPL Sites

Category: Federal NPL

Description: The EPA provides information on the assessment and remediation of current hazardous waste sites. The site in this database have been proposed for the NPL list.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 5/26/2016

Date last checked: 5/26/2016

Distance searched: 1 mile

Sites:

None Found

RADINFO-US**Radiation Information Database**

Category: ERS Supplemental Govt Sources

Description: This database contains a listing of facilities that are regulated by the US EPA regulations for radiation and radioactivity.

Agency: Environmental Protection Agency

Phone Number: 2023439775

Date last updated: 5/27/2016

Date last checked: 5/27/2016

Distance searched: 0.063 miles

Sites:

None Found

RCRA-CESQG-US**Resource Conservation and Recovery Act, Conditionally Exempt Small Quantity Generators**

Category: Federal RCRA Generators

Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner. This database contains a listing of Conditionally Exempt Small Quantity Generators.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 5/20/2016

Date last checked: 5/16/2016

Distance searched: 0.25 miles

Sites:

None Found

RCRA-COR-US**Resource Conservation and Recovery Act - Corrective Actions**

Category: Federal RCRA CORRACTS

Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner.

EPA estimates that between 50 and 70 percent of all TSDFs have some degree of environmental contamination requiring detailed investigation and perhaps cleanup. Under a program entitled Corrective Action, EPA has the statutory authority to require permitted and interim status TSDFs to clean up hazardous waste contamination. This database contains a listing of sites that have had corrective action.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 5/20/2016

Date last checked: 5/16/2016

Distance searched: 1 mile

Sites:

None Found

RCRA-LQG-US

Resource Conservation and Recovery Act, Large Quantity Generators

Category: Federal RCRA Generators

Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner. This database contains a listing of Large Quantity Generators.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 5/20/2016

Date last checked: 5/16/2016

Distance searched: 0.25 miles

Sites:

None Found

RCRA-NON-US

Resource Conservation and Recovery Act

Category: Federal RCRA Generators

Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner. This database contains a listing of RCRA Non-Hazardous generators.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 5/20/2016

Date last checked: 5/16/2016

Distance searched: 0.25 miles

Sites:

None Found

RCRA-SQG-US

Resource Conservation and Recovery Act, Small Quantity Generators

Category: Federal RCRA Generators

Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner. This database contains a listing of Small Quantity Generators.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 5/20/2016
Date last checked: 5/16/2016
Distance searched: 0.25 miles
Sites:
None Found

RCRA-TSD-US

Resource Conservation and Recovery Act - Treatment, Storage, and Disposal sites

Category: Federal RCRA non-CORRACTS TSD

Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner.

This database contains a listing of Treatment, Storage and Disposal Facilities - Facilities that receive hazardous waste from generators or other facilities for treatment, storage or disposal of waste are known as TSDFs.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 5/20/2016

Date last checked: 5/16/2016

Distance searched: 0.5 miles

Sites:

None Found

RemOther-Closed-AZ

Remediation Other Sites

Category: State/Tribal ASTM Other

Description: Sites reported by the Arizona Department of Environmental Quality where the owner has elected to remediate the property without the use of an institutional or engineering control.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714397

Date last updated: 6/1/2016

Date last checked: 6/1/2016

Distance searched: 0.5 miles

Sites:

None Found

RemOther-Open-AZ

Remediation Other Sites

Category: State/Tribal ASTM Other

Description: Sites reported by the Arizona Department of Environmental Quality where the owner has elected to remediate the property without the use of an institutional or engineering control.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714397

Date last updated: 6/1/2016

Date last checked: 6/1/2016

Distance searched: 0.5 miles

Sites:

None Found

RFG-Lab-US

Reformulated Gasoline (RFG)

Category: ERS Supplemental Govt Sources

Description: This database includes the list of registered Reformulated Gasoline Laboratories.

Agency: Environmental Protection Agency, United States

Phone Number: 2023439303

Date last updated: 11/24/2015

Date last checked: 11/18/2015

Distance searched: 0.25 miles

Sites:

None Found

RMP-US

Risk Management Plans

Category: ERS Supplemental Govt Sources

Description: This database contains facilities that have developed risk management plans as reported by the Environmental Protection Agency. The System for Risk Management Plans (SRMP) is a suite of electronic systems containing information relating to risk management plans submitted by facilities in accordance with the Clean Air Act, Section 112(r). Affected facilities are to develop risk management programs which will prevent and minimize consequences of accidental releases of certain hazardous chemicals that could harm public health and the environment.

Agency: Environmental Protection Agency

Phone Number: 2025642491

Date last updated: 4/22/2016

Date last checked: 2/23/2016

Distance searched: 0.063 miles

Sites:

None Found

ROD-US

Records of Decision

Category: ERS Supplemental Govt Sources

Description: The Record of Decision (ROD) is a public document that explains which cleanup alternatives will be used to clean up a Superfund site. The ROD for sites listed on the NPL (NPL Site Listing Process) is created from information generated during the Remedial Investigation/Feasibility Study (RI/FS). A ROD contains site history, site description, site characteristics, community participation, enforcement activities, past and present activities, contaminated media, the contaminants present, scope and role of response action and the remedy selected for cleanup. This database contains a listing of sites with RODs.

Agency: Environmental Protection Agency

Phone Number: 8004249346
Date last updated: 11/24/2015
Date last checked: 11/18/2015
Distance searched: 0.5 miles
Sites:
None Found

SAA-Agreements-US

Sites with Superfund Alternative Approach Agreements

Category: Federal ASTM Other

Description: This database contains sites that have a Superfund Alternative agreement. The Superfund alternative (SA) approach uses the same investigation and cleanup process and standards that are used for sites listed on the NPL. The SA approach is an alternative to listing a site on the NPL; it is not an alternative to Superfund or the Superfund process.

Agency: Environmental Protection Agency

Phone Number: 2025645110

Date last updated: 6/6/2016

Date last checked: 6/1/2016

Distance searched: 1 mile

Sites:
None Found

SDWIS-US

Safe Drinking Water Information System

Category: ERS Supplemental Govt Sources

Description: This database contains the Safe Drinking Water Information including Public Water, Source and Treatment, Enforcements and Violations reported by the United States Environmental Protection Agency.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 3/11/2015

Date last checked: 4/6/2016

Distance searched: 0.25 miles

Sites:
None Found

SS-AZ

Superfund Sites

Category: State/Tribal CERCLIS Equivalent

Description: This database contains superfund sites in Arizona. The data is provided by the University of Arizona Institutional Repository and last updated in 1997.

Agency: United States Environmental Protection Agency

Phone Number: 2022607301

Date last updated: 5/16/2016

Date last checked: 5/16/2016

Distance searched: 0.5 miles

Sites:

None Found

SSTS-US

Section 7 Tracking System

Category: ERS Supplemental Govt Sources

Description: This database contains a listing of EPA-registered domestic pesticide-producing and device producing establishments and the pesticides produced based on data in the Section Seven Tracking System.

Agency: Environmental Protection Agency

Phone Number: 2025644203

Date last updated: 9/3/2015

Date last checked: 9/4/2015

Distance searched: 0.063 miles

Sites:

None Found

SWT-AZ

Special Waste Transporter List

Category: ERS Supplemental Govt Sources

Description: This database contains special waste transporter sites as reported by the Arizona Department of Environmental Quality. Special waste is classified as waste that contains petroleum contaminated soils and waste from shredding motor vehicles.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712221

Date last updated: 6/17/2015

Date last checked: 6/15/2015

Distance searched: 0.25 miles

Sites:

None Found

Transfer-AZ

Transfer Stations

Category: State/Tribal Landfill/Solid Waste

Description: This database contains active transfer stations as reported by the Arizona Department of Environmental Quality.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712221

Date last updated: 5/18/2016

Date last checked: 5/11/2016

Distance searched: 0.5 miles

Sites:

None Found

Tribal-Air-US

Tribal Air Permitted Facilities

Category: ERS Supplemental Govt Sources

Description: This database contains tribal locations that have been issued air permits as reported by the US Environmental Protection Agency. At this time the database includes region 2, 5, 7, 8, 9, 10.

Agency: United States Environmental Protection Agency

Phone Number: 3123532000

Date last updated: 5/1/2015

Date last checked: 2/27/2015

Distance searched: 0.25 miles

Sites:

None Found

Tribal-BF-US

Tribal Brownfields

Category: Federal Brownfield

Description: This database contains a listing of Brownfields on Native American Land identified by the United States Environmental Protection Agency.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 5/16/2014

Date last checked: 5/16/2014

Distance searched: 0.5 miles

Sites:

None Found

Tribal-LUST-Closed-Reg9

Tribal Leaking Underground Storage Tanks

Category: Federal LUST

Description: This database contains a listing of Leaking Underground Storage Tanks on Native American Land identified by the United States Environmental Protection Agency in Region 9.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 3/25/2016

Date last checked: 3/8/2016

Distance searched: 0.5 miles

Sites:

None Found

Tribal-LUST-Open-Reg9

Tribal Leaking Underground Storage Tanks

Category: Federal LUST

Description: This database contains a listing of Leaking Underground Storage Tanks on Native American Land identified by the United States Environmental Protection Agency in Region 9.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 3/25/2016

Date last checked: 3/8/2016

Distance searched: 0.5 miles

Sites:

None Found

Tribal-ODI-US

Tribal Open Dump Sites

Category: Federal Solid Waste

Description: This database contains a listing of Open Dump Sites on Native American Land identified by the Indian Health Service

Agency: Indian Health Service

Phone Number: 3014431046

Date last updated: 5/25/2016

Date last checked: 5/25/2016

Distance searched: 0.5 miles

Sites:

None Found

Tribal-UST-Reg9

Tribal Underground Storage Tanks

Category: Federal UST

Description: This database contains a listing of Underground Storage Tanks on Native American Land identified by the United States Environmental Protection Agency in Region 9.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 3/24/2016

Date last checked: 3/4/2016

Distance searched: 0.25 miles

Sites:

None Found

Tribal-VCP-US

Tribal VCP

Category: Federal Tribal VCP

Description: This database contains voluntary cleanup sites located in tribal land as reported by the United States Environmental Protection Agency.

Agency: United States Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 6/1/2016

Date last checked: 6/1/2016

Distance searched: 0.5 miles

Sites:

None Found

TRIS2000-US

Toxics Release Inventory System

Category: ERS Supplemental Govt Sources

Description: TRIS is a EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities. This database contains a listing of facilities that reported in the years between 2000-2009.

Agency: Environmental Protection Agency

Phone Number: 8004249346

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

TRIS2010-US

Toxics Release Inventory System

Category: ERS Supplemental Govt Sources

Description: TRIS is a EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities. This database contains a listing of facilities that reported in the years between 2010-2012.

Agency: Environmental Protection Agency

Phone Number: 8004249346

Date last updated: 8/28/2015

Date last checked: 7/28/2015

Distance searched: 0.063 miles

Sites:

None Found

TRIS80-US

Toxics Release Inventory System

Category: ERS Supplemental Govt Sources

Description: TRIS is a EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities. This database contains a listing of facilities that reported in the years between 1987-1989.

Agency: Environmental Protection Agency

Phone Number: 8004249346

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

TRIS90-US

Toxics Release Inventory System

Category: ERS Supplemental Govt Sources

Description: TRIS is a EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities. This database contains a listing of facilities that reported in the years between 1990-1999.

Agency: Environmental Protection Agency

Phone Number: 8004249346

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

TSCA-US

Toxics Substance Control Sites

Category: ERS Supplemental Govt Sources

Description: TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon and lead-based paint. This database contains a listing of these facilities.

Agency: U.S. Environmental Protection Agency

Phone Number: 2025642501

Date last updated: 9/4/2015

Date last checked: 11/21/2014

Distance searched: 0.063 miles

Sites:

None Found

UIC-AZ

Underground Injection Control Wells

Category: ERS Supplemental Govt Sources

Description: This database contains Underground Injection Control Wells reported by the Arizona Geological Survey.

Agency: Arizona Geological Survey.

Phone Number: 5207703500

Date last updated: 9/29/2015

Date last checked: 9/25/2015

Distance searched: 0.063 miles

Sites:

None Found

UMTRA-US**Uranium Mill Tailings Remedial Action Sites**

Category: ERS Supplemental Govt Sources

Description: The Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 gave the U.S. Department of Energy (DOE) the responsibility of stabilizing, disposing, and controlling uranium mill tailings and other contaminated material at twenty-four uranium mill processing sites located across ten states and at approximately 5,200 associated properties.

Agency: Department of Energy

Phone Number: 5058450011

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

USGS-Waterwells-US**Ground Water Site Inventory**

Category: ERS Supplemental Govt Sources

Description: This database contains a listing of wells, springs, test holes, tunnels, drains, and excavations reported by the United States Geological Survey, Water Resources Program.

Agency: United States Geological Survey, Water Resources Program

Phone Number: 9162783000

Date last updated: Historical Database

Date last checked: N/A

Distance searched: 0.063 miles

Sites:

None Found

UST-AZ**Underground Storage Tanks**

Category: State/Tribal UST

Description: This database contains a listing of Registered Underground Storage Tanks in Arizona.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027712300

Date last updated: 6/6/2016

Date last checked: 5/24/2016

Distance searched: 0.25 miles

Sites:

None Found

Vapor-Intrusions-US

Vapor Intrusion Database

Category: ERS Supplemental Govt Sources

Description: This database contains the vapor intrusion database as reported by the Environmental Protection Agency.

Agency: Environmental Protection Agency

Phone Number: 7033057411

Date last updated: 5/17/2016

Date last checked: 5/17/2016

Distance searched: 0.5 miles

Sites:

None Found

VCP-Closed-AZ

Voluntary Cleanup Program Sites, Closed Cases

Category: State/Tribal Voluntary Cleanup Sites

Description: This database contains a listing of Voluntary Cleanup Program Sites where the contamination on the property has been cleaned up.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714153

Date last updated: 7/13/2015

Date last checked: 6/29/2015

Distance searched: 0.5 miles

Sites:

None Found

VCP-Open-AZ

Voluntary Cleanup Program Sites, Open Cases

Category: State/Tribal Voluntary Cleanup Sites

Description: This database contains a listing of Voluntary Cleanup Program Sites where the contamination on the property has been cleaned up.

