

**Painted Desert Demonstration Projects, Inc.  
(d.b.a. The STAR School)**

**Project Site Environmental Report  
In accordance with 7 CFR 1970.54.**

**December 2021**

Prepared by:  
Apex Applied Technology, Inc.

# ENVIRONMENTAL REPORT

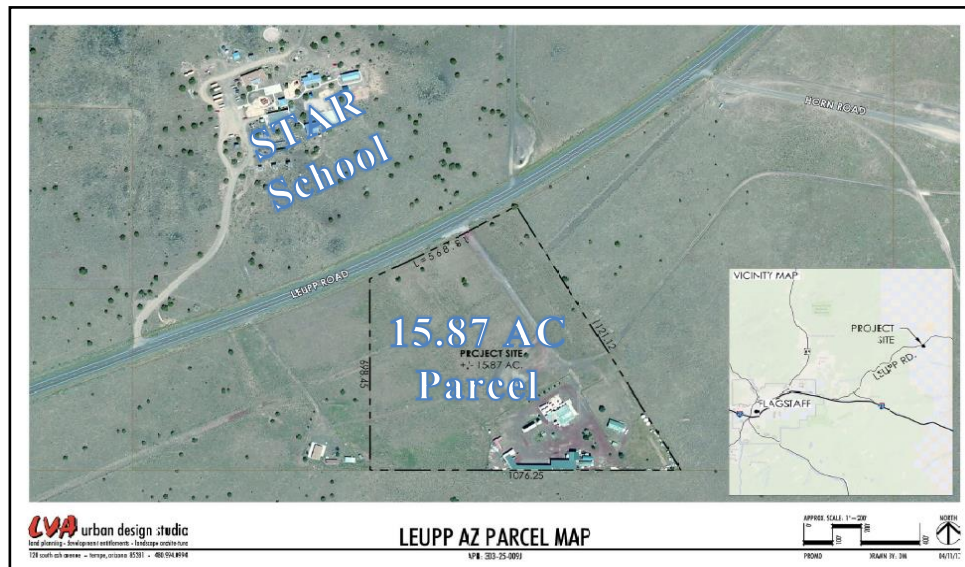
Painted Desert Demonstration Projects, Inc  
Water System Improvements  
145 Leupp Road, Flagstaff, Arizona

## A. Project Description and Location

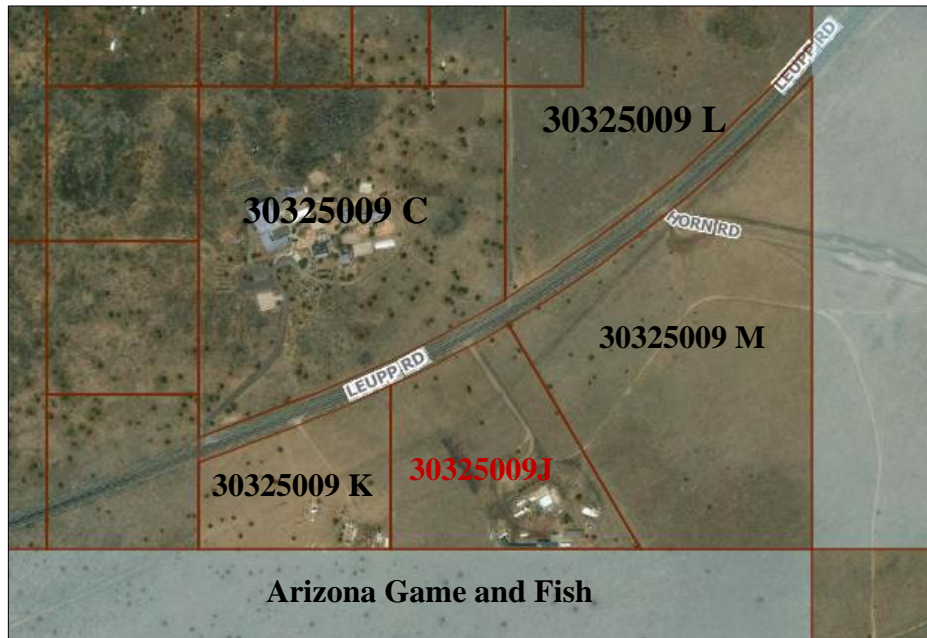
The proposed project is to be developed in Coconino County, in Northern Arizona. It is located approximately 25 miles east of Flagstaff, next to the southwest border of Navajo Nation, at the campus of Painted Desert Demonstration Projects Inc. (PDDP), also known as the STAR School. The project site (A.P N. 303-25-009J) is located about 1,000 feet west of Horn Road in Southeast ¼ Section 11, T22N, R10E, Gila and Salt River Meridian, Coconino County, Arizona. An overhead map of the site can be found in **Figure 1**. The USGS 7.5-minute topographic quadrangle map is included in **Figure 7** and **Appendix A**.

## B. Land Ownership and Land Use

The project is on the property owned by Painted Desert Demonstration Projects, Inc. (d.b.a. the STAR School). All the proposed work are onsite. It does not require easements, nor public rights of way. **Figure 2** shows the surrounding parcels and **Table 1** lists all the basic information of the nearby parcels. The subject parcel is 15.87 acres.



**Figure 1:** Overhead Parcel Map of Project Area



**Figure 2:** Surrounding Parcels

**Table 1:** List of the Surrounding Properties

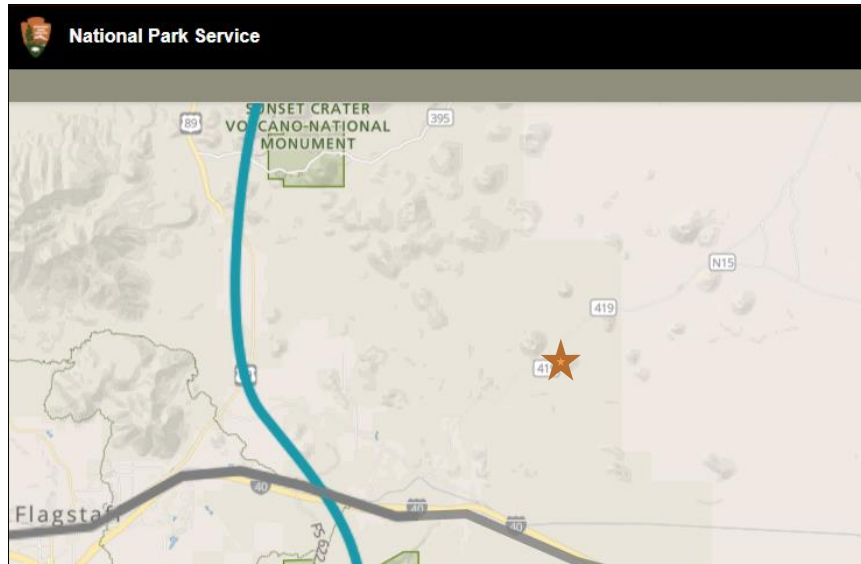
Nearby Parcels	Parcel Number	Owner
West	30325009K	Turrell Art Foundation
North	30325009C	PDDP
Northeast	30325009L	Turrell Art Foundation
East	30325009M	Marcroft Family Trust
South	-	Arizona Game and Fish

The Painted Desert Demonstration Projects, Inc. is the sole owner of the property. The existing zoning on the site is General (G) in Coconino County, a general rural land-use category intended for application to those unincorporated areas of the County not specifically designated in any other zone classification. Only those uses which are complementary and compatible with a rural environment are permitted.

The proposed land use is a small-scale agricultural enterprise. In 2019, Painted Desert Demonstration Projects, Inc has obtained a conditional use permit from Coconino County to add “Agritourism” as a conditionally permitted use within the General zoning category. According to Section 6.2: Definitions of the Coconino County Zoning Ordinance: “Agritourism” shall mean a commercial enterprise at a working farm, ranch or agricultural plant conducted for the enjoyment or education of visitors. The tourism enterprises are supplemental to the agricultural use. Agritourism can include, but is not limited to, shops, farm stays, tours, on-farm classes, seasonal festivals, pumpkin patches, Christmas tree farms, wineries, orchard dinners, barn dances, and guest ranches including signature crops such as microgreens, Navajo Tea, or test crops, food packaging and distribution. The conditional use permit does not change the zoning of the site but to include additional permitted uses of the property to allow the proposed development.

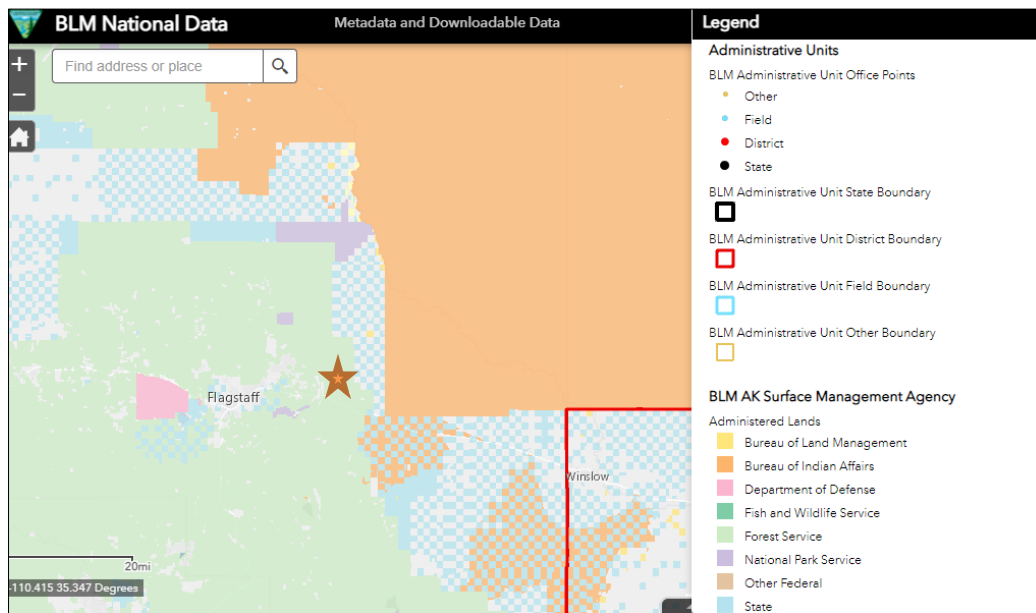
The property is not within or adjacent to any lands administered by the National Park Service. This was determined by checking the National Park Service index of parks within Arizona, which can

be seen in **Figure 3**. No mitigation measures are required.



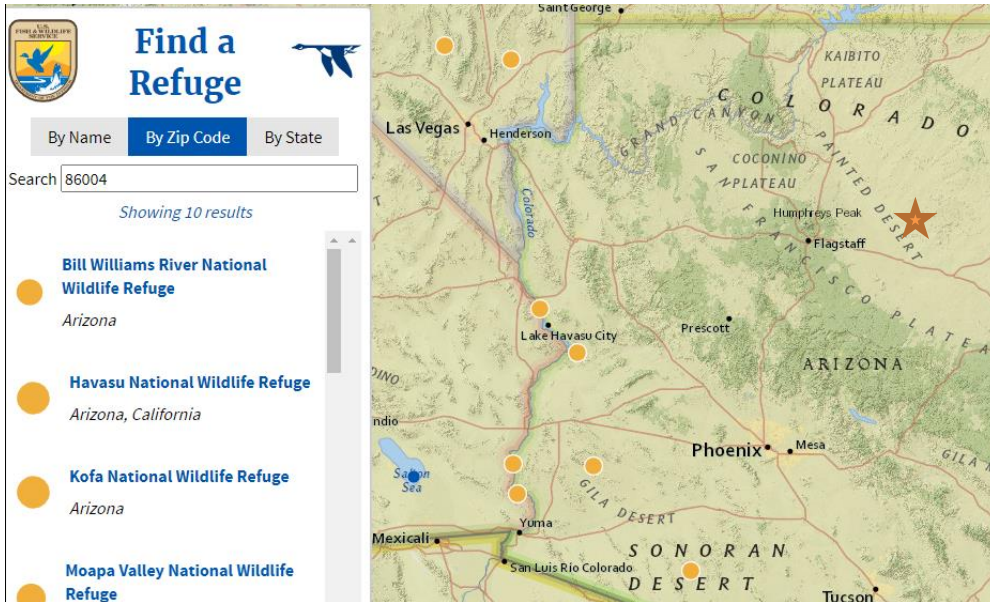
**Figure 3:** National Park Service Areas - Project Area Marked with Star

The property is not within or adjacent to any lands administered by the Bureau of Land Management. This was determined using the BLM GIS data on their website and can be seen in **Figure 4**. No mitigation measures are required.



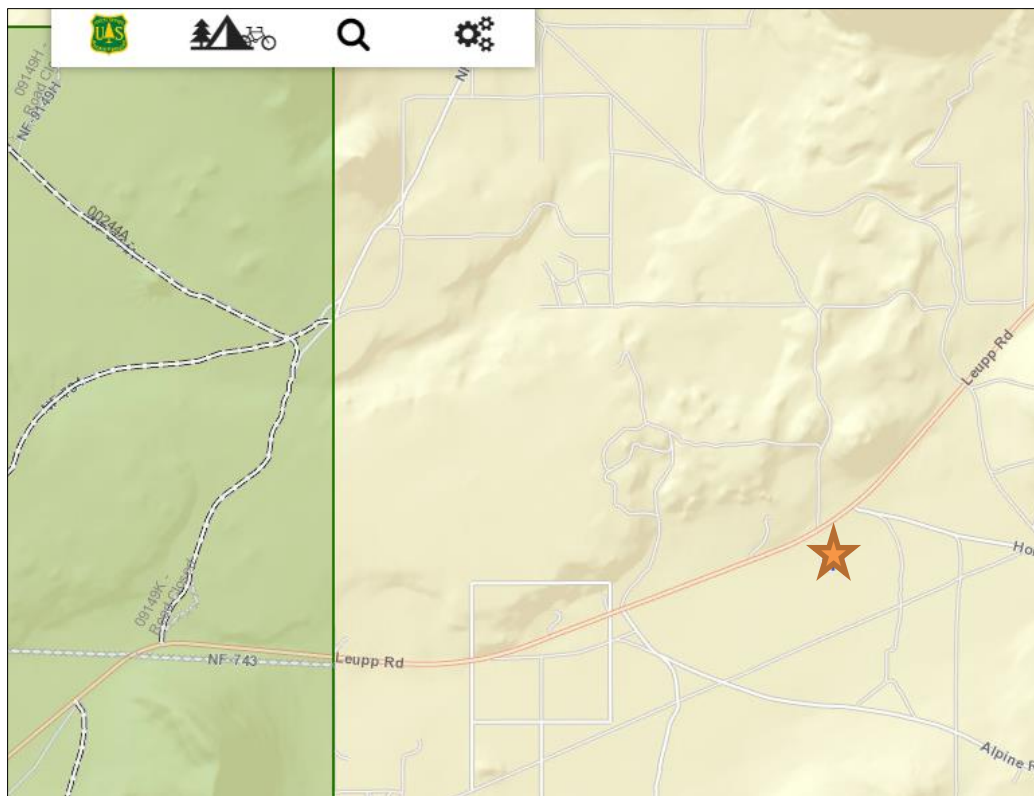
**Figure 4:** BLM GIS Map – Project Area Marked with Star

The property is not near any US Forest Service Refuge. This was determined by searching the proposed project zip code on the US Forest Service website and can be seen in **Figure 5**. No mitigation measures are required.



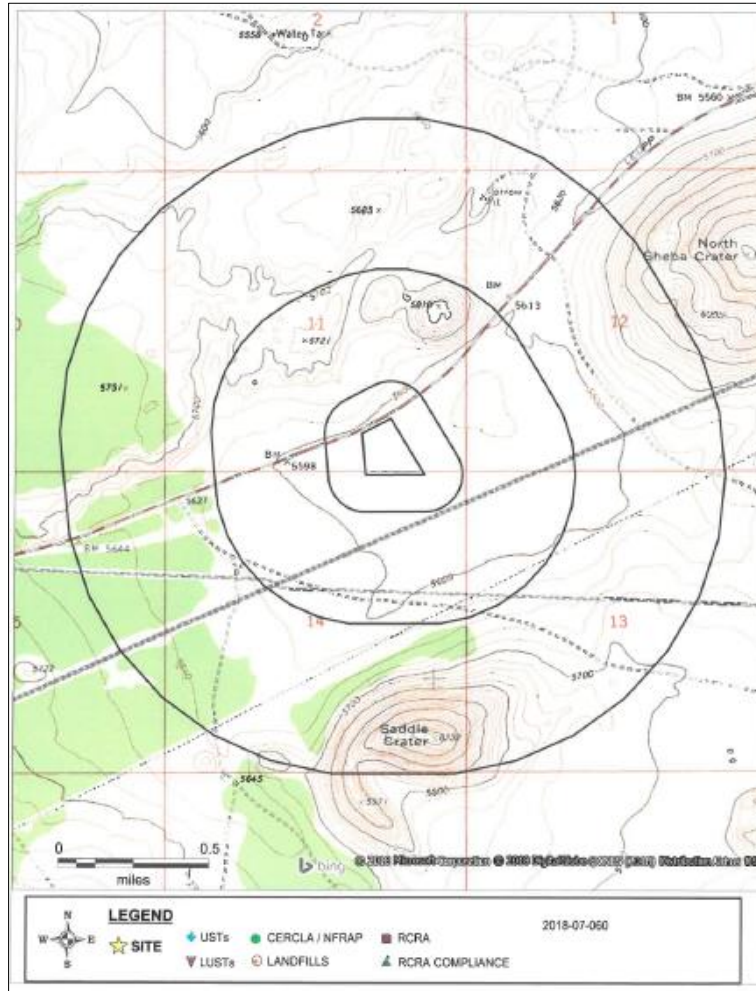
**Figure 5:** US Forest Service Refuges in Arizona - Project Area Marked with Star

The property is not within or adjacent to lands administered by the US Fish and Wildlife Service. This was determined by checking the maps provided on the US Fish and Wildlife Service website and can be seen in **Figure 6**. No mitigation measures are required.



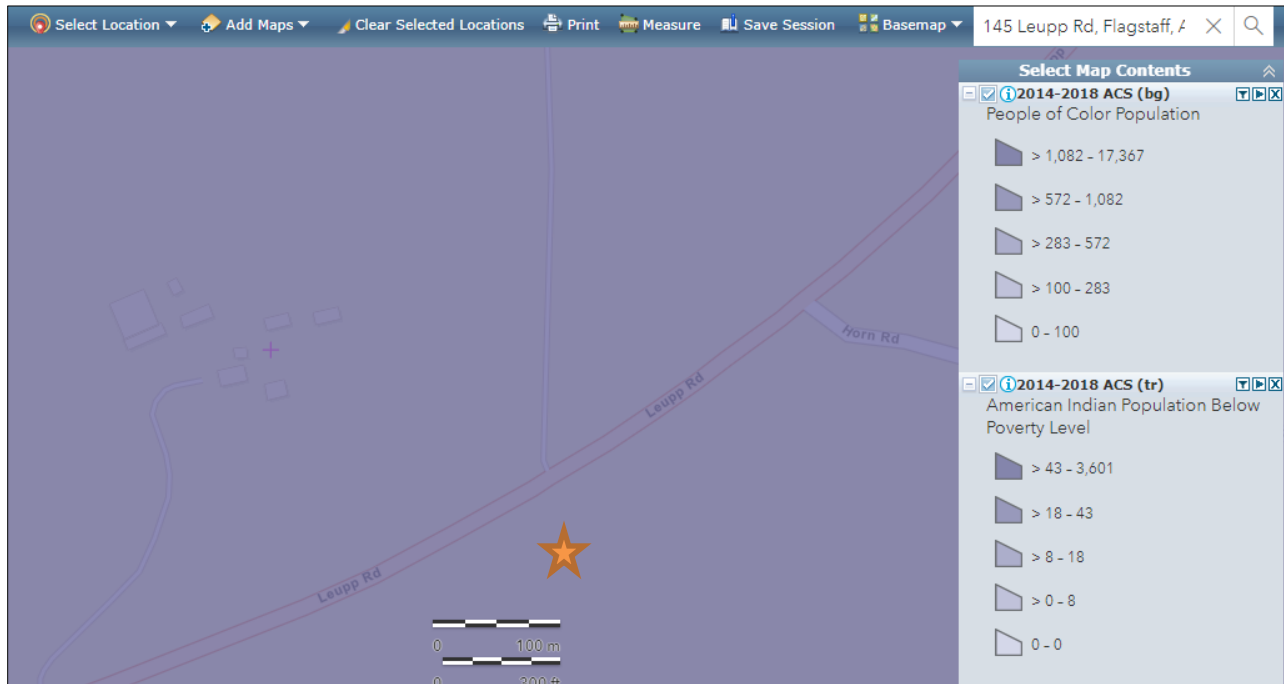
**Figure 6:** US Fish and Wildlife Map - Project Area Marked with Star

A USGS topographical map with the project site overlaid can be found in **Figure 7**.



**Figure 7:** USGS Topographical with Project Site Overlaid

The majority of the population served will be in a Low Income/Low Access census tract as defined by the USDA Food Access Research Atlas. The population is primarily Native American/American Indian. This was found using the EPA’s EJScreen website and can be seen in **Figure 8**. PDDP was founded in 1992 as a 501 c 3 non-profit organization. With almost 30 years’ experience working with tribal members of Navajo Nation and Hopi Tribe, PDDP/STAR School has developed trusting relationships with many tribal communities. Since 2015, Apex Applied Technology, Inc. (AATech) has been working with PPDP/STAR School on developing a decentralized drinking water solution for the underserved communities in Navajo and Hopi through a “Water Technical Assistance and Training Program”, sponsored by USDA Rural Development. AATech and PDDP/STAR School team has organized numerous open houses, workshops, and training sessions. The project team will continue to give public notice and hold public meetings to inform the residents about the project in accordance with the requirements of RD Instruction 1780.



**Figure 8:** EPA’s EJscreen Website - Project Area Marked by Star

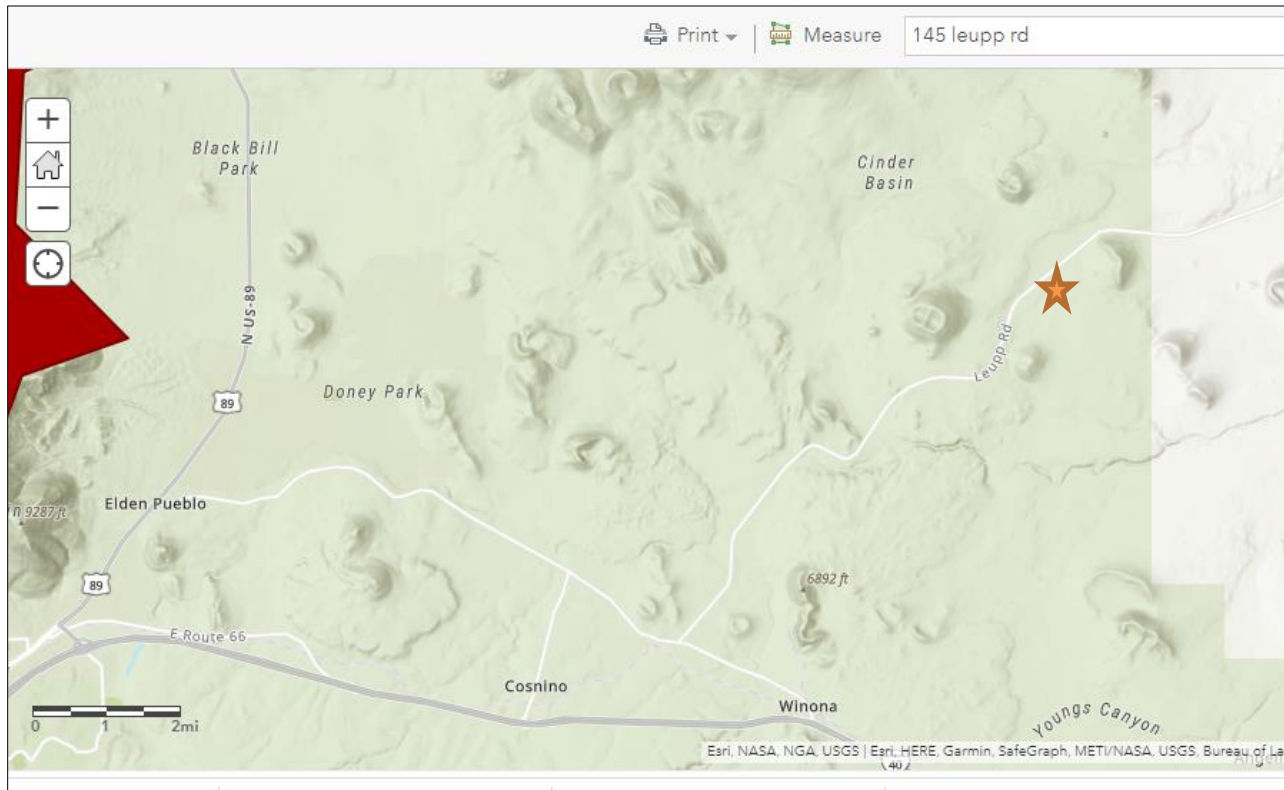
The local government is Coconino County. As mentioned earlier, Painted Desert Demonstration Projects, Inc. has obtained a conditional Use Permit from the County for the proposed development. In addition, the development plans have been submitted to Coconino County for review and approval. The correspondence is included in **Appendix B**.

### **C. Historic Preservation**

The Painted Desert Demonstration Projects, Inc., have consulted with the State Historic Preservation Office. SHPO’s survey questionnaire has been completed in January, 2016. No further archaeological work is recommended for the project. The survey report is included in **Appendix C**.

