Environmental Assessment for

The Arroyos Preserve

New subdivision and proposed right-of-way access road near Quartzsite, Arizona

Prepared for:

James Kunisch
2015 Freda Lane
Cardiff by the Sea, CA 92007

Prepared by:

NEI Environmental
1851 W. 24th Street
Yuma, AZ 85364

NEI Project No. 06-074

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1.0 INTRODUCTION AND PROJECT DESCRIPTION

This Environmental Assessment (EA) evaluates the potential environmental impacts associated with the James Kunisch proposal to develop 40 acres of private property into a 122-lot subdivision with a nine-hole golf course and water feature and to obtain a right-of-way to widen and pave the access road.

The proposed right-of-way will follow the Federal Land Policy and Management Act of 1976 (Public Law 94-579), applicable laws under this authority are contained within 43 CFR 2800, Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations 1500-1508. This document describes the environment and resources that might be affected by the proposed subdivision and right-of-way.

1.1 BACKGROUND

James Kunisch is intending to develop *The Arroyos Preserve*, a 40-acre parcel into a 122-lot residential community with a nine-hole golf course and a water feature. The property is landlocked by Bureau of Land Management (BLM) land. This residential project will require the construction of widening and paving an existing dirt access road. This 0.5-mile road will extend from 53rd Street north to the northeast boundary of the 40-acre property.

Mr. Kunisch has proposed two alternatives for the development of the proposed right-of-way to his property. All the alternatives are described in detail in Section 2.0.

1.2 LOCATION OF THE PROJECT

The project area is located approximately 2.5 miles west of Highway 95 and five miles south of Quartzsite, Arizona. The 40-acre parcel is identified as Assessor's Parcel Number 302-32-012. The proposed right-of-way will extend from 53rd Street north to the entrance of the 40-acre parcel. The USGS Topographic Map for the project area has been included as Figure 1. The following legal description applies to the project:

Arroyos Preserve
La Paz County, Arizona
NE 1/4 SE 1/4 of Section 19, Township 3 North, Range 19 West

1.3 LAND USE PLAN CONFORMANCE

The Proposed Action is in conformance with Federal regulations and BLM policies. The Yuma District Resource Management Plan (RMP) and the Environmental Impact Statement (EIS) that was implemented in 1985 provides the framework for managing public lands affected by this proposal.

1.4 APPLICABLE LAWS, REGULATIONS, AND POLICY

The proposed right-of-way would be authorized under the authority of the Federal Land Policy and Management Act of 1976 (Public Law 94-579). Applicable laws under this authority are contained within 43 CFR 2800.

1.5 PURPOSE AND NEED

The purpose of this project is to develop a 122-lot subdivision with a nine-hole golf course with a water feature within a 40-acre parcel as well as a paved road to access the subdivision. The development of this land will require a 0.5-mile road extending from 53rd Street north to the entrance of the 40-acre property. This 0.5-mile proposed right-of-way is needed to provide safe ingress and egress for the public to access this La Paz County approved subdivision.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The proposed action is located on the NE 1/4 SE 1/4 of Section 19, Township 3 North, Range 19 West. Mr. Kunisch owner of the 40-acre parcel is requesting permanent right-of-way on BLM land for the purpose of a residential access road. The road will extend 0.5 mile from 53rd Street north to the entrance of the 40-acre property near Quartzsite, Arizona (see Figure 1). The proposed right-of-way is to pave and improve the access to the proposed 122- residential subdivision.

Other projects associated with the subdivision development are as follows:

- The installation of sewer and water lines for each residential property. Santec Corporation, Castle Rock, CO, will conduct wastewater treatment.
- The construction of roads for home access with a suggested road width of 22-28 feet and associated ribbon curb.
- The development of two domestic water wells with an approximate depth of 350 feet for 100-year requirement per ADEQ.

The overall conceptual site plan for the 122-subdivision is designed around natural washes, which meanders through the 40-acre parcel. The existing washes will not be impacted or altered by the proposed development. Instead, the natural washes have added to natural aesthetics of the proposed subdivision. A conceptual site plan of the proposed subdivision has been included as Figure 2.

2.2 ALTERNATIVE A

66' RIGHT-OF-WAY ALIGNMENT ON SECTION LINE

With alternative A, Mr. Kunisch intends to develop a 40-acre parcel into a 122-unit subdivision with a nine-hole golf course with a water feature and align the proposed road along the section line between Section 19 and 20 that is located on the NE 1/4 SE 1/4 of Section 19, Township 3 North, Range 19 West. A total of 66 ft right-of-way will be requested for Alternative A. No temporary construction easement will be necessary.

This alternative follows normal road construction practices, which allows for easy road alignment along section lines. It will require the straightening, paving, and widening of the existing 12-foot wide dirt road. However, if the 0.5-mile right-of-way is centered on the section line of Sections 19 and 20, its alignment will conflict with the positioning of the existing power poles. This alternative will be more costly as it will require the relocation of these power poles in order to make way for the new road. In addition, the existing dirt road will require grading and contouring if it is to be abandoned. The grading and contouring will allow the abandoned dirt road to blend into the surroundings. Alternative A is illustrated in Figure 3.

2.3 ALTERNATIVE B

82' RIGHT-OF-WAY ALIGNMENT WITH 16' RAISED CENTER MEDIAN

With alternative B, Mr. Kunisch intends to develop a 40-acre parcel into a 122-unit subdivision with a nine-hole golf course with a water feature and align the proposed road on both sides of the power poles with a raised sixteen-foot median in between the road. The location for this alternative is on the NE 1/4 SE 1/4 of Section 19, Township 3 North, Range 19 West. This alternative would allow the road to provide access to the subdivision without relocating the existing power poles. Alternative B is illustrated in Figure 4. A total of 82 ft right-of-way will be requested for Alternative B. No temporary construction easement will be necessary. APS authorization letter for power poles to remain in median is in Appendix 5.

2.4 NO-ACTION ALTERNATIVE

The no-action alternative would involve rejecting the application pertaining to the right-of-way request.

Mr. Kunisch would not accomplish his project objectives if this alternative were selected since the proposed 122-unit subdivision requires a safe residential access road through BLM land.

3.0 AFFECTED ENVIRONMENT

3.1 GENERAL SETTING

The proposed Arroyos Preserve subdivision site and its associated right-of-way is located in a rural setting approximately 2.5 miles west of Highway 95, five miles south of Quartzsite, Arizona, and approximately six miles east of the Dome Rock Mountains. This land is within the Sonoran Desert region, which typically experiences high summer temperatures (above 100 degrees Fahrenheit) and mild winters. Rainfall averages approximately three inches per year with high evaporation rates common to the region.

The 40-acre site is landlocked by public land administered by BLM. There is an existing 12-foot wide dirt road extending from 53rd Street north to the 40-acre property. This road dips through the existing washes and has been used for more than 10 years.

The dirt road experiences light traffic volume, as there is an existing trailer located on the 40-acre site. There is moderate traffic on 53rd Street as it is an access road for several residential properties in the area. Highway 95 consists of moderate to heavy seasonal traffic from winter visitors, travelers, and local residents.

3.2 VISUAL RESOURCES

The proposed project site is located in moderately disturbed desert terrain. The proposed right-of-way site consists of a meandering dirt road with additional off-road vehicle dirt roads braiding through the proposed right-of-way. The washes located on the 40-acre site also cross the right-of-way. The soils consist of gravel and sand on the desert flatland and the washes contain gravel to medium-sized rocks.

Vegetation is sparse at the subject site and adjacent land. The washes contain a large amount of desert vegetation. Plants observed within the project site can be obtained in the Biological Assessment (see Appendix 1).

3.3 AFFECTED RESOURCES AND ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION ALTERNATIVES

Relevant environmental conditions for resources potentially affected by the Proposed Action and alternatives are discussed herein. The BLM critical elements will be in compliance with NEPA, and Council on Environmental Quality (CEQ) regulations. These descriptions are to target those considerations potentially subject to impacts.

The affected environment description is limited to Quartzsite, Arizona of La Paz County. Resource descriptions focus on the following critical elements of the human environment: Areas of Critical Environmental Concern (ACECs), air and water quality, hazardous/solid wastes, as well as biological, cultural, visual and wilderness resources. Baseline conditions of the environmental components that could be affected by the Proposed Action or alternatives, if implemented, are discussed.

Those critical elements of the human environment not affected by the Proposed Action or alternatives, if implemented, are not discussed in full detail. Native American religious concerns relative to the Proposed Action or alternatives, although not affected, are discussed in order to document that an attempt was made to determine if concerns existed.

3.3.1 AIR QUALITY (THE CLEAN AIR ACT OF 1955, AS AMENDED)

The Clean Air Act is the comprehensive Federal law that regulates air emissions from area, stationary, and mobile sources. This law authorizes the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment.

The project site is within an attainment area for all criteria pollutants (see Figure 5).

If the proposed project is approved some deterioration of air quality would be expected during construction due to the operation of construction equipment with the construction of the right-of-way and associated 40-acre subdivision. However, this is a localized condition that will discontinue when the construction project is complete. Fugitive dust generated from construction activities must be controlled by the contractor in accordance with local rules and ordinances.

3.3.2 AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) (*FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976*)

The Federal Land Policy and Management Act of 1976 provides a policy and direction to BLM field personnel for the identification, designation, and management of ACEC's where special management is required to protect important historic, cultural, and scenic values, fish and wildlife resources and other natural system and processes, and protect human life and property from natural hazards.

There are no Areas of Critical Environmental Concern (See Figure 6).

3.3.3 CULTURAL RESOURCES (*NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED*) HISTORIC AND CULTURAL PROPERTIES

Cultural resources are defined as nonrenewable remains of human activity, occupation, artifacts, ruins, works of art, architecture, and areas of religious significance that were of importance in human events. These resources consist of physical remains, areas where significant human events occurred--even though physical evidence of such events no longer exists and the physical setting immediately surrounding the actual resource. Historic and cultural properties include both prehistoric and historic remains.