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714153

Date last updated: 7/13/2015

Date last checked: 6/29/2015

Distance searched: 0.5 miles

Sites:

None Found

Waste-tire-AZ**Waste Tire Sites**

Category: ERS Supplemental Govt Sources

Description: This database contains a listing of Waste Tire Sites registered through the Arizona Department of Environmental Quality.

Agency: Arizona Department of Environmental Quality

Phone Number: 602-771-41

Date last updated: 6/15/2015

Date last checked: 6/11/2015

Distance searched: 0.5 miles

Sites:

None Found

Wells-AZ**Arizona Wells**

Category: ERS Supplemental Govt Sources

Description: This database contains a listing of Arizona wells.

Agency: Arizona Department of Water Resources

Phone Number: 6027718640

Date last updated: 3/1/2016

Date last checked: 6/15/2015

Distance searched: 0.063 miles

Sites:

None Found

WQARF-AZ**Water Quality Assurance Revolving Fund (WQARF) Sites**

Category: State/Tribal NPL

Description: The database includes the Water Quality Assurance Revolving Fund (WQARF).

Agency: Arizona Department of Environmental Quality

Phone Number: 6027714340

Date last updated: 4/21/2016

Date last checked: 4/21/2016

Distance searched: 1 mile

Sites:

None Found

UN-MAPPABLE OCCURRENCES

The following occurrences were not mapped primarily due to incomplete or inaccurate address information. All of the following occurrences were determined to share the same zip code as the area searched. General status information is given with each occurrence along with any address information entered by the agency responsible for the list.

Requested all "un-mapped" sites.

ID	Facility Name	Address	Database	Status
No "un-mapped" sites found.				

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APPENDIX F

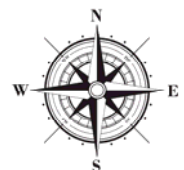
HISTORICAL TOPOGRAPHIC MAPS

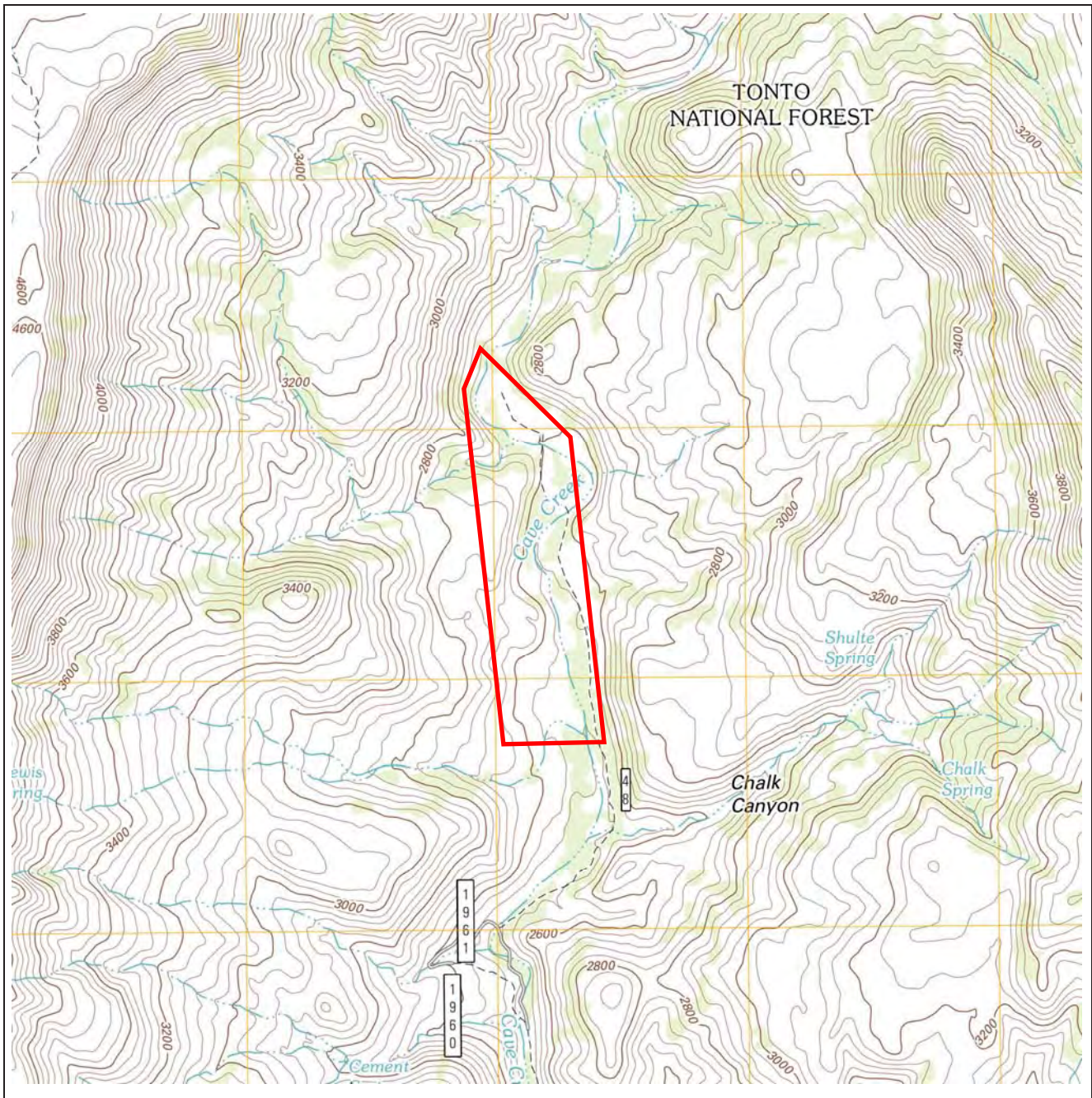


Historical Topographic Map

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

Date:	2014
Quad:	New River Mesa
Series:	7.5
Original Scale:	1:24,000
Contour Intervals:	40 Feet

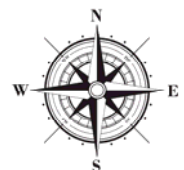


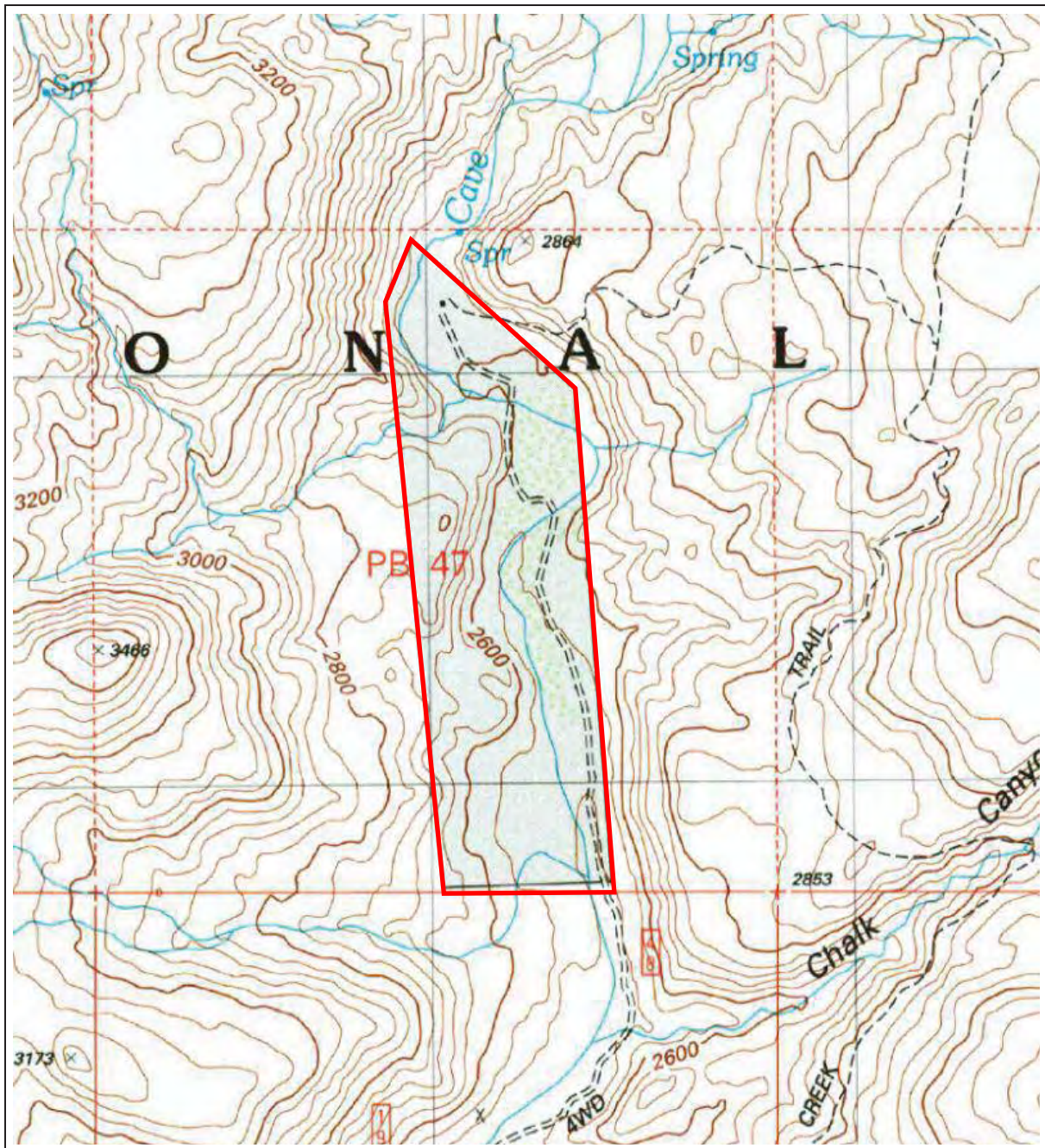


Historical Topographic Map

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

Date:	2011
Quad:	New River Mesa
Series:	7.5
Original Scale:	1:24,000
Contour Intervals:	40 Feet

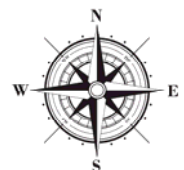


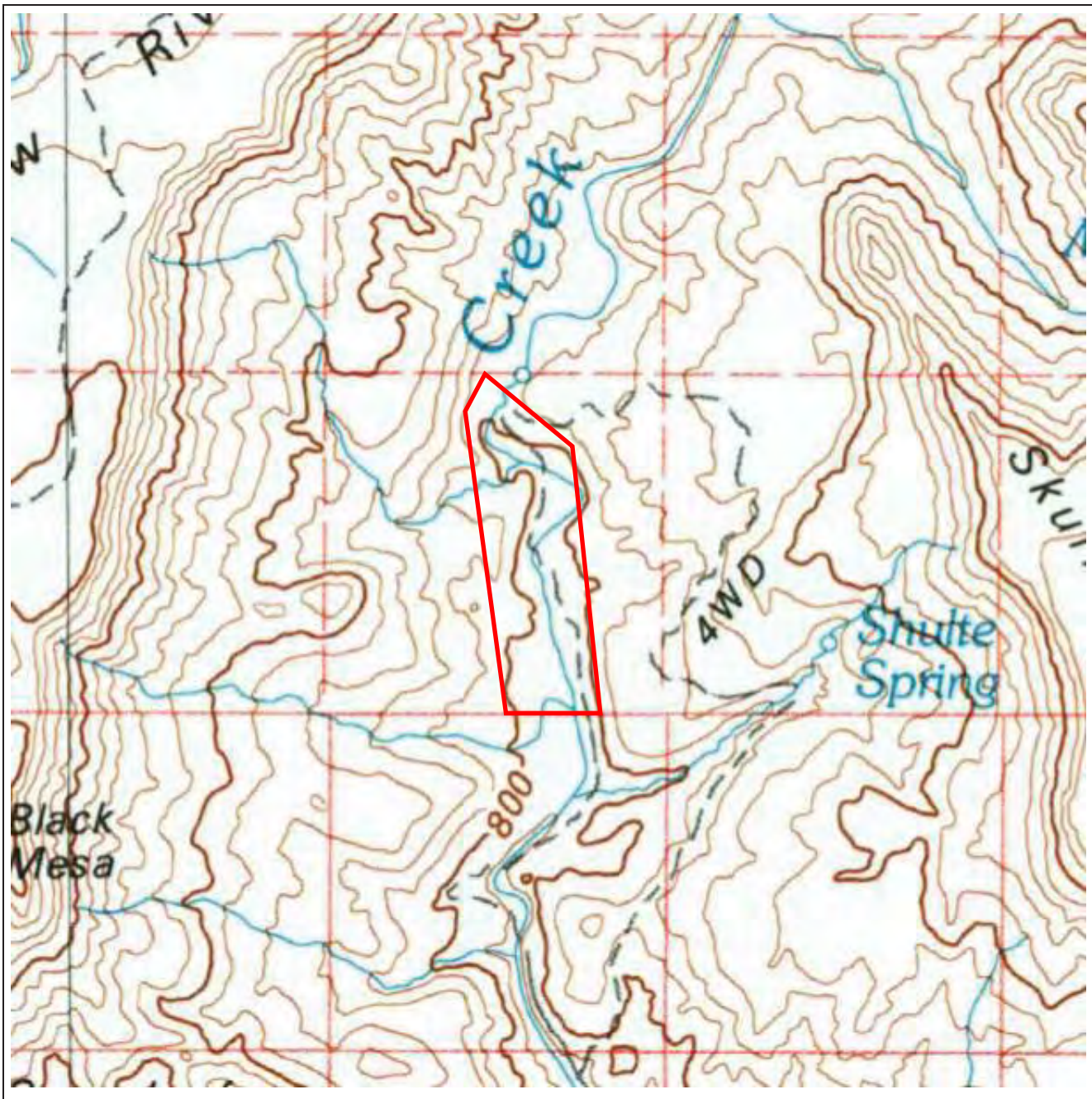


Historical Topographic Map

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

Date:	2006
Quad:	New River Mesa
Series:	7.5
Original Scale:	1:24,000
Contour Intervals:	40 Feet