### **D. Threatened and Endangered Species/Biological Resources**

There are seven endangered species in the area, however there are no critical habitats at the location. This was found using the Fish and Wildlife Service’s website and the map can be found in **Figure 9**. The IPAC Resource List for the project area is included in **Appendix D**.

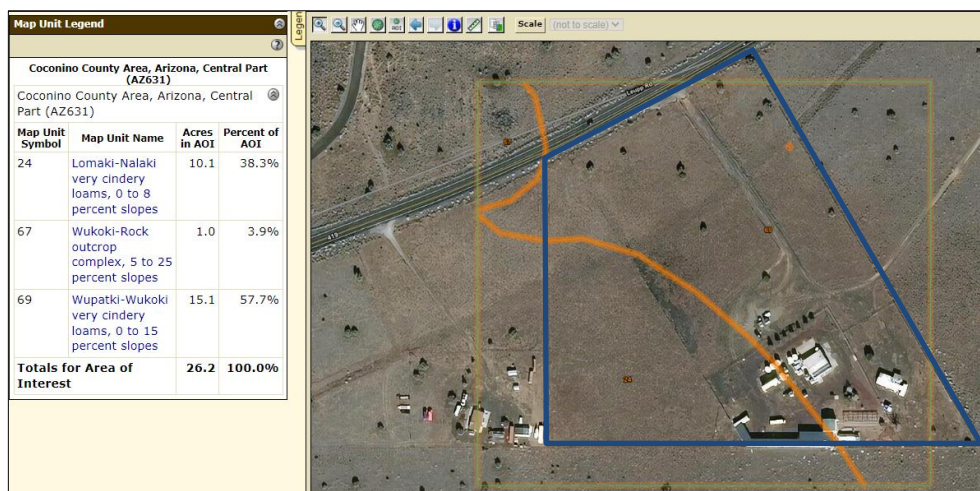


**Figure 9:** Fish and Wildlife Service Map - Project Area Marked by Star

There are no concerns on the conservation of migratory birds in the project location. This can be referenced in the IPAC Resource list in **Appendix D**. No mitigation measures are required.

### E. Wetlands

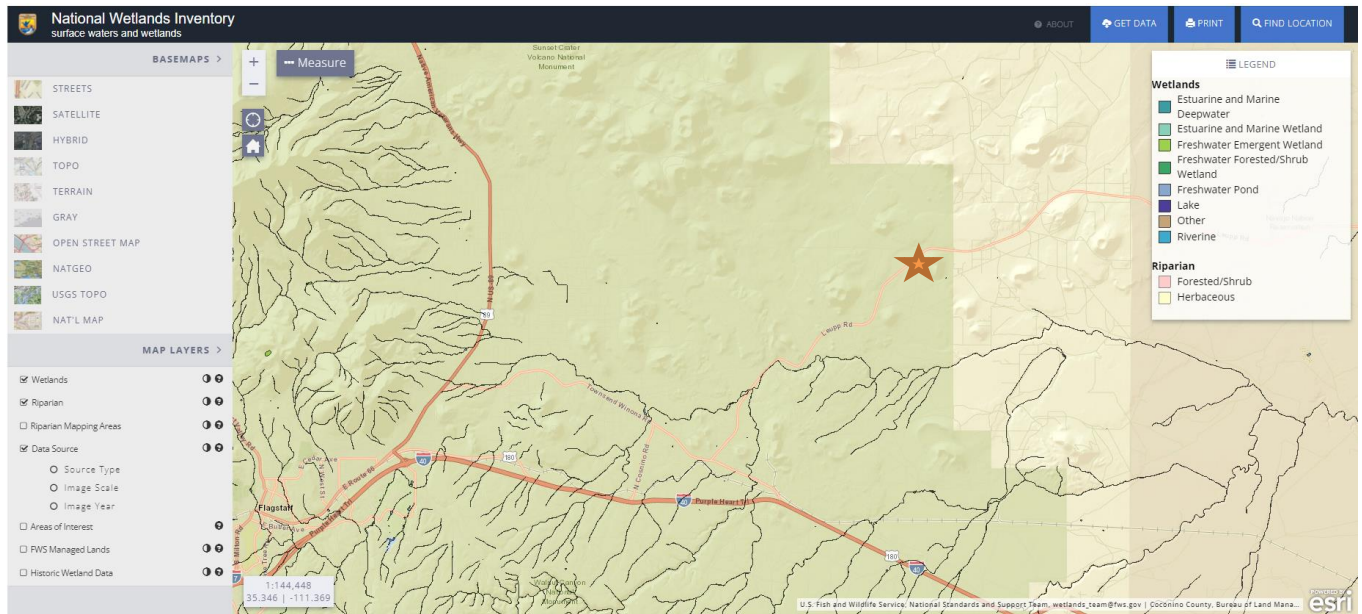
There are no wetlands in the project area. The soils in the project area are summarized in the NRCS soil survey map in **Figure 10**.



**Figure 10:** NRCS Soil Survey Map of Project Area (outlined in blue)



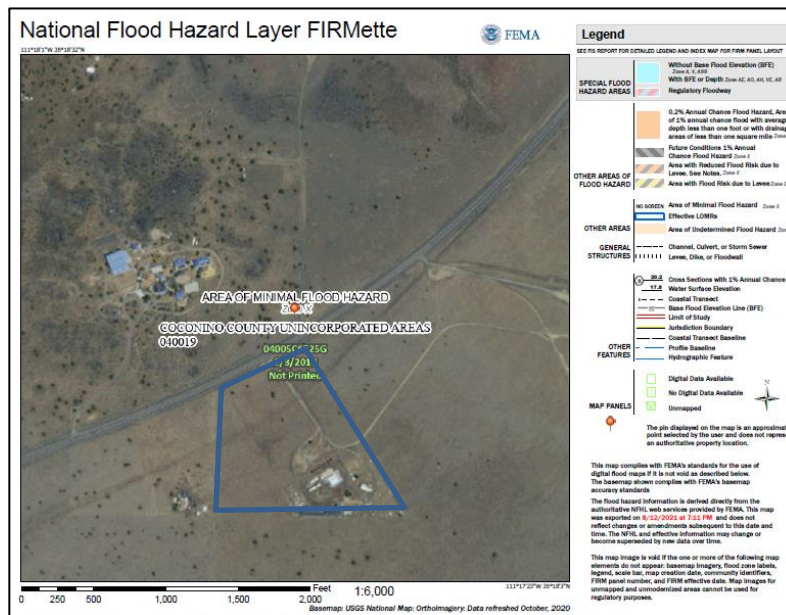
Fish and Wildlife Service does not indicate the presence of wetlands in the area of the proposed project. This was determined using the FWS National Wetland maps, which can be seen in **Figure 11**. No mitigation measures are required.



**Figure 11: FWS National Wetland Map - Project Area Marked with Star**

## F. Floodplains

The project site is out of 100 yr. and 500 yr. flood plain. The FEMA flood hazard map can be found in **Figure 12**. The project site is in Zone X – with minimum flood hazard. The completed Standard Flood Hazard Determination Form is attached in **Appendix E**.



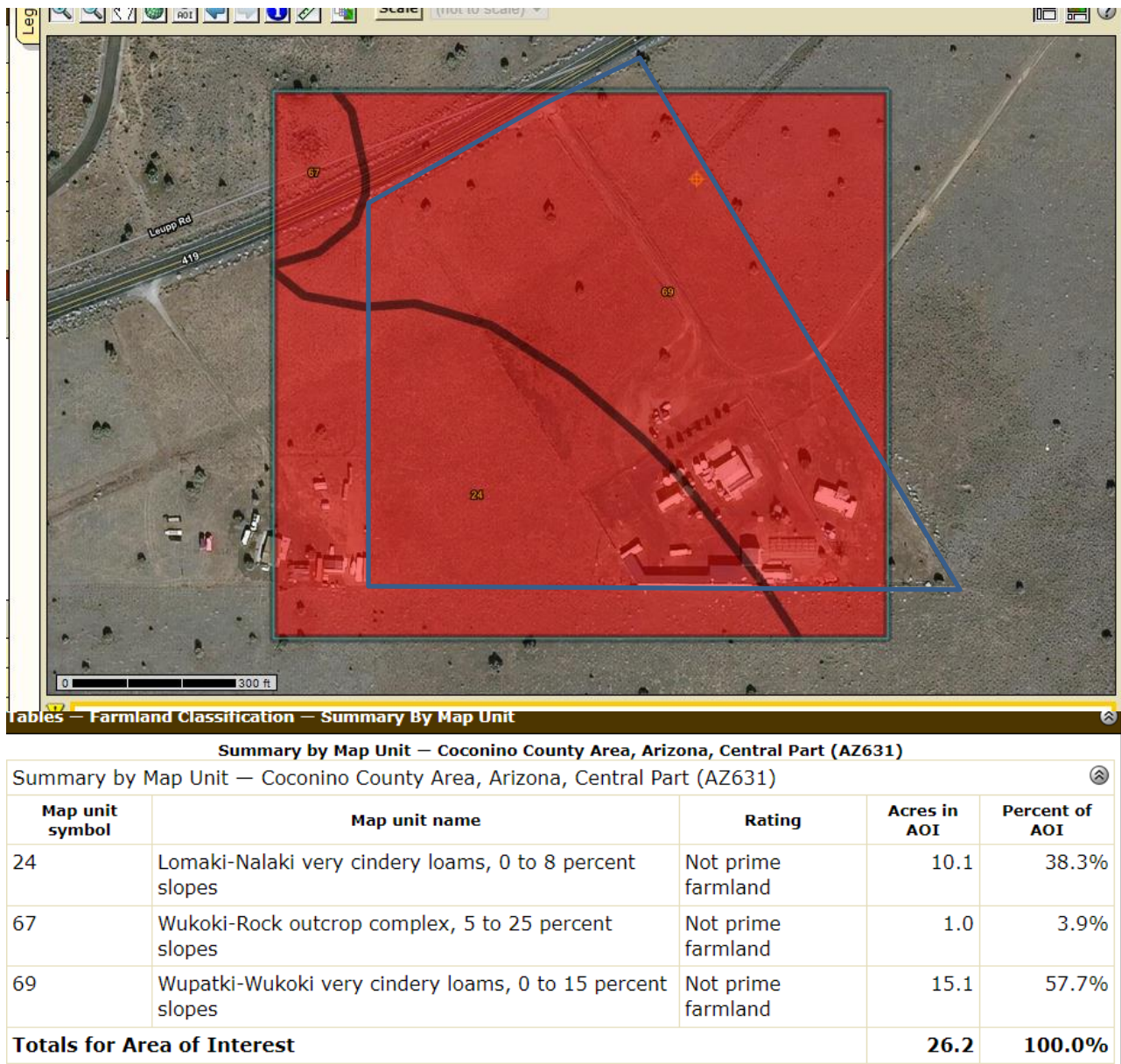
**Figure 12: FEMA Flood Hazard Map - Project Area Outlined in Blue**

## G. Coastal Areas

Not Applicable for AZ or NM

## H. Important Farmland

The proposed project will not convert agriculture lands to non-agricultural uses. This was determined using the NRCS website and the map of the project area can be found in **Figure 13**.



**Figure 13:** NRCS map with project area outlined in blue

## I. Environmental Risk Management

The proposed project will not release, generate, or require hazardous material as part of the operation of the proposed facility. No mitigation measures are required.

There were unknown materials in metal drums left from previous owners. Samples taken at the PDDP/STAR School site were tested for an array of possible contaminants; organic, inorganic, and microbial. No contaminants listed in the US EPA National Primary Drinking Water Standards and the Secondary Drinking Water Standards were found. Therefore, in March 2019, the groundwater well was deemed to be adequate for potable use. A permit was issued by the ADEQ certifying that the community well a safe drinking water source.

Phase I Environmental Site Assessment (ESA) was conducted by Terrane Engineering Corporation (TEC). The ESA report is included in **Appendix F**. The Phase I ESA described the property as mostly undeveloped except for the southeast part of the site where there are two commercial buildings, and a ranch house. There is also a pump house for a water supply well. The Phase I ESA found evidence that the property was the location of an operation to process volcanic ash (cinders) and extract precious metals (gold, silver, platinum). This operation was run by Agra Technologies (Agra) which owned the land from February 2004 to March 2006. A September 2005 newspaper report described the operation and concluded that it was a scam to defraud investors. The newspaper report also mentioned a hydrochloric acid spill that occurred on the property, which was reported to ADEQ as 20 to 30 gallons, although other reports indicated it may have been much larger. The date of the spill was not mentioned, nor is it clear when the Agra cinder-processing operations began (possibly pre-dating their acquisition of the property). At the time of the newspaper report, Agra was also in the business of making soil additives from ground-up cinders. Recognized Environmental Conditions (RECs) were summarized by TEC as follows:

- Fines spread on surface northwest of the west end of the south building,
- Debris west and north of the west end of the south building,
- Drums, bulk bags and debris along the south boundary east of the south building, and,
- Two tanks, reportedly containing acid of some type in the north building.

TEC recommended that further assessments be performed by a qualified environmental professional with experience assessing sites affected by ore-processing activities. Bender Environmental Consulting, Inc. (BEC) was hired to conduct the recommended further assessments.

On February 8, 2019, BEC conducted a tour of the Painted Desert Demonstration Project Site which was formerly operated by Agra Technologies. Areas of concern identified by a previous Phase I ESA report (TEC, October 9, 2018) were examined, and composite samples were collected of some of the materials for purposes of determining disposal methods.

The three super sacks of gray powder contained arsenic exceeding ADEQ's Residential and Non-Residential Soil Remediation Levels (SRLs). Leachability tests show that the metals (including arsenic) are not leachable, and the material would not be considered RCRA hazardous waste. However, the material remaining in the supersacks and on the ground should be cleaned up, and removed as non-hazardous waste. Confirmation sampling of underlying soil should be collected with analysis for arsenic.

The pinkish materials in the drums and on the ground do not show any exceedances of SRLs for the 8 RCRA metals, and do not contain hexavalent chromium. The materials may be disposed as non-hazardous waste.

The black grit on the ground northwest of the south building do not show any exceedances of SRLs

for the 8 RCRA metals, and do not contain hexavalent chromium. The materials may be disposed as non-hazardous waste.

The four drums along the south fence line (gray powder, crushed mica, black grit, and greenish crystalline material) require further testing to determine disposal methods. Some of these materials (especially the greenish crystalline material) may require disposal as RCRA hazardous waste.

Finally, there was an accumulation of 10 drums around the east and south sides of the block construction building along the south fence line. Three of the drums contained what appeared to be small quantities of used oil, while the other drums are empty. There are also three drums on dispenser stands (two marked for antifreeze, one marked for lubricating oil). There was only de minimis oily staining on the ground around any of the drums, and BEC believes that there was no need for sampling of soil in these areas. The small amount of used oil and the drums should be removed for off-site disposal/recycling.

The drum of assay waste requires further testing and will almost certainly require disposal as RCRA hazardous waste. The drum of ceramic pellets may be disposed as solid waste.

The air scrubber equipment and associated containers of possible acids need further evaluation by licensed environmental contractor to determine disposal methods and costs.

BEC recommended that a licensed environmental contractor be provided with the report and also conduct a site visit to obtain specific information needed for further testing of various materials, and for decommissioning the air scrubber equipment. BEC's testing did appear to show no need for soils investigation on the property with possible exception of the superstack area, where testing of soils after the lean up should be considered (limited to arsenic analysis).

Since then, the drum, the air scrubber, and the containers have been removed and disposed by licensed environmental contractor.

## J. Other Resources

The proposed project is not within a sole source aquifer or wellhead protection area. This was found using the EPA's website for Sole Source Aquifers, and the map can be found in **Figure 14**.



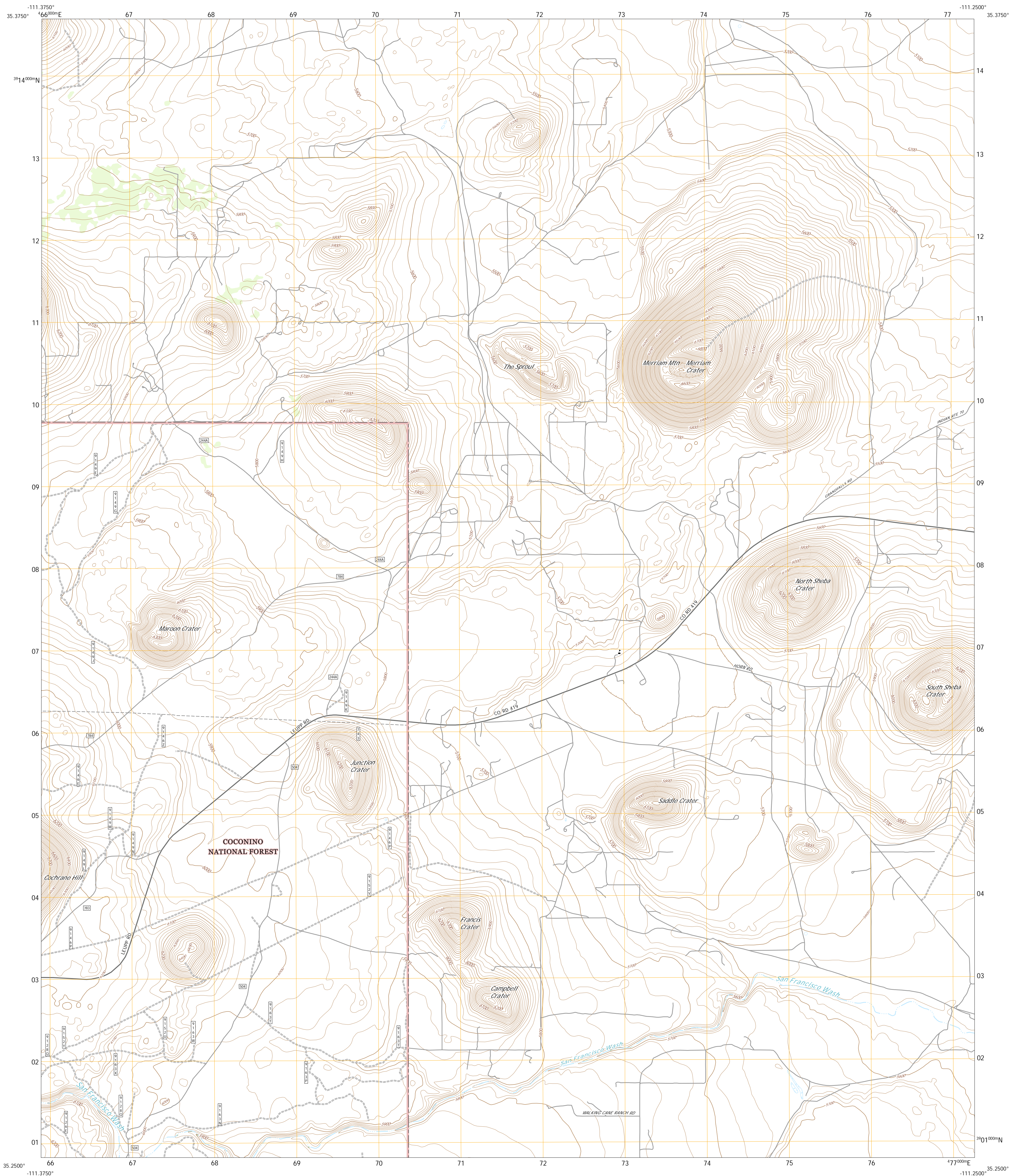
**Figure 14:** EPA Map for Sole Source Aquifers with Project area outlined in orange

## K. Conclusion

The project area is not located in an area that requires additional mitigation measures or work with other Federal agencies.

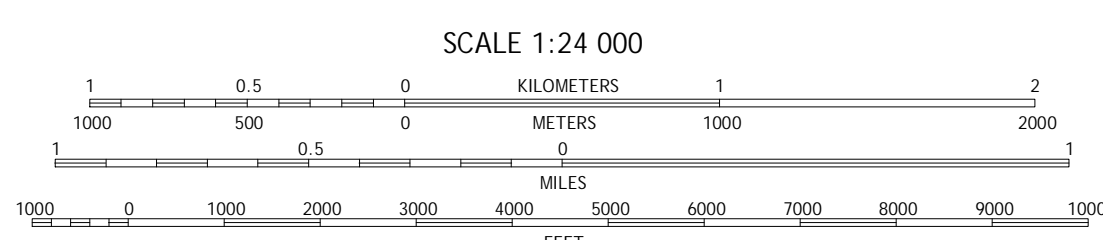
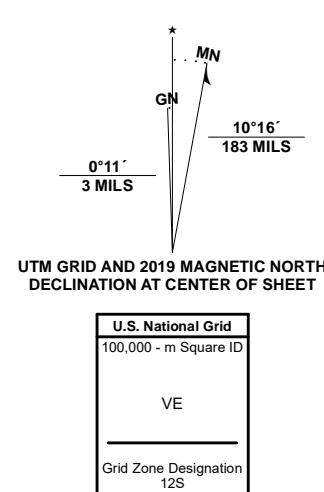
## **Appendix A**

### USGS 7.5 Minute Topographical Map



Produced by the United States Geological Survey  
North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84) Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 12S  
This map is not a legal document. Boundaries within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, July 2019 - July 2019  
Roads.....U.S. Census Bureau, 2016 - 2018  
Roads within US Forest Service Lands.....FS Topo Data  
with limited Forest Service updates, 2018  
Names.....GNIS, 1980 - 2018  
Hydrography.....National Hydrography Dataset, 2004 - 2019  
Contours.....National Elevation Dataset, 1999  
Boundaries.....Multiple sources: see metadata file 2017 - 2021  
Public Land Survey System.....BLM, 2017  
Wetlands.....FWS National Wetlands Inventory, 1980



CONTOUR INTERVAL 20 FEET  
NORTH AMERICAN VERTICAL DATUM OF 1988  
This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



1	2	3
4	5	6
7	8	

ADJOINING QUADRANGLES

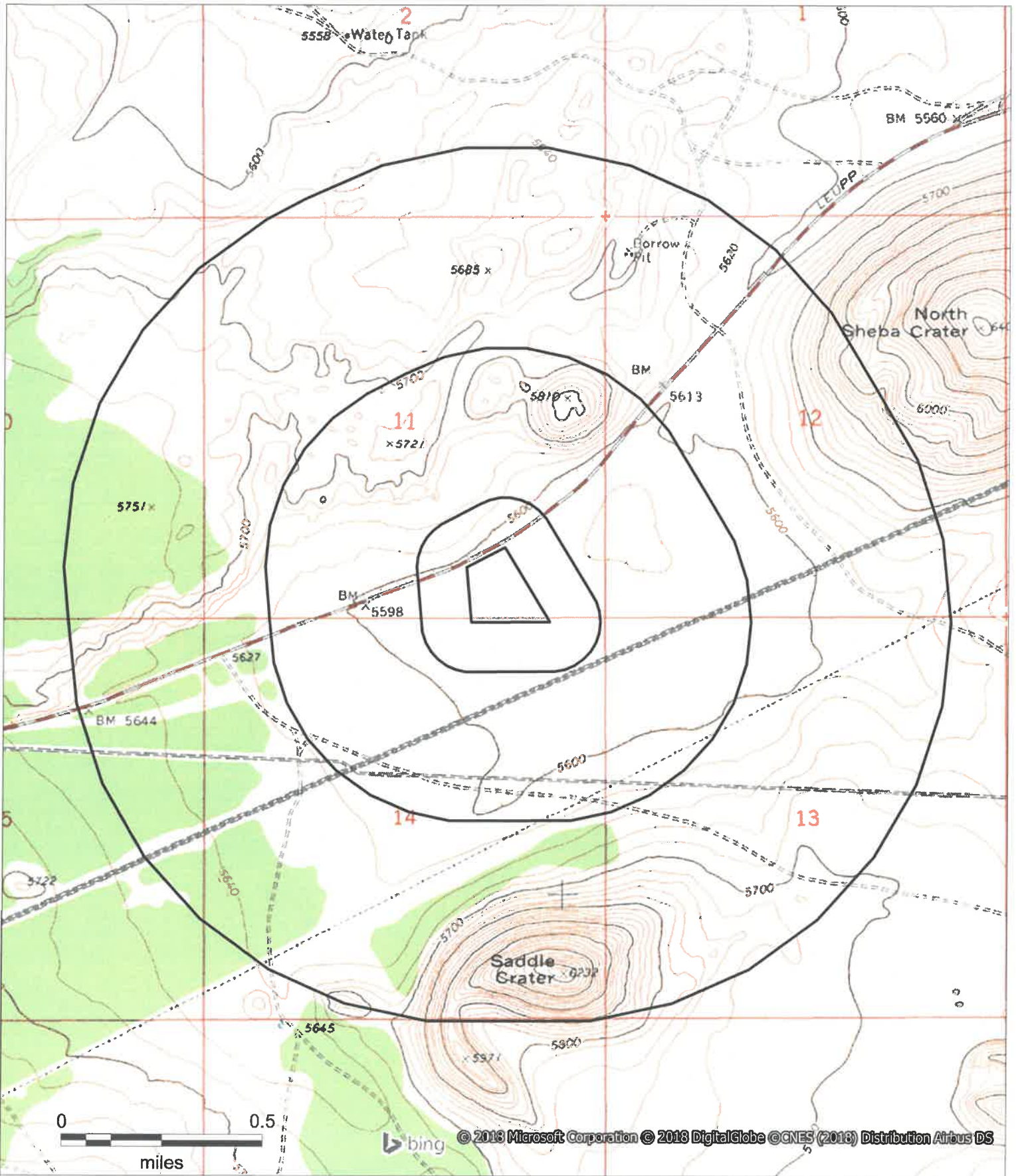
- 1 Strawberry Crater
- 2 Roden Crater
- 3 Grand Falls
- 4 Samsen Crater East
- 5 Grand Falls SW
- 6 Winona
- 7 Angell
- 8 Babbitt Wash

- ROAD CLASSIFICATION**
- Expressway
  - Secondary Hwy
  - Ramp
  - Interstate Route
  - FS Primary Route
  - Local Connector
  - Local Road
  - 4WD
  - US Route
  - FS Passenger Route
  - FS High Clearance Route
  - Slate Route

Check with local Forest Service unit  
for current travel conditions and restrictions.