A Cultural Resource Inventory was conducted by Aztlan Archaeology, Inc. Cultural Resource Project Record No. BLM-AZ-320-2006-057. There are historical sites within the project site. An in-depth description can be found in the cultural report (See Appendix 2).

There is a corral at the north end of the parcel that is considered of historic significance. The site (AZ R:7:120 ASM) is considered eligible for the National Register of Historic Places. The corral is illustrated in Figure 6. According to the Cultural Resources Inventory, a protective buffer would be used to avoid impacts to the finding. If avoidance is not possible, an archaeological testing plan is recommended (see Appendix 2).

3.3.4 ENVIRONMENTAL JUSTICE (*EXECUTIVE ORDER 12898*)

According to Executive Order 12898 of February 11, 1994, all Federal actions must address and identify as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations in the United States.

There are residential units within 0.5-miles of the proposed 40-acre subdivision. The residential access road will be temporarily impacted by the construction of this road. Environmental concerns for these residences include noise pollution from construction activities and reduced air quality from dust generated by construction traffic. However, these impacts are temporary and minor, and are not considered disproportionately high.

There are no concentrations of minority or low-income populations in the project area. No high and /or adverse human health or environmental effects are anticipated as a result of this project.

3.3.5 SOCIOECONOMIC RESOURCES

The purpose of this section is to identify the main characteristics of the population in the project area including demographics, racial diversity, housing, principal economic activities, and employment and income. The socioeconomic data was collected from the U.S. Census Bureau and the Arizona Department of Economic Security.

Census data (2000) indicate the total population of the Town of Quartzsite to be 3,354. The population is 94.5% white, 1.2% American Indian, 0.3% Asian, 0.2% African American, and 0.1% Hawaiian/Pacific Islander. La Paz County as a whole is 74.2% white with 22.4% of the population indicating Hispanic ancestry (see Appendix 3).

In 2000, the unemployment rate was 6.2%. The median household income was $23,053. Low-income populations are present within Quartzsite with 7.8% of families and 13.5% of individuals being below poverty levels.

The proposed project area is located approximately 2.5 miles west of Highway 95 and 5 miles south of Quartzsite, Arizona in La Paz County. The proposed project is intended to improve an existing dirt road. No adverse impacts to the local area are anticipated and consequently no disproportionate impacts to minority or low-income populations are expected. If approved, the proposed project would provide a safe ingress and egress for the public to access this proposed subdivision. In addition the proposed subdivision will provide necessary housing for the La Paz residents.

There are no adverse socioeconomic impacts anticipated as a result of this project.

3.3.6 FARMLAND, PRIME/UNIQUE

Farmlands defined as "prime," "unique," or of state or local significance are protected by federal and state legislation.

Prime Farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, soil erosion.

Unique Farmland is defined as land other than prime farmland that is used for production of specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically sustain high quality or high yields of specific crops when treated and according to acceptable farming methods.

There are no prime or unique farmlands within the project limits. There is no farmland in the vicinity of the proposed site.

3.3.7 FLOODPLAINS (EXECUTIVE ORDER 11988)

Executive Order 11988, issued May 24, 1977, established responsibilities for Federal agencies in the management of floodplains. This order requires that each agency shall provide leadership and take action to, 1) minimize adverse impacts associated with the occupancy and modification of flood plains and reduce risks of flood loss, 2) minimize impacts of floods on human safety, health, and welfare, and 3) restore and preserve the natural and beneficial values served by floodplains. The Executive Order defines flood plain to mean the off shore islands, including at a minimum, that area subject to a one percent or greater chance of flooding any given year.

According to Jackie Johnson from the Community Development in Quartzsite, Arizona parcel number 302-32-012 is in panel 0401220775 of the Federal Emergency Management Agency (FEMA) map (see Figures 7 and 8). This panel is in a Zone D area (see Figure 9). The project site is in an area that is considered undetermined, but possible flood hazards.

3.3.8 NATIVE AMERICAN RELIGIOUS CONCERNS (*AMERICAN INDIAN RELIGIOUS FREEDOM ACT OF 1978*)

The American Indian Religious Act states that on and after August 11, 1978, it shall be the policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

According to the Cultural Resource Inventory, no Native American Religious Concerns were identified (see Appendix 2).

3.3.9 NON-NATIVE INVASIVE SPECIES (WEEDS) (*FEDERAL NOXIOUS WEED ACT*)

The Federal Noxious Weed Act, Public Law 93-629 (7 U.S.C. 2801 et seq.; 88 Stat. 2149), enacted January 3, 1975, established a Federal program to control the spread of noxious weeds. Based on Executive Order 13112 issued February 3, 1999, all projects will "subject to the availability of appropriations, and within Administration budgetary limits, use relevant programs and authorities to:

i) prevent the introduction of invasive species;
ii) detect and respond rapidly to, and control populations of such species in a cost effective and environmentally sound manner;
iii) monitor invasive species populations accurately and reliably; and
iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded."

To prevent the introduction of invasive species, all earth-moving and hauling equipment will be washed at the contractor's storage facility prior to entering the construction site. Also, to prevent the spread of invasive species to uncontaminated areas, all earth-moving and hauling equipment will be washed at a designated location prior to leaving the construction site. In addition, all disturbed soils that will not be landscaped or otherwise permanently stabilized by construction will be seeded using species native to the project vicinity.

3.3.10 THREATENED AND ENDANGERED SPECIES (*ENDANGERED SPECIES ACT OF 1973, AS AMENDED*)

The Endangered Species ACT (ESA) is a Federal law that provides for the conservation of endangered and threatened species of fish, wildlife, and plants. Under the ESA the term threatened or endangered is defined as follows: a species is considered endangered if it is in danger of extinction throughout a significant portion of its range; it is threatened if it is likely to become an endangered species.

The project area may contain suitable habitat for the Sonoran Desert Tortoise (*Gopherus agassizii*), which is listed as a species of special concern by the ESA. No species listed under the ESA were found to occur in the project area (see Appendix 1). The proposed project would have no adverse effect on threatened or endangered species of plants and wildlife.

3.3.11 WASTES, HAZARDOUS / SOLID (RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, AND COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980)

The Resource Conservation and Recovery Act (RCRA) gave the Environmental Protection Agency the authority to control hazardous waste. This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous wastes.

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), also known as "Superfund," gave the federal government broad authority to regulate hazardous substances, to respond to hazardous substance emergencies, and to develop long-term solutions for the nation's most serious hazardous waste problems.

Based upon the site visit conducted by a qualified person there are no known hazardous or solid wastes occurring within the project limits. There are no known hazardous or solid wastes occurring within the project limits. However gasoline and oils well be used as part of the construction operations. Any spills will be handled by the hazardous control measures proposed by the contractor and as approved by BLM.

3.3.12 WATER QUALITY, DRINKING OR GROUND (*SAFE DRINKING WATER ACT OF 1974, AS AMENDED AND CLEAN WATER ACT OF 1977*)

The Safe Drinking Water Act of 1974 requires managing potential contamination threats to ground water. The act instructed EPA to establish a national program to prevent underground injections of contaminated fluids that would endanger drinking water sources.

Impacts to water quality are not anticipated as a result of the proposed road construction and subdivision development activities. The water will be supplied to the proposed development by a domestic water well. The wastewater from the proposed subdivision will be treated by an onsite wastewater treatment system approved by ADEQ.

3.3.13 WETLAND / RIPARIAN ZONES (*EXECUTIVE ORDER 11990*)

Executive Order 11990 of May 24, 1977 requires each agency to take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

Wetlands are defined as lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following attributes:

- Periodically, the land supports predominantly hydrophytes
- The substrate is predominantly undrained hydric soil
- The substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

There are no wetlands or riparian areas within the project vicinity. Therefore, no impacts to wetlands are anticipated as a result of this proposed project (See Figure 10 and 11). In addition, no "waters of the United States" will be impacted as a result of the proposed subdivision. The proposed subdivision has been designed to avoid existing washes located on the parcel (See Figure 2). The proposed right-of-way will cross an existing wash. A 404 permit will be required for this road development where the access road crosses the existing wash near the southeast corner of the proposed subdivision.

3.3.14 WILD AND SCENIC RIVER (*WILD AND SCENIC RIVERS ACT OF 1968, AS AMENDED)*

The U.S. Congress passed the Wild and Scenic Rivers Act in 1968. The Act and accompanying regulations give direction to state and federal land management agencies for the protection and management of free-flowing rivers. The basic goal of this congressional action is stated:

> *It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.*

According to a list provided by the National Atlas Wild & Scenic Rivers the Verde River is the only river in Arizona designated as a *Wild and Scenic River*. The *U.S. Fish and Wildlife Service* manages the *Verde*. There are no *Wild and Scenic Rivers* within the project area (see Appendices 4).

3.3.15 WILDERNESS (*FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976 AND WILDERNESS ACT OF 1964*)

According to the Wilderness Act of September 3, 1964 (Public Law 88-577), there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.

There are several Wilderness areas in La Paz County none is within the project site (See Figure 12).

3.3.16 STANDARDS FOR RANGELAND HEALTH

Land Health Standards were developed in consultation with local Resource Advisory Councils (RACs). These standards are based on the four fundamentals of rangeland health found in BLM's Grazing Regulations, and address 1) water quality, 2) wildlife habitat, 3) soil stability, and 4) energy flow and nutrient cycling.

Within the area of the project site, there are no grazing lands that be affected by the proposed development.

3.3.17 THREATENED OR ENDANGERED PLANT SPECIES ACT Of 1973

The Threatened or Endangered Species Act of 1973 is to provide for the conservation of endangered and threatened species of fish, wildlife, and plants.

Threatened and endangered species list for La Paz County was obtained online from the FWS (see Appendix 1 of the Biological Assessment).

3.3.18 ENERGY POLICY ACT 2005

The area contains no features to energy development, production, supply or distribution.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 SUMMARY OF IMPACTS

Table 1 below is a list of all the critical elements and states if there is an impact associated with each alternative.