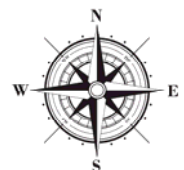


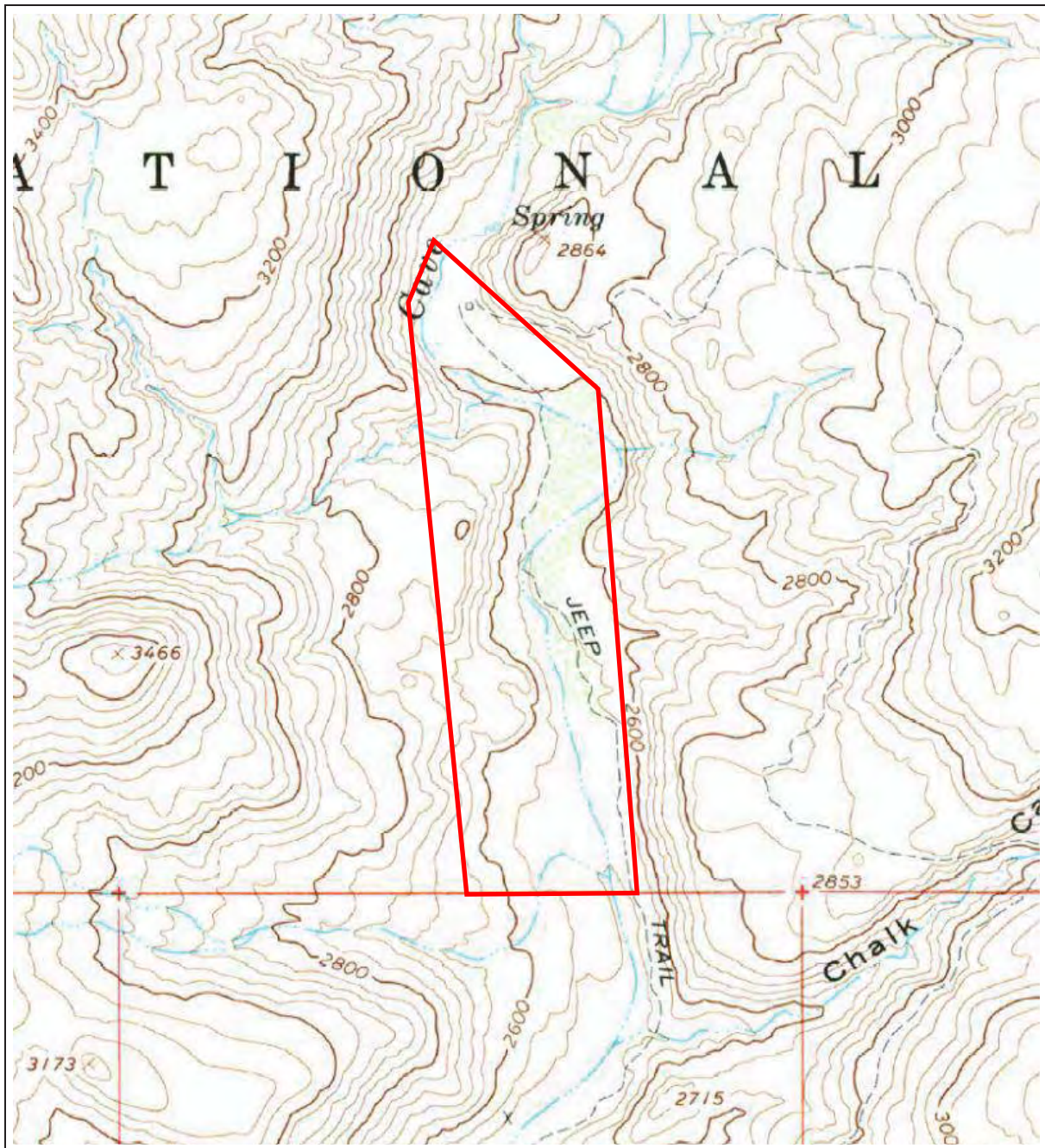


Historical Topographic Map

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

Date:	1994
Quad:	Theodore Roosevelt Lake
Series:	30x60
Original Scale:	1:100,000
Contour Intervals:	40 Meters

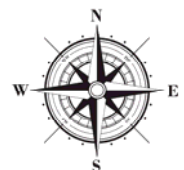


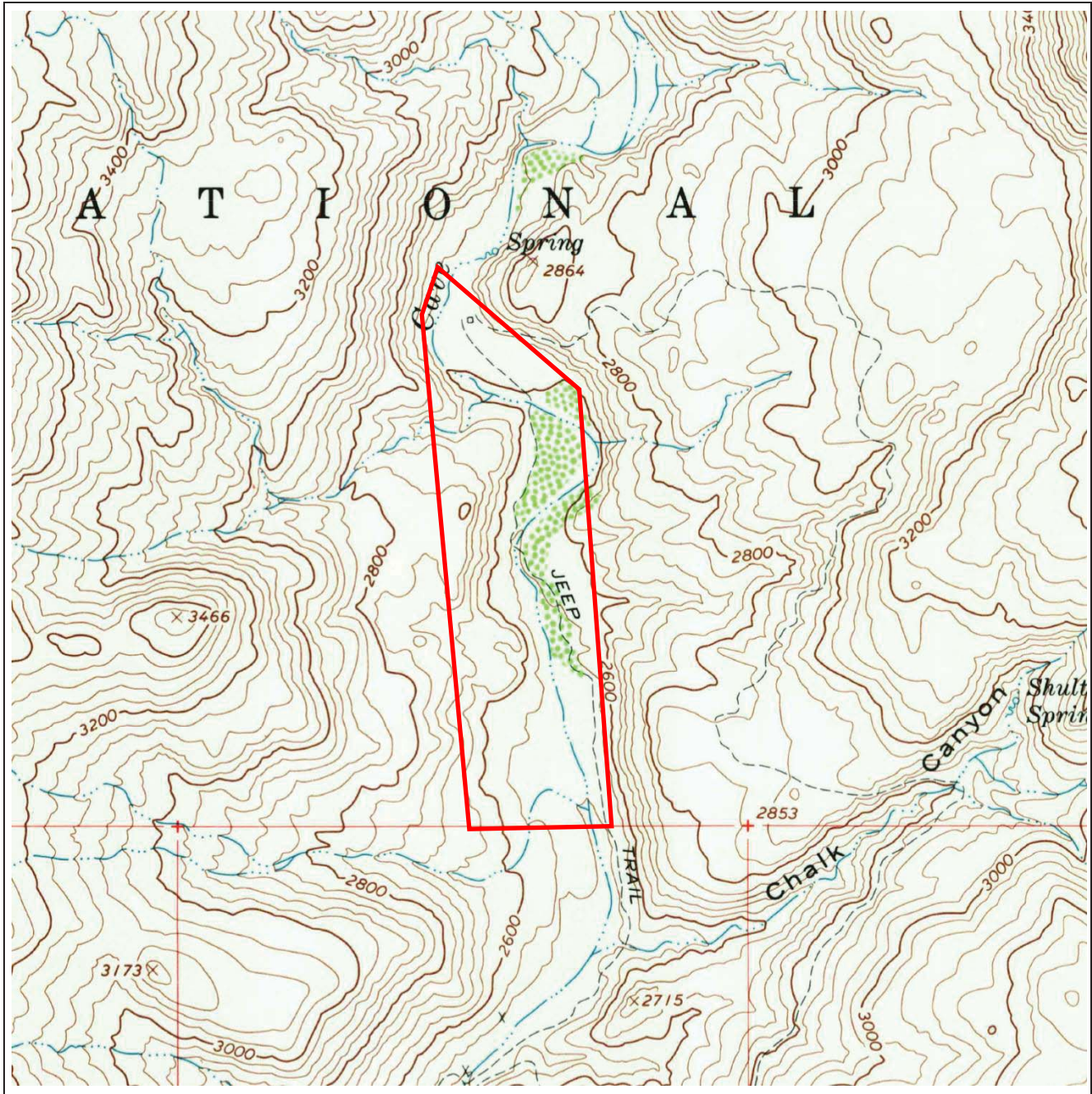


Historical Topographic Map

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

Date:	1987
Quad:	New River Mesa
Series:	7.5
Original Scale:	1:24,000
Contour Intervals:	40 Feet

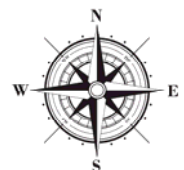


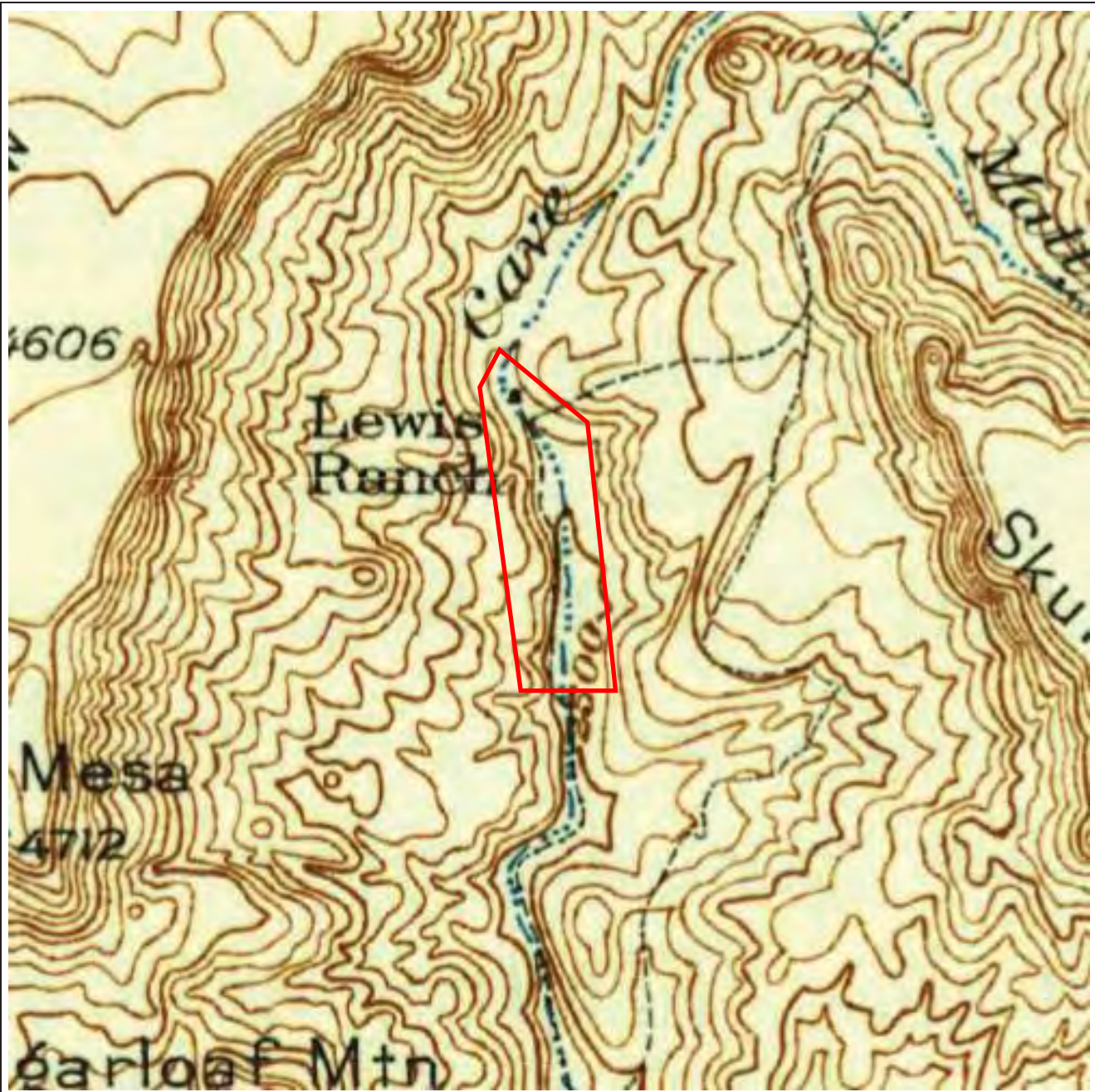


Historical Topographic Map

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

Date:	1964
Quad:	New River Mesa
Series:	7.5
Original Scale:	1:24,000
Contour Intervals:	40 Feet

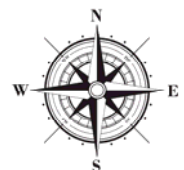


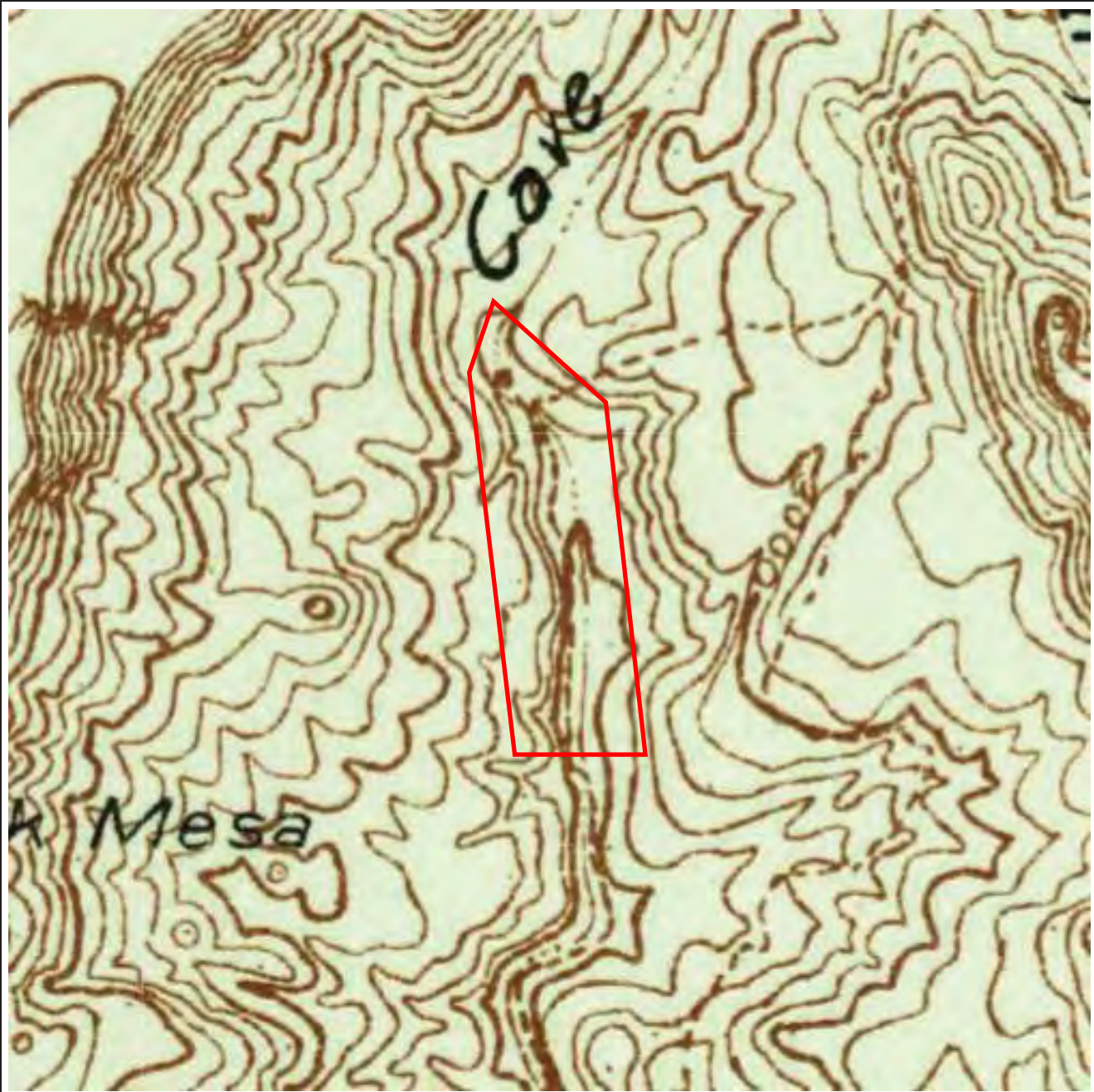


Historical Topographic Map

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

Date:	1939
Quad:	Cave Creek
Series:	30
Original Scale:	1:125,000
Contour Intervals:	100 Feet