MERRIAM CRATER, AZ  
2021





	<b>LEGEND</b>			2018-07-060
	<b>SITE</b>	USTs	CERCLA / NFRAP	
	LUSTs	LANDFILLS	RCRA COMPLIANCE	



## **Appendix B**

### Correspondence with State and Local Agencies

## Connor Wohlenhaus

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**From:** noreply@smartgovcommunity.com  
**Sent:** Tuesday, November 9, 2021 1:50 PM  
**To:** Andie Hemmah  
**Subject:** COCONINO COUNTY Permit [BD-21-1800] status has changed to [All requested submittals have been received, Project is in the review process]



COCONINO COUNTY Permit **BD-21-1800** status has changed to **All requested submittals have been received, Project is in the review process**

Permit #:	BD-21-1800	Type:	BD - COM - BUILDING
Site Address:	145 LEUPP RD FLAGSTAFF, AZ 86004	Contact:	Hemmah, Andie 2932 W Corte Olivia Tucson, AZ 85741  ahemmah@atwell-group.com 5207803049

[View](#)

This email was sent from a notification-only address that cannot accept incoming email. Please do not reply to this message.

Links contained in this email have been replaced. If you click on a link in the email above, the link will be analyzed for known threats. If a known threat is found, you will not be able to proceed to the destination. If suspicious content is detected, you will see a warning.

**External Email: Do not click any links or open any attachments unless you trust the sender and know the content is safe.**

## Connor Wohlenhaus

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**From:** Schwartz, Zachary <zschwartz@coconino.az.gov>  
**Sent:** Wednesday, June 23, 2021 2:54 PM  
**To:** Andie Hemmah; Short, Bob  
**Cc:** Francis Hemmah  
**Subject:** RE: [Permit #PZ-CUP-19-007]

This appears substantially compliant with the CUP approval, I think you can submit for the actual building permit now.



Zach Schwartz  
Senior Planner  
Community Development  
Phone: 928-679-8866  
[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)  
[www.coconino.az.gov](http://www.coconino.az.gov)

---

**From:** Andie Hemmah <ahemmah@atwell-group.com>  
**Sent:** Wednesday, June 23, 2021 2:51 PM  
**To:** Schwartz, Zachary <zschwartz@coconino.az.gov>; Short, Bob <bshort@coconino.az.gov>  
**Cc:** Francis Hemmah <fhemmah@atwell-group.com>  
**Subject:** RE: [Permit #PZ-CUP-19-007]

Zach,

Thank you for the information. Please see the attached preliminary design that include site improvements including a new building addition to an existing building, parking area improvements, sidewalk, fence improvements and installing a solar field farm.

Please let me know if you have any information after reviewing this conceptual design.

### Andie Hemmah

Project Administrator  
**ATWELL, LLC**  
866.850.4200 Tel  
250 N. Meyer Ave | Tucson, AZ 85701  
[www.atwell-group.com](http://www.atwell-group.com)

---

**From:** Schwartz, Zachary <[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)>  
**Sent:** Wednesday, June 23, 2021 2:48 PM  
**To:** Andie Hemmah <[ahemmah@atwell-group.com](mailto:ahemmah@atwell-group.com)>; Short, Bob <[bshort@coconino.az.gov](mailto:bshort@coconino.az.gov)>  
**Cc:** Francis Hemmah <[fhemmah@atwell-group.com](mailto:fhemmah@atwell-group.com)>  
**Subject:** RE: [Permit #PZ-CUP-19-007]

Hi Andie,

I've attached the approval information. Are you able to email me what you're proposing? I do apologize, I actually will not be in the office tomorrow or Friday but can revisit Monday or Tuesday next week.

Thanks,



Zach Schwartz  
Senior Planner  
Community Development  
Phone: 928-679-8866  
[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)  
[www.coconino.az.gov](http://www.coconino.az.gov)

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**From:** Andie Hemmah <[ahemmah@atwell-group.com](mailto:ahemmah@atwell-group.com)>  
**Sent:** Wednesday, June 23, 2021 2:34 PM  
**To:** Schwartz, Zachary <[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)>; Short, Bob <[bshort@coconino.az.gov](mailto:bshort@coconino.az.gov)>  
**Cc:** Francis Hemmah <[fhemmah@atwell-group.com](mailto:fhemmah@atwell-group.com)>  
**Subject:** RE: [Permit #PZ-CUP-19-007]

Hey Zach,

Any luck with the paper documents.

Also do you have time to have a phone meeting sometime tomorrow with both me and the engineer?

**Andie Hemmah**

Project Administrator

**ATWELL, LLC**

866.850.4200 Tel

250 N. Meyer Ave | Tucson, AZ 85701

[www.atwell-group.com](http://www.atwell-group.com)

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**From:** Schwartz, Zachary <[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)>  
**Sent:** Friday, June 11, 2021 11:12 AM  
**To:** Andie Hemmah <[ahemmah@atwell-group.com](mailto:ahemmah@atwell-group.com)>; Short, Bob <[bshort@coconino.az.gov](mailto:bshort@coconino.az.gov)>  
**Cc:** Francis Hemmah <[fhemmah@atwell-group.com](mailto:fhemmah@atwell-group.com)>  
**Subject:** RE: [Permit #PZ-CUP-19-007]

Sure, sounds good to me.



Zach Schwartz  
Senior Planner  
Community Development  
Phone: 928-679-8866  
[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)  
[www.coconino.az.gov](http://www.coconino.az.gov)

---

**From:** Andie Hemmah <[ahemmah@atwell-group.com](mailto:ahemmah@atwell-group.com)>  
**Sent:** Friday, June 11, 2021 10:59 AM  
**To:** Schwartz, Zachary <[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)>; Short, Bob <[bshort@coconino.az.gov](mailto:bshort@coconino.az.gov)>  
**Cc:** Francis Hemmah <[fhemmah@atwell-group.com](mailto:fhemmah@atwell-group.com)>  
**Subject:** RE: [Permit #PZ-CUP-19-007]

Sounds great. Thank you! How about we reconvene on Thursday morning and see what the best way is to proceed?

Will that give you enough time to get the paper documents?

**Andie Hemmah**

Project Administrator

**ATWELL, LLC**

866.850.4200 Tel

250 N. Meyer Ave | Tucson, AZ 85701

[www.atwell-group.com](http://www.atwell-group.com)

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**From:** Schwartz, Zachary <[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)>

**Sent:** Friday, June 11, 2021 10:56 AM

**To:** Andie Hemmah <[ahemmah@atwell-group.com](mailto:ahemmah@atwell-group.com)>; Short, Bob <[bshort@coconino.az.gov](mailto:bshort@coconino.az.gov)>

**Cc:** Francis Hemmah <[fhemmah@atwell-group.com](mailto:fhemmah@atwell-group.com)>

**Subject:** RE: [Permit #PZ-CUP-19-007]

Good morning,

These are only paper documents in the office right now and today I am working from home. I can pull these Monday or Tuesday next week for you. We can then take a look at what you want to add and decide if a formal pre-application might be necessitated or just a call.

Thanks,



Zach Schwartz

Senior Planner

Community Development

Phone: 928-679-8866

[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)

[www.coconino.az.gov](http://www.coconino.az.gov)

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**From:** Andie Hemmah <[ahemmah@atwell-group.com](mailto:ahemmah@atwell-group.com)>

**Sent:** Friday, June 11, 2021 10:50 AM

**To:** Short, Bob <[bshort@coconino.az.gov](mailto:bshort@coconino.az.gov)>

**Cc:** Francis Hemmah <[fhemmah@atwell-group.com](mailto:fhemmah@atwell-group.com)>; Schwartz, Zachary <[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)>

**Subject:** RE: [Permit #PZ-CUP-19-007]

Thank you Bob.

Zach,

Please let me know if a teleconference meeting is possible next week to start this process correctly and smoothly?

Thank you,

**Andie Hemmah**

Project Administrator

**ATWELL, LLC**

866.850.4200 Tel

250 N. Meyer Ave | Tucson, AZ 85701

[www.atwell-group.com](http://www.atwell-group.com)

---

**From:** Short, Bob <[bshort@coconino.az.gov](mailto:bshort@coconino.az.gov)>  
**Sent:** Friday, June 11, 2021 8:45 AM  
**To:** Andie Hemmah <[ahemmah@atwell-group.com](mailto:ahemmah@atwell-group.com)>; Plan Submittals <[plansubmittals@coconino.az.gov](mailto:plansubmittals@coconino.az.gov)>  
**Cc:** Francis Hemmah <[fhemmah@atwell-group.com](mailto:fhemmah@atwell-group.com)>; Schwartz, Zachary <[zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)>  
**Subject:** RE: [Permit #PZ-CUP-19-007]

Hello Andie,

I am forwarding to you the essential documents from that application. I am working from home and don't have access to paper copies that may be more complete. The Zoning Ordinance requires applicants for CUPs to obtain building permits within two years, or the CUP lapses requiring the applicant to begin the process again. This CUP appears to have lapsed on March 27, 2021. The additions you refer to may require a new application in any case. Please let me know if you have any questions. Zach Schwartz, who was assigned this case, has been included in this email.

Thanks,



**Bob Short**  
Principal Planner  
Community Development  
Phone: 928-679-8874  
[bshort@coconino.az.gov](mailto:bshort@coconino.az.gov)  
[www.coconino.az.gov](http://www.coconino.az.gov)

---

**From:** Andie Hemmah <[ahemmah@atwell-group.com](mailto:ahemmah@atwell-group.com)>  
**Sent:** Friday, June 11, 2021 7:42 AM  
**To:** Plan Submittals <[plansubmittals@coconino.az.gov](mailto:plansubmittals@coconino.az.gov)>  
**Cc:** Short, Bob <[bshort@coconino.az.gov](mailto:bshort@coconino.az.gov)>; Francis Hemmah <[fhemmah@atwell-group.com](mailto:fhemmah@atwell-group.com)>  
**Subject:** [Permit #PZ-CUP-19-007]

Good Morning

We are looking into additions to a the current CUP PZ-CUP-19-007. I have been coordinating with Bob Short regarding the project. However, if I could get a copy of the current CUP sent to me that would be wonderful and very much appreciated.

Please let me know if I need to fill out a form for records or if you need any further information from me.

Thank you,

**Andie Hemmah**  
Project Administrator  
**ATWELL, LLC**  
866.850.4200 Tel  
250 N. Meyer Ave | Tucson, AZ 85701  
[www.atwell-group.com](http://www.atwell-group.com)

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## Connor Wohlenhaus

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**From:** noreply@smartgovcommunity.com  
**Sent:** Tuesday, November 9, 2021 12:31 PM  
**To:** Andie Hemmah  
**Subject:** Permit application submitted online



### Your application information has been shared with our Planning team

**Application Status: Pending**

Check your application page to see if your application requires any documentation, site plans, or other information to keep your application moving forward.

Application Number:	BD-21-1800	Application Type:	BD - COM - BUILDING
Site Address:	145 LEUPP RD FLAGSTAFF, AZ 86004	Contact:	Hemmah, Andie 2932 W Corte Olivia Tucson, AZ 85741

ahemmah@atwell-group.com  
5207803049

[View](#)

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## Connor Wohlenhaus

---

**From:** Saltzman, Christine <csaltzman@coconino.az.gov>  
**Sent:** Thursday, October 28, 2021 7:58 AM  
**To:** Andie Hemmah  
**Cc:** Francis Hemmah  
**Subject:** RE: Star School

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Yes, when you apply, it will be under commercial, it depends on what your project is whether it is building or misc. If you would like to give me a call when you are ready to apply, I can walk you through it

Have a wonderful day!

Christine Saltzman  
Permit Technician



Coconino County Community Development  
2500 N. Fort Valley Road, Building 1  
Flagstaff, AZ 86001-1287

Phone: 928-679-8887

[csaltzman@coconino.az.gov](mailto:csaltzman@coconino.az.gov)  
[www.coconino.az.gov](http://www.coconino.az.gov)

**\* Please consider the environment before printing this e-mail. \***

---

**From:** Andie Hemmah <ahemmah@atwell-group.com>  
**Sent:** Wednesday, October 27, 2021 4:14 PM  
**To:** Saltzman, Christine <csaltzman@coconino.az.gov>  
**Cc:** Francis Hemmah <fhemmah@atwell-group.com>  
**Subject:** FW: Star School

Christine,

Please see the email below that I sent to Zach, I received his out of office reply soon after. I am hoping that you can help me out with a 1<sup>st</sup> submittal.

Thank you,

**Andie Hemmah**  
Project Administrator  
**ATWELL, LLC**  
[www.atwell-group.com](http://www.atwell-group.com)

---

**From:** Andie Hemmah  
**Sent:** Wednesday, October 27, 2021 4:12 PM  
**To:** [zschwartz@coconino.az.gov](mailto:zschwartz@coconino.az.gov)  
**Cc:** Francis Hemmah <[fhemmah@atwell-group.com](mailto:fhemmah@atwell-group.com)>  
**Subject:** Star School

Zach,

We are preparing to submit our first submittal for the Star School Building Permit off of Lupe Road . When applying online is the Category Building and the Application Type Commercial Building? I want to make sure I submit correctly to not put any holds on the project.

Also is there a checklist for submittals?

Thank you,

**Andie Hemmah**  
Project Administrator  
**ATWELL, LLC**  
[www.atwell-group.com](http://www.atwell-group.com)

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Daniel Borgerding <[dborgerding@kclengineering.com](mailto:dborgerding@kclengineering.com)>**RE: Star Charter School Makerspace - FlagStaff Coconino county battery storage building**

1 message

**Daniel Borgerding** <[dborgerding@kclengineering.com](mailto:dborgerding@kclengineering.com)>  
To: Jake Avila <[javila@dffm.az.gov](mailto:javila@dffm.az.gov)>

Wed, Aug 4, 2021 at 10:04 AM

Thank you, yes the alternative solution will be engineered by fire protection engineers to meet all IFC requirements and be ul listed.

**Dan Borgerding, PE**  
Electrical Engineer

4014 N Goldwater Blvd #203  
Scottsdale, AZ 85251  
515.981.3843 (mobile)  
[dborgerding@kclengineering.com](mailto:dborgerding@kclengineering.com)

**KCL Engineering**  
[www.kclengineering.com](http://www.kclengineering.com)

---

**From:** Jake Avila <[javila@dffm.az.gov](mailto:javila@dffm.az.gov)>  
**Sent:** Wednesday, August 4, 2021 10:02 AM  
**To:** Daniel Borgerding <[dborgerding@kclengineering.com](mailto:dborgerding@kclengineering.com)>  
**Subject:** Re: Star Charter School Makerspace - FlagStaff Coconino county battery storage building

Yes, That is correct.an alternative method may be used. Does your alternative method comply with the international fire code?

On Wed, Aug 4, 2021 at 10:00 AM Daniel Borgerding <[dborgerding@kclengineering.com](mailto:dborgerding@kclengineering.com)> wrote:

Hi Jake,

Thank you for the quick response. I'd like to get one more quick clarification since I'm not sure if you answered it. We're planning to utilize lithium ion batteries, which contain water reactive materials by my understanding. Doesn't 1206.2.11.1.1 tell us to utilize an alternative automatic fire extinguishing method in lieu of traditional sprinklers?

**Dan Borgerding, PE**  
Electrical Engineer

4014 N Goldwater Blvd #203  
Scottsdale, AZ 85251  
515.981.3843 (mobile)  
[dborgerding@kclengineering.com](mailto:dborgerding@kclengineering.com)

**KCL Engineering**  
[www.kclengineering.com](http://www.kclengineering.com)

---

**From:** Jake Avila <[javila@dffm.az.gov](mailto:javila@dffm.az.gov)>  
**Sent:** Wednesday, August 4, 2021 9:09 AM  
**To:** Daniel Borgerding <[dborgerding@kclengineering.com](mailto:dborgerding@kclengineering.com)>  
**Subject:** Re: Star Charter School Makerspace - FlagStaff Coconino county battery storage building

The Office of the state fire marshal would require a Fire sprinkler system inside the building. The local food store would not be classified as a B occupancy OSFM would classify it as a M.

A plan would be submitted through the online portal for a accurate review.

- Jake

On Tue, Aug 3, 2021 at 11:45 AM Daniel Borgerding <[dborgerding@kclengineering.com](mailto:dborgerding@kclengineering.com)> wrote:

Jake,

We recently spoke on the phone regarding a battery storage building for the star charter school makerspace project near flagstaff. We discussed whether or not a fire protection/sprinkler system would be needed for a battery storage facility located in coconino county north/east of flagstaff which will have 165kwh of lithium ion batteries.

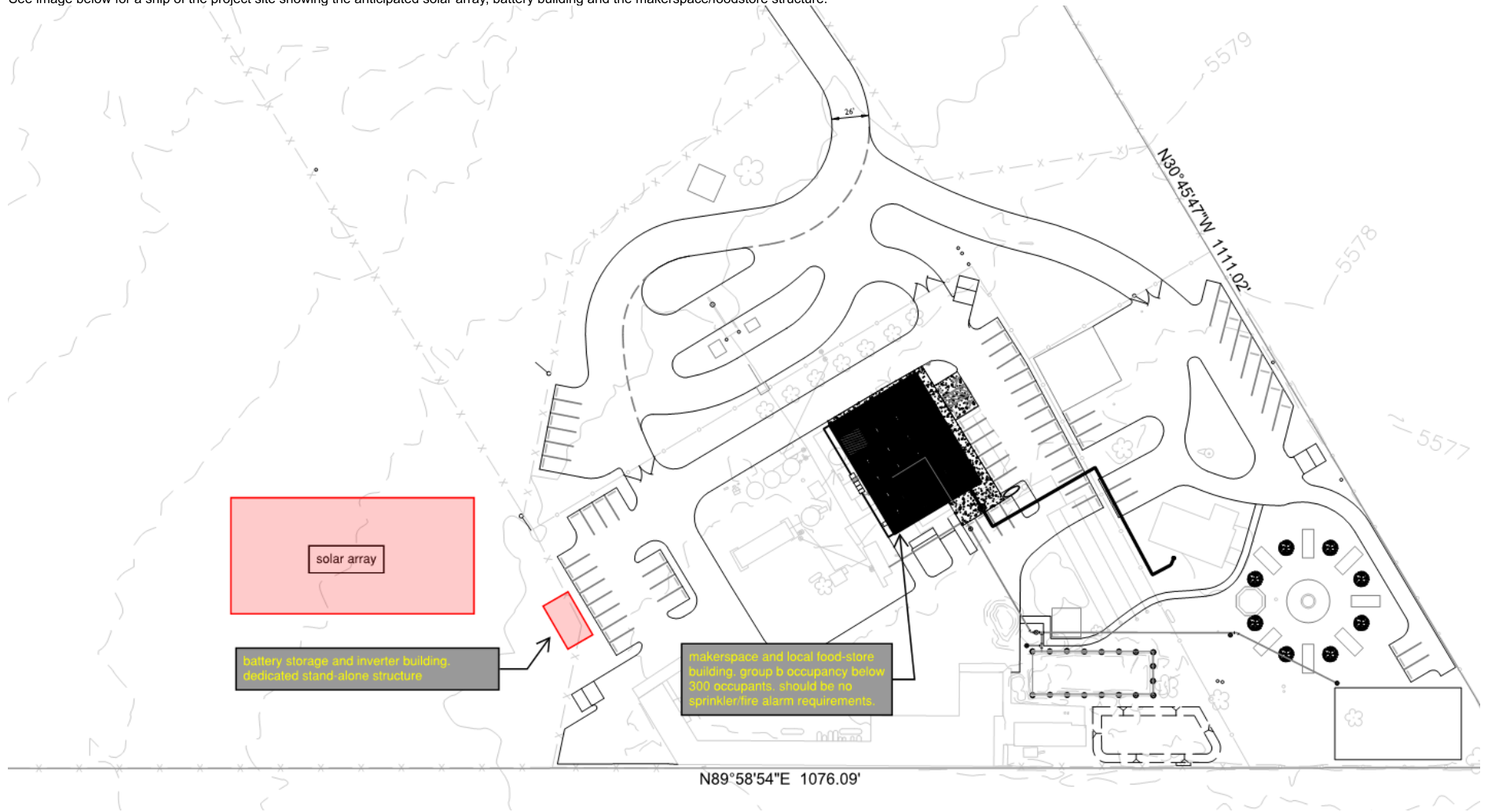
I wanted to confirm those requirements if possible via email prior to us wrapping up design documents and cost estimation. Please let me know what additional information I can provide that you might need. Obviously we're still planning to go through permitting and SFM official approval process in the coming weeks for this but just trying to make sure we aren't spinning our wheels in design.

I believe the discussion ended with the conclusion that a 500 sq ft stand-alone structure dedicated to battery storage and inverter storage only would still be required to have a fire protection system. I believe this aligns with IFC 1206.2.11 since we're over the 20kwh threshold and you indicated there would be no options for variances on this.

What I also wanted to confirm was whether or not you would approve an alternative to traditional sprinkler solution per IFC 1206.2.11.1.1 instead of traditional fire sprinklers for this building since we're utilizing lithium ion batteries. We were thinking this would be an inert gas like an FM-200 solution. Cost-wise this would likely be far more cost-effective for us to provide vs a diesel engine fire pump and storage tanks so we were hoping to explore this option.

Lastly I'd like to confirm fire alarm needs. Is there still a need to have a fire alarm system for this remote battery building if it's purely an s-1 or s-2 occupancy? Our assumption right now is the main building would not be code required to have the alarm system being a group B or A and well below 300 occupants, But I'm curious to know your thoughts.

See image below for a snip of the project site showing the anticipated solar array, battery building and the makerspace/foodstore structure.



**Dan Borgerding, PE**  
Electrical Engineer

4014 N Goldwater Blvd #203  
Scottsdale, AZ 85251  
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www.kclengineering.com

## **Appendix C**

Copy of State Historic Preservation Office Survey Report

**STATE HISTORIC PRESERVATION OFFICE  
SURVEY REPORT SUMMARY FORM**

1

**1. REPORT TITLE**

**1a. Report Title:** A Cultural Resource Survey for the Painted Desert Demonstration Project Food Hub, Leupp Road, Coconino County, Arizona

**1b. Report Author(s):** Andrew L. Christenson

**1c. Date:** 7/28/18    **1d. Report No.:**

**2. PROJECT REGISTRATION/PERMITS**

**2a. ASM Accession Number:**

**2b. AAA Permit Number:**

**2c. ASLD Lease Application Number(s):**

**2d. Other Permit Number(s):**

**3. ORGANIZATION/CONSULTING FIRM**

**3a. Name:** Andrew L. Christenson

**3b. Internal Project Number:**

**3c. Internal Project Name:** PDDP Food Hub

**3d. Contact Name:** A. L. Christenson

**3e. Contact Address:** 746 Redondo Road, Prescott, AZ 86303

**3f. Contact Phone:** 928-308-5758

**3g. Contact Email:** alchristenson@cableone.net

**4. SPONSOR/LEAD AGENCY**

**4a. Sponsor:** Painted Desert Demonstration Project

**4b. Lead Agency:** USDA – Rural Development

**4c. Agency Project Number(s):**

**4d. Agency Project Name:**

**4e. Funding Source(s):** Federal; private

**4f. Other Involved Agencies:**

**4g. Applicable Regulations:** Section 106 of the National Historic Preservation Act

STATE HISTORIC PRESERVATION OFFICE  
SURVEY REPORT SUMMARY FORM

**5. DESCRIPTION OF PROJECT OR UNDERTAKING:** Development of a food hub that will serve as a packing, aggregation and distribution center for local/regional producers.

**6. PROJECT AREA/AREA OF POTENTIAL EFFECTS:** This is a 15.87 a parcel next to Leupp Road. The APE is the same as the project area.

**7. PROJECT LOCATION**

**7a. Address:** 19722 Leupp Road

**7b. Route:**                               **7c. Mileposts Limits:**

**7d. Nearest City/Town:** Flagstaff **7e. County:** Coconino

**7f. Project Locator UTM:** 473043 Easting 3906546 Northing **7g. NAD 83** **7h. Zone:** 12

**7i. Baseline & Meridian:** G&S **7j. USGS Quadrangle(s):** Merriam Crater

**7k. Legal Description(s):** T22N R11E S11, SE

**8. SURVEY AREA**

**8a. Total Acres:** 15.87

**8b. Survey Area.**

<b>1. Land Jurisdiction</b>	<b>2. Total Acres Surveyed</b>	<b>3. Total Acres Not Surveyed</b>	<b>4. Justification for Areas Not Surveyed</b>
Private; Painted Desert Demonstration Project	12.4	3.5	built on or graded

**9. ENVIRONMENTAL CONTEXTS**

**9a. Landform:** Shallow basin between volcanic craters

**9b. Elevation:** 5590

**9c. Surrounding Topographic Features:** Saddle Crater, South and North Sheba craters

**9d. Nearest Drainage:** San Francisco Wash 2.5 mi. south

**9e. Local Geology:** volcanic

**9f. Vegetation:** Great Basin Grassland - grass, Russian thistle, a few junipers

**9g. Soils/Deposition:** volcanic cinders



STATE HISTORIC PRESERVATION OFFICE  
SURVEY REPORT SUMMARY FORM

9h. **Buried Deposits:** not likely

9i. **Justification:** plowing and surface modifications have not turned up any artifacts

10. **BUILT ENVIRONMENT:** Property has a mobile home, a well (Adobe Ranchos Community Well), pump, water delivery infrastructure, a warehouse, sheds, and a parking lot. All of the above are ca. 1988 or later. Star Charter School is across Leupp Road. A residential house is to the west of the parcel.