Table 1
Summary of Impacts

ELEMENT	ALTERNATIVE A PROPOSED ACTION		ALTERNATIVE B PROPOSED ACTION		NO-ACTION ALTERNATIVE	
	IMPACT	NO IMPACT	IMPACT	NO IMPACT	IMPACT	NO IMPACT
CRITICAL:						
Air Quality	X		X			X
Areas of Critical Environmental Concern		X		X		X
Cultural Resources	X		X			X
Environmental Justice		X		X		X
Socioeconomic Resources		X		X		X
Farmlands, Prime/Unique		X		X		X
Floodplains	Undetermined	Undetermined	Undetermined	Undetermined		X
Invasive/Non-native Plants (Weeds)		X		X		X
Native American Religious Concerns		X		X		X
Threatened and Endangered Animal Species		X		X		X
Wastes, Hazardous/ Solids		X		X		X
Water Quality		X		X		X
Wetlands/Riparian		X		X		X
Wild and Scenic Rivers		X		X		X
Wilderness		X		X		X
Standards for Rangeland Health		X		X		X
Energy Policy		X		X		X
Threatened or Endangered Plant Species		X		X		X

4.2 CRITICAL ELEMENTS NOT AFFECTED BY PROPOSED ACTION AND ALTERNATIVES

The following critical elements have been analyzed and are either not present or would not be affected by the proposed action and alternatives.

1. Area of Critical Environment Concern\
2. Environmental Justice
3. Socioeconomic Resources
4. Farmland, Prime / Unique
5. Native American Religious Concerns
6. Threatened and Endangered Animal Species
7. Water Quality, Drinking or Ground
8. Wetland / Riparian Zones
9. Wild and Scenic Rivers
10. Wilderness
11. Standards for Rangeland Health
12. Energy Policy
13. Threatened and Endangered Plant Species

4.3 IMPACTS OF PROPOSED ALTERNATIVES

The following critical elements have been analyzed and would have an impact on the environment.

1. Air Quality:
   - Temporary impacts are anticipated due to construction and equipment.
2. Cultural Resources
   - A historical site was identified (see Appendix 2)
3. Floodplains:
   - The project site is in an undetermined area.
4. Non-Native:
   - Measures would be taken to prevent the spread of invasive plants in the project site.
5. Waste, Hazardous / Solids:
   - Measures would be taken to avoid any waste or hazardous spill associated with the construction.

5.0 LIST OF PREPARERS

The following is a list of preparers involved in the preparation of this Environmental Assessment:

Mark Galate, Environmental Professional

Stacy Gutierrez, P.E. Vice President, Environmental Engineer

6.0 CONSULTATION AND COORDINATION

The following agencies were consulted to prepare this Environmental Assessment:

Arizona Public Safety (APS)

Aztlan Archaeology, Inc.

Bureau of Land Management (BLM)

La Paz County Public Works

The correspondence has been attached as Appendix 5.

7.0 REFERENCES

Arizona Department of Environmental Quality website

D.L Wilson, Parker Area Manager, Arizona Public Service (APS): 1221 Arizona Avenue Parker, Arizona 85644

Federal Emergency Management Agency (FEMA) map panel 0401220775A.

Francisca Muller, Realty Specialist BLM 2555 East Gila Ridge Road Yuma, Arizona 85365, 928-317-3237

Jackie Johnson, Community Development, La Paz County 928-669-6138

La Paz County Comprehensive Plan

Lois Fox, La Paz County Public Works; Parker, Arizona 928-669-6407

Map of Areas of Critical Environmental Concerns from Lake Havasu Field Office Resource Management Plan

Rebecca Heick BLM, Field Manager: 2555 East Gila Ridge Road Yuma, Arizona 85365, 928-317-3200

Sandra Arnold, Archeologist BLM 2555 East Gila Ridge Road Yuma, Arizona 85365, 928-317-3237

The National Wild and Scenic River System website:

WetLandMAPS.com

8.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

The resumes of the key personnel for this project are included on the following pages.

Stacy Gutierrez, P.E.
Vice President, Environmental Engineer

Education:

Master of Science in Technology from Arizona State University, 2004
Bachelor of Science in Environmental Engineering from California Polytechnic State
University in San Luis Obispo, 1996

Relevant Certifications:

Registered Professional Engineer (Environmental) – License #36702
Certified for Hazardous Waste Operations & Emergency Response (40hr)
Certified AHERA Building Inspector, Management Planner, Contractor/Supervisor, and Project Designer for Asbestos Inspections, Management, and Abatement.
Certified Lead Based Paint Inspector
Certified Microbial Remediation Supervisor
ASTM Phase I Training Certification
ASTM Phase II Training Certification

Relevant Experience:

- **Phase I Environmental Site Assessments**

City of Yuma Giss Parkway, Yuma County Right of Way Annex, Wellton-Mohawk Property Transfer, Albertson's Shopping Center, Alexander Ford, Bienestar, Avenue A Widening, Mohave County Administration Complex, San Luis Industrial Park, Yuma Regional Medical Center, Yuma International Airport

- **Underground Storage Tank Closures/Site Characterization**

Little Ole's Food and Fuel, Cocopah Easy Corner, Stuckey's Convenience Store, Cocopah Vocational Training Center, Mohave County Highway Department

- **Asbestos and Lead Based Paint Inspections**

Yuma County, Arizona Western College, Dakotas, Karl Model, Former K-Mart, Southwest Cancer Center, Town of Wellton

- **Soil Sampling at Potentially Contaminated Sites**

Yuma County, Shay Oil, Arizona Department of Corrections, City of Yuma, Yuma Proving Ground, South Yuma County Landfill, Sturges Estate

- **Aqueous Sampling**

Yuma County, Kinder Morgan, Little Ole's, Marine Corps Air Station, Mission Citrus, Shay Oil Company

- **State-of-the-Art Municipal Solid Waste Landfill Design**

South Yuma County Landfill

- **Indoor Air Quality Investigations and Mold Abatement Projects**

Numerous Residential Properties, Citrus Plaza, AEA Federal Credit Union, Yuma County Court House, Yuma County Recorders Office, Gastroenterology Center

- **NEPA Environmental Assessments**

Arizona Housing Development Corporation, Quechan Housing, San Carlos Housing, and Yavapai-Apache Housing

- **Radon Sampling**

Numerous Residential Properties
Silver Mesa Apartments, Terracina Apartments, Villa Nueva Apartments

- **Environmental Protection Plans/Health and Safety Programs**

Emergency Response Coordination – City of Yuma
Standard Operating Procedure for TB Isolation Rooms – Yuma County
Respiratory Protection Program – Yuma County
Emergency Evacuation Plan – Dole
Health and Safety Plan – South Yuma County Landfill

Professional and Community Involvement:

Active Member of ASPE and ASCE
American Indoor Air Quality Council
Environmental Information Association
Rotary International

Mark Galate

Environmental Professional

Education:

Bachelor of Environmental Science (Biology Emphasis); Northern Arizona University

Certifications:

Lead Base Paint Inspection and Risk Management (40 Hr)
Hazardous Materials and Hazardous Waste Workers (Refresher 8 Hr)
Transportation of Hazardous Materials (80 Hr)
Incident Command Systems (40 Hr)
Emergency Response to Hazardous Material Incidents (40 Hr)
Hazardous Materials Incident Response Operations (40 Hr)
Hazardous Waste Facility Management (40)
ArcView 3.0
Introduction to ArcGIS II
GPS Field Mapping
ASTM Phase I Training Certification
ASTM Phase II Training Certification
Certified AHERA Building Inspector

Relevant Experience:

- **Stormwater Pollution Prevention Plans**

  1st Street Waterline, East Main Canal Multi-Use Path, 9E to South Frontage Road, 42" Water Transmission Main, 3E to 9E, 30" Water Transmission Main 1st Street and Madison Road Improvements, Gowan Milling Expansion, Taylor Farms, B1.7 Canal Lateral Pipeline – Avenue 6E, 21st Drive Improvement Project, Tonto National Park, South General Aviation Apron Development, Estrella at Mesa Del Sol, COY – Gateway Park and Backwash Line, El Dorado Senior Housing, Ave. E & CO. 23rd Street to New International Port of Entry, Shay Oil on South Fortuna Road, COY Gateway Park and Backwash Line.

- **Asbestos Sampling**

  Lines and Lundgreen Roofing and Insulation
  COY 3 Residential Dwellings
  El Centro Chamber of Commerce
  Mohawk Valley Elementary School

- **Aqueous Sampling**

  Shay Oil Company, Stuckey's, Union Pacific Railroad, North Madison Yuma County, DDS, Trans West Cooling, Mission Citrus, Apples Radiator, Residential

- **Soil Sampling**

  Yuma County, DDS Facility
  City of Yuma
  Union Pacific Railroad
  Marine Corps Air Station
  Wal-mart
  Apples Radiator Shop

Brock Research Center

- **Indoor Air Quality Investigations**
  San Pasqual High School
  Residential Sampling
  Bose Corporation
  Yuma High School
  YRMC Easter Seals Building
  Picacho Homes
  Bureau of Land Management
  YCO Sheriff's Office

- **Underground Storage Tank Closures/Site Characterization**
  Shay Oil Company

- **Phase I**
  Fox 9 News, City of Yuma 10th Avenue and 16th Street Properties
  Bienestar Estates #9, New Sun Homes, Jacobson Section 17 Land Trust
  South Pacific Industries, Sans RV Park, Joe Deal Self Storage,
  Winlectric, Womans Health Specialist, El Rancho Encantado
  Adult Probation Parking Lot I & II

- **Transaction Screening**
  Best Western Inn Suites Condominiums

- **Noise Attenuation Testing**
  Sierra Pacific Mobile Home Park
  Spring Gardens Mobile Home Park
  Country Breeze Mobile Home Park
  Residential Sampling
  Yuma County Jail Detention Center
  Yuma County Justice Center

- **Soil Vapor Extraction (SVE) and Free Product Recovery Units**
  Yuma County, Department of Developmental Services (DDS)
  Shay Oil Chevron 110 Somerton, Stuckey's