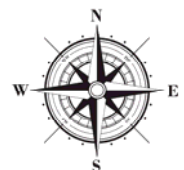




Historical Topographic Map

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

Date:	1930
Quad:	Cave Creek
Series:	30
Original Scale:	1:96,000
Contour Intervals:	100 Feet



APPENDIX G

HISTORICAL AERIAL PHOTOGRAPHS



Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

2016





Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

2013



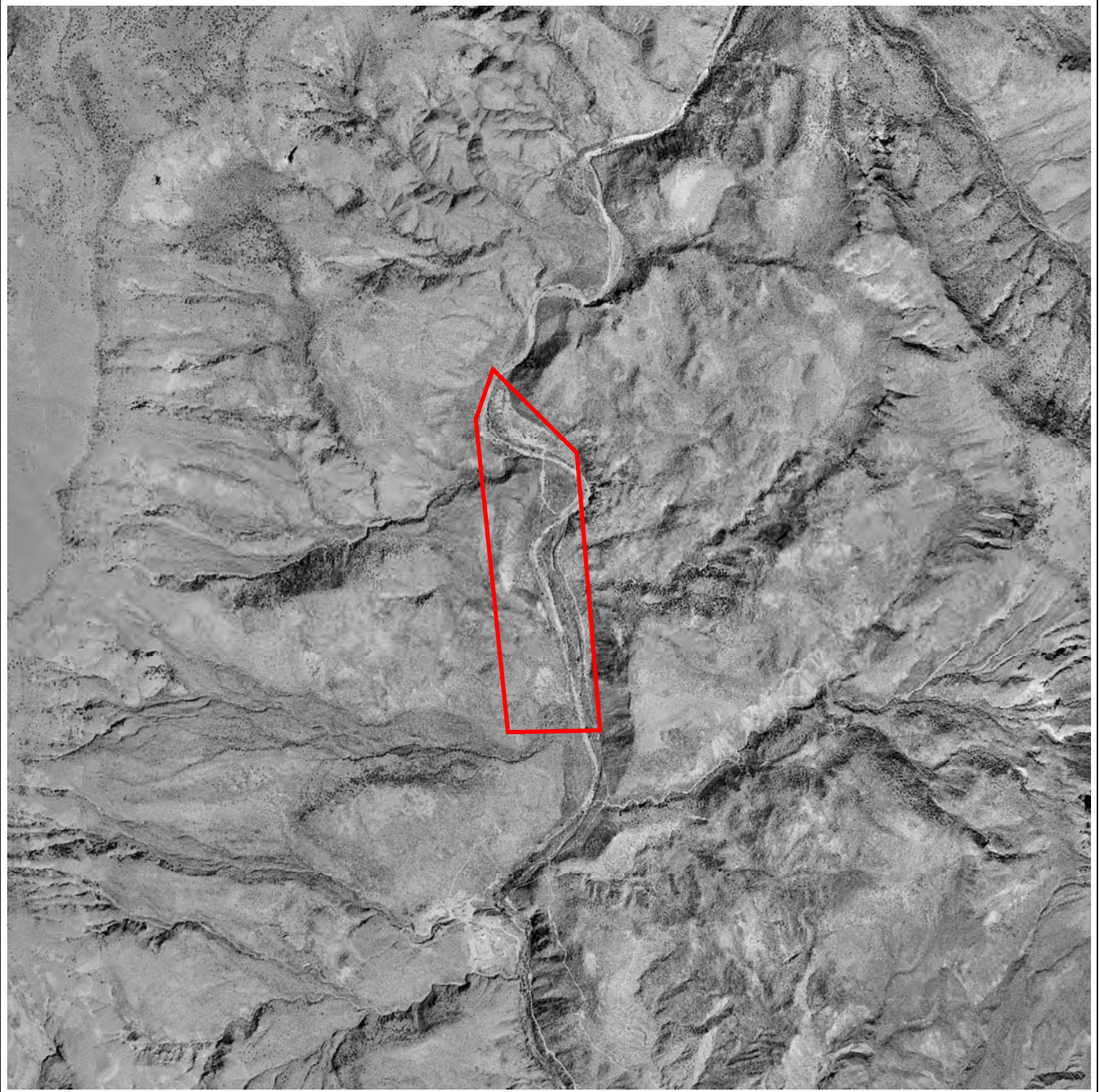


Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

2009





Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

2003



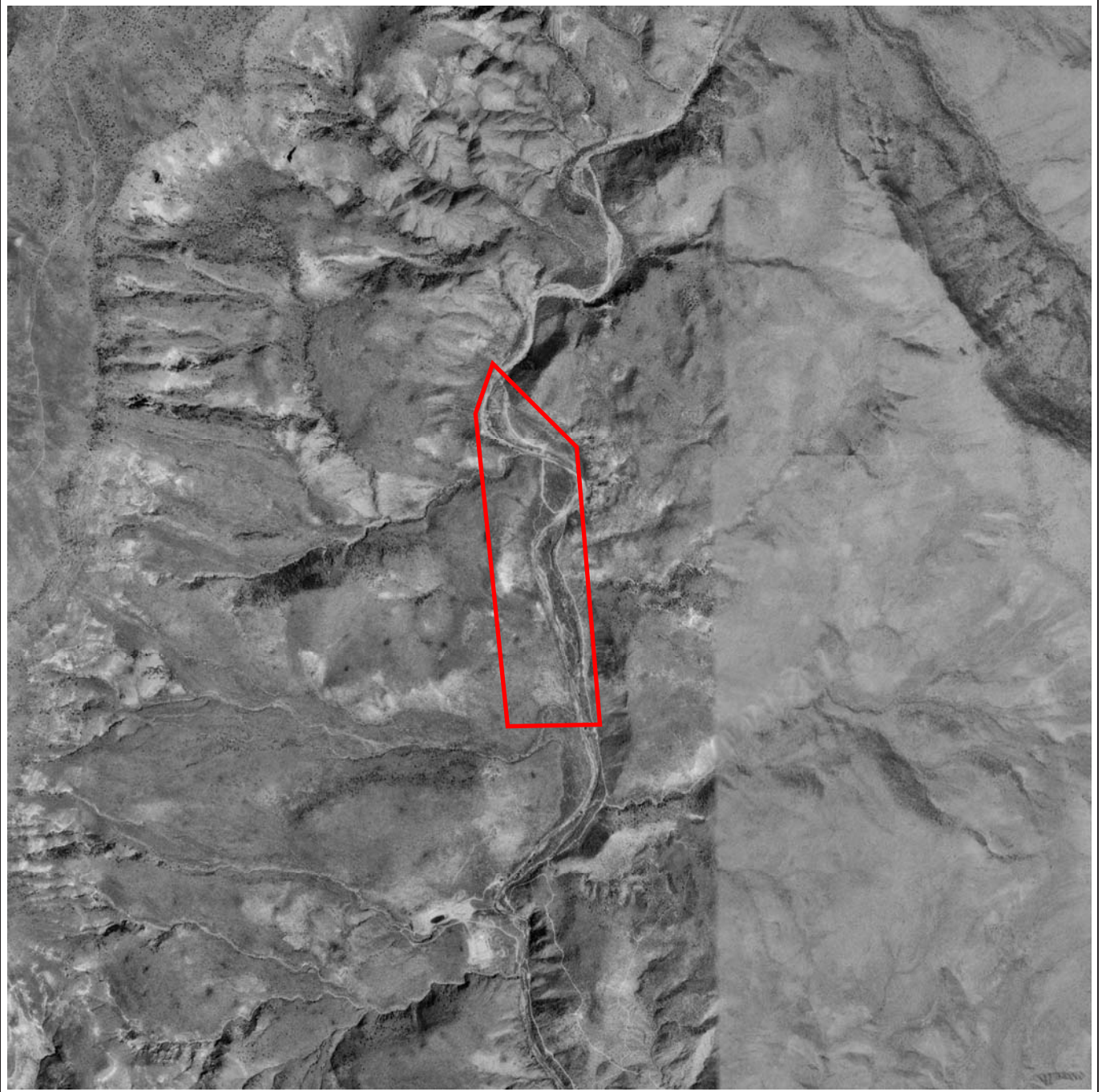


Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

1997

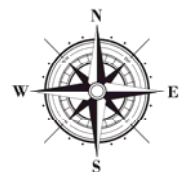


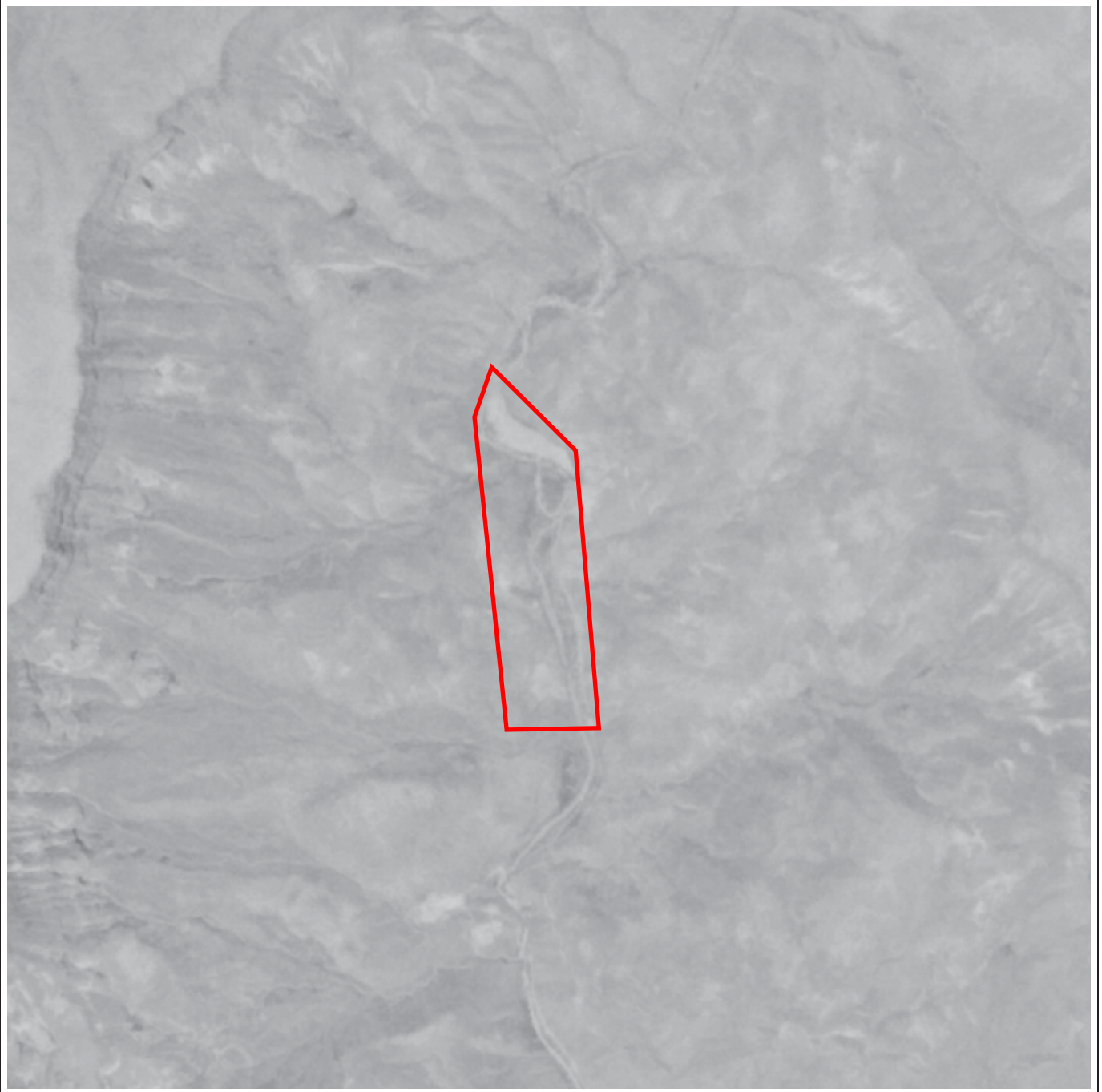


Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

1992



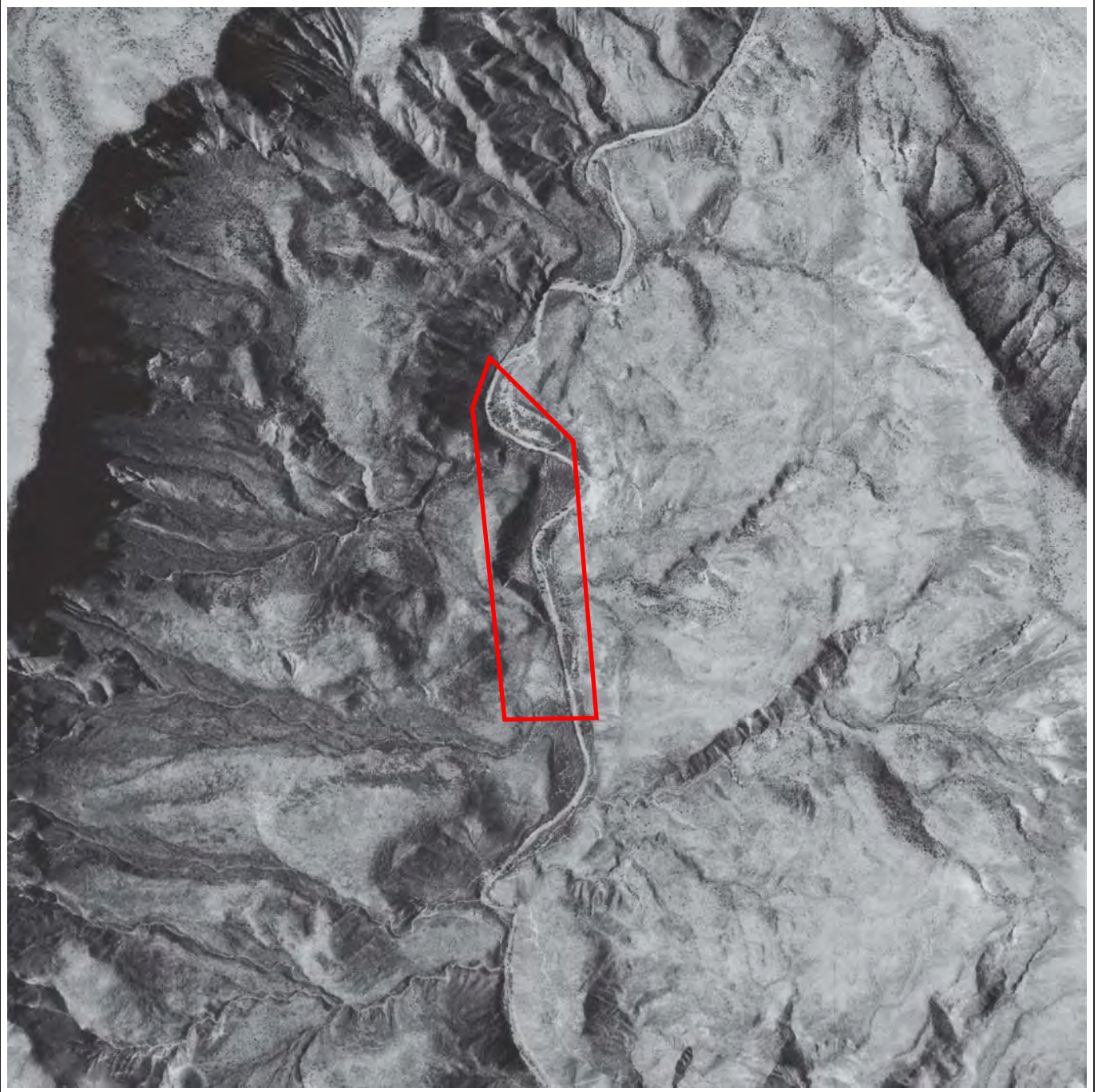


Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

1981





Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

1971





Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

1965



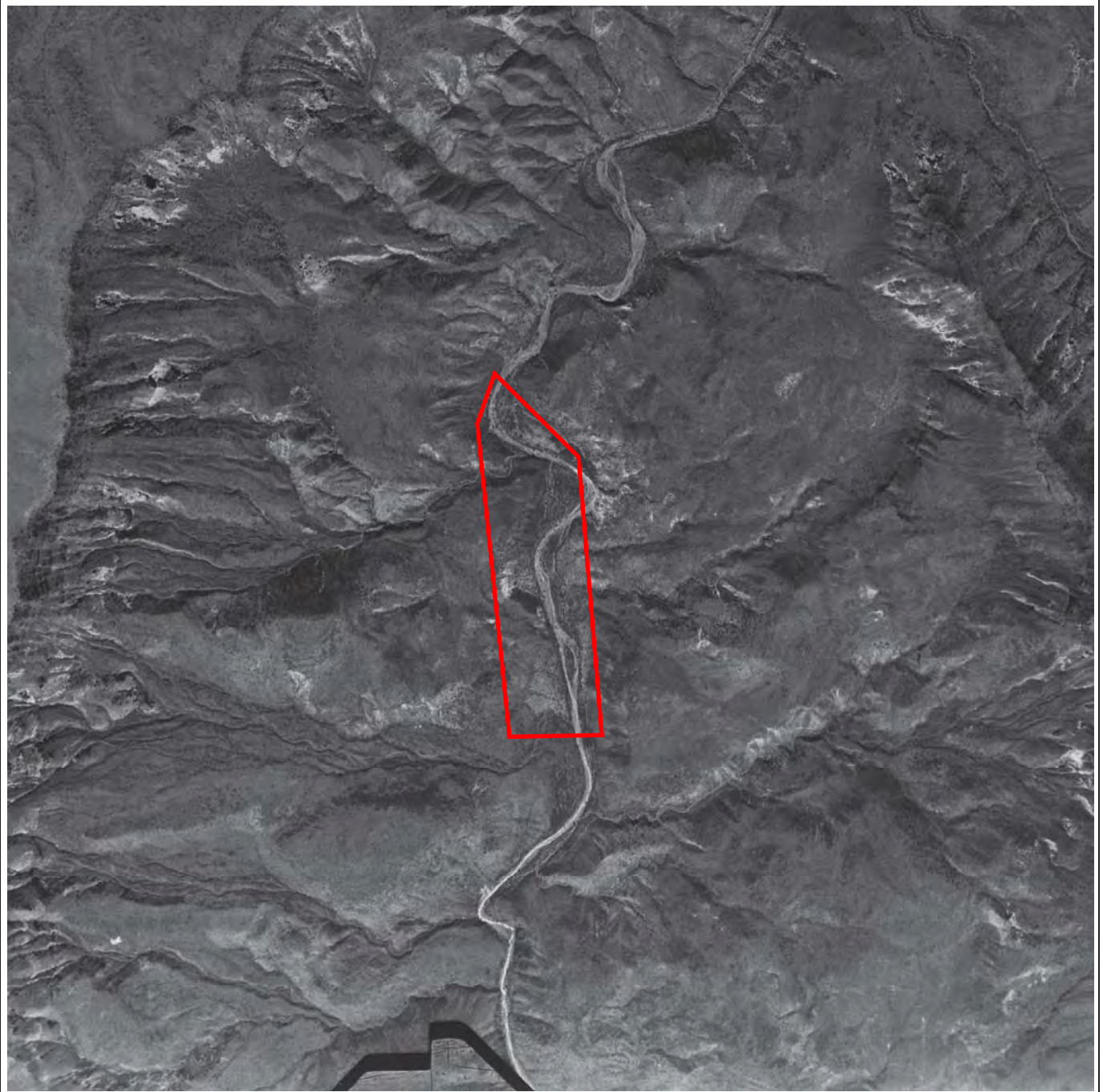


Historical Aerial Photo

Site:
**Forest Road 48 and Trail 4
Cave Creek, AZ**

1962





Historical Aerial Photo

Site:
Forest Road 48 and Trail 4
Cave Creek, AZ

1953



APPENDIX H

**MARICOPA
COUNTY
ASSESSOR
PROPERTY
DETAIL
RECORDS**

219-09-001

Parcel Type: Land

[SWIFT CURRENT LAND & CATTLE LLC](#)

Property Information

MCR #: N/A
 Address:
 Latitude/Longitude:
 Description: EMBRACING PT OF APPROX SEC 21 BEG AT COR 1 FR WH US LOCAT MON 317 HES BRS S 59D57'E 10.58 CHS S 46D12'E 26.94 CHS TO COR 2 S 4D3' E 61 CHS TO COR 3 W 19.84 CHS TO COR 4 N 5D51'W 71.34 CHS TO COR 5 N 21D 46'E 9.22 CHS TO COR 1 POB CONT 149.30 AC
 Lot Size (Sq Ft): 6,503,508
 Zoning: RU-43
[Section](#), [Township](#), Range: 28 7N 4E
 Market Area/[Neighborhood](#): 07/009
[Subdivision](#): Not Available
[Lot #](#): Not Available
 High School District: NO HIGH SCHOOL
 Elementary School District: NO SCHOOL DISTRICT
 Local Jurisdiction: NO CITY/TOWN
 Owner: [SWIFT CURRENT LAND & CATTLE LLC](#)
 Mailing Address: PO BOX 1944 , SUPERIOR, AZ 85273
[Deed #](#): [040883014](#)
 Deed Date: July 30, 2004
[Sale Date](#): None
[Sale Price](#): \$0

Valuation Data

Tax Year:	2017	2016	2015	2014	2013
Full Cash Value:	\$980,300	\$942,100	\$325,200	\$325,200	\$406,500
Limited Property Value:	\$358,533	\$341,460	\$325,200	\$325,200	\$406,500
Legal Class:	2	2	2	2	2
Description:	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P
Assessment Ratio:	15%	15%	16%	16%	16%
Assessed FCV:	\$0	\$0	\$0	\$52,032	\$65,040
Assessed LPV:	\$53,780	\$51,219	\$52,032	\$52,032	\$65,040
Property Use Code:	0014	0014	0014	0014	0014
PU Description:	Vacant Residential Land	Vacant Residential Land	Vacant Residential Land	Vacant Residential Land	Vacant Residential Land
Tax Area Code:	000000	000000	000000	000000	000000

Commercial Characteristics/Improvements

No improvements on record

[Notice: The values displayed on this page may not reflect constitutional or statutory adjustments.](#)

Property Sketches

CAUTION! USERS SHOULD INDEPENDENTLY RESEARCH AND VERIFY INFORMATION ON THIS WEBSITE BEFORE RELYING ON IT.

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By using this website, you acknowledge having read the above and waive any right you may have to claim against Maricopa County, its officers, employees, and contractors arising out of my reliance on or the use of the information provided on this website.

APPENDIX I

RÉSUMÉS

Project Role and Responsibilities:

WestLand Resources, Inc., Principal QA/QC

Special Expertise:

- *Large Water System Master Planning*
- *Well Design and Permitting*
- *Environmental Site Assessments*
- *Reservoir Design and Analysis*
- *Arsenic Treatment Design*
- *Water System Modeling and Pipe Network Analysis*
- *Water Pumping Facility Design and Permitting*
- *Sewer Basin Studies*
- *Potable/Reclaimed Water Main Extensions*
- *Water and Wastewater Treatment Design*
- *Infrastructure Route Studies*
- *Potable/Reclaimed Water System Planning*
- *Sewer and Reclaimed Water System Master Planning*

Education:

- *M.B.A., University of Arizona*
- *B.S., Civil Engineering, University of Arizona*

Civil Engineering Registration:

- *Arizona #22999, 1989*
- *California #44219, 1989*
- *Nevada #09281, 1991*
- *New Mexico #14546, 1999*