11. **INVENTORY CLASS COMPLETED**

11a. **Class I Inventory:**

11b. **Researcher(s):**

11c. **Class II Survey:**

11d **Sampling Strategy:**

11e. **Class III Inventory:**

12. **BACKGROUND RESEARCH SOURCES**

12a. **AZSITE:**

12b. **ASM Archaeological Records Office:**

12c. **SHPO Inventories and/or SHPO Library:**

12d. **NRHP Database:**

12e. **ADOT Portal:**

12f. **GLO Maps:** 1932 map shows Flagstaff to Leupp road in S11

12g. **Land- Managing Agency Files:**

12h. **Tribal Cultural Resources Files:**

12i. **Local Government Websites:** Coconino County parcel information

12j. **Other:**

13. **BACKGROUND RESEARCH RESULTS**

13a. **Previous Projects Within Study Area.**

1. Project Reference Number	2. Project Name	3. Author(s)	4. Year
1993-079	Willow Springs Ranch fence	Williams, S. M.	1993
1995-20	San Juan Line & Loop Line	DeMaagd, H. S.	1995
1997-441	Flagstaff Pipeline Survey	no information	

**STATE HISTORIC PRESERVATION OFFICE  
SURVEY REPORT SUMMARY FORM**

2003-349	Kolb Materials Pit	Hammack, L	2003
2005-763	Miller Mine Archaeological Inventory	E. Lane	2005

**13b. Previously Recorded Cultural Resources Within Study Area.**

1. Site Number/Name	2. Affiliation	3. Site Type	4. Eligibility Status	5. Associated Reference(s)
AZ:I:11:33 (ASM)	Sinagua, post 1066	ceramic scatter	considered eligible by recorder	Hammack 2003
AZ:I:11:36 (ASM)	“	ceramic scatter	“	“

**13c. Historic Buildings/Districts/Neighborhoods.**

1. Property Name or Address	2. Year	3. Eligibility Status
NONE		

**14. CULTURAL CONTEXTS**

**14a. Prehistoric Culture:** Northern Sinagua

**14b. Protohistoric Culture:** Hopi

**14c. Indigenous Historic Culture:** Hopi; Navajo

**14d. Euro-American Culture:** Use for grazing; transportation (Flagstaff to Leupp); pipeline corridor; subdivision in the 1980s?

**15. FIELD SURVEY PERSONNEL**

**15a. Principal Investigator:** Andrew L. Christenson

**15b. Field Supervisor:** same

**15c. Crew:** none

**15d. Fieldwork Date(s):** 7/16/18

**16. SURVEY METHODS**

**16a. Transect Intervals:** 17 m apart

**16b. Coverage (%):** 100

STATE HISTORIC PRESERVATION OFFICE  
SURVEY REPORT SUMMARY FORM

16c. Site Recording Criteria: ASM

16d. Ground Surface Visibility: 95%

16e. Observed Disturbances: southeast quarter of project area has buildings, a parking area, and has been extensively disturbed

17. FIELD SURVEY RESULTS

17a. No Cultural Resources Identified:

17b. Isolated Occurrences (IOs) Only:

17c. Number of IOs Recorded: 1

17d. Table of IOs.

1. IO Number	2. Description	3. Date Range	4. UTM's
1	flattened food can (roadside trash)	20 <sup>th</sup> century	473174E 3906833N

18. COMMENTS: No further archaeological work is recommended for this project.

STATE HISTORIC PRESERVATION OFFICE  
SURVEY REPORT SUMMARY FORM

**SECTION 19. ATTACHMENTS**

- 19a. Project Location Map:   
19b. Land Jurisdiction Map:   
19c. Background Research Map(s):   
19d. GLO Map(s):   
19e. References:

**SECTION 20. CONSULTANT CERTIFICATION**

I certify the information provided herein has been reviewed for content and accuracy and all work meets applicable agency standards.



\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
Owner/PI  
**Title**

**SECTION 21. DISCOVERY CLAUSE**

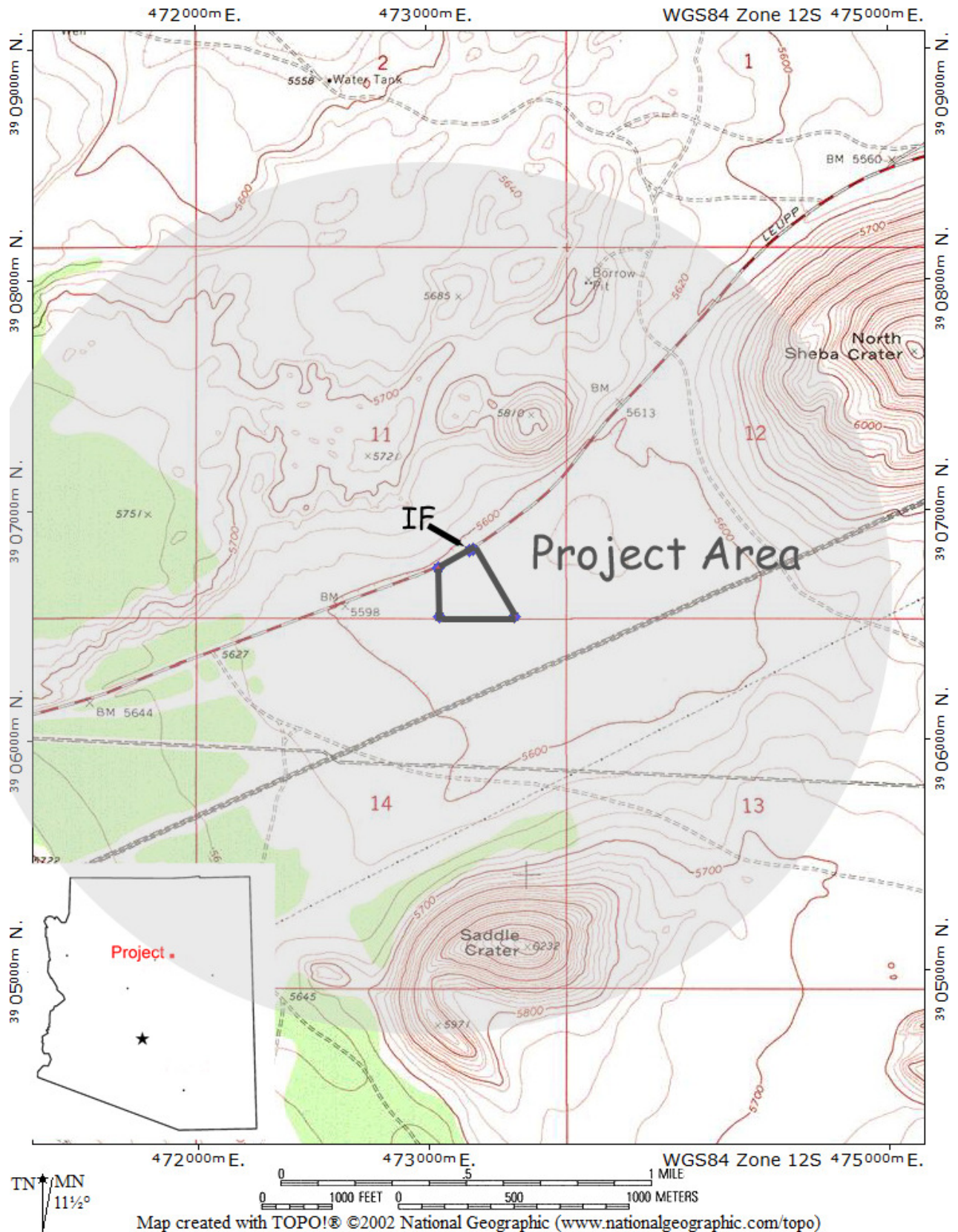
---

In the event that previously unreported cultural resources are encountered during ground disturbing activities, all work must immediately cease within 30 meters (100 feet) until a qualified archaeologist has documented the discovery and evaluated its eligibility for the Arizona or National Register of Historic Places in consultation with the lead agency, the SHPO, and Tribes, as appropriate. Work must not resume in this area without approval of the lead agency.

If human remains are encountered during ground-disturbing activities, all work must immediately cease within 30 meters (100 feet) of the discovery and the area must be secured. The Arizona State Museum, lead agency, SHPO, and appropriate Tribes must be notified of the discovery. All discoveries will be treated in accordance with NAGPRA (Public Law 101-601; 25 U.S.C. 3001-3013) or Arizona Revised Statutes (A.R.S. § 41-844 and A.R.S. § 41-865), as appropriate, and work must not resume in this area without authorization from ASM and the lead agency.

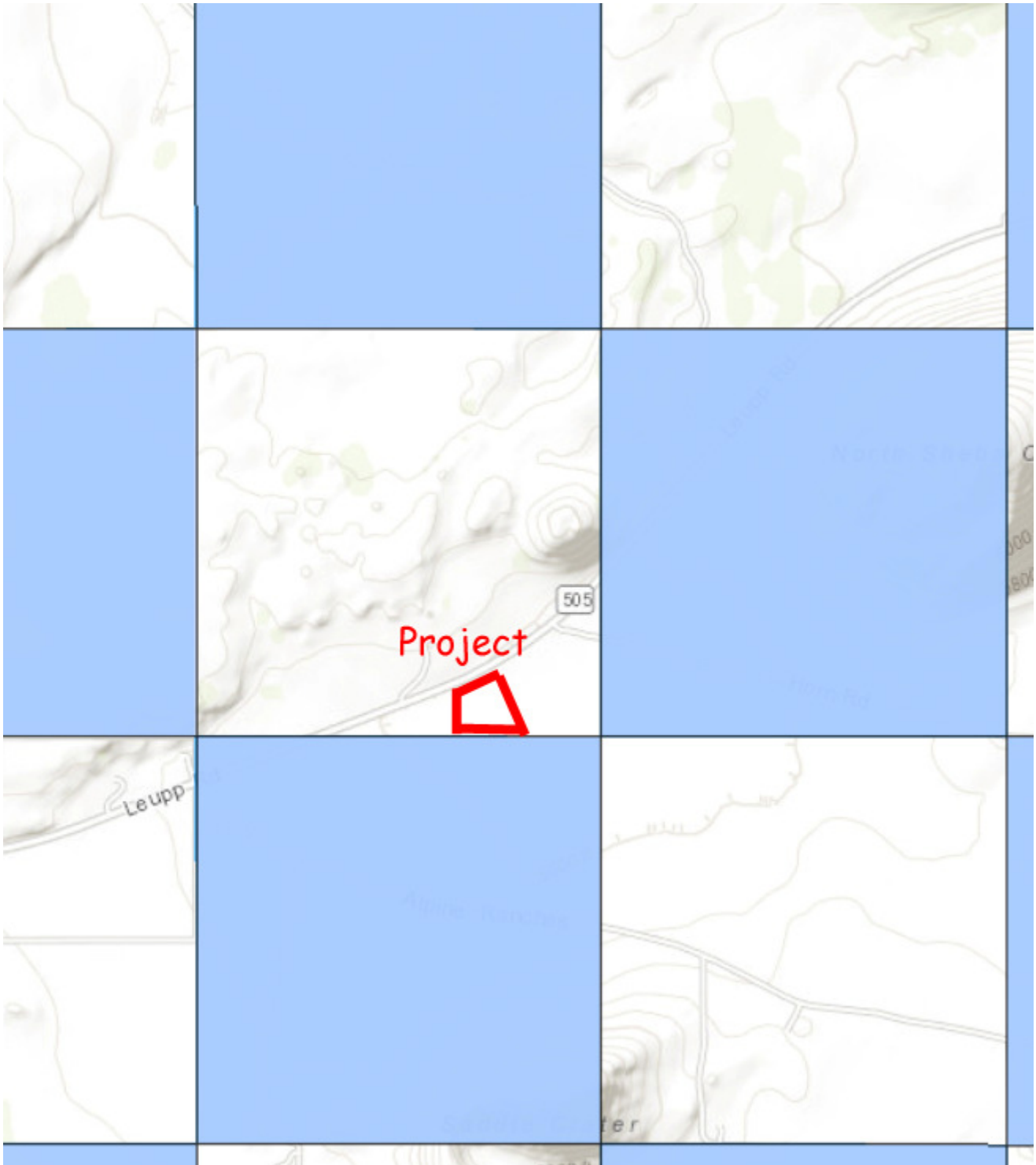
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STATE HISTORIC PRESERVATION OFFICE  
SURVEY REPORT SUMMARY FORM



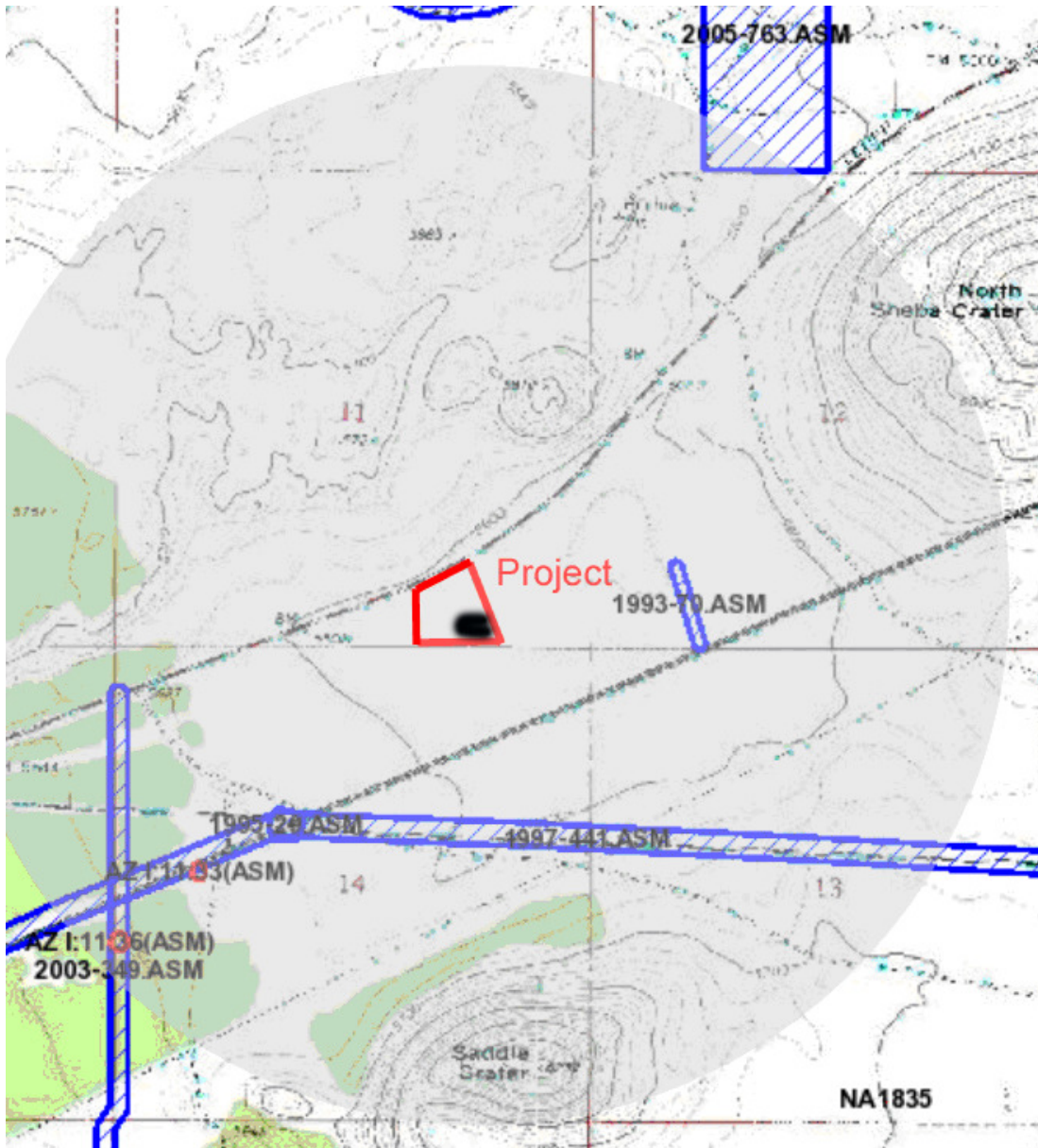
Project area and isolated find with one-mile circle. From Merriam Crater quad. Scale 1:24000.

STATE HISTORIC PRESERVATION OFFICE  
SURVEY REPORT SUMMARY FORM



Project area with land ownership. Blue is State, white is private. Scale 1:24000.

STATE HISTORIC PRESERVATION OFFICE  
SURVEY REPORT SUMMARY FORM



Project area with previous projects and sites. Area not systematically surveyed in black. Scale 1:24,000.

## **Appendix D**

IPAC Resource List for the project area



# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Coconino County, Arizona



## Local office

Arizona Ecological Services Field Office

☎ (602) 242-0210

📠 (602) 242-2513

9828 North 31st Ave

#c3

Phoenix, AZ 85051-2517

<http://www.fws.gov/southwest/es/arizona/>

[http://www.fws.gov/southwest/es/EndangeredSpecies\\_Main.html](http://www.fws.gov/southwest/es/EndangeredSpecies_Main.html)

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

# Birds

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. <a href="https://ecos.fws.gov/ecp/species/8193">https://ecos.fws.gov/ecp/species/8193</a>	Endangered
California Condor <i>Gymnogyps californianus</i> There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. <a href="https://ecos.fws.gov/ecp/species/8193">https://ecos.fws.gov/ecp/species/8193</a>	EXPN
Mexican Spotted Owl <i>Strix occidentalis lucida</i> Wherever found There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. <a href="https://ecos.fws.gov/ecp/species/8196">https://ecos.fws.gov/ecp/species/8196</a>	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

# Reptiles

NAME	STATUS
Northern Mexican Gartersnake <i>Thamnophis eques megalops</i> Wherever found There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. <a href="https://ecos.fws.gov/ecp/species/7655">https://ecos.fws.gov/ecp/species/7655</a>	Threatened

# Fishes

NAME	STATUS
Roundtail Chub <i>Gila robusta</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/2782">https://ecos.fws.gov/ecp/species/2782</a>	Candidate

# Insects

NAME	STATUS
------	--------

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

THERE ARE NO MIGRATORY BIRDS OF CONSERVATION CONCERN EXPECTED TO OCCUR AT THIS LOCATION.

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be

breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

## Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

## Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic



vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

**Appendix E**

Standard Flood Hazard Determination Form

DEPARTMENT OF HOMELAND SECURITY  
Federal Emergency Management Agency

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

OMB Control No. 1660-0040  
Expires: 10/31/18

SECTION I - LOAN INFORMATION

1. LENDER/SERVICER NAME AND ADDRESS Rural Business Development 230 W. First Ave Suite 200 Phoenix, AZ 85003		2. COLLATERAL DESCRIPTION (Building/Mobile Home/Property) (See instructions for more information.)		
3. LENDER/SERVICER ID #	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED		

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name Coconino County Unincorporated Area	2. County(ies) Coconino	3. State AZ	4. NFIP Community Number 04005C6525G
---	----------------------------	----------------	---

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective / Revised Date 09/03/2010	3. Is there a Letter of Map Change (LOMC)? <input checked="" type="radio"/> NO <input type="radio"/> YES (If yes, and LOMC date/no. is available, enter date and case no. below).	
4. Flood Zone X	5. No NFIP Map	Date	Case No.

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply.)

1.  Federal Flood Insurance is available (community participates in the NFIP).  Regular Program  Emergency Program of NFIP

2.  Federal Flood Insurance is not available (community does not participate in the NFIP).

3.  Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.  
CBRA/OPA Designation Date: \_\_\_\_\_

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")?  YES  NO

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.

If no, flood insurance is not required by the Flood Disaster Protection Act of 1973. Please note, the risk of flooding in this area is only reduced, not removed.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building /mobile home on the NFIP map.

E. COMMENTS (Optional)

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
--	-----------------------

## **Appendix F**

Copy of Environmental Site Assessment Report for Project Area

**PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT  
PAINTED DESERT DEMONSTRATION PROJECT SITE  
149 LEUPP ROAD  
FLAGSTAFF, ARIZONA  
FOR  
VERDE ENGINEERING GROUP PLLC  
TEC 18C027.02 RPT.01  
OCTOBER 9, 2018**

**TERRANE ENGINEERING CORPORATION**





# TERRANE ENGINEERING CORPORATION

507 E. Boston Cir. • Chandler, AZ 85225 • Ph. 480.894.1207 • Fx. 480.894.2667

October 9, 2018

Mr. Ralph Bossert  
Verde Engineering Group PLLC  
1109 N. McLane Rd.  
Payson, AZ 85541

Re: Preliminary Environmental Site Assessment of Painted Desert Demonstration Project Site  
149 Leupp Road, Flagstaff, Arizona  
TEC 18C027.02 RPT.01

Dear Mr. Bossert:


The opportunity to provide this assessment for you and Painted Desert Demonstration Project, Inc. is appreciated. It was performed in general accordance with TEC Proposal 17084PR.FC, November 21, 2017. The report describes services performed, presents information from research and reconnaissance, and provides a summary and conclusions with recommendations. The appendices include recent aerial and site photographs and database-search and chain-of-title reports with related figures.


This assessment found evidence indicating the existence of significant environmental concerns or recognized environmental conditions being associated with prior activities and uses of the site. Further assessment by an environmental professional with experience assessing sites affected by ore-processing activities is recommended to evaluate effects, if any, from prior uses and activities. This recommendation is based on information from the sources and activities described in the report. If additional information or sources are discovered regarding the site, TEC should be advised, and further assessment and revised recommendations may be needed.

If you have any questions concerning this report or if we may be of service, please contact us.

Sincerely,

TERRANE ENGINEERING CORPORATION

  
Frank Costello, P.E.



Copies to: Addressee, rbossert1109@gmail.com (pdf only)

**Earth Consultants with Rational Solutions**

ENVIRONMENTAL

• GEOTECHNICAL

• MATERIALS

## TABLE OF CONTENTS

1. INTRODUCTION .....	1
2. SCOPE OF SERVICES .....	1
2.1 Research .....	1
2.2 Reconnaissance .....	2
2.3 Analysis .....	2
3. CHARACTERIZATION .....	2
3.1 Cadastral .....	2
3.2 Drainage .....	2
3.3 Geology .....	2
3.4 Groundwater .....	3
4. HISTORY .....	3
4.1 Review of Aerial Photographs.....	3
4.2 Chain-Of-Title Report .....	6
4.3 Interviews.....	7
5. RECORDS .....	9
6. RECONNAISSANCE.....	11
6.1 Site .....	11
6.2 Surrounding Properties .....	12
7. DISCUSSION .....	12
8. SUMMARY .....	12
9. CONCLUSIONS .....	14
10. RECOMMENDATIONS .....	14
11. CLOSURE.....	14

## APPENDICES

APPENDIX A	Recent Aerial and Site Photographs
APPENDIX B	Allands Database-Search Report and Figures
APPENDIX C	Allands Chain-of-Title Report and Parcel Figures

**PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT  
PAINTED DESERT DEMONSTATION PROJECT SITE  
149 LEUPP ROAD  
FLAGSTAFF, ARIZONA  
FOR  
VERDE ENGINEERING GROUP PLLC**

**TEC 18C027.02 RPT.01  
OCTOBER 9, 2018**

## **1. INTRODUCTION**

This report presents the results of a preliminary environmental assessment of the Painted Desert Demonstration Project Site, a 15.874-acre parcel on the south side of Leupp Road, about 1,000 feet west of Horn Road, in Coconino County, Arizona. It was performed in general accordance with *TEC* Proposal 17084PR.FC, November 21, 2017. The location and layout of the parcel are shown on a recent aerial photograph in Appendix A.

A preliminary assessment is the first step in meeting the due diligence requirements associated with the "innocent landowner" defense described in federal and state "Superfund" laws. These assessments are a surficial analysis of a property and surrounding neighborhood with respect to past and current uses and the existence or likelihood of regulated, environmental concerns. The depth of analysis for this assessment was in general accordance with engineering practices in Arizona and American Society for Testing and Materials (ASTM) E1527-13 for due diligence associated with the "innocent landowner" defense.

## **2. SCOPE OF SERVICES**

The scope of services for this assessment had three components: research, reconnaissance, and analysis. The scopes of these components are described in the following subsections. The "study area" for the assessment included the site and neighboring properties in general accordance with ASTM E1527 up to one mile from the site.

### **2.1 Research**

This component consisted of reviewing selected public records and documents and interviewing knowledgeable persons. Allands was subcontracted to provide a chain-of-title report from 1939 to the present and provide a current database-search report in general accordance with ASTM guidelines.



## **2.2 Reconnaissance**

This consisted of a walking and driving survey of the site and a driving survey of neighboring properties within a half-mile of the site. While on site, we searched for environmental concerns such as rubbish and debris, remnants of past development, utility locations, soil stains, and distressed vegetation. Reconnaissance of neighboring properties included the property perimeter, locations such as RCRA notifiers, underground storage tanks (USTs), leaking underground storage tanks (LUSTs), registered wells, and other environmental features such as drainage.

## **2.3 Analysis**

This component consisted of compiling data obtained during research and reconnaissance and analyzing the data with respect to environmental hazards potentially impacting the site. It also included preparation of an assessment report that described our scope of services, presented the information obtained during our assessment, provided a summary and conclusions regarding findings, and presented recommendations concerning further action.