9.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Stacy Gutierrez, P.E.
Vice President

Date

Mark Galate
Environmental Professional

3/21/07

Date

10.0 LIST OF FIGURES

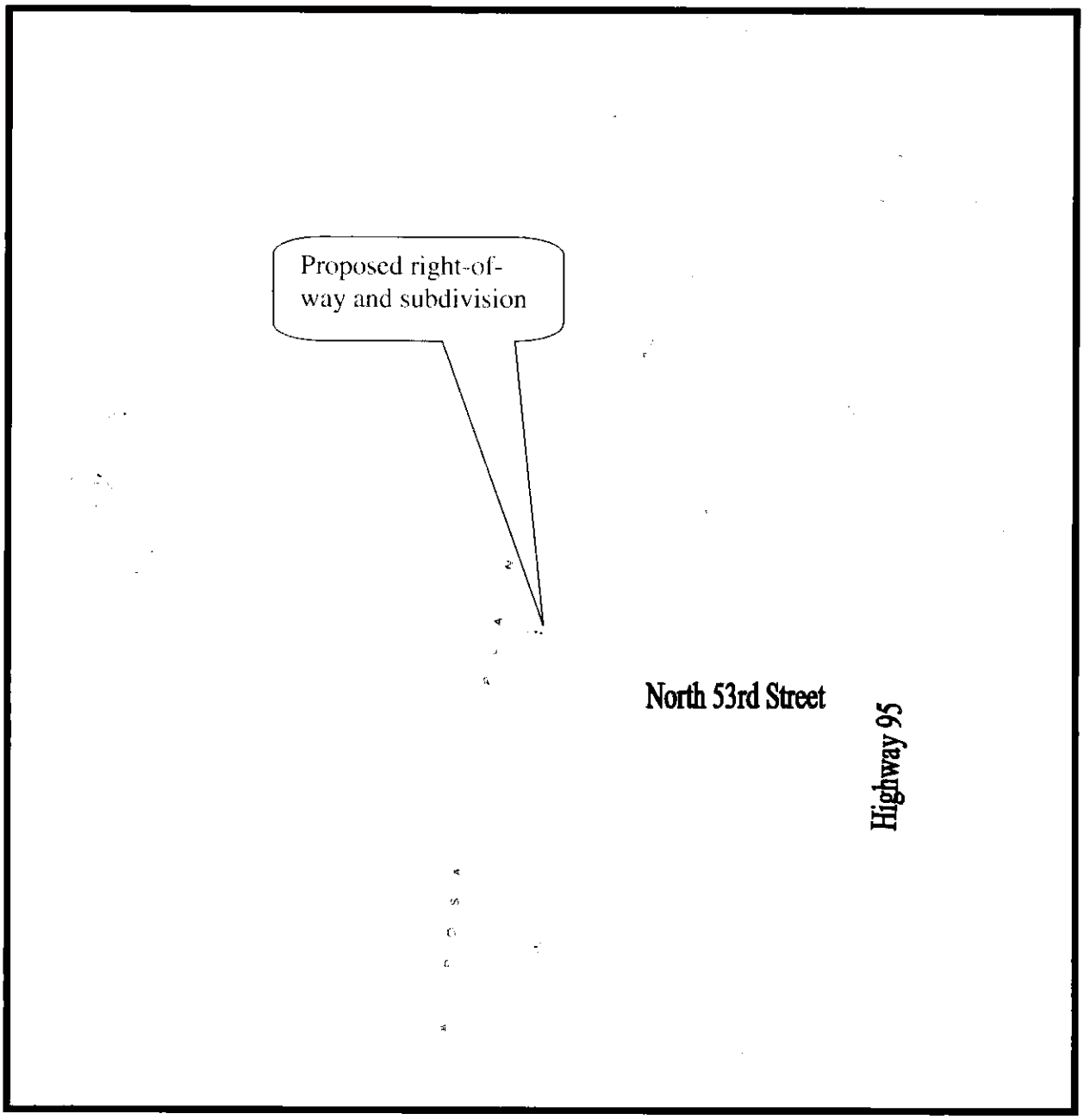


Figure 1
Vicinity Map
USGS Topographic Map
(Arroyos Preserve Subdivision)

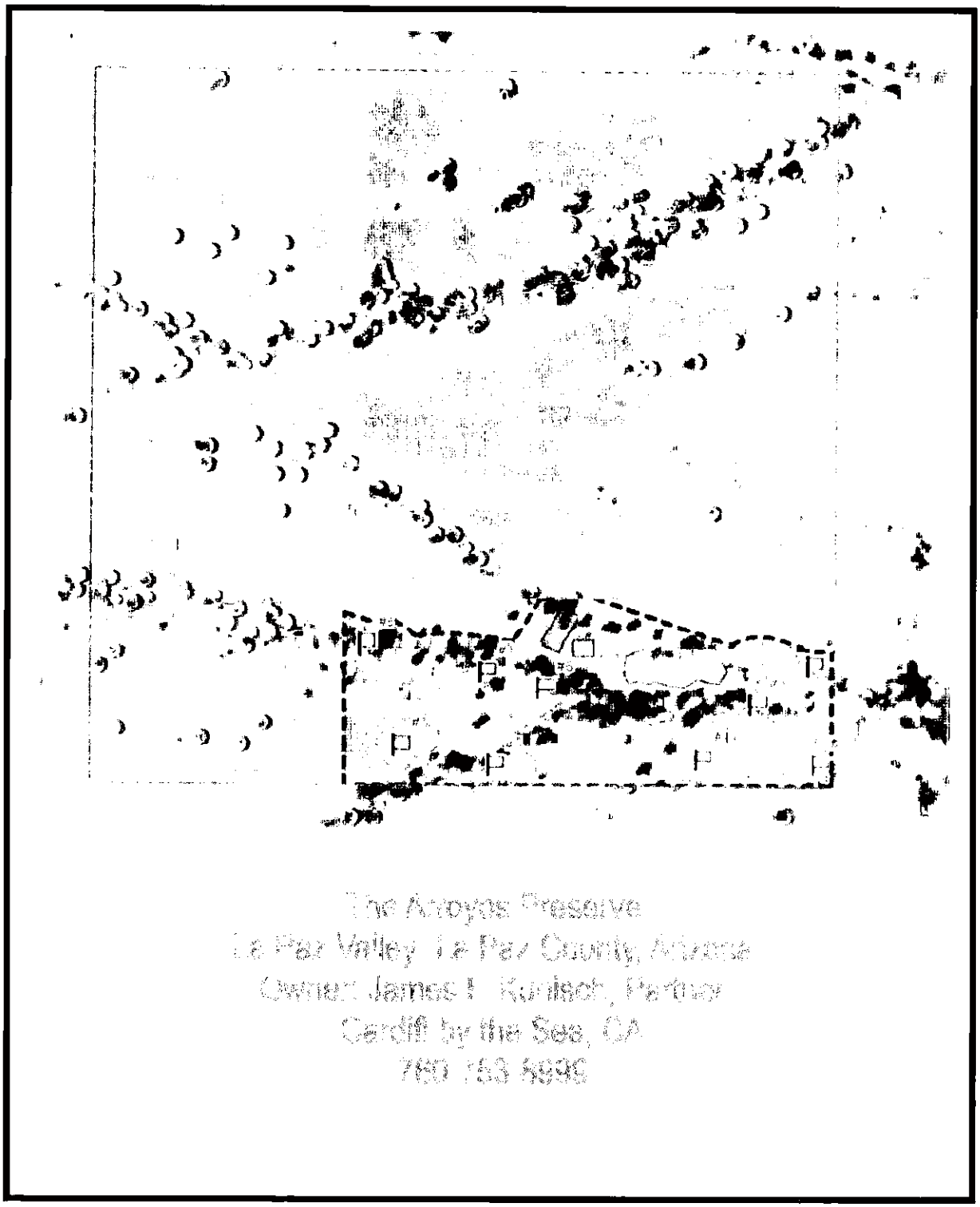
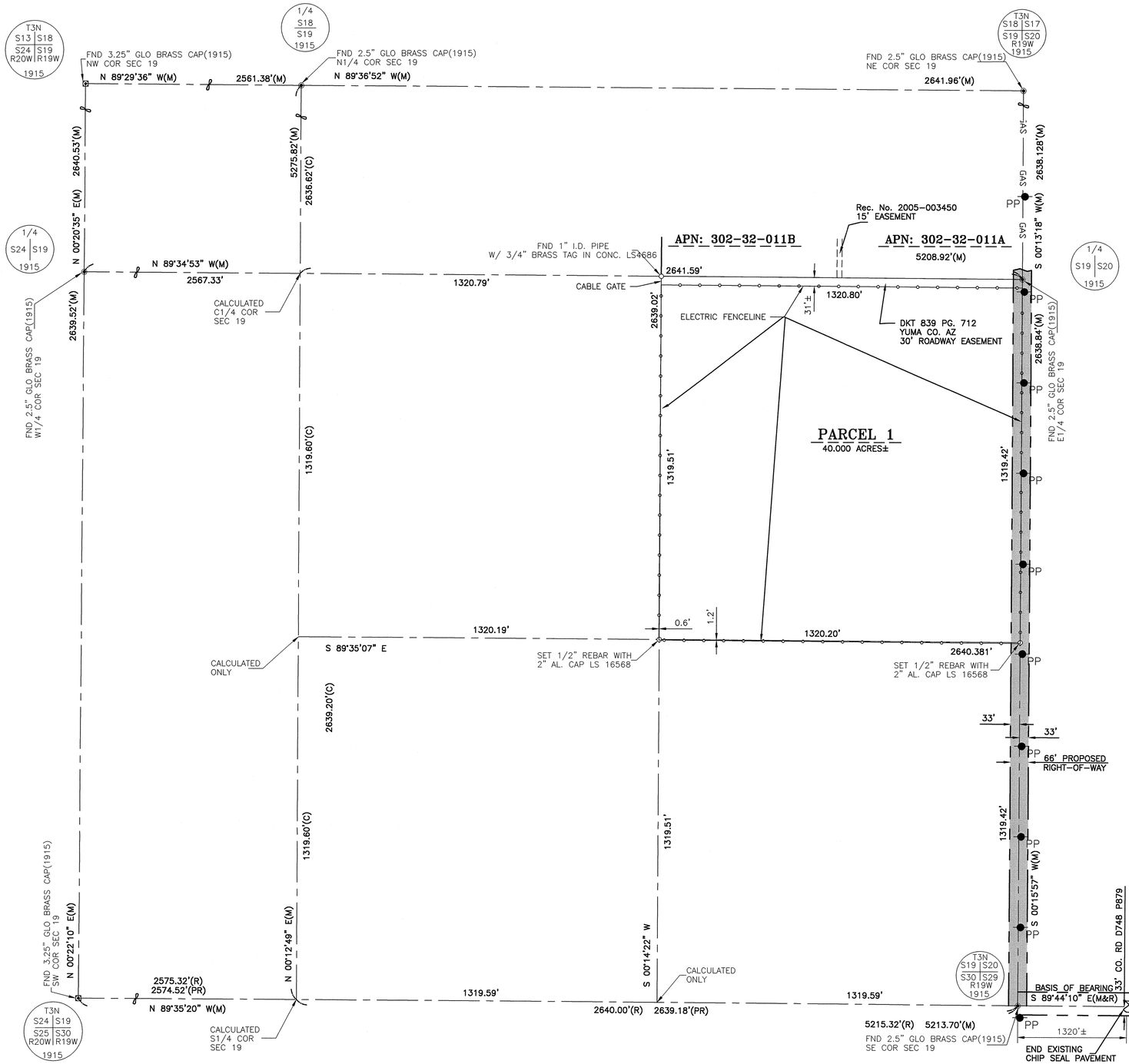