Memberships:

- *Board Member - Citizen's Water Advisory Committee to the City of Tucson*
- *Finance Subcommittee Member - Citizen's Water Advisory Committee to the City of Tucson*

Background:

Mr. Taylor has over 25 years of experience in water resources wastewater engineering, and remediation systems including the design of systems for public works projects, master-planned communities, large commercial and retail centers, and the mining industry. He is responsible for the development of water system master plans; well, reservoir, booster station, and transmission main design; water treatment and arsenic treatment design; and the assessment of rates and development impact fees as well as wastewater master plan preparation, feasibility studies, system modeling and simulation, and capacity analyses; the design of wastewater treatment plants/disposal facilities, sewer infrastructure, lift stations and force mains, septic systems, and wetlands; and permit application, including aquifer protection permits, reclaimed water reuse permits, Arizona Pollutant Discharge Elimination System permits, recharge basin permits, and 208 plan amendments for private and municipal clients.

During the last 12 years, Mr. Taylor has served as Principal-in-Charge for WestLand's multi-disciplinary water and wastewater infrastructure projects, providing project management, design and technical supervision, project scheduling, and budget oversight. His plans and contract documents are technically accurate, buildable, and operationally efficient, leading to few, if any, change orders during construction.

Selected project experience includes:

Various Phase I Environmental Site Assessments. Performed and managed multiple Phase I Environmental Site Assessments at various locations in Arizona and acted as principal reviewer for technical reports. Experience includes site reconnaissance and characterization, environmental record sources review, personal interviews, and aerial photograph and topographical map interpretations. Elective sites generally exhibit little evidence of environmental liabilities with some wildcat dumping and numerous housekeeping issues of *de minimis* importance.

Tucson Water Dove Mountain 3.0-MG C-Zone Reservoir and D-Zone and E-Zone Booster Stations; Pima County, Arizona; Cottonwood Properties.

As part of Tucson Water's regional planning efforts, Mr. Taylor served as Project Manager for the design of water infrastructure in support of the Dove Mountain development and other properties located at the intersection of Tangerine and Thornydale Roads. Consulting services for the 3.0-MG cast-in-place, hopper-bottom, reinforced-concrete, in-ground reservoir and two onsite

booster stations included project management and coordination; surveying services; geotechnical investigation; corrosion monitoring design; structural engineering; civil engineering, site, and pipeline design; and landscape services. The new reservoir provides floating storage to the Tucson Water C-Zone and forebay storage capacity to both the onsite D- and E-Zone

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booster stations. Civil engineering services included plans, specifications, and construction drawings for the booster station design, booster station piping layout, hydropneumatic tank and air compressor, reservoir piping, and valve vault equipment layout. The project was constructed per Tucson Water standards.

Dove Mountain Reclaimed Water Master Plan; Pima County, Arizona; Cottonwood Properties; Principal-in-Charge of the preparation of the Dove Mountain Reclaimed Water Master Plan, an update to the Reclaimed Water Master Plan for the Tortolita Mountain Properties Basin that had been prepared for approximately 1,800 acres within the Dove Mountain community and included two golf courses. WestLand's revised master plan incorporated the entire 5,600-acre community with provisions for up to five 18-hole golf courses. The Dove Mountain project is served by Tucson Water's Thornydale reclaimed water reservoir and booster station. In accordance with Tucson Water's pressure and velocity requirements, WestLand performed hydraulic modeling for each of the various phasing scenarios to determine the best phasing of construction for the proposed reclaimed water system infrastructure buildout.