# **3. CHARACTERIZATION**

This section provides information regarding surface topography and subsurface characteristics of the site, neighboring properties, and study area. The information is presented in four subsections: cadastral, drainage, geology, and groundwater.

## **3.1 Cadastral**

The site is 15.874-acre parcel with improvements in its southeast part on the south side of Leupp Road, about 1,000 feet west of Horn Road, in Coconino County, Arizona, about 16 miles east-northeast of the Flagstaff metro-area. It is a portion of the southeast quarter of Section 11, Township 22 North, Range 10 West of the Gila and Salt River Base and Meridian. Its Coconino County Tax Assessor Parcel Number (APN) is 303-25-009J. Additional title information and figures related to the site are presented in the Allands report in Appendix C. Information about surface conditions is presented in Section 6.

## **3.2 Drainage**

The site was relatively flat with southeastward drainage across the surface and 8 feet of relief from the north side to the southeast corner of the site. From the Merriam Crater quadrangle, the site is in a basin without an outlet. A portion of the quadrangle is included in the figures in the Allands report in Appendix B. No dry wells were seen on the site.

## **3.3 Geology**

From *A Guide to the Geology of the Flagstaff Area*, John V. Bezy, the area is on the southern margin of the Colorado Plateau, which is dominated by the San Francisco volcanic field and

underlying limestone-capped plateau. The oldest rocks underlying the area are 1.7-1.8 billion-year-old, Precambrian granites and schists that covered by volcanic and sedimentary rocks.

During the Paleozoic and Mesozoic Eras (544 to 248 and 248 to 65 million years ago, mya, respectively), level layers of sedimentary rock (sandstones, limestones, shales, and siltstones) were deposited on the Precambrian rocks. The sedimentary strata from top to bottom were Moenkopi Formation, Kaibab Formation, Toroweap Formation, Coconino Sandstone, Supai Group, Redwall Limestone, Martin Formation, Mauv Limestone and Bright Angel Shale, and Tapeats Sandstone. Thickness may have reached 10,000 feet, but much was eroded away.

Mountain building, the Laramide Orogeny, began 75 to 65 mya, which raised the Precambrian rocks and overlying sedimentary rocks thousands of feet and formed the Colorado Plateau and the Rocky Mountains. The exact causes and timing are not agreed on. Faulting began about 25 mya, and about 6 mya, magma began flowing to surface along some faults as lava flows. Eruptions continued through the period, 3 mya to 1,000 years ago. Lava from the San Francisco volcanic field flowed onto, exploded through, or intruded into the sedimentary rocks, leaving Quaternary and Tertiary volcanic rocks at the surface. There are many basalt flows and cinders cones in the vicinity of the site, where it is considered likely that the Kaibab Formation or Toroweap Formation underlie the volcanic materials at the surface.

### **3.4 Groundwater**

Based on Allands review of ADWR records presented in Appendix B, one recorded well exists in the 1/64 section (10 acres, 660-foot square) the site lies in or in adjoining 1/64 sections. ADWR records indicate the well was drilled on September 17, 1987, is 1,394 feet deep, and the water level was 1,065 feet below the surface.

## **4. HISTORY**

*TEC* compiled a history of the site and neighboring areas of interest by reviewing public records of the study area and reviewing aerial photographs.

### **4.1 Review of Aerial Photographs**

Historical aerial photographs from 1997 to 2017 were reviewed on Google Earth. Comments and selected photographs are presented below. Rough estimates of the west, south, and east sides of the site are shown on the photographs.

1997 Ownership changed from La Vaun Harenberg (recorded owner of the well) to Jeffrey and Tammy Lobstein. Site is thought to be used for ranching. There is a ranch house in a graded area in the southeast part of the site with ancillary structures and equipment.

There is a drive from the highway to the graded area. In the central part, there appear to be several dozen rows of closely spaced soil piles, north of which, on the other side of an old road, some grading has been done.



2003 William Pierson, dba D&B Enterprises, is the owner. Site is similar. Fill piles and grading in central part have been leveled. Site is thought to be used for ranching.



2007 Reliance Land Company, LLC, trustee, is the owner after Agra Technologies, Inc. (2-6-04 to 3-31-06), which had constructed several structures in the southeast part of the site for its processing operations.



- 2010 Conditions were similar to 2007. The large, white, storage tanks north of the east end of the building along the south line had been moved east of the ranch house along the property line with other materials and equipment south of the tanks and along the south property line. The graded area between the north and south buildings, west of the ranch house, is surfaced with cinders.
- 2011 Conditions were similar to 2010. The remainder of the graded area west of the ranch house is surfaced with cinders. More materials and equipment are being stored along the east boundary and west of the south building.
- 2013 Conditions were similar to 2011. Drives around the ranch house and the well and access area north of the north building are surfaced with cinders.
- 2015 Mark and Catherine Sorensen are the owners. Conditions are similar to 2013. The tanks along the east side have been moved west of the north building.
- 2017 Painted Desert Demonstration Project, Inc. became the owner in December. Conditions were similar to 2015. Materials and equipment have accumulated between the ranch house and south property line.



#### 4.2 Chain-Of-Title Report

Based on Allands review of title records presented in Appendix C, ownership has been as follows:

- Campbell Francis Sheep Company, an Arizona corporation, prior to 10-19-1939,
- Arizona Livestock Company, an Arizona corporation, 10-19-39 to 4-21-44,
- Jess B. Kellam from 4-21-44 to 9-19-58,
- Hermosa Valley Investment Company, 9-19-58 to 2-2-59,
- Phoenix Title and Trust, an Arizona corporation, later Continental Service Corporation, 2-2-59 to 7-29-83,
- Kenneth K. Roether and Leslie L. Roether, 7-29-83 to 10-10-86,
- Leroy L. Roether and Marion G. Roether, 10-10-86 to 4-29-87,
- Lavaun N. Harenberg, 4-29-87 to 7-8-97,
- Jeffrey W. Lobstein and Tammy J. Lobstein, 7-8-97 to 3-1-02,
- William J. Pierson, a married man, as his sole and separate property, dba D&B Enterprises, 3-1-02 to 2-6-04,
- Agra Technologies, Inc., a Nevada corporation, 2-6-04 to 3-31-06,
- Reliance Land Company, LLC, a New Mexico limited liability company, and subsequently or concurrently a trustee, 3-31-06 to 5-21-14,
- Mark W. Sorensen and Catherine Sorensen, 5-21-2014 to 12-19-17, and
- Painted Desert Demonstration Project, Inc., 12-19-2017 to present.

During ownership by Jess B. Kellam from April 15, 1944 to August 1, 1958, there were two oil and gas leases, one to Harkey & Associates and the other to Flagstaff Associates, Inc. There are no

environmental liens, voluntary environmental mitigation use restrictions (VEMURs), or designated environmental mitigation use restrictions (DEURs) recorded for the parcel.

#### **4.3 Interviews and Newspaper Article**

During the site visit, Mr. Costello spoke with Mark Sorenson, who administers Star School and the work on this site, and Jeff Skinner, maintenance superintendent for Star School and work on this site. After the site visit, Mr. Costello found an article about Agra Technologies, Inc. (Agra), whose activities on site are of interest.

Mr. Sorenson had knowledge of the site before Agra occupied the site. The school gets water from the well on the site, and is working on mobile equipment to treat water from wells on the Reservation. The water from the well on site meets drinking water standards, and some people come to the site to get potable water. He understood that Agra had convinced investors that it had the technology and equipment to extract precious metals (gold and platinum) from volcanic cinders, which he considered to be a scam. He did not advise me of any activities he observed on site that he considered to be of environmental concern. The scheme did not pan out for Agra, who lost ownership of the site, which was purchased by Mr. Sorenson and his wife at auction. Under his and current ownership, potable water has been provided to others from the well on site, an employee has lived in the ranch house, and the south building has been used for some commercial activities. Now, the site will be developed for Painted Desert Demonstration Project, Inc. for commercial, educational, and recreational purposes for the community.

Mr. Skinner worked for Agra for several months while it was in operation. He did not note much work on materials to extract precious metals during his tenure. Both he and Mr. Sorenson understood the process to consist of grinding the cinders to fines and trying to extract precious metals by leaching or smelting. They understood that the fines in several areas of the site, either in 55-gallon drums, large bulk bags, or spread on the ground, were ground cinders from Arizona and other states, including Alaska. After obtaining ownership, Mr. Sorenson had had the fines assayed and found the precious-metals content was not economical for extraction. Mr. Skinner had observed the dumping of acid on the ground east of the north building, which he had reported to the EPA. Neither man was certain what acid was stored in the tanks in the north building.

The Arizona Sun Times published *From Cinders to Gold?*, Cindy Cole, September, 17, 2005, which is presented below. Her article confirms Mr. Sorenson's suspicion that Agra's scheme was a scam and explains the assay results he obtained on the fines. It also addressed the spill Mr. Skinner reported and indicated ADEQ did not consider it to be a concern.

*From Cinders to Gold?*, Arizona Sun Times, Cindy Cole, 9/17/2005

"The volcanic cinders around the San Francisco Peaks have always held gold, platinum and silver. And since the 1980s, a succession of companies have set up shop in the rocks around

Flagstaff, promising investors they would use special technology to leach precious metals from the cinders thrown down on roads for traction.

It has never been profitable, according to the Arizona Corporation Commission, the state mining department and a Nevada securities investigator. Now another company near Sheep Hill east of Flagstaff says it has found a way to turn a profit extracting gold, platinum and silver from volcanic remnants. Its vice president was an officer in one of the companies that 20 years ago promised the same thing.

But this time, says Agra-Technologies Vice President Richard Campbell, the results will be different. "There's always been a bone of contention with cinders and whether people could get precious metals out of them ... there are new technologies in the last seven to eight years," Campbell said. "We're producing metals — precious metals — platinum, gold, and silver." The evidence, he said, is in the precious metals they've recovered that are sitting on company president William Pierson's desk. "The proof is whether or not we can get it out on a commercially economical basis, and it looks like we can," Campbell said.

#### REGULATORS INTERVENE

Campbell, of the Valley, was the vice president of a company named Mariah International, according to Daily Sun articles from 1993 and his own acknowledgment. In 1993, Campbell said Mariah had recovered 8.3 ounces of gold from 114 tons of cinders. He asked investors for \$3.5 million to build a mill 22 miles east of Flagstaff. Mariah is named in a Department of Mines report called "Arizona Mining Scams and Unassayable Ore Projects of the Late 20th Century."

Another company, Pantel Mineral, sued Richard and Sondra Campbell in 1994, accusing them and other Mariah International directors of securities fraud. The case was settled out of court. Mariah was also known as M.G. Natural Resources, which went by three other names, including Xenolix Technologies, Inc., the Arizona Corporation Commission said in 2001.

The Arizona Corporation Commission ordered Xenolix to offer refunds to all 100 investors who'd put \$1.7 million into Xenolix, saying the company claimed to have a patented technology for extracting gold and other precious metals from the company's volcanic cinders and misled investors about its ability to economically produce precious metals from the cinders. The state of Utah revoked Xenolix's stock.

#### NOT FEASIBLY RECOVERABLE

John Nelson, a criminal investigator for the Nevada Secretary of State's securities division, said his office investigated other companies 15 years ago that said they were mining gold from the cinders of Sheep Hill and other nearby cinder cones. "We actually did some gold

and platinum samples and there just was not anything there... there's one to two parts per billion of gold and platinum. It's just not (economically) feasibly recoverable," Nelson said. "It's 10 to 100 times not enough to do massive heap leaching." In other words, the flecks of precious metals in the mountains of cinder are too few and too small to cover the costs of obtaining them.

"There's no known technology ... for extracting precious minerals from basically a waste product," Arizona Corporation Commission spokeswoman Heather Murphy said. That's doubly the case for platinum. "As primary ore, platinum has never been mined in Arizona; its only production has come from trace amounts recovered in the final stages of refining copper ores... the geologic environment of Arizona, diverse as it is, does not encourage the search for platinum-group metals," according to the "Mining Scams" report.

#### MAKING SOIL ADDITIVES

Agra-Technologies operates far out on Leupp Road, across the street from Star School, with a business office at 5800 N. Dodge Avenue. The Leupp Road plant has been there less than a year, he said. Despite Campbell's description of his company's interest in producing precious metals, Agra-Technologies is primarily interested in agriculture, said Chief Financial Officer William Baker. It is grinding up volcanic cinders to make soil additives that farmers and gardeners can use to improve their soil.

Star School Director Mark Sorensen said he was leery of the Agra-Technologies facility across the street until his new neighbors told him they were producing special soils and soil enrichment products, which he welcomed. Star School is solar-powered, has a greenhouse, and is almost environmentally self-sustaining. Sorensen hoped to install a well this fall.

When Agra-Technologies had a small spill from a 10,000-gallon tank labeled "hydrochloric acid," no one ever notified Sorensen. The spill was perhaps 20 or 30 gallons of 30 percent hydrochloric acid, according to what the plant operators told the Arizona Department of Environmental Quality. The person who notified ADEQ said it was much larger. "There wasn't any risk of any kind of off-site release or threat to groundwater," ADEQ director Steve Owens said. ADEQ sent out hazardous materials specialists to inspect, but they did not test the potable water at a pumping station less than 200 feet away used by local homeowners and other water haulers. The water comes from a well more than 1,200 feet deep."

## 5. RECORDS

Allands reviewed applicable public records and lists from various federal, state, and local agencies (including ADEQ, ADWR, and EPA) for its database search. Table 5.1 presents a



summary of the sources researched, search distances, and reported facilities. Neither the site nor sites within the search distances were listed. Additional details are presented in the Allands report in Appendix B.

**Table 5.1 Summary of Allands Database Research**

Database	Date of Database	Approx Min Search Dist (mi)	Reported Facilities
<b>Standard Federal ASTM Environmental Record Sources</b>			
NPL (National Priorities List) / Proposed NPL / DOD (Department of Defense Sites)	5/18	1	0
Delisted National Priorities List	5/18	½	0
CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System)/No Further Remedial Action Planned (NFRAP)	5/18	½	0
RCRA (Resource Conservation and Recovery Act)	5/18	⅛	
RCRA – CORRACTS TSDFs (Corrective Action Treatment, Storage, and Disposal Facilities)	5/18	1	0
RCRA – Non-CORRACTS TSDFs	5/18	½	0
ERNS (Emergency Response Notification System)	5/18	⅛	0
<b>Standard State ASTM Environmental Record Sources</b>			
WQARF (Water Quality Assurance Revolving Fund) Areas	5/18	1	0
Superfund Program List (replaces ACIDS)	8/04	½	0
Solid Waste Facilities/Landfill Sites – Operating and Closed	5/99 & 5/04	½	0
Control Registries	5/18	Site and adjoining	0
Brownfields / Voluntary Remediation Program	12/16	½	0
Registered USTs (Underground Storage Tanks) (includes Tribal Records)	5/18	⅛	0
LUSTs (Leaking Underground Storage Tanks) Incident Reports (includes Tribal Records)	5/18	½	0
<b>Additional Environmental Record Sources</b>			
RCRA Compliance Facilities	5/18	⅛	0
Hazardous Materials Incidents Emergency Response Logbook	1984-06/01	⅛	0
ADEQ Drywell Registration Database (includes Tribal Records)	5/18	⅛	0
Environmental Permits	5/18	Site	0
Fire Insurance Maps	Various	Site and adjoining	0

Database	Date of Database	Approx Min Search Dist (mi)	Reported Facilities
Topographic/Aerial Maps	See text	Site and adjoining	2
VEMUR / DEUR / LIENS / DEURTRACKER	5/18	Site	0
DRYCLEANER	6/06	1/8	0
Arizona Department of Water Resources Well Registration Database	5/18	Site and adjoining	See text

## 6. RECONNAISSANCE

The author, a professional engineer with over 30 years of geotechnical and environmental experience, performed reconnaissance activities for this assessment on August 30, 2018. He has performed or directed several hundred preliminary environmental site assessments for commercial, industrial, and residential properties in Arizona and surrounding states, has completed the requisite OSHA safety training, and has a working knowledge of environmental regulations. Summaries of observations from the reconnaissance are presented below, and photographs from the reconnaissance presented in Appendix A.

### 6.1 Site

The site was relatively flat with a mild downward gradient to the southeast. The last photograph in Review of Aerial Photographs and Recent Aerial of Developed Area in Appendix A provide recent depictions of the site. Photographs 1 thru 4 in Appendix A show the general nature of the site. Other than the southeast part of the site and entrance drive, the site was undeveloped with sparse to moderately dense, native brush and a few trees. Other than fines on the surface, northwest of the west end of the south building, Photographs 5 and 6, no stains or distressed vegetation of concern were noted in the undeveloped part of the site. In the southeast part of the site there was a ranch house, two larger structures related to prior ranching and Agra activities, and related ancillary structures, including a pump house for the well. Most areas around the structures were surfaced with cinders. No staining or distressed vegetation of concern were noted. Also, no evidence that a significant amount of material was processed in any manner to extract precious metals was observed.

From west to east in the Recent Aerial of Developed Area, the former drums had been moved, and fines had been spread on the surface. There was debris west and north of the west end of the south building that appeared to be from Agra activities. Most of the south building was a canopy with a wall on the south side. No unusual conditions or evidence of significant ore processing were noted in it or the buildings at its east end. South of the building east of the south building there were several drums, and at least one contained what appeared to be waste

oil (Photographs 7 and 8). Further eastward, along the boundary, there were more drums and some bulk-material bags with fines in them. At the southeast corner of the site, there was debris that appeared to be from Agra activities, and northwest of the southeast corner there was a burn pit related to a recent resident of the ranch house that appeared to have some dross in the ashes (Photograph 9). Nothing unusual was noted around the exterior of the ranch house; the interior was not accessible. No evidence of an acid spill was noted between the ranch house and the north building. Nothing unusual or evidence of significant ore processing was noted in accessible areas of the north building. In its west part, there was a room with two large, partially filled tanks (Photograph 10) that were understood to contain some type of acid. No excessive degradation of surrounding concrete floors from acid was noted. No unusual conditions were noted in the pump house to the west.

## **6.2 Surrounding Properties**

The site is in a native area that has been used for ranching. Within a quarter-mile, there is a school campus to its northwest and a residence with ancillary structures to its west. The low point of the basin the site lies in is about a quarter-mile to the northeast. No recognized, environmental concerns related to observed conditions or findings of the database search with an association to the site were noted while driving in the study area.

## **7. DISCUSSION**

This environmental assessment was performed in general accordance with ASTM E1527-13 and reasonable, local engineering practices. The components of this assessment (research, reconnaissance, and analysis) were performed in a manner suitable for gathering a preponderance of evidence with respect to the existence or likelihood of recognized, environmental concerns affecting the site. The methods used for this assessment should not be considered absolutely conclusive. We have assumed that information gained from interviews, reports prepared by others, public records, and visual observation of surface features is reasonable and accurate.

## **8. SUMMARY**

The site is a partially developed, 15.874-acre parcel on the south side of Leupp Road about 1,000 feet west of Horn Road in Coconino County, Arizona. The site is in a basin without an outlet filled with Tertiary and Quaternary volcanic materials underlain by sedimentary rocks from Paleozoic and Mesozoic Eras over Precambrian granites and schists. ADWR records indicate the well on site is 1,394 feet deep and depth to groundwater was 1,065 feet when the well was drilled about 30 years ago. An Arizona Sun Times article from 2005 indicated depth to groundwater was over 1,200 feet then.

The southeast part of the site is developed with several structures for residential, ranching, potable-water, and cinder-processing purposes and the remainder of the site is native land with a drive through it. Drainage is southeastward across the surface. Prior to Agra's tenure on site, ranching was the primary activity. During Agra's tenure, they said they were processing cinders to extract precious metals and as a soil amendment for farming; both are considered to be scams. After Agra's tenure, the site was probably not used much until owned by the Sorensens and Painted Desert Demonstration Project, Inc., during which, potable water was provided to others, some commercial activities in the south building, and an employee lived in the ranch house.

For the most part, no stains, spills, chemical storage, or unnaturally distressed vegetation of consequence were observed on the site. However, fines (understood to be ground cinders) were spread on surface northwest of the west end of the south building. Debris thought to be related to Agra activities are west and north of the west end of the south building. From the east end of the south building to the southeast corner of the site along the south boundary, there are drums, bulk bags and debris thought to be related to Agra activities fines with fines in most of the drums and bulk bags and what appeared to be waste oil in at least one of the drums. Between the southeast corner and the ranch house, there is a burn pit related to the employee that stayed in the ranch house with what appeared to be dross in the ashes. In the north building, there are two, partially filled tanks, reportedly, containing acid of some type.

The site is in a native area that was used for ranching with a few residences and related structures. Now, within a quarter-mile of the site, there is a school campus to its northwest and a residence with related structures to its west. No recognized, environmental concerns related to observed conditions or findings of the database search with an association to the site were noted while driving in the study area.

From the Allands report, the site has been owned by individuals, companies, and corporations since 1939. Agra Technologies, Inc. owned the site from February 6, 2004 to March 31, 2006. Painted Desert Demonstration Project, Inc. has owned the site since December 19, 2017. No environmental liens, voluntary environmental mitigation use restrictions (VEMURs), or designated environmental mitigation use restrictions (DEURs) were recorded for the parcel.

Research of regulatory databases for federal, state, and local agencies indicated neither the site nor surrounding properties are listed in the databases. An acid spill was reported on the site, but in an Arizona Sun Times article ADEQ indicated it did not consider the spill it to be a concern. No evidence of the spill was noted in the area where Mr. Skinned said it occurred.

## 9. CONCLUSIONS

Based on the findings of this assessment, *TEC* there is evidence indicating the existence of significant environmental concerns or recognized environmental conditions being associated with prior activities and uses of the site. They include:

- Fines spread on surface northwest of the west end of the south building,
- Debris west and north of the west end of the south building,
- Drums, bulk bags and debris along the south boundary east of the south building, and
- Two tanks, reportedly, containing acid of some type in the north building.

## 10. RECOMMENDATIONS

Based on the results of this preliminary environmental site assessment, *TEC* recommends further site assessment by a qualified environmental professional with experience assessing sites affected by ore-processing activities to evaluate effects, if any, from the concerns listed above from prior activities and uses of the site. This recommendation is based on information from the sources and activities described herein. If additional information or sources are discovered regarding the site, *TEC* should be advised, and further assessment and revised recommendations may be needed.

## 11. CLOSURE

This assessment was performed for the purposes previously stated; it is not being performed to indemnify past, current, or future property owners or operators for past, current, or future actions that have created or may create environmental hazards. *TEC* intends only to indemnify the client for errors and omissions where *TEC's* services are negligent and not in general accordance with the guidelines in ASTM E1527-13. This report was prepared for the exclusive use of Verde Engineering Group PLLC and Painted Desert Demonstration Project, Inc. and may not be reproduced, quoted publicly, or relied upon by others without the express written consent of *TEC*.

# APPENDIX A



**Recent Aerial of Developed Area, 6/12/17**

Painted Desert Demonstration Project Site, 149 Leupp Road, Flagstaff, Arizona  
TEC Project 18C027.02



**Photograph 1** Southeastward view of site



**Photograph 2** Southward view from entrance





**Photograph 3** Westward view of former Agra Technologies facility



**Photograph 4** Southeastward view of former Agra Technologies facility with grindings on the surface in the foreground



**Photograph 5** Grindings on surface northwest of west side of former Agra Technologies facility



**Photograph 6** Grindings on surface northwest of west side of former Agra Technologies facility in area designated as "former drums" on the recent aerial of developed areas of site



**Photograph 7** Drums south of west end of south building; one with waste oil



**Photograph 8** Waste oil from black drum on gray pipe



**Photograph 9** Burn pit in southeast part of site



**Photograph 10** Storage tanks for acid in north building

# APPENDIX B



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Historical Title and Environmental Research

## **REGULATORY DATABASE (ASTM) SEARCH**

YOUR FILE NO: 18C027

ALLANDS FILE NO: 2018-07-060D

DATE OF REPORT: July 18, 2018

ALLANDS hereby reports the search results of Federal and State Databases according to ASTM standards for Phase I Environmental Site Assessments E 1527-13. Allands is not responsible for errors in the available records. The total liability is limited to the fee paid for this report. This is a confidential, privileged and protected document for the use of Terrane Engineering.

1. The land referred to in this report is located in Coconino County, Arizona, described as follows:

Property located at 149 Leupp Road, Flagstaff, Arizona, being in the Southeast quarter of Section 11, Township 22 North, Range 10 East, Gila and Salt River Base and Meridian.