Figure 2
Conceptual Subdivision Layout
(Arroyos Preserve Subdivision)

Figure 3

Illustration of Alternative A
(Arroyos Preserve Subdivision)



LEGAL DESCRIPTION

THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 3 NORTH, RANGE 19 WEST OF THE GILA AND SALT RIVER MERIDIAN, LA PAZ COUNTY, ARIZONA.

BASIS OF BEARINGS:

BASIS OF BEARING IS THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 3 NORTH, RANGE 19 WEST SHOWN ON RESULTS OF SURVEY MAP FILED IN LA PAZ COUNTY OFFICIAL RECORDS FEE NUMBER 2000-04943 SHOWN ON SURVEY AS S 89°44'10" E AND IS USED AS THE BASIS OF BEARING FOR THIS SURVEY.

SITE INFORMATION:

40.000 ACRES +/- (1,742,346 SQ.FT.)

APN: 302-32-012

REFERENCE DOCUMENT:

REC NO. 2000-04943

LEGEND

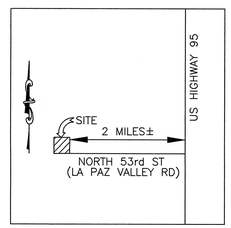
- ◉ = FOUND 3.25" GLO BRASS CAP (1915)
- ⊡ = FOUND 2.5" GLO BRASS CAP (1915)
- o = SET 1/2" REBAR WITH 2" ALUMINUM CAP LS 16568
- (M) = MEASURED
- (C) = CALCULATED
- (PR) = PRO-RATION
- (R) = RECORD PER REC NO. 2000-04943

PREPARED FOR:

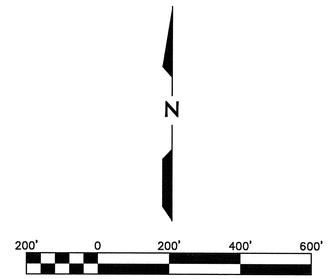
THE VANGUARD COMPANIES
MR. JAMES KUNISCH
4055 E. RIVER RD
TUSCON, AZ 85718
TEL(520)615-9300
FAX(520)615-9333

NOTE:

THIS FIGURE WAS CREATED FROM THE SURVEY PREPARED BY LEMME ENGINEERING INC. DATED 11/23/05 (W.O. #05-451). THIS FIGURE HAS BEEN PREPARED TO ILLUSTRATE THE ALTERNATIVES FOR THE PROPOSED RIGHT-OF-WAY AS PART OF AN ENVIRONMENTAL ASSESSMENT AND SHOULD NOT BE RELIED UPON FOR ANY OTHER REASON.



VICINITY MAP
SECTION 19, T3N, R19W
NOT TO SCALE



ARROYOS PRESERVE
ENVIRONMENTAL ASSESSMENT

ALTERNATIVE 'A'
66' RIGHT-OF-WAY
ALIGNMENT ON SECTION LINE

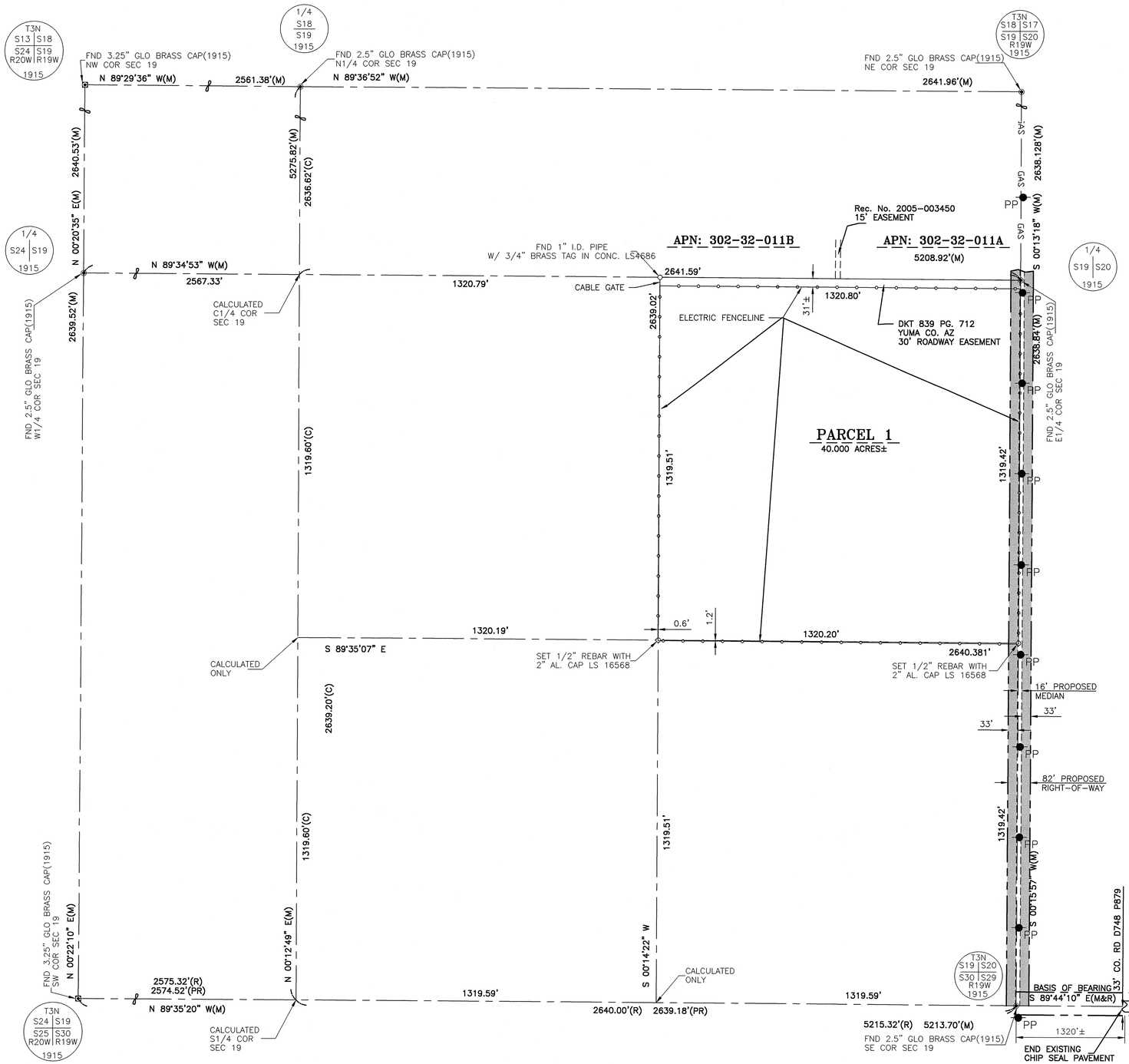
Nicklaus Engineering Inc.
1851 West 24th Street P.O. Box 6029
YUMA, ARIZONA 85364 (928)344-8374
Email: nei@neiaw.com

SCALE:	AS SHOWN
DATE:	DEC., 2006
DES. BY:	SSG
DRAWN BY:	DEH
SURVEYED BY:	–
JOB. No.:	06-074
FILE No.:	ENV-7-D

SHEET
FIG. 3

Figure 4

Illustration of Alternative B
(Arroyos Preserve Subdivision)



VICINITY MAP
SECTION 19, T3N, R19W
NOT TO SCALE

LEGAL DESCRIPTION
THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 3 NORTH, RANGE 19 WEST OF THE GILA AND SALT RIVER MERIDIAN, LA PAZ COUNTY, ARIZONA.

BASIS OF BEARINGS:
BASIS OF BEARING IS THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 3 NORTH, RANGE 19 WEST SHOWN ON RESULTS OF SURVEY MAP FILED IN LA PAZ COUNTY OFFICIAL RECORDS FEE NUMBER 2000-04943 SHOWN ON SURVEY AS S 89°44'10" E AND IS USED AS THE BASIS OF BEARING FOR THIS SURVEY.