Sahuarita Water Company Arsenic Treatment Design; Sahuarita, Arizona; Sahuarita Water Company. Principal-in-Charge of water system planning and design for the Sahuarita Water Company's centralized arsenic treatment facility and transmission system. WestLand coordinated with Layne Christensen in the preparation of the design drawings for a new 2,000-gpm Layne Christensen Adsorption Arsenic Treatment facility, providing specifications for the facility, electrical and instrumentation systems, and piping layout and sizing. Deliverables included a treatment system option evaluation, design report, an opinion of probable construction cost, and final plans and specifications. The facility was designed to be expandable for future needs. WestLand also provided construction bidding services for this project.

Las Quintas Serenas Water Company Arsenic Treatment and Well Site Upgrades; Green Valley, Arizona; Las Quintas Serenas Water Company. Principal-in-Charge of the design of arsenic treatment and water plant upgrades for Well Nos. 6 and 7. These included an iron media adsorption arsenic treatment system, a 400,000-gallon storage tank, and a 1,250-gpm variable-frequency-drive (VFD) transfer booster station. A new 2,500-lineal foot, 8-inch dedicated transmission water main was designed to connect Well No. 7 to the Well No. 6 site. Raw water from either or both wells is treated through the arsenic system at the Well No. 6 site, sent to fill the new tank, and pumped via the transfer booster station into the distribution system. Services provided by WestLand included site layout and grading; site piping and valving layout and sizing; preparation of booster pump and motor design specifications; and hydropneumatic tank design and associated equipment. WestLand prepared the design report, final plans and specifications, and engineer's opinion of probable construction cost.

City of Nogales Arsenic Treatment; Nogales, Arizona; City of Nogales Utilities Department. Principal-in-Charge of the development of design criteria for arsenic treatment at the Meadow Hills Wells Nos. 1 and 3 and Coronado Well No. 1. The Meadow Hills wells pump directly into the water distribution system and fill the existing City of Nogales North Zone storage tank, while the Coronado well pumps to the existing High School storage tank located in the City of Nogales Downtown Pressure Zone. All three wells required arsenic treatment in order to meet the new EPA arsenic standard. Arsenic treatment consisted of a dual-vessel iron-media adsorption system located at each well site.

Northwest CAP Delivery System Preliminary Route Evaluation and Analysis; Northwestern Pima County; Northwest Water Providers. For over a decade, the Flowing Wells Irrigation District, Metropolitan Domestic Water Improvement District, Town of Marana, and Town of Oro Valley have worked collaboratively to develop a sustainable water supply for their customers. This effort has evolved over time to focus on the establishment of a water delivery system to deliver Central Arizona Project water to northwestern Pima County. As part of this effort, Mr. Taylor served as Principal-in-Charge of the

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development of a route analysis for the delivery system that would allow for the direct use of CAP water by each partner. The project consisted of three planning/engineering tasks: Task 1 – preliminary route evaluation, screening, and route evaluation matrix preparation; Task 2 – technical evaluation of alternative routes; and Task 3 – final route evaluation. Five potentially feasible routes were reviewed during the preliminary evaluation and screening process, two of which were identified for more detailed study.

Community Water Wells Nos. 10 and 11 Reservoir, Arsenic Treatment, Booster Station, and Transmission Main; Green Valley, Arizona; Community Water of Green Valley. Principal-in-Charge of the design of Community Water Well Nos. 10 and 11 sites, including arsenic treatment facilities, new 300,000-gallon forebay reservoirs, and booster pump stations. The new wells were designed to pump through a Layne Christensen coagulation filtration arsenic treatment process into onsite forebay reservoir. The reservoirs provide treated source water to booster stations that pump through dedicated well transmission mains to fill the Community Water Reservoirs No. 2 and No. 3. WestLand prepared the design report, final plans and specifications, and engineer's opinion of probable construction cost. Services provided by WestLand included site layout and grading; site piping and valving layout and sizing; preparation of well pump, column, and motor design specifications; and hydropneumatic tank design and associated equipment. In addition, several miles of 16-inch water main were designed to transport treated potable water to the Community Water reservoirs.

Oak Creek Water Company No. 1 Water System Master Plan; Sedona, Arizona; Oak Creek Water Company No. 1. Principal-in-Charge of the development of a master plan to address existing system deficiencies and future infrastructure requirements in support of a hook-up fee application with the Arizona Corporation Commission. As part of the preparation of the master plan, WestLand examined water source capacity and quality requirements, storage requirements, pressure requirements, fire flow requirements, water main requirements, land and easement requirements, and required system upgrades to serve proposed future development. WestLand prepared a master plan report and engineer's opinion of probable construction cost.

Red Rock Water Plant No. 1 Nitrate Treatment Plant; Pinal County, Arizona; Red Rock Utilities, LLC. Principal-in-Charge of the design of a nitrate treatment facility to mitigate the tested nitrate concentration of 10 to 12 parts per million at Water Plant No. 1. (The current primary maximum nitrate concentration limit is 10 ppm.) The treatment facility was installed at the discharge of the existing wellhead to treat half the full flow of 800 gpm to an approximate final mixed (half treated, half bypassed) nitrate concentration of 8 ppm. It consists of four steel filtration vessels that contain a chloride form of anion exchange resin media. Nitrate ions are exchanged onto the media releasing chloride ions resulting in a reduced concentration of nitrate in the treated water. The media is then backwashed with a sodium chloride brine solution to remove the nitrate ions and replace them with fresh chloride ions. The spent brine backwash water is sent to a holding tank for continuous low-flow disposal to the public sewer system. The treated water is sent to an existing onsite forebay reservoir.

Project Role and Responsibilities:

Environmental Planner/Project Manager

Special Expertise:

- *National Environmental Policy Act, Administrative Record*
- *Phase I and II Environmental Site Assessments, Preliminary Initial Site Assessments*
- *Clean Water Act*
- *Endangered Species Act*
- *Public Disclosure/Public Reports*

Education/Training:

- *MA, Land Use & Community Planning, with distinction, Northern Arizona University*
- *BSc, Regional Development, Cum Laude, University of Arizona*
- *ASTM Phase I and Phase II Environmental Site Assessments for Commercial Real Estate Workshop*
- *National Environmental Policy Act Compliance Workshop (EA/EIS)*
- *Mine Safety and Health Administration Certification*
- *90-hour Real Estate Pre-licensing*

Professional Affiliations:

- *American Planning Association*
- *ASTM Committee E50 on Environmental Assessment, Risk Management and Corrective Action*
- *International Right of Way Association*

Background:

Ms. Sandoval's experience with environmental law began in her coursework studies including Natural Resources History and Policy, Water Resources Policy and Law, Land Development Processes, and Field Studies in Environmental Geography. Prior to joining Westland, Ms. Sandoval gained experience working as an intern for the Arizona Department of Water Resources and then spent three years with a national homebuilder where she was responsible for assisting in due diligence research and land acquisitions and entitlement for master planned communities in southern Arizona. Since joining WestLand in 2007, she has provided regulatory compliance and permitting services related to land use and transportation planning, renewable energy, mining, and residential and commercial development.

Ms. Sandoval has assisted in the completion of numerous Phase I Environmental Site Assessments (ESAs) for various property types pursuant to ASTM standards E1527-05, E1527-13 and E2247-08. She has also completed Preliminary Initial Site Assessments (PISAs) for public roadway projects prepared in accordance with Arizona Department of Transportation/ Federal Highway Administration requirements and Environmental Assessment and Mitigation Reports (EAMRs). Ms. Sandoval has completed ASTM technical and professional training for Phase I and II ESAs. WestLand's ESA team routinely receives compliments from clients and regulators regarding our professionalism and the consistent quality of our work product. Upon request, ESAs address non-scope items classified as outside the standard practice, including potential asbestos-containing building materials, potential lead-based paint, health and safety concerns, and ecological resources.

Her experience with National Environmental Policy Act (NEPA) process and other federal environmental planning requirements includes resource studies, community development assessment, scoping and public participation, alternatives analyses, and keeping the administrative record. Ms. Sandoval has completed professional training workshops for writing Environmental Impact Statements, Environmental Assessments, and Finding of No Significant Impact documentation.

She has obtained CWA Section 404 and 401 permit authorizations including residential and commercial property development; linear transportation projects for railroad, roadway, and utility extensions; bank stabilization projects; mine expansions; emergency discharges; and hazardous and toxic waste cleanup. She has completed jurisdictional delineations (JDs), and secured regional general permits (RGPs), nationwide permits (NWP), and individual permits (IPs) from the U.S. Army Corps of Engineers.

Ms. Sandoval has assisted developers in meeting the requirements pertaining to City of Tucson environmental resource policies including floodplain, W.A.S.H. and E.R.Z. standards. She has worked with the City of Tucson Office of Conservation and Sustainable Development and managed the process for obtaining development standard modification requests, overlay zoning, and Stormwater Advisory Committee approvals.

She has provided environmental support for special zoning, including Conditional Use Permits for solar developments in Pima County inclusive of coordination with local environmental groups and the preparation of biological impact analyses, species surveys, and mitigation reports for impacts to protected species and habitat.

Diana Shiel Sandoval, MA

Selected Experience:

- Prepared numerous Phase I ESA reports for the Pima County Department of Environmental Quality also considering non-scope items, classified as outside the standard practice including: potential asbestos-containing building materials, potential lead-based paint, health and safety concerns, high-voltage power lines, and ecological resources.
- Completed several PISAs in anticipation of ADOT funding including the Town of Marana's project to improve Tangerine Road between Interstate-10 and La Canada, a project crossing into multiple jurisdictions including Pima County and the Town of Oro Valley; and the Town of Sahuarita's project replacing the Pima Mine Road bridge crossing over the Santa Cruz River.
- Completed Phase I Environmental Site Assessment and provided housekeeping recommendations including Spill Prevention, Control and Countermeasure (SPCC) Plan for confidential car-dealership and auto body repair shop in Tucson, Arizona.
- Managed environmental regulatory compliance for Tucson Electric Power transmission line project which will run approximately 41 linear miles in Pinal County (Pinal Central Substation to the Tortolita Substation). Assisted Tucson Electric Power in addressing National Environmental Policy Act, National Historic Preservation Act, Clean Water Act, Endangered Species Act, migratory bird protection, Arizona Pollutant Discharge Elimination System, State Native Plant Preservation and more. Coordinated with various federal entities and land management agencies to obtain all agreements, required permits and compliance documentation; the transmission line will cross privately-owned lands, lands owned by the State of Arizona and managed by the Arizona State Land Department (ASLD), federally owned lands managed by the Bureau of Reclamation (BOR) and the San Carlos Irrigation Project (SCIP), an agency of the Bureau of Indian Affairs (BIA). Ms. Shiel obtained an Approved Jurisdictional Determination from Army Corps of Engineers regarding the absence of jurisdictional waters for the project, documented that project was not likely to not adversely impact federally protected species, coordinated with Arizona Game and Fish Department to conduct surveys for candidate species in anticipation of potential federal listing, addressed plant salvage considerations for protected native species including vegetation clearing projections, and addressed state and federal archeological clearance requirements.
- Conducted special status species evaluation for confidential mining client encompassing approximately 100,000 acres (156 square miles) in Pima County. This evaluation considered species listed by the U.S. Fish and Wildlife Service under the Endangered Species Act and approximately 100 other species with potential to be listed in the future including species listed as Sensitive by the Bureau of Land Management (BLM), State of Arizona Species of Special Concern, Priority Vulnerable Species identified in the Sonoran Desert Conservation Plan website, and species identified by the International Union for Conservation of Nature and Natural Resources (IUCN) on the Red List of Threatened Species.
- Acted as Federal Emergency Management Agency's (FEMA) agent to consult with US Fish and Wildlife Service regarding potential impacts to lesser long-nosed bat for private development which needed a conditional letter of map revision (CLOMAR). Prepared biological evaluation, addressed US Fish and Wildlife Service comments, and managed federal agency's review of applicable records to obtain required clearances within the project's required development schedule.
- Acted as third party contractor to the Tonto National Forest maintaining the Resolution Pre-feasibility Activities Plan of Operations project file and prepared the administrative record. Managed Microsoft Access databases and indices of all project files; coordinated closely with interdisciplinary team to collect appropriate documentation for project decisions; identified records for redaction; and assisted in providing timely public comment and Freedom of Information Act (FOIA) responses.
- Assisted in obtaining Individual Section 404 permit authorization for Pima County Regional Flood Control District's bank stabilization project along the Pantano Wash between Speedway Boulevard and Tanque Verde Road. Work included preparation of the 404 and 401 applications, draft public notice, and 404(b)(1) Alternatives Analysis.
- Conducted riparian habitat assessment and completion of the Environmental Resource Report (ERR) for the El Rio Health Center Development in Tucson. The El Rio Health Center Development occurs along a W.A.S.H. designated watercourse. Ms. Shiel secured Development Services environmental policy approvals in compliance with Development Services Department (DSD) Full Notice Procedure (Chapter 23A-50 and 51) which required public coordination, overlay zone approval, and Stormwater Advisory Committee (SAC) authorization.
- Prepared Biological Impact Reports for Pima County Office of Sustainability & Conservation, addressed compliance with Maeveen Marie Behan Conservation Land System (MMB-CLS) and Regulated Riparian Habitat by preparing for on and offsite mitigation-conservation plans in collaboration with local, state, and federal agencies.

Education:

- MA, Anthropology, Northern Arizona University
- BA, Anthropology, University of Arizona

Awards:

- Kenny Acord Memorial Award: Northern Arizona University, August 2009
- Phi Beta Kappa Murphey Scholarship: University of Arizona, December 2003
- Anthropology Department Leadership Award: University of Arizona, May 2005

Special Expertise:

- Anthropological Archaeology
- Cultural Resource Management
- GIS
- Prehistoric Domestic Architecture, Southwestern U.S.