## REGULATORY DATABASE SEARCH SUMMARY

Database	Date of Database	Approximate Minimum Search Distance (miles)	Reported Facilities
<b>Standard Federal ASTM Environmental Record Sources</b>			
NPL (National Priorities List) / Proposed NPL / DOD (Department of Defense Sites)	05/18	1.0	0
Delisted National Priorities List	05/18	0.5	0
CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System)/No Further Remedial Action Planned (NFRAP) / Superfund Enterprise Management Systems (SEMS)	05/18	0.5	0
RCRA (Resource Conservation and Recovery Act)	05/18	0.125	0
RCRA – CORRACTS TSDFs (Corrective Action Treatment, Storage, and Disposal Facilities)	05/18	1.0	0
RCRA – Non-CORRACTS TSDFs	05/18	0.5	0
ERNS (Emergency Response Notification System)	05/18	0.125	0
<b>Standard State ASTM Environmental Record Sources</b>			
WQARF (Water Quality Assurance Revolving Fund) Areas	05/18	1.0	0
Superfund Program List (replaces ACIDS)	08/04	0.5	0
Solid Waste Facilities/Landfill Sites – Operating and Closed	05/99 & 05/04	0.5	0
Control Registries	05/18	Site only	0
Brownfields / Voluntary Remediation Program	12/16	0.5	0
Registered USTs (Underground Storage Tanks) (includes Tribal Records)	05/18	0.125	0
LUSTs (Leaking Underground Storage Tanks) Incident Reports (includes Tribal Records)	05/18	0.5	0
<b>Additional Environmental Record Sources</b>			
RCRA Compliance Facilities	05/18	0.125	0
Hazardous Materials Incidents Emergency Response Logbook	1984-06/01	0.125	0
ADEQ Drywell Registration Database (includes Tribal Records)	05/18	0.125	0
Environmental Permits	05/18	Site only	0
Fire Insurance Maps	Various	Site and adjoining	0
Topographical / Aerial Maps	See text	Site and adjoining	2
VEMUR / DEUR / LIENS / DEURTRACKER	05/18	Site only	0
DRYCLEANER	06/06	0.125	0
Arizona Department of Water Resources Well Registration Database	05/18	Site and adjoining	See Text

**Allands contacts the appropriate sources on a quarterly basis to maintain currency of data**

## **Standard Federal ASTM Environmental Record Sources**

### **SUPERFUND NATIONAL PRIORITIES LIST (NPL)**

Under Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act the Environmental Protection Agency established a National Priorities List (NPL) of Superfund sites. In addition, Proposed NPL and DOD (Department of Defense) Sites are researched in the section. These databases are provided by the EPA and the Arizona Department of Environmental Quality, dated May, 2018, and searched to identify all NPL/Proposed NPL/ DOD sites within a 1.0 mile search distance from subject property exterior boundaries.

Note: Due to inconsistency between the general area site description in the Narrative site information and the detailed site map, the distance/directions are determined based upon the most current site map available from ADEQ.

No National Priorities List (NPL) / Proposed NPL / DOD Sites were found located within a 1.0 mile search distance from subject property exterior boundaries.

### **DELISTED NATIONAL PRIORITIES LIST**

Site may be delisted from the National Priorities List where no further response is appropriate. This database is provided by the Environmental Protection Agency, dated May, 2018, and searched to identify all Delisted NPL Sites within a 0.5 mile search distance from subject property exterior boundaries.

No Delisted National Priorities List (NPL) Sites were found located within a 0.5 mile search distance from subject property exterior boundaries.



## **FEDERAL CERCLIS / NFRAP LIST / SEMS**

The CERCLIS list contains sites which are either proposed to or on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL. Those sites on the NFRAP list have no further remedial action planned. This database has been archived by EPA as of November 12, 2013 and the Superfund Enterprise Management System (SEMS) has replaced the former CERCLIS/NFRAP lists and is dated May, 2018 and searched for facilities within a 0.5 mile search distance from subject property exterior boundaries.

No CERCLIS / NFRAP / SEMS facilities were found located within a 0.5 mile search distance from subject property exterior boundaries.

## **RESOURCE CONSERVATION AND RECOVERY ACT FACILITIES (RCRA)**

Under RCRA the Environmental Protection Agency compiles a database of facilities that are involved in the generation of hazardous materials. This database is from the Arizona Department of Environmental Quality RCRAInfo Database, dated May, 2018 and checked for Federal RCRA facilities located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No Federal RCRA handlers were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

### **CODES:**

LQG: Large quantity generator (more than 1000 kg per month)  
SQG: Small quantity generator (100 – 1000 kg per month)  
CEG: Conditionally exempt small quantity generator (less than 100 kg per month)  
N : Not a generator verified or inactive generator

## **CORRACTS FACILITIES**

Under RCRA the Environmental Protection Agency compiles a database of Corrective Action Sites, sites with known contamination. Also known as the RCRA CORRACTS List, this is a list maintained by the EPA of RCRA sites at which contamination has been discovered and where some level of corrective clean-up activity has been undertaken. For example, a site may have been on the RCRA TSD or the RCRA Generators site list, and was placed on the CORRACTS list once contamination was discovered and remediation was underway. This database is dated May, 2018, and checked for facilities which occurred within a 1.0 mile search distance from subject property exterior boundaries.

No Facilities were found which occurred within a 1.0 mile search distance from subject property exterior boundaries.

## **TSD FACILITIES**

Under RCRA the Environmental Protection Agency compiles a database of facilities that are involved in the transportation, treatment, storage, or disposal of hazardous materials. This database is from the Arizona Department of Environmental Quality Arizona Hazardous Waste Treatment, Storage and Disposal Facilities, dated May, 2018, and checked for Facilities which occurred within a 0.5 mile search distance from subject property exterior boundaries.

No TSD Facilities were found which occurred within a 0.5 mile search distance from subject property exterior boundaries.

## **FEDERAL EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) LIST**

The ERNS list is a national database used to collect information on reported releases of oil and hazardous substances. This database is provided by the National Response Center and the EPA through the Right of Know Net by OMB Watch and Unison Institute from 1983 to May, 2018, and checked for incidents located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No incidents were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

## Standard State ASTM Environmental Record Sources

### WATER QUALITY ASSURANCE REVOLVING FUND (WQARF)

The state of Arizona established a remedial program under A.R.S. 49-282 to facilitate the conservation and clean-up of Arizona drinking water and water sources. Under the authority of the WQARF program, the state actively identifies any actual or potential impact upon state waters, evaluates the extent of contamination, identifies parties responsible, and provides money grants to assist in clean-up activities. This database is provided by the Arizona Department of Environmental Quality dated May, 2018, and searched to identify all WQARF sites within a 1.0 mile search distance from subject property exterior boundaries.

Note: Due to inconsistency between the general area site description in the Narrative site information and the detailed site map, the distance/directions are determined based upon the most current site map available from ADEQ.

No WQARF Registry List sites were found located within a 1.0 mile search distance from subject property exterior boundaries.

### ARIZONA SUPERFUND PROGRAM LIST

The Arizona Superfund Program List replaces the Arizona CERCLIS Information Data System (ACIDS). This list is more representative of the sites and potential sites within jurisdiction of the Arizona Department of Environmental Quality Superfund Programs Section (SPS). This database is provided by the Arizona Department of Environmental Quality, dated August, 2004, and searched to identify all sites within a 0.5 mile search distance from subject property exterior boundaries.

No facilities on the Arizona Superfund Program List were found located within a 0.5 mile search distance from subject property exterior boundaries.

#### Program Status codes:

Pending PI	WQARF Preliminary Investigation (PI) is scheduled or in process
On Registry	PI has resulted in inclusion of a site on the WQARF Registry
ACTIVE	The Department of Defense is presently addressing the site
On NPL	site has been listed on the CERCLA National Priorities List

## LANDFILLS

The state of Arizona maintains listings of closed and permitted, operating landfills and solid waste dump sites. Lists of closed facilities are not necessarily complete - older dumping areas may not be documented. This database is from the Arizona Department of Environmental Quality Waste Programs Division; Solid Waste Section Directory of Arizona Active and Inactive Landfills dated May, 1999 and May, 2004, and checked for active and inactive landfills located within a 0.5 mile search distance from subject property exterior boundaries.

No active nor inactive landfills were found located within a 0.5 mile search distance from subject property exterior boundaries.

### Codes:

**MSWLF:**        **Municipal Solid Waste Landfills**  
**CSWLF:**       **Closed Solid Waste Landfills**  
**CSWOD:**      **Closed Solid Waste Dumps**

## CONTROL REGISTRIES

Under ASTM E 1527-13, Federal, State and Tribal institutional control / engineering control registries need to be researched. EPA Envirofacts was reviewed for federal institutional or engineering controls and The Arizona Department of Environmental Quality has developed the AZURITE Database, reviewed through ADEQ GIS eMaps, which retrieves any institutional or engineering controls, dated May, 2018, and was researched for inclusion of subject property.

No institutional or engineering controls were found which occurred at subject property

## **BROWNFIELDS / VOLUNTARY CLEANUP PROGRAM**

The Arizona Department of Environmental Quality has developed the AZURITE Database, reviewed through ADEQ GIS eMaps, which includes the ADEQ Voluntary Remediation Program and the ADEQ Brownfields Tracking System, dated December, 2016, and searched for sites which occurred within a 0.5 mile search distance from subject property exterior boundaries.

No brownfield sites were found which occurred within a 0.5 mile search distance from subject property exterior boundaries.

## **REGISTERED UNDERGROUND STORAGE TANKS (UST)**

State (A.R.S. 49-1001 to 1014) and Federal (RCRA Subtitle I) laws require that persons who own or have owned underground storage tanks containing “regulated substances” complete a notification form and register the tank with the state. Tribal UST records are researched when subject property exterior boundaries are within search distance of Tribal lands. This database is from the Arizona Department of Environmental Quality UST Log dated May, 2018, and searched for UST sites located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No registered underground storage tanks were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

## **REGISTERED LEAKING UNDERGROUND STORAGE TANKS (LUST)**

Owners of USTs are required to report to the Arizona Department of Environmental Quality any and all releases of tank contents for which ADEQ maintains an ongoing file documenting the nature of contamination and the status of each such incident. Tribal LUST records are researched when subject property exterior boundaries are within search distance of Tribal lands. This database is from the ADEQ LUST Log dated May, 2018, and searched for LUST sites located within a 0.5 mile search distance from subject property exterior boundaries.

No registered leaking underground storage tanks were found located within a 0.5 mile search distance from subject property exterior boundaries.

## **Additional Environmental Record Sources**

### **RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) COMPLIANCE FACILITIES**

The RCRA Compliance Log lists facilities that have been or presently are under investigation for non-compliance with RCRA regulations. Inclusion of any facility on this list indicates a history of compliance problems and RCRA regulatory violation. This database is from the Arizona Department of Environmental Quality RCRA Compliance Log, dated May, 2018, and searched for compliance facilities within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No compliance facilities were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

### **HAZARDOUS MATERIAL INCIDENTS**

The Arizona Department of Environmental Quality (ADEQ) Response Team documents spills and incidents involving hazardous materials that are reported to the unit. This database is from the Arizona Department of Environmental Quality Emergency Response Log from 1984 through June, 2001, and checked for hazardous material incidents located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No hazardous material incidents were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.



## **ADEQ DRY WELL REGISTRATION DATA BASE**

Dry wells are constructed for the purpose of collecting storm waters. Dry wells are required to be registered with ADEQ. Tribal Drywell records are researched when subject property exterior boundaries are within search distance of Tribal lands. This database is from the ADEQ dry well registration database dated May, 2018, and searched for dry wells located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No registered dry wells were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

## **ENVIRONMENTAL PERMITS**

These lists include Groundwater Permits, Reuse Permits; National Pollutant Discharge Elimination System (NPDES) Permitted Facilities and Aquifer Protection Permits. Any facility which discharges a material that directly or indirectly adds any pollutant to the waters of the state may be required to obtain a permit as required by the Aquifer Protection Permit Rules. These databases are from the Arizona Department of Environmental Quality through its AZURITE Database System and the Environmental Protection Agency and updated to May, 2018, and checked for inclusion of subject property.

Subject property was not found on these lists.

## **FIRE INSURANCE MAPS**

A review was made at the Arizona State Capital Archives for Fire Insurance Maps, more commonly known as Sanborn Maps, which covered the area in which the subject property is located. Subject property is not located within the boundaries of available maps.

## **USGS 7.5 MINUTE TOPOGRAPHICAL MAPS AERIAL PHOTOS**

The United States Geological Survey Topographic maps and Aerial Photos are derived from Terrain Navigator Software from My Topo, a Trimble Company. ([www.mytopo.com](http://www.mytopo.com)) and are for informational purposes only.

<b>NAME</b>	<b>TYPE</b>	<b>DATE</b>	<b>REVISION</b>	<b>CONTOUR INTERVAL</b>
Merriam Crater	Topo	1969	None	20 feet
Bing	Aerial	2018		

**VOLUNTARY ENVIRONMENTAL MITIGATION USE RESTRICTIONS BY OWNERS (VEMUR'S); DECLARATION OF ENVIRONMENTAL USE RESTRICTIONS (DEUR); AND ENVIRONMENTAL LIENS**

A.R.S. 49-152. This states that the Director of the Arizona Department of Environmental Quality shall allow property owners, who have voluntarily elected to remediate their property for nonresidential uses, to record in the applicable county recorder's office a VEMUR limiting, by legal description, the area necessary to protect public health and the environment to nonresidential uses if contamination remains on the property at or above certain levels. In accordance with Arizona Administrative Code (A.A.C.) R18-7-201 et. Seq., a Declaration of Environmental Use Restriction (DEUR) is a voluntary notice to deed which restricts the use of a property to non-residential use. ADEQ maintains a repository listing of sites remediated under programs administered by the department. This is called the Remediation and DEUR Tracking System (RDT) ADEQ's RDT was researched for inclusion of subject property.

No VEMUR'S, DEUR'S; nor Environmental Liens were found listed for subject property.

**DRYCLEANERS**

The Drycleaners Inventory List summarizes current and historic dry cleaners sites throughout the state of Arizona and is not all inclusive. This database is from the Report for the Arizona Department of Environmental Quality Dry Cleaners Inventory Project, dated June, 2006, and searched for dry cleaners sites located within a <=0.125 mile search distance from subject property exterior boundaries.

No drycleaners were found located within a <=0.125 mile search distance from subject property exterior boundaries.

## ARIZONA DEPARTMENT OF WATER RESOURCES WELL REPORT

This database is from the Arizona Department of Water Resources Well Report Operations Division Report, dated May, 2018. This report identifies existing wells sequenced by legal description and checked for inclusion of subject site and adjacent properties within 10 Acres.

Imaged Records are available at: <http://infoshare.azwater.gov/docushare/dsweb/HomePage>

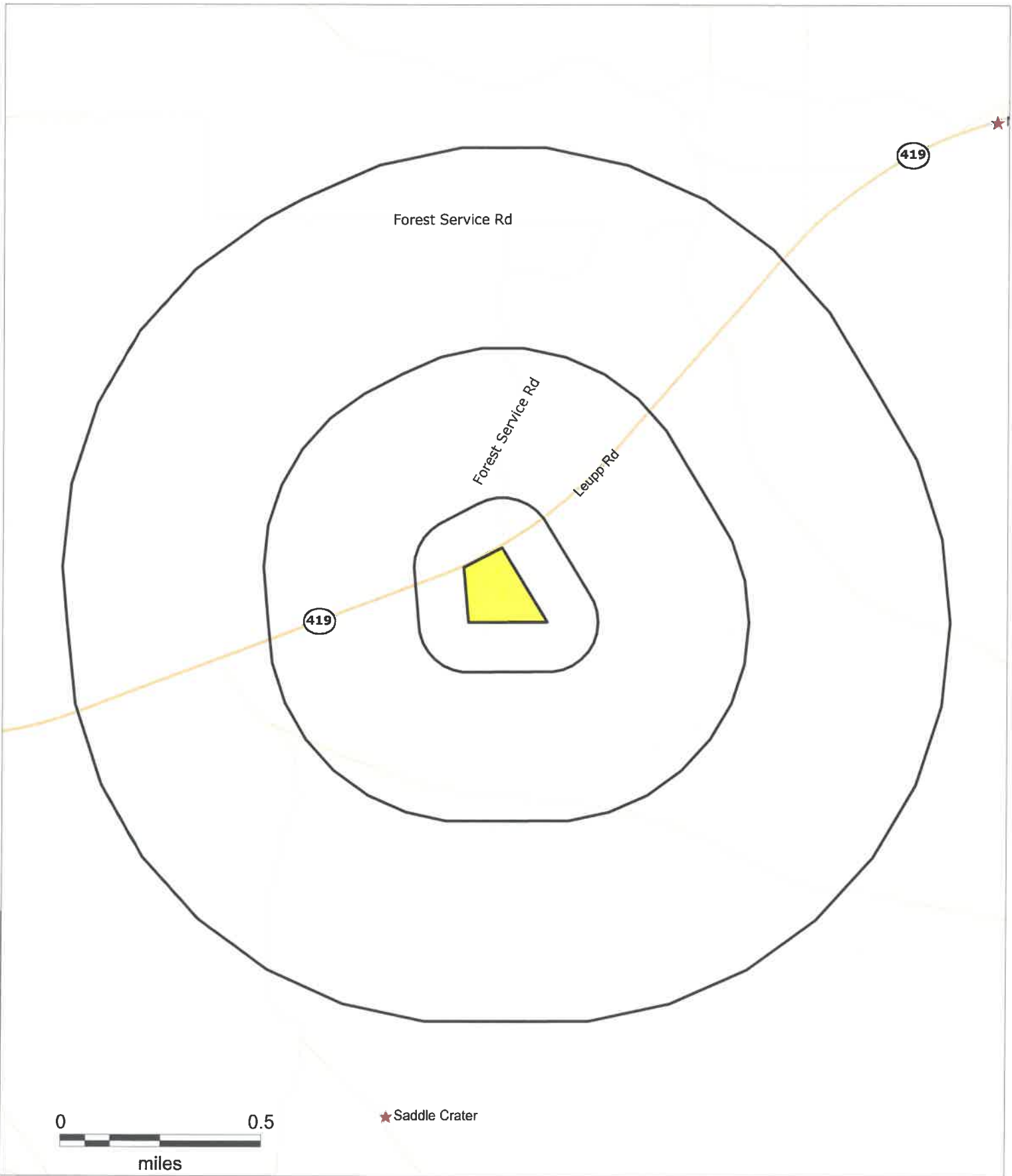
### Water Uses (WU)

A Irrigation  
 B Utility (Water Co.)  
 C Commercial  
 D Domestic  
 E Municipal  
 F Industrial  
 G Recreational  
 H Remediation  
 I Mining  
 J Stock  
 K Other - Exploration  
 L Drainage  
 M Monitoring  
 N None  
 O Other - Non-Production  
 P Remediation  
 R Recharge  
 T Test  
 U Unknown  
 V Dewatering

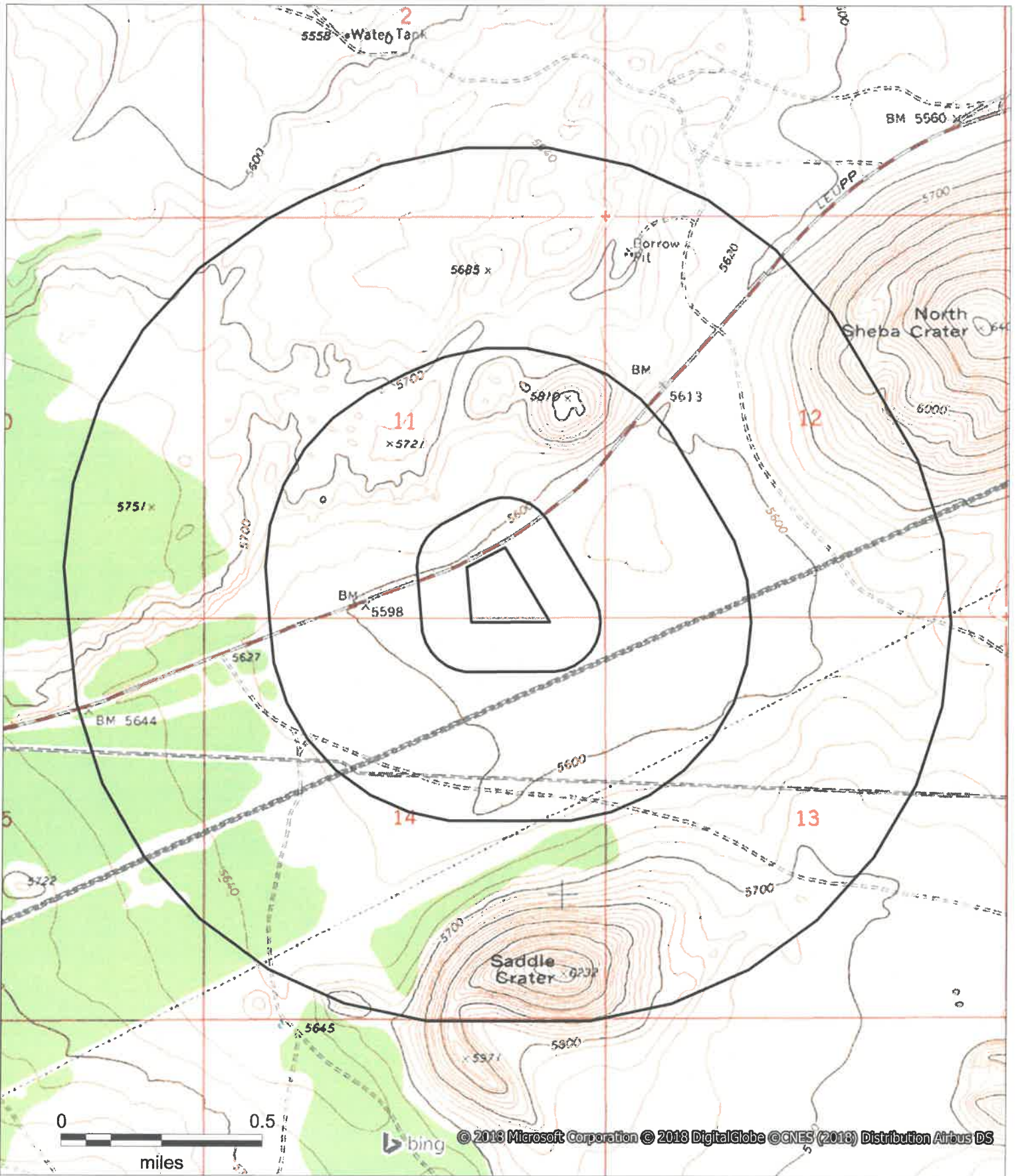
### Legal Description

T Township  
 N/S North or South  
 R Range  
 E/W East or West  
 S Section  
 Q1 Quarter of Section (160 Acres)  
 Q2 Quarter Quarter of Section (40 Acres)  
 Q3 Quarter Quarter Quarter of Section (10 acres)  
 ID Well Registration Number  
 WD Well Depth  
 WL Water Level  
 DIA Casing width

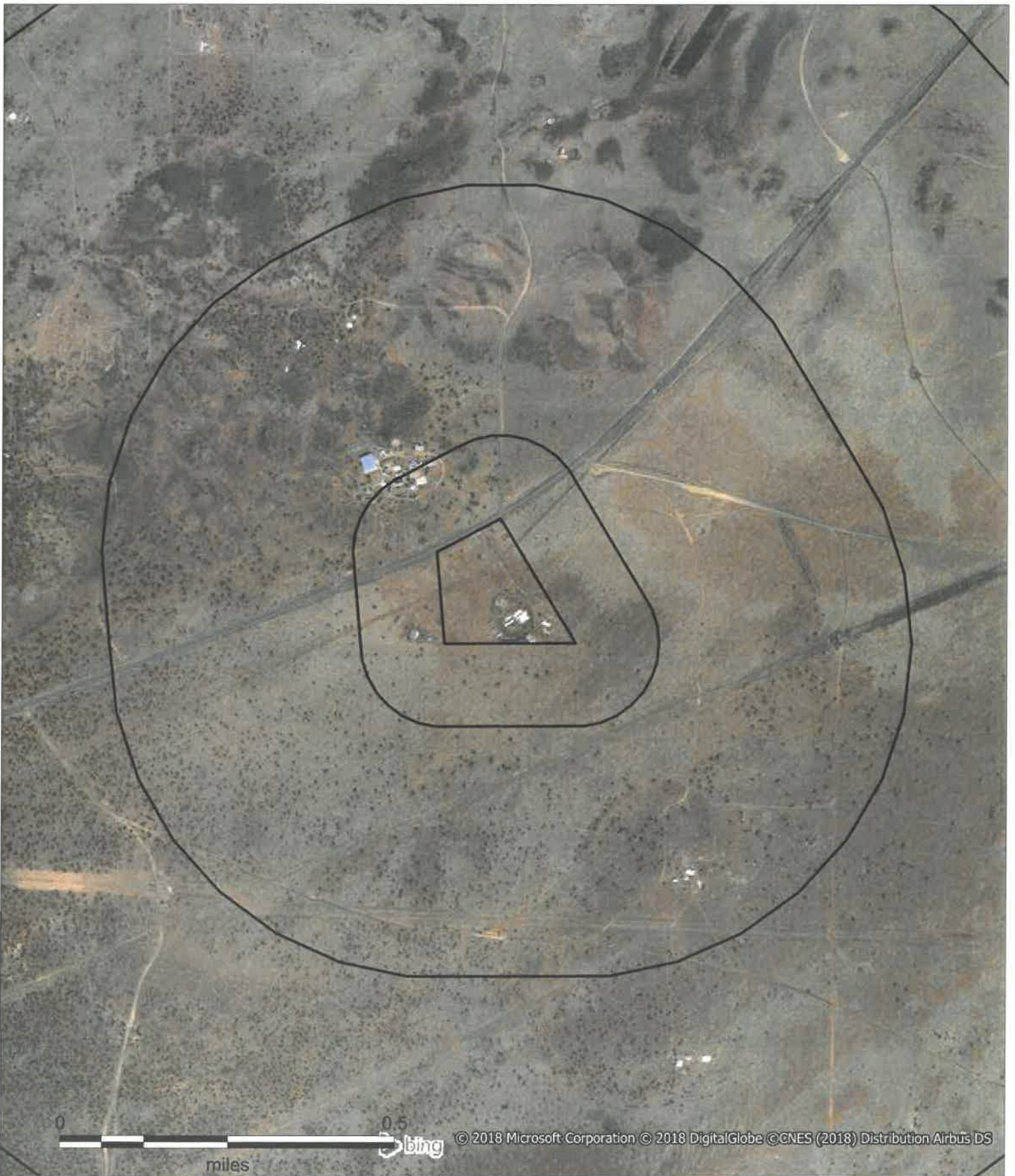
ID	T	N/S	R	E/W	S	Q1	Q2	Q3	WU	WD	WL	DIA	NAME
518314	22	N	10	E	11	SE	SE	SW	D	1394	1065	7	Harenburg, La Vaun,