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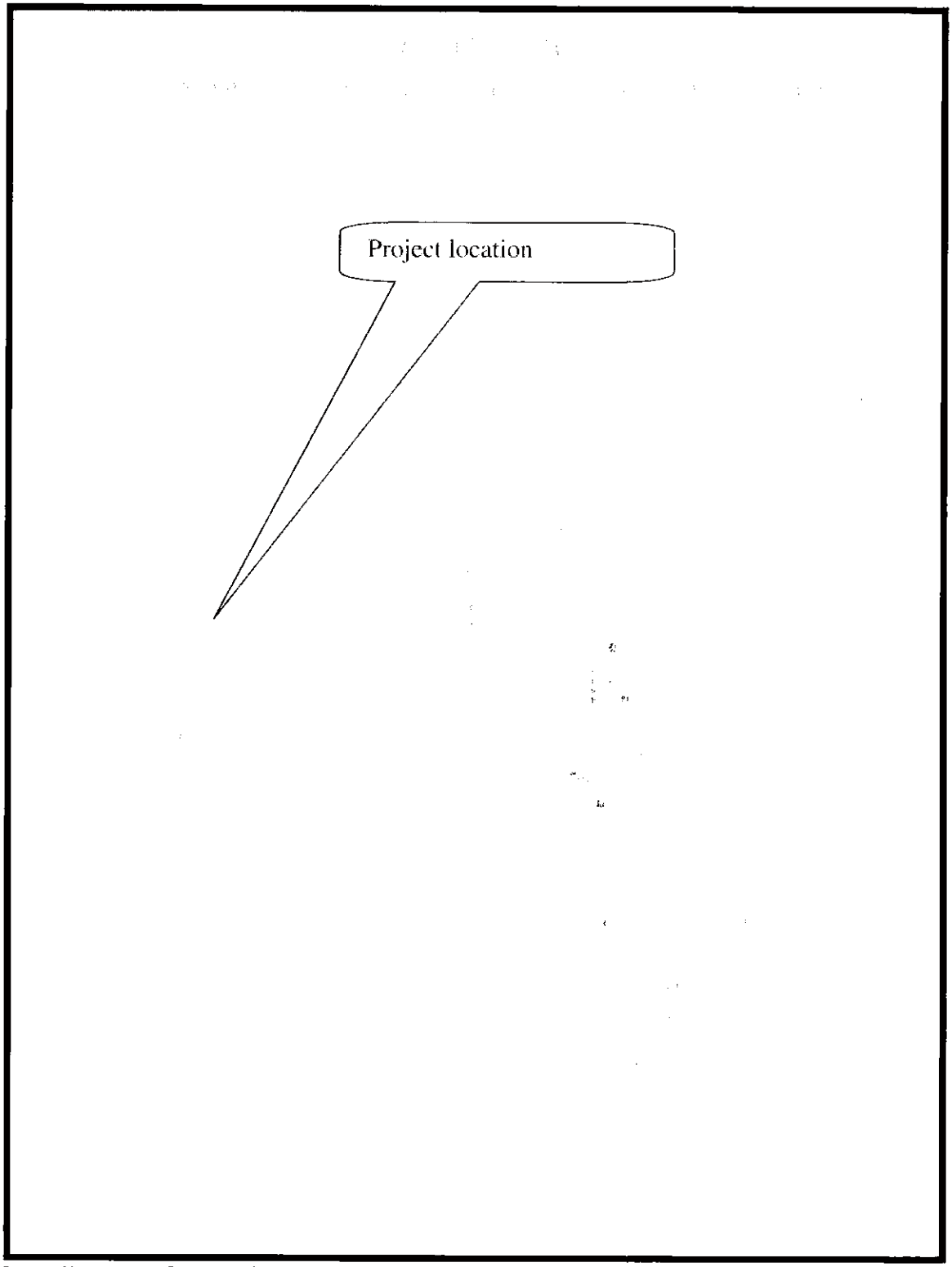
ARROYOS PRESERVE
ENVIRONMENTAL ASSESSMENT

ALTERNATIVE 'B'
82' RIGHT-OF-WAY W/16' MEDIAN
ALIGNMENT ON SECTION LINE

SCALE:	AS SHOWN
DATE:	DEC., 2006
DES. BY:	SSG
DRAWN BY:	DEH
SURVEYED BY:	–
JOB. No.:	06-074
FILE No.:	ENV-7-D

Nicklaus Engineering Inc.
1851 West 24th Street P.O. Box 6029
YUMA, ARIZONA 85364 (928)344-8374
Email: nei@neiaw.com

SHEET
FIG. 4



http://www.azdeq.gov/environ/air/plan/notmeet.html

Figure 5
Air Quality Map
(Arroyos Preserve Subdivision)

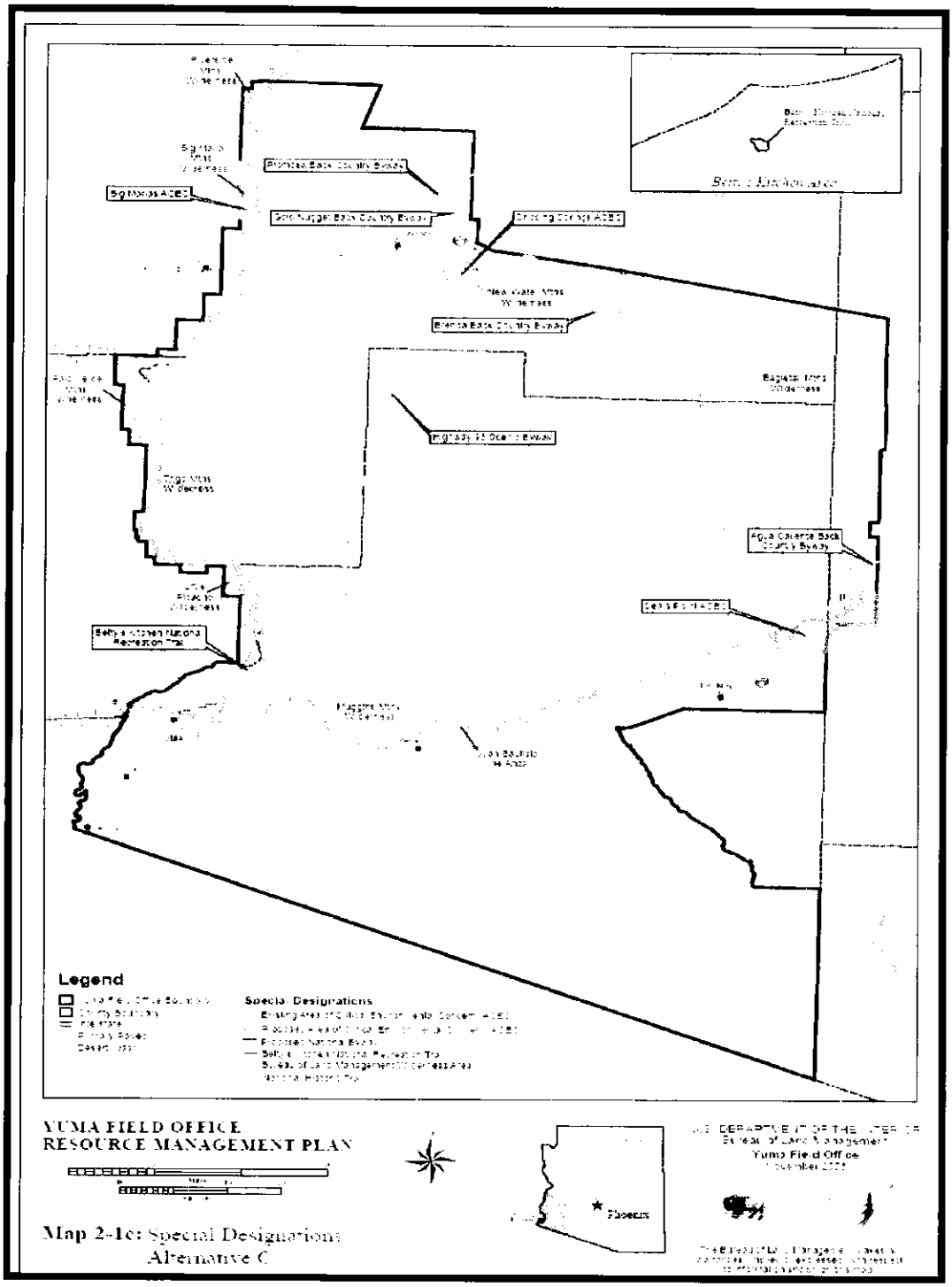


Figure 6
Areas of Critical Environmental Concerns
(Arroyos Preserve Subdivision)