Background:

Mr. Charest received his BA in anthropology from the University of Arizona and his MA in anthropology from the Northern Arizona University in 2010. He has been doing field archaeology in the southwest since 2004 and was recently promoted by WestLand from crew chief to field director because of his field skills and writing ability. Mr. Charest's master's thesis explored Hohokam pithouse architectural morphology as a means to infer social ties between Hohokam villages, and he has worked on a number of Hohokam sites in the Tucson Basin. Presently, Mr. Charest is directing the excavation of a Middle Sedentary period habitation site on the Sahuarita Highlands alluvial fan south of the Zanardelli site in Tucson. Mr. Charest's permanent position is in the Flagstaff office, but he works out of the Tucson office when assigned to projects in southern Arizona.

Selected Experience:

Cultural Resources Inventories:

Cultural Resources Inventory of 24.09 Miles of Seismic Survey Lines on Arizona State Land Department Land; Maricopa and Yavapai Counties, Arizona; BHP Mineral Resources Inc. BHP proposes to conduct reflection seismologic (geophysical) survey on land managed by the Arizona State Land Department within the Aguila Valley northwest of Wickenburg. The purpose of the project is to identify iron-rich zones that assist in vectoring toward copper mineralization. The information gained from the survey would be ultimately used to select drilling sites. Mr. Charest performed a cultural resources survey of the 192.82-acre project area and identified two new archaeological sites and 31 isolated occurrences. One of the sites—AZ N:13:70(ASM), a railroad line—was recommended eligible for inclusion in the National Register of Historic Places; the other—AZ T:1:57(ASM), a resource-processing camp—was recommended not eligible due to a lack of significance. It was determined that the project would have No Adverse Effect on any register-eligible archaeological sites. The geophysical survey poses no danger to the extant railway line.

Cultural Resources Inventory of 4.28 Miles of Seismic Survey Lines on Arizona State Land Department Land; Apache County, Arizona; Twin Bridges, LLC. Archaeologist for survey along a seismic right-of-way corridor measuring 20 m wide and 6.89 km (4.28 miles) long prior to ground-disturbing activities (including off-road vehicular travel and the hand-placement of 6-inch geophone receivers into the ground). Three previously unknown archaeological sites and 21 isolated occurrences were identified during the survey. Two of the newly recorded sites were recommended eligible for inclusion in the National Register of Historic Places. WestLand recommended that the project would have No Adverse Effect on these sites provided that WestLand's list of management recommendations be followed. These recommendations included that the site boundaries be flagged with wooden lathe and flagging tape to prevent inadvertent trespass; that no vehicles enter into a flagged archaeological site; and that no excavation be conducted within a site boundary.

Cultural Resources Inventory of a 32-Acre Parcel North of Kingman; Mohave County, Arizona; Tucson Electric Power. TEP is considering an undeveloped 32-acre parcel of privately owned land north of Kingman for potential future

energy-related projects. Mr. Charest conducted an archaeological survey of the project area prior to the purchase of the property. No cultural resources sites were recorded in the project area and archaeological clearance was recommended.

Cultural Resources Inventory and Cultural Resources Clearance of 21.77 Acres for Repairs to a UNS Energy Natural Gas Pipeline; Sedona, Coconino National Forest, Yavapai County, Arizona; UNS Energy. UNS Energy needed to make repairs to a 1.6-km (1-mile) section of 4-inch high-pressure natural gas pipeline where erosion has exposed and damaged portions of the pipe. Mr. Charest served as Field Director on the project, which identified one new archaeological site. The site, a small lithic and ground stone scatter, was recommended eligible for inclusion in the National Register of Historic Places. A recommendation of No Adverse Effect was made contingent upon an archaeological monitor being present during ground-disturbing activities within 15 m (50 feet) of the site.

Cultural Resources Inventory of 633.88 Acres for the East Clear Creek Land Exchange; Coconino County, Arizona; Resolution Copper Mining, LLC. Field Director during a 633.88-acre pedestrian survey for Section 110 compliance. In anticipation of a land exchange between Resolution and the Coconino National Forest, WestLand conducted a cultural resources inventory of the land to be exchanged. Because the project area contained steep and rugged slopes, some areas were omitted from survey for safety considerations. Ultimately, WestLand systematically surveyed 248.62 acres of the total 633.88-acre project area. Three previously unknown archaeological sites, all low-density scatters of flaked stone debitage, and six isolated occurrences were discovered during the survey. No culturally or temporally diagnostic prehistoric artifacts were identified at any of the sites. WestLand recommended the sites eligible for inclusion in the NRHP under Criterion D, with the acknowledgment that the project is a land exchange and that no physical changes to the project area are proposed. Additional archaeological work was not required.

Cultural Resources Inventory of 158.58 Acres along the Gila River; Graham County, Arizona; Freeport-McMoRan. Field Director for a cultural resources inventory of an approximately 158-acre site known as the Emery Site. Freeport-McMoRan proposes to conduct compensatory mitigation activities within portions of the site, including tamarisk control and the planting of native tree species. Because these activities are ground-disturbing, they have the potential to adversely affect historic properties. During the survey, no cultural resources were identified and WestLand recommended that no additional archaeological investigation would be necessary.

Cultural Resources Inventory of 7.64 Miles of Access Roads for Tucson Electric Power Transmission Lines on the Gila and Apache National Forests; Catron County, New Mexico; Tucson Electric Power. Archaeological Field Technician for cultural resources inventory of approximately 7.64 miles of transmission line access roads on Gila National Forest land, including portions of the Apache National Forest. The 18 individual transmission line access roads included 17 not previously subjected to Section 106 inventory. TEP requires access to the twin 345-kV lines for vegetation management, maintenance, and inspection. The field survey identified six archaeological sites and eight isolated occurrences. WestLand recommended that the five sites recommended eligible for inclusion in the NRHP and the one site with a recommendation of undetermined eligibility be avoided by all ground-disturbing project activities. Otherwise, the development and implementation of a Historic Properties Treatment Plan would be required.

Cultural Resources Inventory of 159.64 Acres for the Dripping Spring Land Exchange; Gila and Pinal Counties, Arizona; Resolution Copper Company. Field Director for cultural resources inventory as part of a 159.64-acre land exchange between Resolution Copper and the Bureau of Land Management. For safety considerations, WestLand surveyed 54.71 acres (the survey area) of the total 159.64-acre project area. Four previously unrecorded archaeological sites and 15 isolated occurrences were discovered. WestLand recommended two sites, AZ V:13:268(ASM) and AZ V:13:269(ASM), eligible for inclusion in the NRHP. The other two sites, AZ V:13:270(ASM) and AZ V:13:271(ASM), were recommended ineligible due to a lack of significance. The project will have No Adverse Effect on any of the sites as no construction or other action is proposed. WestLand therefore recommended that no additional archaeological work need be undertaken.

Supplement to a Cultural Resources Inventory of Approximately 41 Miles for the TEP Pinal-Tortolita 500-kV Transmission Line; Pinal County, Arizona; Tucson Electric Power. TEP constructed a new single-circuit 500-kV transmission line from the Pinal Central substation to the Tortolita substation, a distance of approximately 41 miles. Prior

to construction, TEP contracted WestLand to perform a cultural resources inventory of the transmission line corridor. In response to minor alterations to the design of the project after the completion of the survey report, TEP hired WestLand to survey additional areas encompassing road intersections where wider turning areas were proposed, additional segments of access roads, locations where grounding rods needed to be installed, and pull site locations that had been shifted due to engineering changes. The new 29-acre survey area consisted of a number of small discontinuous supplemental polygons scattered across the larger project area. Mr. Charest served as Field Director for the project. No sites were identified, and the 10 isolated occurrences discovered did not meet the criteria of eligibility for inclusion in the National Register of Historic Places. WestLand recommended that the project would result in No Historic Properties Affected and that no additional archaeological work was necessary.

Cultural Resources Inventory of 2.44 Miles of Access Road between the Coolidge Municipal Airport and the El Paso Natural Gasline Road for the TEP Pinal-Tortolita 500-kV Transmission Line, Pinal County, Arizona; Tucson Electric Power. Field Director for cultural resources inventory of a 9-m-wide, 3.9-km-long existing dirt road that was used to provide vehicle access to the larger transmission line corridor. The survey area lies within lands administered by the Arizona State Land Department (3.49 linear kilometers) and the U.S. Department of the Interior Bureau of Reclamation (0.43 linear kilometer). One previously recorded site, wagon road AZ AA:3:318(ASM), crosses the survey area. WestLand recommended the site not eligible for inclusion in the NRHP as it lacked significance under the NRHP eligibility criteria and had been heavily disturbed by the construction of the airport access road.

Cultural Resources Inventory of 6.73 Miles of Seismic Survey Lines on ASLD Land by C.O. Bar Ranch; Coconino County, Arizona; Bird Seismic Services, Inc. Field Director for cultural resources inventory prior to reflection seismologic 3D (geophysical) survey on private lands and lands managed by the Arizona State Land Department. The survey resulted in the identification of one previously unrecorded site (AZ I:6:57[ASM]) and 10 isolated occurrences. The site contained a substantial collection of features and artifacts, including petroglyph panels, slab-lined pits, and projectile points, suggesting that it had been intermittently occupied for centuries. WestLand recommended that the project would have No Adverse Effect provided that the boundary was flagged to prevent inadvertent transgressions into the site.

Cultural Resources Inventory of 2.6 Miles of Seismic Survey Lines on ASLD Land; Apache County, Arizona; Bird Seismic Services, Inc. Field Director for cultural resources inventory prior to reflection seismologic 3D (geophysical) survey on lands managed by the Arizona State Land Department along the Puerco River southeast of Chambers. Archaeologists surveyed a 4.18-km, 20-m-wide corridor for a total survey area of 20.74 acres. Six previously unrecorded prehistoric sites and seven isolated occurrences were recorded during the survey. WestLand recommended that the proposed project would have No Adverse Effect on the four NRHP-eligible sites within the survey area provided Bird Seismic Services restricted vehicle access and conducted no excavation within the sites' boundaries.

Cultural Resources Inventory of 23.15 Miles of Seismic Survey Lines and Alternative Access Routes; Mohave County, Arizona; PacSeis, Inc. Field Director for cultural resources inventory prior to reflection seismologic 2D (geophysical) survey on private lands and lands managed by the Bureau of Land Management. Two previously unrecorded archaeological sites and five isolated occurrences were identified. One of the sites, a railway signal stop and associated historical trash dumps, was recommended eligible for inclusion in the NRHP. WestLand determined that the project would have No Adverse Effect as PacSeis was committed to the avoidance of all cultural resources regardless of their NRHP-eligibility status.

Testing and Data Recovery Plans:

Treatment Plan for Phase I Data Recovery of AR-03-07-01-2166; Williams Ranger District, Kaibab National Forest, Coconino County, Arizona; Fennemore Craig. Lost Canyon, Young Life summer camp is proposing to purchase a parcel of federal land managed by the Kaibab National Forest. The parcel, which is located 2 km southeast of Williams, Arizona, contains a known archaeological site, AR-03-07-01-2166, that consists of a small cave sheltered in the western face of a cliff. San Francisco Mountain Gray Ware sherds were discovered at the site during previous archaeological surveys, prompting site recorders to interpret the site as a seasonal Cohonina shelter and encampment.

The U.S. Forest Service recommended the site eligible for inclusion in the National Register of Historic Places and the Arizona State Historic Preservation Office concurred. Mr. Charest prepared an archaeological treatment plan for phased data recovery at AR-03-07-01-2166. The goals of the archaeological data recovery are to identify any subsurface archaeological features and deposits at the site and to mitigate the adverse effects to the site posed by the proposed land purchase.

Tangerine Road Widening Project: Archaeological Testing Plan for Archaeological Sites AZ AA:12:82(ASM) and AZ AA:12:422(ASM); Pima County, Arizona; Town of Marana. The Town of Marana plans to widen and improve approximately 10 linear miles of Tangerine Road. The project area measures 107 m (350 feet) wide and has the potential to adversely affect historic properties that have significance in local, state, and national history and prehistory. The Town retained WestLand to prepare an archaeological treatment plan to identify subsurface archaeological features and deposits at AZ AA:12:422(ASM) in support of data recovery and at AZ AA:12:82(ASM) to provide enough data to make an informed recommendation as to its NRHP eligibility. Mr. Charest developed the treatment plan for archaeological testing at the two sites.

Testing and Data Recovery:

NRHP-eligibility Testing at AZ AA:12:726(ASM) and AZ AA:12:1118(ASM) along Tangerine Road; Oro Valley, Pima County, Arizona; Town of Marana. The Town of Marana plans to widen and improve Tangerine Road from the Twin Peaks Road/Dove Mountain Boulevard intersection to La Cañada Drive. Proposed road improvements include road widening, paving, and the installation of drainage culverts and erosion controls along Thornydale Road. Following a Class III cultural resources inventory of the project area, two sites—AZ AA:12:726(ASM) and AZ AA:12:1118(ASM)—were recommended for additional National Register of Historic Places-eligibility testing. Mr. Charest served as Field Director for the testing project. WestLand archaeologists collected artifacts from two 10-by-10-m surface collection units at each site, and two trenches measuring 10 m long were excavated at each site down the centerline of the collection units. No subsurface cultural features were discovered. WestLand recommended the sites as not eligible for inclusion in the NRHP due to a lack of site integrity and significance.

Pinal-Tortolita 500-kV Transmission Line Archaeological Excavations on Private Lands; Pinal County, Arizona; Tucson Electric Power. TEP constructed a new single-circuit 500-kilovolt transmission line that crossed privately owned lands and lands owned and managed by the Arizona State Land Department. TEP avoided and minimized impacts to NRHP-eligible properties during the project's final design phase, but some archaeological sites could not be avoided. Two of these were on private land. Mr. Charest served as Field Director for data recovery at AZ AA:3:316(ASM) and AZ AA:3:317(ASM), which involved systematic surface artifact collections and the excavation of trenches to expose sediment strata and archaeological features in profile. Testing was restricted to those areas that would be adversely affected during the construction of the transmission line. The project revealed that the occupation of the prehistoric sites in the project area was likely inextricably linked to activities at the Brady Wash Complex, a series of habitation sites, agricultural areas, and resource-procurement and processing loci surrounding a platform mound located on the southern bank of Brady Wash between the northern Picacho Mountains and the Picacho Reservoir.