	<b>LEGEND</b>			2018-07-060
	<b>SITE</b>	USTs	CERCLA / NFRAP	
	LUSTs	LANDFILLS	RCRA COMPLIANCE	



	<b>LEGEND</b>			2018-07-060
	<b>SITE</b>	USTs	CERCLA / NFRAP	
	LUSTs	LANDFILLS	RCRA COMPLIANCE	



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**LEGEND**

★ **SITE**

◆ USTs

● CERCLA / NFRAP

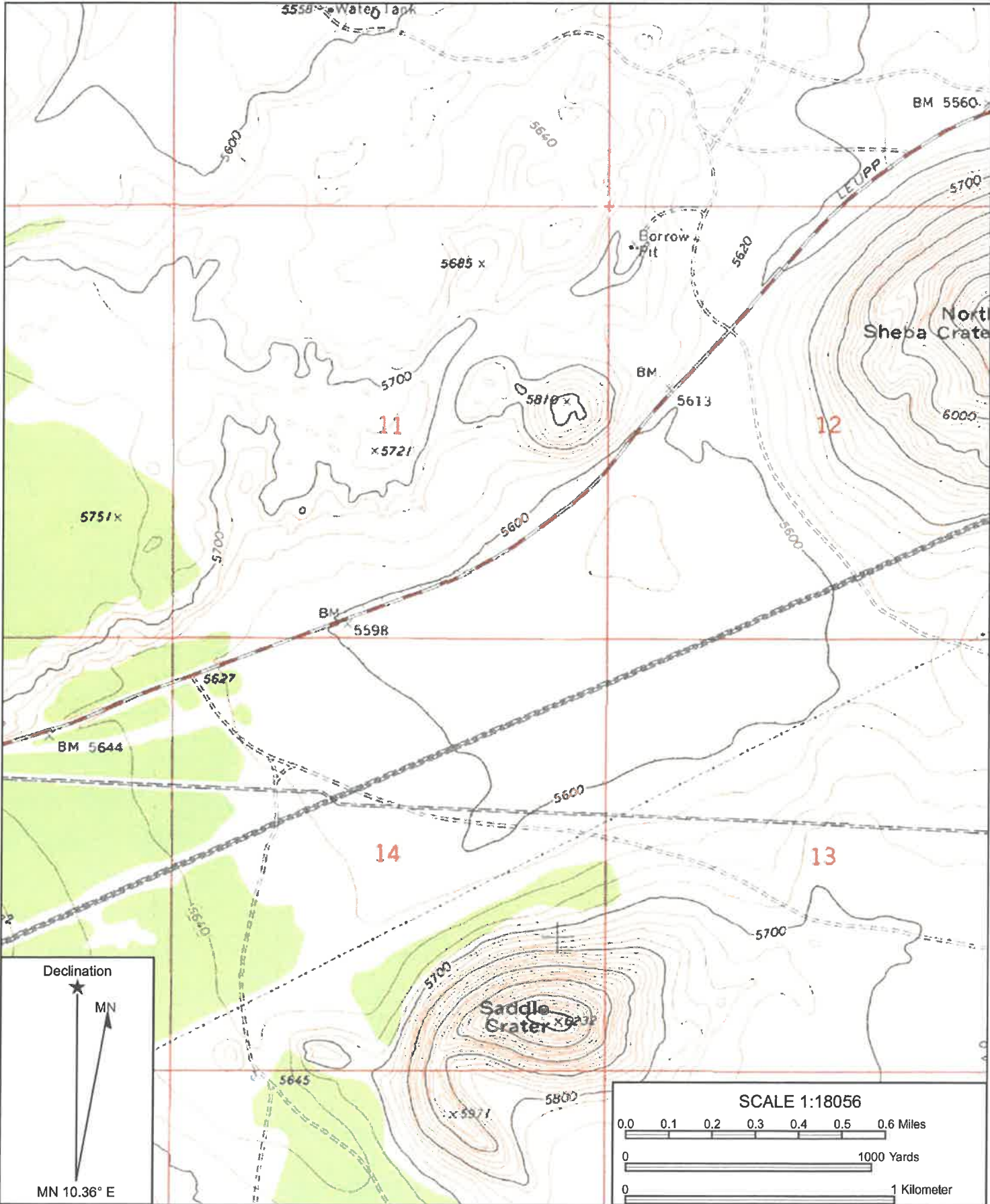
■ RCRA

▼ LUSTs

○ LANDFILLS

▲ RCRA COMPLIANCE

2018-07-060

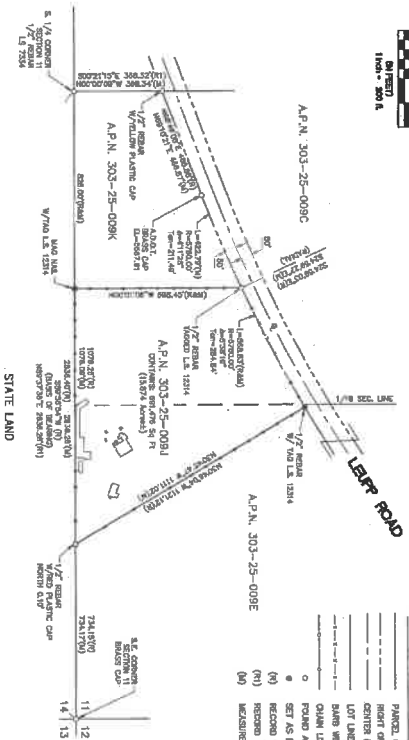


Name: MERRIAM CRATER  
 Date: 07/18/18  
 Scale: 1 inch = 1,504 ft.

Location: 035° 18' 10.0148" N, 111° 17' 39.3038" W  
 2018-07-060



**RECORD OF SURVEY**  
 PARCEL A.P.N. 303-25-009A  
 DESCRIBED IN INSTRUMENT NO. 3892403  
 LOCATED IN SOUTHEAST 1/4 SECTION 11, T22N, R10E,  
 GILA AND SALT RIVER MERIDIAN,  
 COCONINO COUNTY, ARIZONA



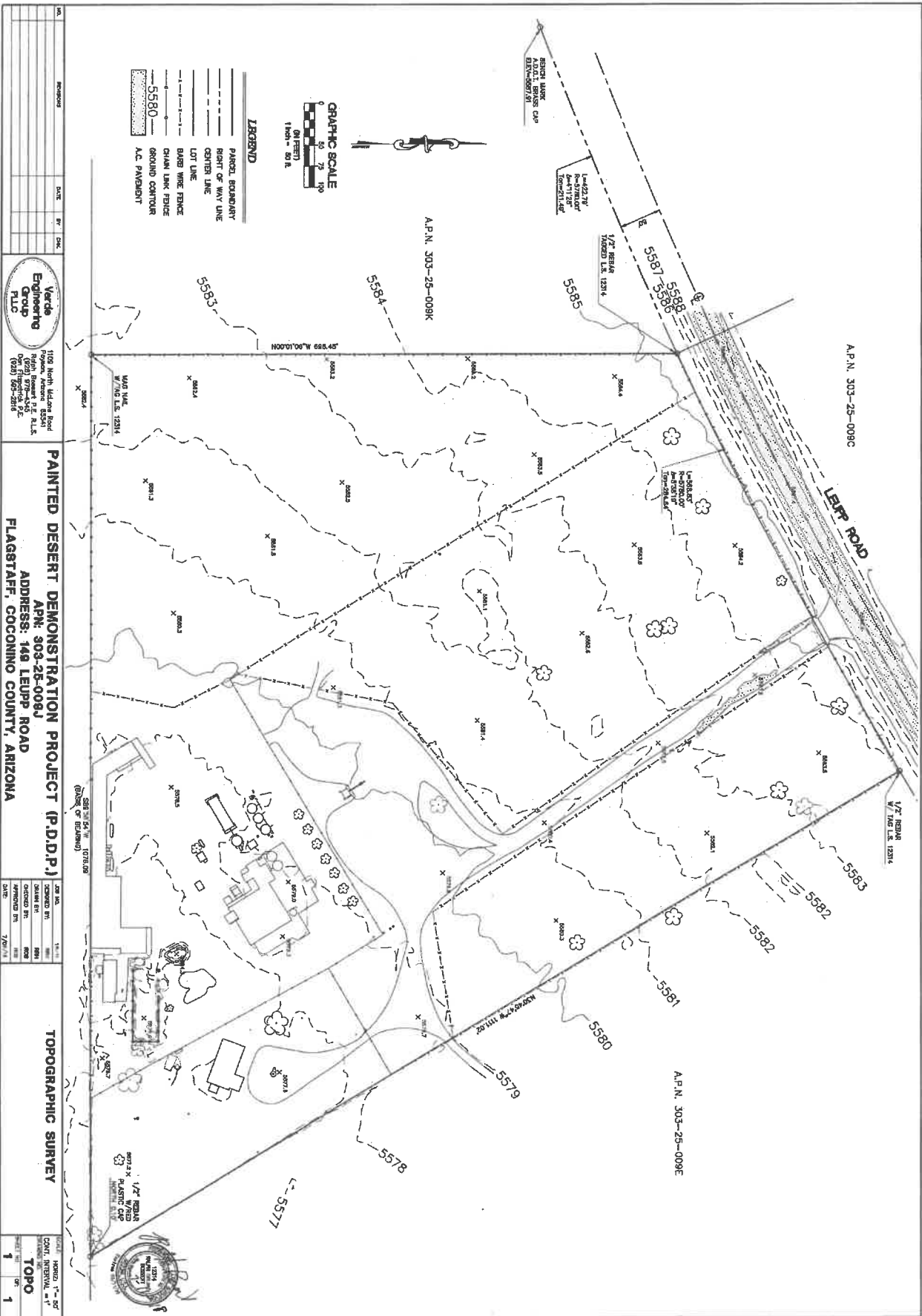
- LEGEND**
- PAVED ROADWAY
  - ROAD & SIDE LINE
  - CENTER LINE
  - LOT LINE
  - BOUNDARY
  - BOUNDARY
  - BOUNDARY
  - POINT AS INDICATED
  - SET AS INDICATED
  - (\*) RECORD INFORMATION FOR INSTRUMENT PURPOSES
  - (N) RECORD INFORMATION FOR B.L.S. PURPOSES
  - (M) MESSAGED INFORMATION

**CERTIFICATION**  
 I, the undersigned, being a duly licensed Professional Engineer in the State of Arizona, do hereby certify that the foregoing is a true and correct copy of the original survey as shown by the instrument thereon.



**V. J. ...**  
 Professional Engineer  
 1129 North McDowell Street  
 Phoenix, Arizona 85004  
 Registration No. 10001  
 State of Arizona





NO.	REVISIONS	DATE	BY	CHK.

DATE	NOV 21 1997
SCALE	1" = 50'
CONTR.	INVESTAL
NO.	1
OF	1

# APPENDIX C



14947 W. Piccadilly Road, Goodyear, AZ 85395 • Phone: 623-535-7800 • Fax: 623-535-7900  
www.allands.com • e-mail: sharon@allands.com

Historical Title and Environmental Research

## HISTORICAL TITLE REPORT

YOUR FILE NO: 18C027

ALLANDS FILE NO: 2018-07-060T

Date of Report: July 18, 2018

Title Plant Date\*\*\*: July 5, 2018

\*\*\*The Title Plant Date reflects the most current data made available by the information sources used at the time the research was performed.

ALLANDS hereby reports a Historical Title Report to the land described below, subject to the items as shown in Schedule B. This is a historical title report ONLY and is neither a guarantee of title, a commitment to insure or a policy of title insurance. Allands is not responsible for errors in the available records. The total liability is limited to the fee paid for this report. This is a confidential, privileged and protected document for the use of Terrane Engineering.

1. Title to the estate or interest covered by this report is vested in: PAINTED DESERT DEMONSTRATION PROJECT, INC.,
2. By virtue of that certain chain of title attached.
3. The land referred to in this report is located in Coconino County, Arizona, described as follows:

Assessor's No.: 303-25-009J

SEE LEGAL DESCRIPTION ATTACHED

## SCHEDULE B

1. Oil & Gas Lease by and between Jess B. Kellam, Lessor, and L. R. Harkey & Associates, Lessee, dated 12-6-59, recorded 1-17-50 in Docket 15, page 537 and recorded 4-24-50 in Docket 17, page 404.
2. Oil & Gas Lease by and between Jess B. Kellam, Lessor, and Flagstaff Associates, Inc., Lessee, dated 9-1-54, recorded 9-17-54 in Docket 58, page 535 and recorded 8-30-56 in Docket 94, page 475.
3. No VEMUR'S, DEUR'S; Environmental Liens, or activity and use limitations, if any, were found currently recorded against the property as searched at the subject county recorders office. \*\*\*

\*\*\* A.R.S. 49-152. This states that the Director of the Arizona Department of Environmental Quality shall allow property owners, who have voluntarily elected to remediate their property for nonresidential uses, to record in the applicable county recorders office a VEMUR limiting, by legal description, the area necessary to protect public health and the environment to nonresidential uses if contamination remains on the property at or above certain levels. In accordance with Arizona Administrative Code (A.A.C.) R18-7-201 et. Seq., a Declaration of Environmental Use Restriction (DEUR) is a voluntary notice to deed which restricts the use of a property to non-residential use. Effective July 18, 2000, the Declaration of Environmental Use Restriction (DEUR) replaced the Voluntary Environmental Mitigation Use Restriction (VEMUR) as a restrictive use covenant.

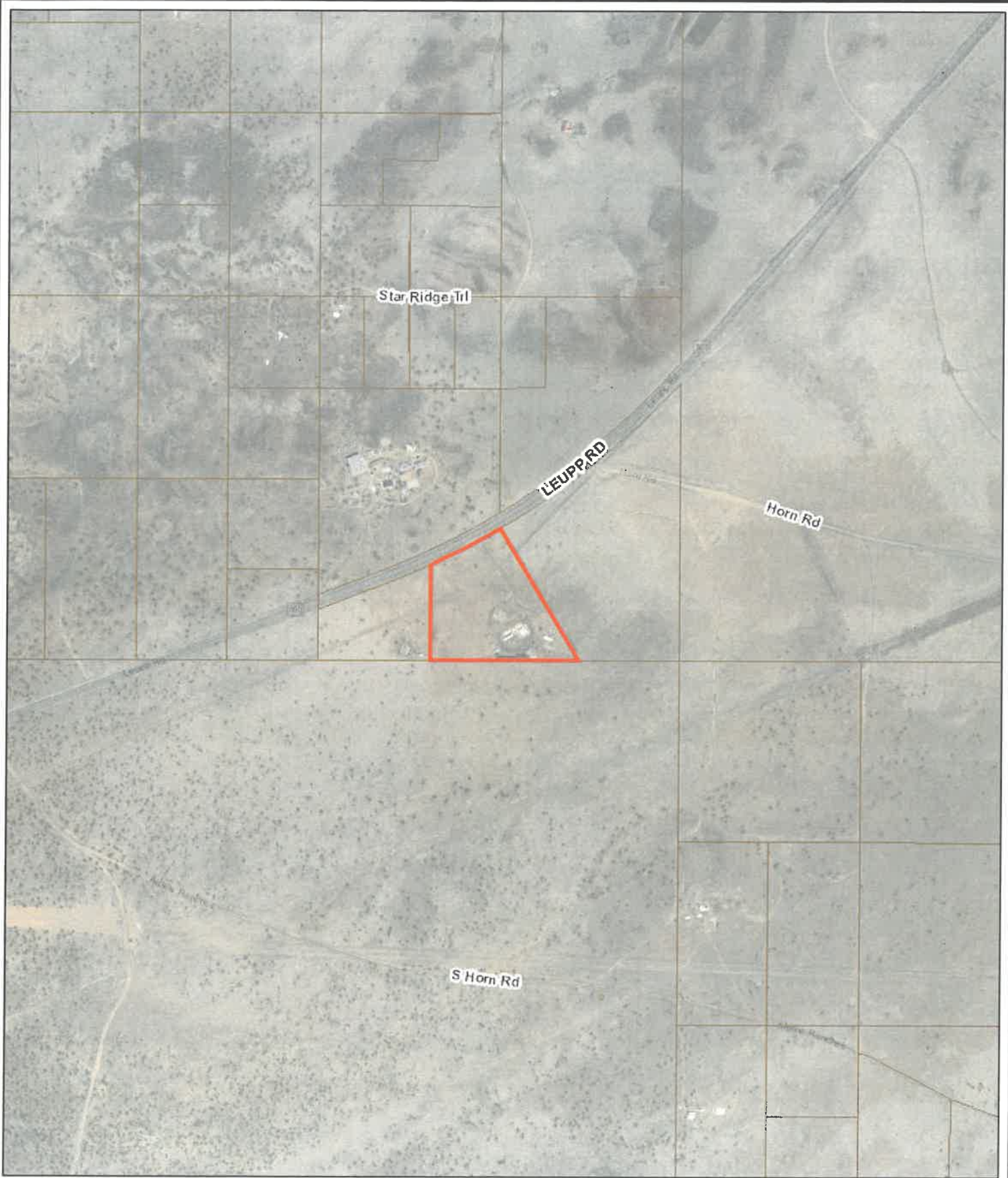
## CHAIN OF TITLE

1. Deed from Campbell Francis Sheep Company, an Arizona corporation to Arizona Livestock Company, an Arizona corporation, dated 10-5-1939, recorded 10-19-1939 in Book 59 of Deeds, page 354.
2. Deed from Arizona Livestock Company, an Arizona corporation to Jess B. Kellam, dated 4-15-44, recorded 4-21-44 in Book 67 of Deeds, page 526.
3. Warranty Deed from Jess B. Kellam to Hermosa Valley Investment Company, dated 8-1-58, recorded 9-19-58 in Docket 126, page 493.
4. Warranty Deed from Hermosa Valley Investment Company to Phoenix Title and Trust Company, an Arizona corporation, as Trustee, dated 10-31-58, recorded 2-2-59 in Docket 132, page 594.
5. Deed from Continental Service Corporation, formerly known as Phoenix Title and Trust Company, an Arizona corporation, as Trustee to Kenneth K. Roether and Leslie L. Roether and Leroy L. Roether and Marion G. Roether, his wife, dated 7-29-83, recorded 7-29-83 in Docket 1011, page 656.
6. Deed from Kenneth K. Roether and Leslie L. Roether, his wife to Leroy L. Roether and Marion G. Roether, his wife, dated 10-10-86, recorded 10-10-86 in Docket 1117, page 562.
7. Deed from Leroy L. Roether and Marion G. Roether, his wife to Lavaun N. Harenberg, dated 4-29-87, recorded 4-29-87 in Docket 1154, page 476.
8. Deed from Lavaun N. Harenberg to Lavaun N. Harenburg, as Trustee of the Lavaun N. Harenburg Trust, dated 7-25-95, recorded 7-25-95 in Docket 1788, page 411.

CHAIN OF TITLE CONTINUES

## CHAIN OF TITLE CONTINUED

9. Warranty Deed from Lavaun N. Harenburg, as Trustee of the Lavaun N. Harenburg Trust to Jeffrey W. Lobstein and Tammy J. Lobstein, husband and wife, recorded 7-8-97 in Docket 2001, page 936.
10. Warranty Deed from Jeffrey W. Lobstein and Tammy J. Lobstein, husband and wife to William J. Pierson, a married man, as his sole and separate property, dba D & B Enterprises International, dated 2-14-02, recorded 3-1-02 in Document No. 2002-3130350.
11. Warranty Deed from William J. Pierson, a married man, as his sole and separate property, dba D & B Enterprises International to Agra Technologies, Inc., a Nevada corporation, dated 12-30-03, recorded 2-6-04 in Document No. 04-3247559.
12. Special Warranty Deed from Agra Technologies, Inc., a Nevada corporation to Reliance Land Company, L L C, a New Mexico limited liability company, dated 3-27-06, recorded 3-31-06 in Document No. 06-3376662.
13. Trustee's Deed Upon Sale of Deed of Trust recorded in Docket 2001, page 938, awarding property to Mark W. Sorensen and Catherine Sorensen, husband and wife, dated 5-21-2014, recorded 5-21-2014 in Document No. 2014-3692403.
14. Quit Claim Deed from Mark W. Sorensen and Catherine Sorensen to Painted Desert Demonstration Project, Inc., dated 12-19-2017, recorded 12-19-2017 in Document No. 2017-3804148.



**2018-07-060**

July 16, 2018



THIS MAP WAS GENERATED BY THE COCONINO COUNTY WEB MAP APPLICATION.  
IT IS FOR GENERAL PUPOSES ONLY. NO WARRANTY OF ACCURACY IS GIVEN OR IMPLIED.





**Account: R0236215**

Location

**Flag Code 622 - FULLY EXEMPT PROPERTY - RELIGIOUS/SCHOOLS 629 - ORGANIZATIONAL EXEMPTION**

**Neighborhood 01.31 - 2 BAR 3 AREA - ALPINE RANCHOS**

**Situs Address 19722 LEUPP RD**

**City FLAGSTAFF**

**Tax Area 0100 - SD#1 ONLY**

**Parcel Number 303-25-009-J**

**Legal Summary Sixteenth: SW Quarter: SE Section: 11 Township: 22N Range: 10E Sixteenth: SE Quarter: SE Section: 11 Township: 22N Range: 10E POR DESC AS FLLWS:BEG SW COR PAR 3130350; TH N 89-58-54 E 826'TO TPOB; TH N 0-1-6 W 698.45';TH ALNG A CURVE CONCAVE TO THE NW 568.83'; TH S 30-46-4 E 1121.12'; TH S 89-58-54 W 1076.25' TO THE TPOB. MBL HOME TITLE: 3132870 SERIAL: AS16407U YEAR: 1988 MAKE: PALM HARBOR SIZE: 25.5X52, SERIAL: AS16407X**

Owner Information

**Owner Name PAINTED DESERT DEMONSTRATION PROJECTS INC**

**Owner Address 145 LEUPP RD FLAGSTAFF, AZ 86004**

Assessment History

<b>Full Cash Value (FCV)</b>	\$259,468
<b>Limited Property Value (LPV)</b>	\$255,463
<b>Primary Assessed</b>	\$38,320
<b>Exempt</b>	(\$38,320)
<b>Net Primary Assessed</b>	\$0
<b>Secondary Assessed</b>	\$38,921
<b>Exempt</b>	(\$38,921)
<b>Net Secondary Assessed</b>	\$0

**Tax Area: 0100 Primary Rate: 5.5904  
Secondary Rate: 2.3163**

<b>Legal Class</b>	<b>FCV</b>	<b>LPV</b>	<b>Primary Assessed</b>	<b>Secondary Assessed</b>
02.R	\$259,468	\$255,463	\$38,320	\$38,921

**Sale Date**

**Sale Price**

\$0

**Doc Description**

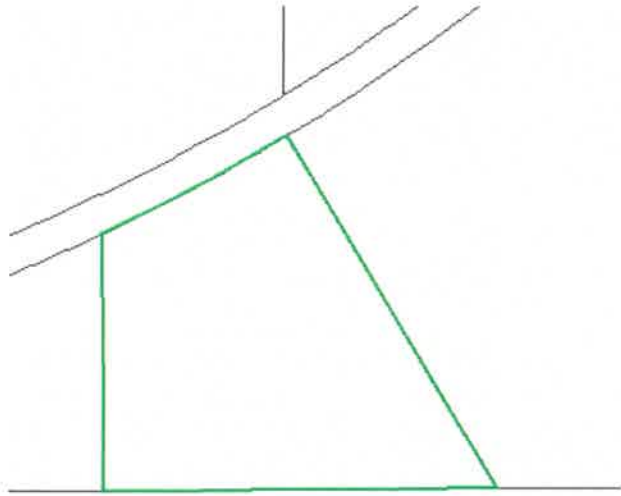
COMBINATION/SPLIT

Trustee Deed

Quit Claim Deed

**Images**

- [GIS](#)



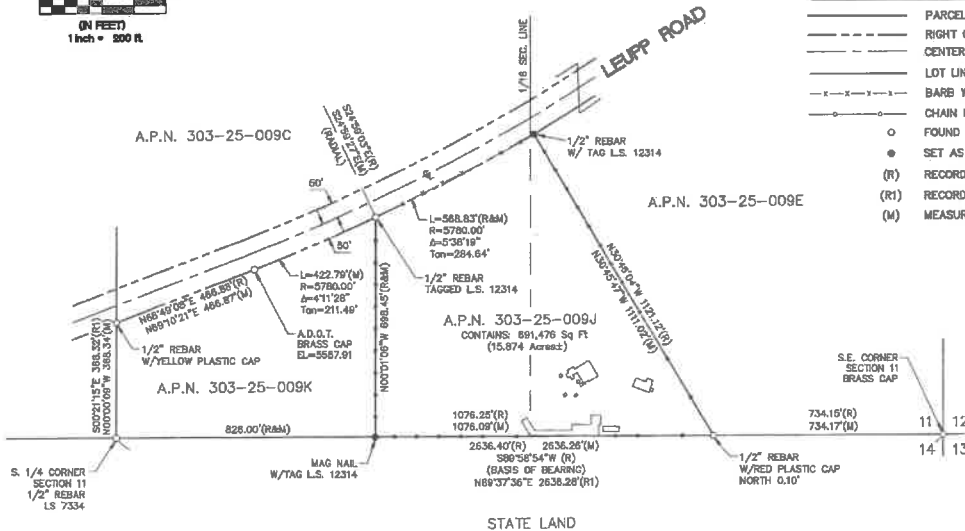
# RECORD OF SURVEY

PARCEL A.P.N. 303-25-009J  
 DESCRIBED IN INSTRUMENT No. 3692403  
 LOCATED IN SOUTHEAST 1/4 SECTION 11, T22N, R10E,  
 GILA AND SALT RIVER MERIDIAN,  
 COCONINO COUNTY, ARIZONA



## LEGEND

- PARCEL BOUNDARY
- - - - RIGHT OF WAY LINE
- CENTER LINE
- LOT LINE
- - - - - BARB WIRE FENCE
- - - - - CHAIN LINK FENCE
- FOUND AS INDICATED
- SET AS INDICATED
- (R) RECORD INFORMATION PER INSTRUMENT #3692403
- (R1) RECORD INFORMATION PER R.O.S. #3586178
- (M) MEASURED INFORMATION



## CERTIFICATION

THIS IS TO CERTIFY THAT THIS MAP, CONSISTING OF ONE (1) SHEET CORRECTLY REPRESENTS A RECORD OF SURVEY MADE UNDER MY SUPERVISION DURING THE MONTH OF JUNE, 2018.