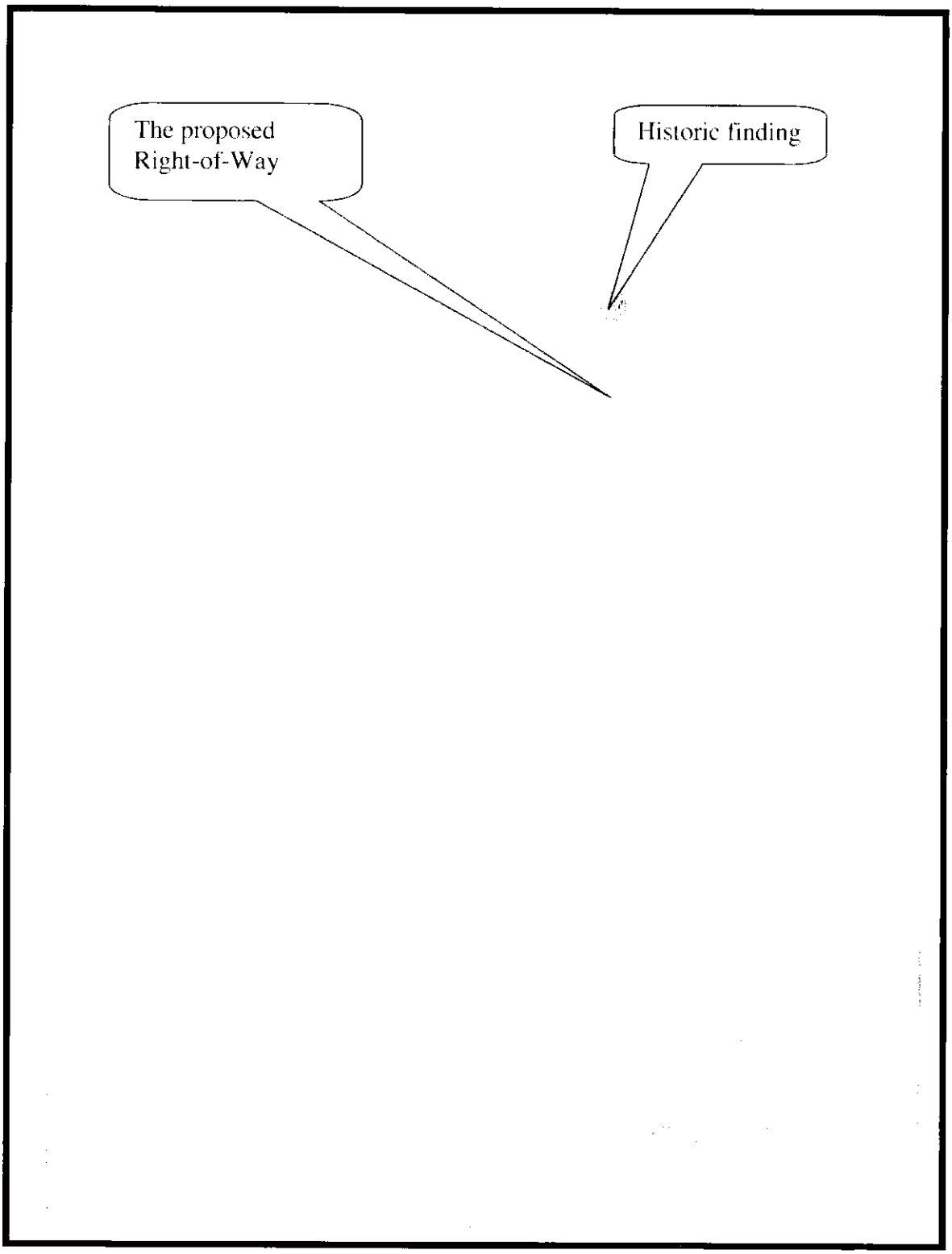


Figure 7
Location of Historic Finding
(Arroyos Preserve Subdivision)

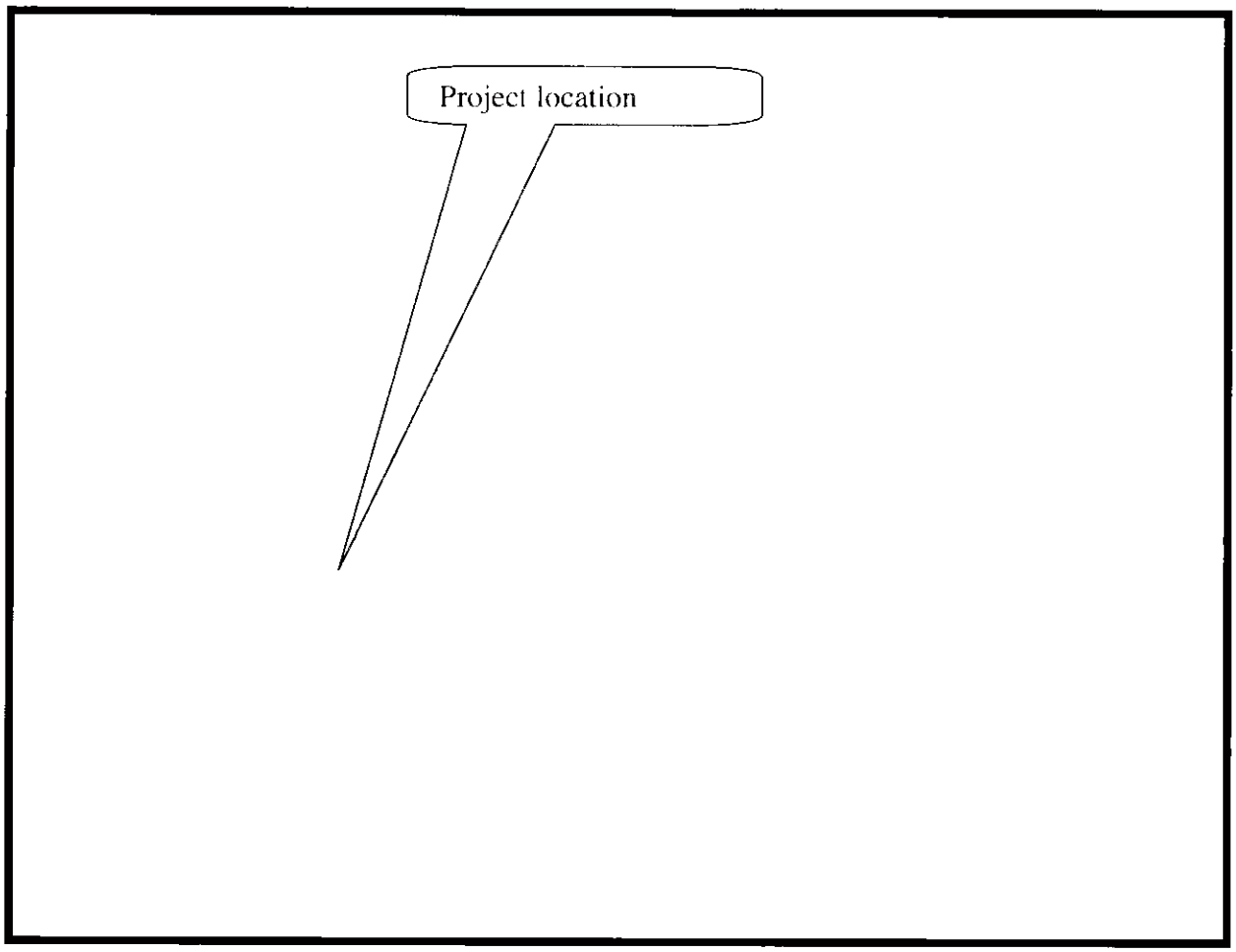


Figure 8
Floodplain Panels
(Arroyos Preserve Subdivision)

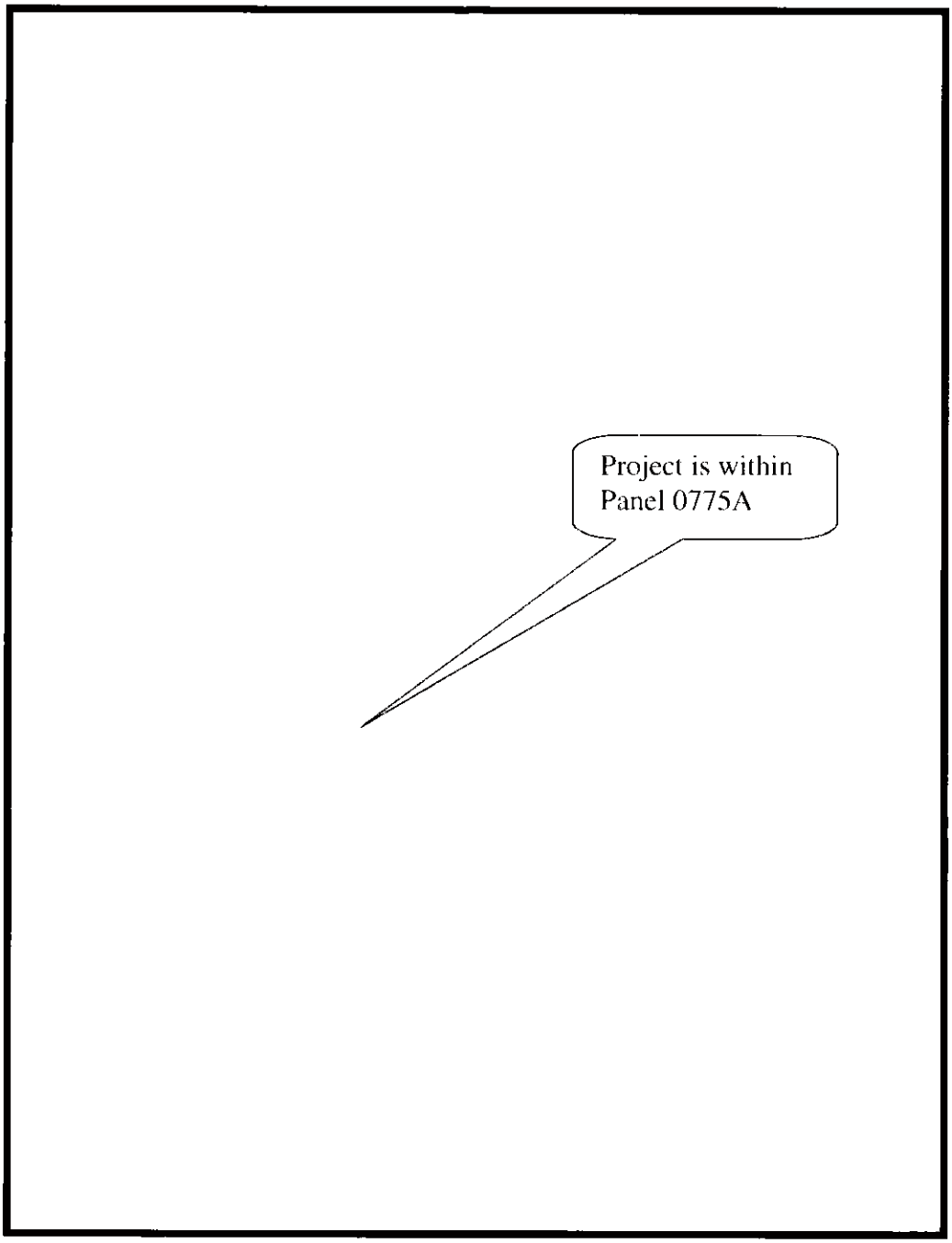


Figure 9
Panel ID Number 0775A
(Arroyos Preserve Subdivision)

FEMA FLOOD ZONE DESIGNATIONS & EXPLANATIONS

Annual Probability of Flooding of 1% or greater

A	Subject to 100-year flood. Base flood elevation undetermined.
AE or A1-A30	Both AE and A1-A30 represent areas subject to 100-year flood with base flood elevation determined.
AH	Subject to 100-year shallow flooding (usually areas of poundings) with average depth of 1-3 feet. Base flood elevation determined.
AO	Subject to 100-year shallow flooding (usually sheet flow on sloping terrain) with average depth of 1-3 feet. Base flood elevation undetermined.
A99	Subject to 100-year flood, with federal flood protection system (levee/dam) under construction. Base flood elevation undetermined.
V	Subject to 100-year flood and additional velocity hazard (wave action). Base flood elevation undetermined.
VE or V1-V30	Both VE and V1-V30 represent areas subject to 100-year flood and additional velocity hazard (wave action). Base flood elevation determined.
In SFHA	Areas in a "Special Flood Hazard Area" (or 100-year flood plain). Subject to 1% annual chance flooding. No distinctions have been made between the different flood hazard zones that may be included within the SFHA.
Flood Prone Area	An area designated as a "Flood Prone Area" on a map prepared by USGS and the Federal Insurance Administration. This area has been delineated based on available information on past floods. This is an area inundated by 1% annual chance flooding for which no base flood elevations have been determined.