Pinal-Tortolita 500-kV Transmission Line Data Recovery and NRHP-eligibility Testing for Five Sites on Arizona State Land Department Lands; Pinal County, Arizona; Tucson Electric Power. TEP constructed a new single-circuit 500-kV transmission line that crossed lands owned and managed by the Arizona State Land Department. TEP avoided and minimized impacts to NRHP-eligible properties during the project's final design phase, but some archaeological sites could not be avoided. Following the preparation of a treatment plan, four archaeological sites on ASLD land were recommended for data recovery and one for NRHP-eligibility testing. Mr. Charest served as Field Director on the project, which involved systematic surface artifact collections and the excavation of trenches to expose sediment strata and archaeological features in profile. Testing was restricted to those areas that would be adversely affected during the construction of the transmission line. Phase I data recovery did not result in the discovery of any subsurface cultural materials at AZ AA:3:300, AZ AA:3:304, AZ AA:3:305, or AZ AA:3:306 (all ASM), and Phase II data recovery

was therefore not conducted. Following eligibility testing at AZ AA:3:318(ASM), a historical wagon road, it was determined that the site did not represent the historical reuse of an existing prehistoric trail.

Monitoring:

Cultural Resources Discovered during Construction Monitoring in Support of the TEP Pinal-Tortolita 500-kV Transmission Line; Pinal County, Arizona; Tucson Electric Power. TEP constructed a new single-circuit 500-kV transmission line from the Pinal Central substation to the Tortolita substation, a distance of approximately 41 miles. Mr. Charest monitored construction activities in those areas near known archaeological sites to ensure that construction activities did not have an adverse effect on cultural resources. During monitoring, WestLand discovered one previously unknown archaeological site (recommended NRHP-ineligible) and a pit feature approximately 35 m northeast of a previously recorded site. TEP construction activities avoided the site, and WestLand excavated the feature and extended the site boundary to encompass it. No significant impacts to archaeological sites resulted from any of the construction activities.

Other Selected Experience:

Field Director for Quail Creek Data Recovery, Sahuarita, Arizona. Supervised archaeological fieldwork, prepared project reports, planned and executed treatment plan.

Crew Chief, Cultural Resources Inventory of 6,024 Acres for the Proposed Bagdad Waterline; Maricopa and Yavapai Counties, Arizona; Freeport-McMoRan Corporation.

Luke Air Force Base Solar Mitigation Data Recovery (Middle Archaic). Crew Chief. Monitored mechanical stripping, excavated archaeological features, prepared archaeomagnetic samples, and supervised crew.

Coconino National Forest, Happy Jack, Arizona. GIS archaeological database management.

Simplot Phosphates, LLC, Class III Survey, Cedar City, Utah. Conducted archaeological survey, recorded sites, and photographed archaeological features.

Adkins Steel Data Recovery (Historic period/Rincon phase Hohokam). Edited crew paperwork for accuracy, excavated archaeological features, prepared maps and field paperwork, photographed archaeological features.

Luke Air Force Base Solar Mitigation Data Recovery (Middle Archaic). Excavated archaeological features, prepared maps and field paperwork, and photographed archaeological features.

Western Area Power Authority Glen Canyon-Pinnacle Peak Transmission Line Class III Survey. Conducted archaeological survey, recorded sites, operated Trimble GPS receiver, photographed archaeological features, and prepared portions of the final technical report.

Thornton Road-EMP Substation Monitoring. Monitored and protected cultural resources during transmission line construction, operated Trimble GPS receiver, photographed archaeological features, and prepared daily logs.

SunZia Transmission Line Class II Survey. Conducted archaeological survey, recorded sites, operated Trimble GPS receiver, photographed archaeological features, and prepared portions of the final technical report.

Las Capas RWRP Data Recovery (Archaic-Early Agricultural period). Excavated archaeological features, prepared maps and field paperwork, and photographed archaeological features.

Yuma Wash Data Recovery (Pre-Classic period Hohokam). Supervised 7 to 10 field crew, edited crew paperwork, excavated and photographed archaeological features, and prepared maps/field paperwork.

Site Files Search – Navajo Archaeological Site Files, Window Rock, Arizona. Conducted Class I records search and compiled data on previous survey work.

Nogales Airport Class III Survey. Conducted archaeological survey and operated GPS equipment.

Ironwood Forest National Monument Class III Survey. Conducted archaeological survey, recorded sites, operated Trimble GPS receiver, photographed archaeological features, and prepared portions of the final technical report.

Honeybee Village Data Recovery (Pre-Classic/Classic period Hohokam). Supervised 10 to 15 field crew, edited crew paperwork, excavated features, prepared maps and field paperwork, photographed archaeological features, and prepared portions of the final technical report.

Mission San Agustín Data Recovery (Archaic Historic periods). Supervised 5 to 10 field crew, edited crew paperwork, excavated features, prepared maps and field paperwork, photographed archaeological features, and prepared portions of the final technical report.

Depot Plaza Data Recovery (Historic period). Edited crew paperwork for accuracy, excavated features, prepared maps and field paperwork, and photographed archaeological features.

Honeybee Village Data Recovery (Pre-Classic/Classic period Hohokam). Excavated archaeological features and prepared maps and paperwork.

Columbus Park Data Recovery (Archaic period). Excavated features, prepared maps and field paperwork, and photographed archaeological features.

Tanque Verde Wash Data Recovery (Pre-Classic/Classic period Hohokam). Excavated features, prepared maps and field paperwork, and photographed archaeological features.

Presidio San Agustín del Tucson Data Recovery (Archaic-Historic periods). Excavated archaeological features and prepared maps and field paperwork.

Lot 7 Data Recovery (Historic period). Excavated archaeological features and prepared maps and field paperwork.

Kingman, Arizona, Class III Survey. Conducted archaeological survey and operated GPS equipment.

Sahuarita, Arizona, Expansion Class III Survey. Conducted archaeological survey and operated GPS equipment.

Cortaro Road/I-10 Data Recovery. Excavated Archaic features, prepared field paperwork and maps. Recorded archaeological features in trench profiles, prepared scale profile drawings and field paperwork.

Yuma Wash Data Recovery (Pre-Classic period Hohokam). Excavated archaeological features and prepared maps and field paperwork.

Selected Publications:

Purcell, David E., Jeffrey P. Charest, and Avi Buckles

2013 *A Cultural Resources Inventory of the Proposed Bagdad Waterline in Maricopa and Yavapai Counties, Arizona.* Cultural Resources Report 2013-XX. WestLand Resources, Inc., Tucson.

Charest, Jeffrey P.

2013 Archaeological Features Discovered during the Fort Lowell-Adkins Steel Soil Remediation Project. In *Archaeological Investigations at the Fort Lowell-Adkins Steel Property Locus of Fort Lowell, AZ BB:9:40(ASM), Tucson, Pima County, Arizona*, edited by J. Homer Thiel, pp. 17–58. Technical Report No. 2012-12. Desert Archaeology, Inc., Tucson.

Charest, Jeffrey P., and CaraMia Whitney

2011 Descriptions of Structures in the North Loci. In *Archaeological Investigations at Honey Bee Village, a Prehistoric Hohokam Ballcourt Village in the Cañada del Oro Valley of Southern Arizona: Description of Excavated Features*, edited by D. L. Swartz, pp. 217–308. Technical Report No. 2011-08. Desert Archaeology, Inc., Tucson.

Charest, Jeffrey P., and CaraMia Whitney

2011 Descriptions of Structures in the South Loci. In *Archaeological Investigations at Honey Bee Village, a Prehistoric Hohokam Ballcourt Village in the Cañada del Oro Valley of Southern Arizona: Description of Excavated Features*, edited by D. L. Swartz, pp. 99–161. Technical Report No. 2011-08. Desert Archaeology, Inc., Tucson.

Charest, Jeffrey P., and CaraMia Whitney

2011 Descriptions of Structures in the West Loci. In *Archaeological Investigations at Honey Bee Village, a Prehistoric Hohokam Ballcourt Village in the Cañada del Oro Valley of Southern Arizona: Description of Excavated Features*, edited by D. L. Swartz, pp. 163–217. Technical Report No. 2011-08. Desert Archaeology, Inc., Tucson.

Swartz, Deborah L., Jeffrey P. Charest, and CaraMia Whitney

2011 Descriptions of Structures in the East Loci. In *Archaeological Investigations at Honey Bee Village, a Prehistoric Hohokam Ballcourt Village in the Cañada del Oro Valley of Southern Arizona: Description of Excavated Features*, edited by D. L. Swartz, pp. 3–98. Technical Report No. 2011-08. Desert Archaeology, Inc., Tucson.

Charest, Jeffrey P.

2010 Defining Hohokam Supravillage Community Boundaries through an Analysis of Domestic Architecture. Unpublished Master's Thesis. Northern Arizona University, Flagstaff.

Whitney, Gregory J., Jeffrey P. Charest, and Michael W. Lindeman

2008 *A Class III Cultural Resources Inventory of Selected Road Segments within and Immediately Adjacent to the Ironwood Forest National Monument, Arizona*. Project Report No. 07-134. Desert Archaeology, Inc., Tucson.

Project Role and Responsibilities:

Senior Project Manager

Special Expertise:

- Mining
- Water Resources
- Solid and Hazardous Wastes
- Environmental Site Assessments
- Manufacturing
- Oil and Gas
- Power
- Health and Safety

Education:

- M.A., *Environmental Policy and Management, University of Denver, Colorado, 1995*
- B.A., *Philosophy, Humboldt State University, California, 1980*

Affiliations:

- *Environmental Auditing Roundtable*
- *Southern Arizona Environmental Management Society*
- *Society of Mining Engineers, Tucson Chapter*

Background:

Mr. Rife is a Senior Project Manager in the Environmental Services Group. He specializes in regulatory compliance for environmental and engineering projects. Other areas of his expertise include water resources, mining, agriculture, environmental site assessment (ESA), underground storage tank (UST) investigations, solid and hazardous waste, and health and safety audit services. He has over 20 years of experience conducting ESAs and has been responsible for ESA projects for more than 350 broad-ranging sites, including public, private, and industrial properties; solid waste facilities; mines; and he has conducted pilot-scale testing of remedial systems. He has worked on environmental projects in the western United States and Mexico.

Selected Project Experience:

Confidential Site, Arizona. Conducted Phase I ESA of 3,500-acre site along a river bed in central Arizona. The work was conducted on behalf of a mining client in anticipation of a potential land exchange with federal agencies. The site included significant stands of undisturbed mesquite bosque and mesoriparian plants, with little evidence of environmental liabilities from limited agricultural activities historically performed on part of the property. Some wildcat dumping and numerous abandoned automobiles were observed; these were considered housekeeping issues of *de minimis* importance.

Confidential Residential Development Site; Tucson, Arizona. Managed biological assessment of 17-acre site southeast of the Tucson metropolitan

area. Previous consultants had not advised the developer of permitting and biological assessment regulatory requirements, resulting in violations of the federal Clean Water Act (CWA) and Endangered Species Act, as well as the Pima County Native Plant Preservation Ordinance. WestLand is currently completing the biological assessment and will assist the client in negotiating with regulatory agencies, especially in ESA Section 7 consultation.

Road Improvement and Park Development Site; Marana, Arizona. Task manager for CWA Section 404 permitting of road widening, drainage improvement, riverbank stabilization, and district park development for a community northwest of Tucson. Conducted a CWA Nationwide Permit applicability assessment and is currently performing an alternatives analysis. Future work will include public notification and preparation of the environmental assessment.

Prospective Municipal Solid Waste Landfill Site; Arizona. Project Manager for site investigation of a location in central Arizona for potential development as a municipal solid waste facility. The project included an engineering suitability evaluation, jurisdictional delineation of waters of the United States, and a biological evaluation of special-status species.

Silverbell UST/Leaking UST Site; Marana, Arizona. Managed closure project at site with 11 USTs. Three leaking USTs were identified during the tank removal activities. Appropriate reports were submitted to ADEQ and scoping of site characterization activities for the leaking UST sites was performed.

Confidential Hazardous Waste Site; United States. Principal internal reviewer of Phase I ESA reports for 60 hazardous waste collection sites, transfer facilities, incinerators, and landfills on behalf of client bidding to purchase portfolio. Included fast-track mobilization of field investigators from offices across the country; coordination of document review, reporting, and responding to client inquiries; and strict confidentiality protocols.

Project Role and Responsibilities:
Environmental Specialist

Training and Special Expertise:

- *Environmental Planning and Assessment*
- *Mine Safety and Health Administration Certifications*
- *Regulatory and Planning Research*

Education:

- *B.A., Environmental Studies and Business Economics, University of California, Santa Barbara*
- *Master of Environmental Science and Management (MESM), University of California, Santa Barbara*

Background:

Ms. Richman holds a Master of Environmental Science and Management specializing in pollution prevention and remediation and corporate management from the University of California, Santa Barbara. Ms. Richman's environmental consulting expertise includes permitting, technical studies, and environmental analyses for both private and public land development projects. During her tenure at WestLand Resources, Inc., (WestLand), Ms. Richman has worked on permitting for exploration drilling projects, biological resource reports, and Phase I Environmental Site Assessments (ESAs). She is proficient in project and task management and effectively communicates science and policy to a broad range of audiences.

She has assisted in the completion of several Phase I ESAs for various property types pursuant to E1527-13 and E2247-08. She has also assisted in the completion of Preliminary Initial Site Assessments (PISAs) for roadway projects. WestLand's ESA team routinely receives compliments from clients and regulators regarding our professionalism and the consistent quality of our work produce. Upon request, ESAs address non-scope items classified as outside the standard practice, including potential asbestos-containing building materials, potential lead-based paint, health and safety concerns, and ecological resources.

Ms. Richman has experience with both National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) processes and documentation. She has completed multiple Health Risk Assessments (HRAs) to analyze impacts of mobile and stationary sources of pollution on sensitive human populations. She has also completed technical studies, scoping and public participation, and noticing for multiple projects.

Past Experience:

- Coordination and support provided for confidential mine client including permitting support, biological resource documentation, and field coordination.
 - Worked on the team completing the air quality and greenhouse gas emissions analysis for one segment of the California High Speed Rail CEQA/NEPA documentation.
 - Provided project management and support services for noise, aesthetics, and air quality studies, as well as the Initial Study for commercial and residential development at a proposed Specific Plan site in Southern California.
 - Completed multiple EAs for the City of Mesa's projects developing parks and low-income housing.
 - Coordinated noticing, including newspaper publication, for multiple projects throughout California.
 - Participated in numerous courses focused on remediation of pollution in the environment while earning Master's degree.
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