1109 North McLane Road  
 Payson, Arizona 85541  
 Ralph Bossert, P.E. R.L.S.  
 (928) 978-4345  
 Don Filipatrick, P.E.  
 (928) 565-2816  
 JOB No. 18-11





Arizona Notary Acknowledgement

For an Individual (on individuals own behalf):

State of Arizona

County of Cocconino

This instrument was acknowledged before me on the 16<sup>th</sup> day of Dec, 2017,  
by Matherine Hawke for the quick  
claim deed.

(Place Notary Stamp Here)



Angel Wilson  
Notary Public

Angel Wilson  
Notary Public Name (Printed or Typed)

My Commission Expires: 05.04.2019

For a Corporation or Limited Liability Company:

State of \_\_\_\_\_

County of \_\_\_\_\_

This foregoing instrument was acknowledged before me on this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,  
by \_\_\_\_\_ (name of officer or agent)  
of \_\_\_\_\_ (name of corporation),  
a \_\_\_\_\_ (state or place of incorporation)  
corporation or limited liability company.

(Place Notary Stamp Here)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Notary Public Name (Printed or Typed)

My Commission Expires: \_\_\_\_\_

For a Partnership, Limited Partnership, or Limited Liability Partnership:

State of \_\_\_\_\_

County of \_\_\_\_\_

The foregoing instrument was acknowledged before me on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,  
by \_\_\_\_\_ (name of acknowledging partner),  
on behalf of \_\_\_\_\_ (name of partnership),  
a partnership, limited partnership, limited liability partnership.

(Place Notary Stamp Here)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Notary Public Name (Printed or Typed)

My Commission Expires: \_\_\_\_\_

**PARCEL B**

The following is a description of a parcel of land being a portion of the parcel described in Instrument # 3130350, Records of Coconino County, and located in Section 11, Township 22 North, Range 10 East, G&SRB&M, Coconino County, Arizona, being more particularly described by metes and bounds as follows:

**FROM** the southwest corner of the parcel described in Instrument # 3130350;

**THENCE** north 89°58'54" east, along the southerly line of said parcel, 826.00 feet, to the **TRUE POINT OF BEGINNING** of this description;

**THENCE** north 00°01'06" west, 698.45 feet, to a point on the northerly line of said parcel, and a point on a non-tangent curve, concave to the northwest, having a radius of 5780.00 feet, to which point a radial line bears south 24°59'03" east;

**THENCE** along said curve and along the northerly line of said parcel, 568.83 feet, through a central angle of 05°38'19", to the northeast corner of said parcel and a non-tangent line;

**THENCE** south 30°46'04" east, 1121.12 feet, to the southeast corner thereof;

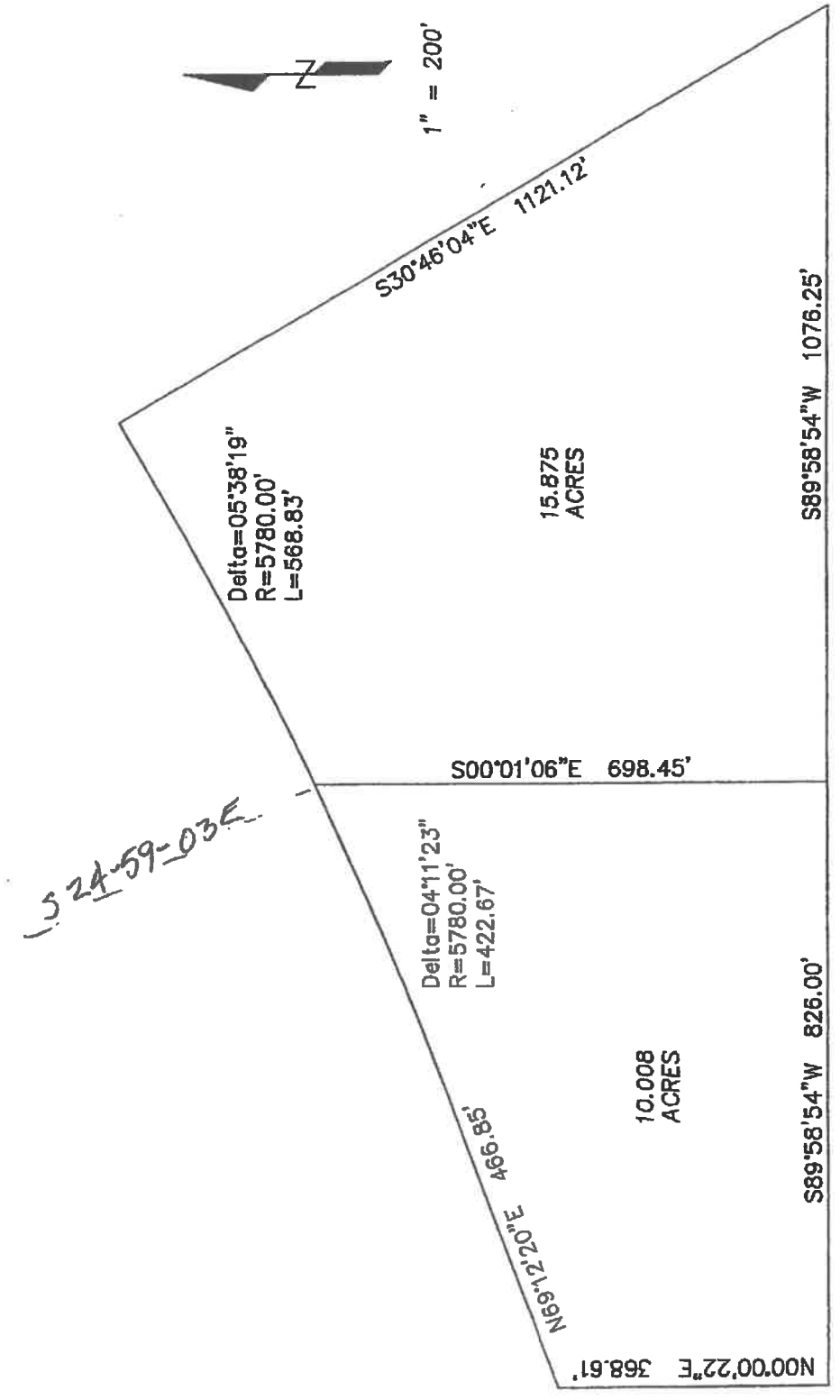
**THENCE** south 89°58'54" west, along the southerly line of said parcel, 1076.25 feet, to the **TRUE POINT OF BEGINNING** of this description.

The parcel described above contains 15.875 acres of land, more or less.



**3252575**  
Page: 6 of 7  
CSR

3252575  
7 of 7  
CSA  
TAB



1" = 200'



PRELIMINARY  
NOT FOR RECORDING

OIL AND GAS LEASE

AGREEMENT, Made and entered into the 5th day of December, 1919, by and between Geo. B. Kellam, executor,

of Pleasant, Arizona, Herein after called lessor (whether one or more), and I. L. Herkey, hereinafter called lessee.

WITNESS: That the said lessor, for and in consideration of the sum of \$100.00 DOLLARS cash in hand paid, the receipt of which is hereby acknowledged, and of the covenants and agreements hereinafter contained on the part of lessee to be paid, kept and performed, have granted, devised, leased and let, and for these presents do grant, lease and let unto the said lessee for the sole and only purpose of mining and operating for oil and gas and of laying pipe lines and of building tanks, power stations and structures thereon to produce, save and take care of said products, all that certain tract of land situated in the county of Coconino, State of Arizona described as follows, to-wit:

Southern 1/4 of Section 17, Township 17N, Range 10E, Coconino County, Arizona.

and containing acres, more or less. It is agreed that this lease shall remain in force for a term of Five years from this date, and as long thereafter as oil gas or casinghead gas, or either of them is produced from said land by lessee in commercial quantities.

In consideration of the premises the said lessee covenants and agrees:

1st: To deliver to the credit of lessor, free of cost, in the pipe line to which Lessee may connect oil or gas wells, the equal one-eighth part of all oil produced and saved from the leased premises.

2nd: To pay the lessor one-eighth (1/8) of the market value thereof at the mouth of the well for gas from any well where gas is found while the same is being used off the premises, and lessor to have gas free of cost from any such well for all stoves and all inside lights in the principal dwelling house on said land during the time by making his or their own connections with the well at his or their own risk and expense.

3rd: To pay the lessor as royalty for gas produced from any oil well and used by lessee for the manufacture of gasoline, one-eighth the market value of such gas. If such gas is sold by lessee, then lessor agrees to pay lessor, as royalty, one-eighth of the market price at the wells for the amount sold. Payment for gas and casinghead gas to be made quarterly.

If no well be completed on said land on or before the 1st day of January, 1920, this lease shall terminate as to both parties unless the lessee on or before that time shall pay or tender to the lessor, or to the lessor's credit in the State of Arizona, \$100.00, or its successor, which shall continue as the depositary, regardless of changes in the ownership of said land, the sum of \$100.00, which shall expire on the 1st day of January, 1920.

Should the first well drilled on the above described land be a dry hole, then and in that event, if a second well is not commenced on said land within twelve months thereafter, this lease shall terminate as to both parties, unless the lessee on or before the expiration of said twelve months shall resume the payments of rentals in the same amount and in the same manner as hereinafter provided. And it is agreed that upon the resumption of the payments of rentals, as above provided, that the last preceding paragraph herein, covering the payment of rentals and the effect thereof, shall continue in force and effect, though there had been an interruption in the rental payments. In the event of production on said land, lessee agrees to drill proper and necessary wells along property lines; lessee agrees that all other developments shall be at the discretion of lessee. If at the expiration of the primary term, oil, gas, or other minerals are not being produced on said land but Lessee is then engaged in drilling or re-working operations thereon, this lease shall remain in force for as long as operations are prosecuted with no cessation of more than thirty (30) consecutive days, and if they result in the production of oil, gas, or other minerals, so long thereafter as oil, gas or other mineral is produced from said land.

If said lessee owns a less interest in the above described land than the entire unbridled fee simple estate herein, then the royalties and rentals herein provided for shall be paid lessor only in proportion which said interest bears to the whole and undivided fee.

Lessee shall have the right to use, free of cost, gas, oil and water produced on said land for all operations thereon except water from well of lessee.

When requested by lessor lessee shall bury the pipe line below ground. No well shall be drilled nearer than 200 feet to the house or barn now on said premises without the written consent of the lessor. Lessee shall pay for damages caused by all operations, to growing crops on said land.

Lessee shall have the right at any time to remove all machinery, haul fixtures placed on said premises, including the right to draw and remove same. If the estate of either party herein is assigned, and the privilege of assigning in whole or in part is expressed, assigned, allowed, the covenants hereof shall extend to their heirs, executors, administrators, assigns, or assigns, but no change in the ownership of the land or assignment of rentals or royalties shall be binding on the lessee until after the lessee has been furnished with a written transfer or assignment or a copy thereof; and it is hereby agreed that in the event the lease and fee accepted as to part or as to parts of the above described land and the assigns or assigns of such part or parts shall fail or make default in the payment of the proportionate part of the rentals due from him or them, such default shall not operate to defeat or affect this lease as to or as to any part of said land in which the said lessee or any assignee thereof shall make the payment of said rental.

It is agreed that this lease shall never be deemed null, void, or rescinded for failure to perform in whole or in part any of the covenants, conditions or stipulations, and if such have been fully determined, such failure exists, and after such final determination, lessee to give a reasonable time thereupon to comply with any such covenants, conditions or stipulations.

Lessee covenants and agrees to, and the title to the lands herein described and agrees that the lessor shall have the right at any time to sue for losses, to represent of any incursions, damages, or other losses on the above described lands, in the event of default of payment by lessee, and be subordinated to the rights of the holder thereof.

All covenants and stipulations of this lease shall be subject to all federal and state laws, executive orders, rules or regulations, and this lease shall not be terminated, in whole or in part, for failure to comply therewith, if compliance is prevented by, or if such failure is the result of, any such law, order, rule or regulation.

IN TESTIMONY WHEREOF, we sign this 5th day of December, 1919. Geo. B. Kellam, I. L. Herkey

RECORDED AT REQUEST OF Geo. B. Kellam, Executor, Dec 15, 1919. A. D. 1919. Book 15, Page 537. Coconino County, Ariz. County Recorder

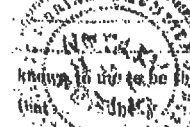


15 538

THE STATE OF TEXAS

County of Madison

a Notary Public in and for the County of Madison and State of Texas, on this day personally appeared James B. Kollar and J. B. Kollar



known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office on this the 10 day of December, A. D. 1942

*Notary Seal Exp. Dec. 4, 1942*

James B. Kollar  
Notary Public in and for Madison County, Texas

THE STATE OF TEXAS

County of

Before me, \_\_\_\_\_ County, Texas, on this day personally appeared \_\_\_\_\_ and \_\_\_\_\_

whose names are subscribed to the foregoing instrument and acknowledged to me that they each executed the same for the purposes and consideration therein expressed, and the said \_\_\_\_\_ being herein examined by me privately and apart from her husband, and having the same fully explained to her, she the said \_\_\_\_\_ acknowledged such instrument to be her act and deed, and she declared that she had willingly signed the same for the purposes and consideration therein expressed, and that she did not wish to retract it.

Given under my hand and seal of office this, the \_\_\_\_\_ day of \_\_\_\_\_, A. D. 19 \_\_\_\_\_

\_\_\_\_\_ County, Texas

No. _____		OIL AND GAS LEASE		No. _____	
FROM		TO		County, Texas	
Date	No. Acres	Section	Range	County	State
_____	_____	_____	_____	_____	_____
This instrument is filed for record on the _____ day of _____, 19____					
at _____	_____	_____	_____	_____	_____
in Book _____	_____	_____	_____	_____	_____
record in this office.	_____	_____	_____	_____	_____
By _____	_____	_____	_____	_____	_____
County Clerk	_____	_____	_____	_____	_____
When Recorded	_____	_____	_____	_____	_____
Return to _____	_____	_____	_____	_____	_____

THE STATE OF TEXAS

County of

a Notary Public in and for the County of \_\_\_\_\_ and State of Texas, on this day personally appeared \_\_\_\_\_ known to me to be the person

whose name is subscribed to the foregoing instrument as \_\_\_\_\_ of \_\_\_\_\_

and acknowledged to me that he executed the same for the purposes and consideration therein expressed, and as the act and deed of said \_\_\_\_\_

Given under my hand and seal of office on this the \_\_\_\_\_ day of \_\_\_\_\_, A. D. 19 \_\_\_\_\_

\_\_\_\_\_ County, Texas

Notary Public in and for \_\_\_\_\_

County, Texas



STATE OF \_\_\_\_\_ } ss. ACKNOWLEDGMENT FOR INDIVIDUAL (Kans., Okla. and Colo.)  
 COUNTY OF \_\_\_\_\_ }  
 Before me, the undersigned, a Notary Public, within and for said County and State, on this \_\_\_\_\_  
 day of \_\_\_\_\_, 19\_\_\_\_, personally appeared \_\_\_\_\_  
 and \_\_\_\_\_

to me personally known to be the identical person who executed the within and foregoing instrument and acknowledged to me  
 that \_\_\_\_\_ executed the same as \_\_\_\_\_ free and voluntary act and deed for the uses and purposes therein set forth.  
 IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.  
 My commission expires \_\_\_\_\_  
 Notary Public

STATE OF \_\_\_\_\_ } ss. ACKNOWLEDGMENT FOR INDIVIDUAL (Kans., Okla. and Colo.)  
 COUNTY OF \_\_\_\_\_ }  
 Before me, the undersigned, a Notary Public, within and for said County and State, on this \_\_\_\_\_  
 day of \_\_\_\_\_, 19\_\_\_\_, personally appeared \_\_\_\_\_  
 and \_\_\_\_\_

to me personally known to be the identical person who executed the within and foregoing instrument and acknowledged to me  
 that \_\_\_\_\_ executed the same as \_\_\_\_\_ free and voluntary act and deed for the uses and purposes therein set forth.  
 IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.  
 My commission expires \_\_\_\_\_  
 Notary Public

STATE OF \_\_\_\_\_ } ss. ACKNOWLEDGMENT FOR CORPORATION  
 COUNTY OF \_\_\_\_\_ }  
 Be it remembered that on this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me, the undersigned, a  
 Notary Public, duly commissioned, in and for the county and state aforesaid, came \_\_\_\_\_  
 \_\_\_\_\_ president of \_\_\_\_\_

a corporation of the State of \_\_\_\_\_ personally known to me to be such officer, and to be  
 the same person who executed as such officer the foregoing instrument of writing in behalf of said corporation, and he duly ac-  
 knowledged the execution of the same for himself and for said corporation for the uses and purposes therein set forth.  
 IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the day and year last above written.  
 My commission expires \_\_\_\_\_  
 Notary Public

No. \_\_\_\_\_

**OIL AND GAS LEASE**

FROM \_\_\_\_\_

TO \_\_\_\_\_

Date \_\_\_\_\_ 19\_\_\_\_

Section \_\_\_\_\_ Twp \_\_\_\_\_ Rge \_\_\_\_\_

No. of Acres \_\_\_\_\_ Term \_\_\_\_\_ County \_\_\_\_\_

STATE OF \_\_\_\_\_ ss:  
 County of \_\_\_\_\_

This instrument was filed for record on the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_  
 at \_\_\_\_\_ o'clock \_\_\_\_\_ M., and duly recorded  
 in Book \_\_\_\_\_ Page \_\_\_\_\_ of  
 the records of this office.

By \_\_\_\_\_  
 Register of Deeds.

When recorded, return to \_\_\_\_\_

THE KANSAS BLUE PRINT CO.  
 141 NORTH MARKET ST. WICHITA, KANSAS  
 PHOTODUPLICATION SERVICE 6P-10-DAYS OIL MAPS

NOTE: When signature by mark in Kansas, said mark to be witnessed by at least one person and also acknowledged.  
 For acknowledgment by mark, use regular Kansas acknowledgment.

STATE OF \_\_\_\_\_ } ss. ACKNOWLEDGMENT FOR INDIVIDUAL (Kans., Okla. and Colo.)  
 COUNTY OF \_\_\_\_\_ }  
 Before me, the undersigned, a Notary Public, within and for said County and State, on this \_\_\_\_\_  
 day of \_\_\_\_\_, 19\_\_\_\_, personally appeared \_\_\_\_\_  
 and \_\_\_\_\_

to me personally known to be the identical person who executed the within and foregoing instrument and acknowledged to me  
 that \_\_\_\_\_ executed the same as \_\_\_\_\_ free and voluntary act and deed for the uses and purposes therein set forth.  
 IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.  
 My commission expires \_\_\_\_\_  
 Notary Public

# OIL AND GAS LEASE

RECORDING INFORMATION  
FILED IN BOOK 94 PAGE 475

THIS AGREEMENT, Entered into this the 21st day of March, 1966  
Between JESS B. KELLAM, an unmarried man, and J. A. KELLAM, an unmarried man

and FLAGSTAFF ASSOCIATES, INC., a corporation, hereinafter called lessor,  
and FLAGSTAFF ASSOCIATES, INC., a corporation, hereinafter called lessee, does witness:

1. That lessor, for and in consideration of the sum of ten dollars Dollars (\$10.00)  
to hand paid, and of the covenants and agreements hereinafter contained, has granted and leased and hereby grants,  
lease and lets unto the lessee for the purpose of mining, exploring, developing, producing, operating and producing oil and gas, casinghead gas and casinghead gasoline, laying pipe  
lines, building tanks, storing oil, building power, storage and other structures thereon to produce, save, take care of and manufacture  
oil of such substances, and for housing and boarding employees, the following described tract of land, to-wit: Cocconino  
County, State of Arizona

- Tract A** All of SECTIONS 1, 2, 9, 17, 19, 21, 29, 31 and 33, in T23N, R10E, GASHRUM, Cocconino County, Arizona.
- Tract B** All of SECTIONS 1, 11, 13, 15, 23, 25, 27 and 35 and all of SECTION 1, all in T23N, R10E, GASHRUM, Cocconino County, Arizona.
- Tract C** All of SECTIONS 1, 11, 13, 15, 23, 25, 27 and 35 in T23N, R10E, and LOTS 1, 2, 3, 4, 5, 6, the SW 1/4 and SW 1/4 of SECTION 5, All of SECTION 7, LOTS 1, 2, 3, and 4 and 1/2 of SECTION 17, all of SECTION 19, LOTS 1, 2, 3, 4 and the SW 1/4 of SECTION 29, all of SECTION 31, T23N, R11E, GASHRUM, Cocconino County, Arizona.

BOOK 94 PAGE 475

1. The lessee shall have the right to use free of cost, gas, oil and water found on said land for its operations thereon, except waste from the wells of the lessee. When required by law, the lessee shall pay the taxes thereon and shall pay for damage caused by its operations to growing crops on said land. No well shall be drilled deeper than 6000 feet to the bottom of said premises without written consent of the lessor. Lessee shall have the right at any time during the term of this lease to remove all machinery, fixtures, houses, buildings and other structures placed on said premises, including the right to draw and remove oil casing.

2. As to the gas leasehold estate hereby granted and the consolidated gas leasehold estate hereby granted, lessor is expressly granted the right and privilege of consolidation with any other oil and/or gas leasehold estates in firm or consolidated gas leasehold estates which shall not exceed a total area of 400 acres, and in the event of consolidation, as herein provided, the consolidated gas leasehold estate shall be deemed, created and operated in the same manner as though the entire consolidated gas leasehold estate were originally covered by and included in this lease, and all royalties which at all times or times including production gas produced from a well produced and marketed from the consolidated estate in this lease, and all royalties which at all times or times including production gas produced and marketed from the consolidated estate in the same proportion that the acreage of each well bore bears to the total acreage of the consolidated estate, and a producing gas well on any portion of the consolidated estate shall operate to continue the oil and gas leasehold estate hereby granted so long as gas is produced therefrom.

10. If the estate of either party hereto is a leasehold, the privilege of a leasehold in whole or in part, expressly all such, the covenants hereof shall extend to the heirs, executors, administrators, successors and assigns, but no change of ownership in the land or in the interests or royalties shall be binding on the lessee until after notice to the lessor and it is hereby furnished with the written transfer or assignment or a certified copy thereof.

11. If the leased premises shall hereafter be owned in severalty or in separate parts, the premises, in whatever, shall be developed and operated as one lease and all royalties accruing thereon shall be treated as an entirety and shall be divided among and paid to each separate owner in the proportion that the acreage owned by each such separate owner bears to the entire leased acreage. There shall be no obligation on the part of the lessee to amend wells on separate tracts into which the land covered by this lease may be hereafter divided by sale, devise, or otherwise, or to furnish separate measuring or receiving tanks. It is hereby agreed that, in the event this lease shall be assigned as to a part or as to parts of the above described lands, and the holder or owner of any such part or parts shall fail or make default in the payment of the proportionate part of the rent due from him or them, such default shall not operate to defeat or affect this lease in so far as it covers a part or parts of said land upon which the said lease or any assignment hereof shall make due payment of said rents. If at any time there be as many as four parties entitled to rentals or royalties, lessee may withhold payments thereof unless and until all parties designate, in writing, in a recordable instrument to be filed with the lessee, a common agent to receive all payments due hereunder, and to execute division and transfer orders in behalf of said parties, and their respective successors in title.

12. Lessor hereby warrants and agrees to defend the title to the land herein described and agrees to let the lessee, at its option, may pay and discharge any taxes, mortgages, or other liens existing, levied or assessed on or against the above described lands and, in event it exercises such option, it shall be subrogated to the rights of any holder or holder thereof and may reimburse itself by applying to the charge of any such mortgage, tax or other lien, any royalty or rentals accruing hereunder.

13. Notwithstanding anything in this lease contained to the contrary, it is expressly agreed that if lessee shall commence drilling operations at any time while this lease is in force, this lease shall terminate in force and its term shall continue so long as such operations are prosecuted and, if producing results therefrom, then as long as production continues.



*[Faint, mostly illegible text from the main body of the document]*

Witness

- IN WITNESS WHEREOF, we also the Cds and sds. here written.

*Elizabeth Kellum*  
*Notary Public*

*My Commission expires*  
*Sept. 7, 1959*

*James B. Kellum*  
*J. Kellum*

No. 4620

RECORDED AT REQUEST OF Ther. M. Flick  
AUGUST 30th A. D. 19 56 At 3:00 o'clock P. M.  
In Book No. Official Recd pages 475-477

Records of Cocoosno County, Fla.  
Mrs. Mae Thornton County Recorder  
By Edward S. [illegible] Deputy