Annual Probability of Flooding of 0.2% to 1%

B or X500	Both B and X500 represent areas between the limits of the 100-year and 500-year flood; or certain areas subject to 100-year flood with average depths less than 1 foot or where the contributing drainage area is less than 1 square mile; or areas protected by levees from the 100-year flood

Annual Probability of Flooding of Less than 0.2%

C or X	Both C and X represent areas outside the 500-year flood plain with less than 0.2% annual probability of flooding

Annual Probability of Flooding of Less than 1%

No SFHA	Areas outside a "Special Flood Hazard Area" (or 100-year flood plain). Can include areas inundated by 0.2% annual chance flooding; areas inundated by 1% annual chance flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; areas protected by levees from 1% annual chance flooding; or areas outside the 1% and 0.2% annual chance floodplains.

Undetermined

D	Unstudied areas. Flood hazards are undetermined.

Figure 10
Description of Zone D
(Arroyos Preserve Subdivision)

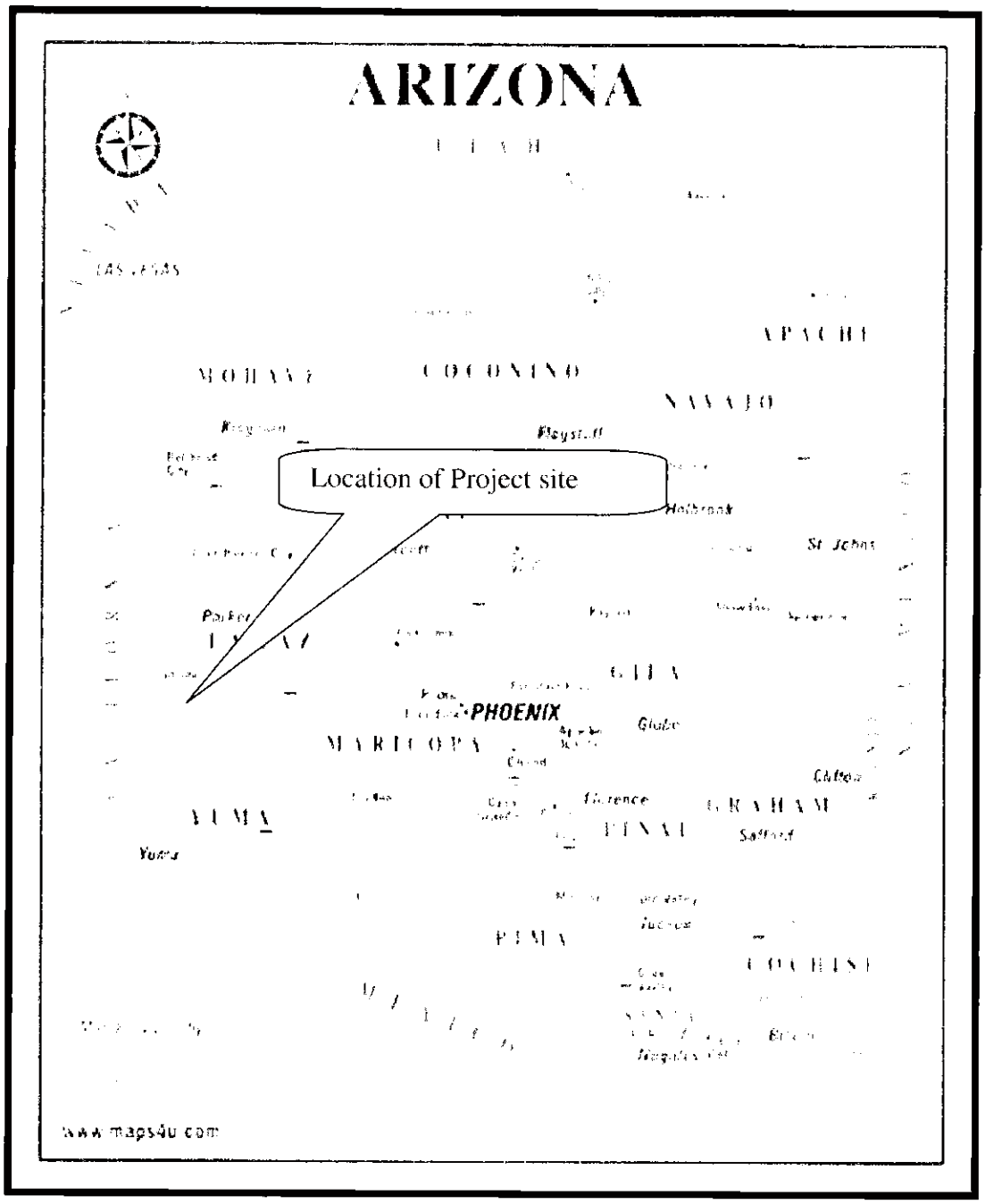


Figure 11
Location of County Lines and the Proposed Project Site
(Arroyos Preserve Subdivision)

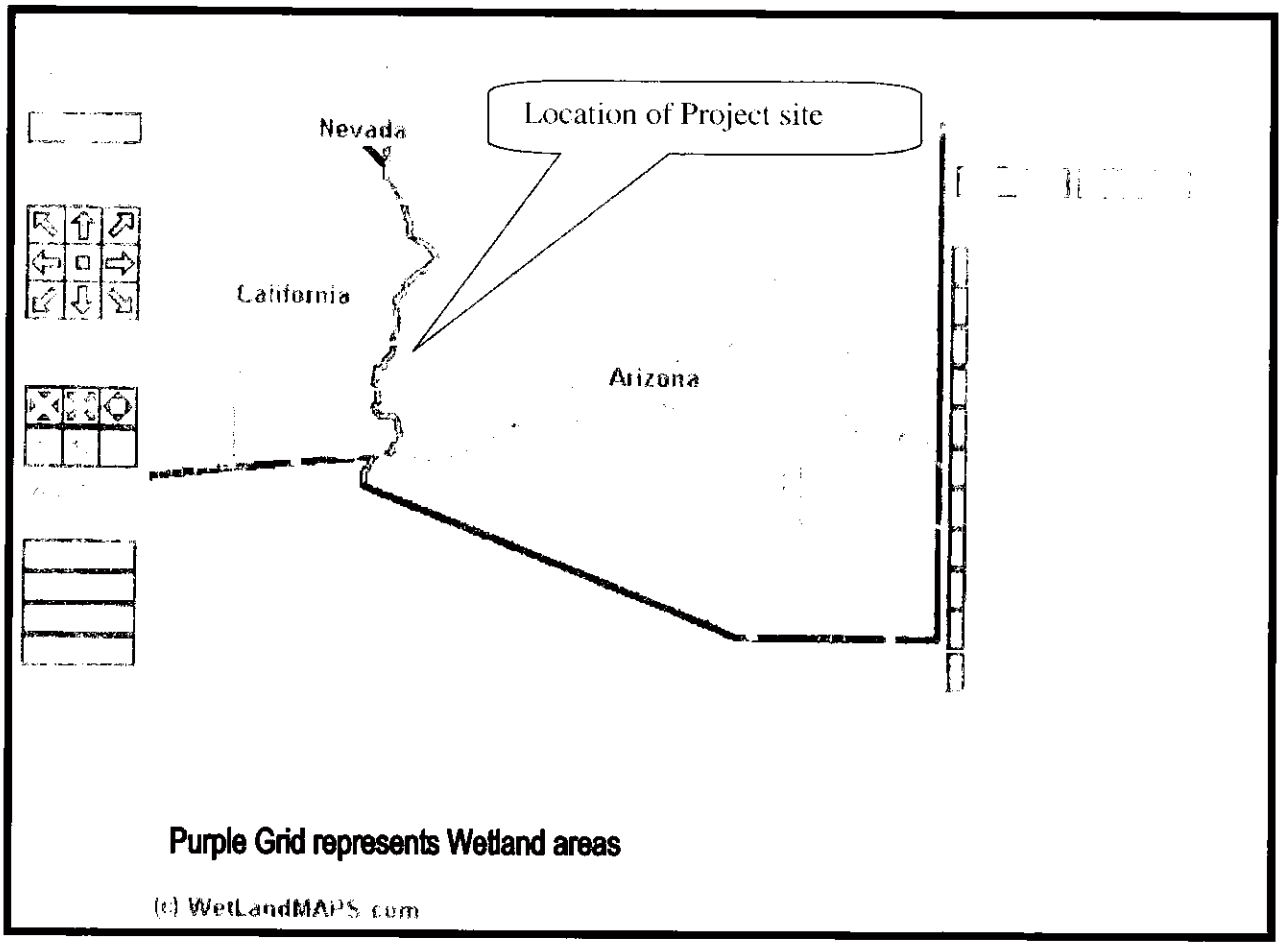


Figure 12
Wetland Map
(Arroyos Preserve Subdivision)

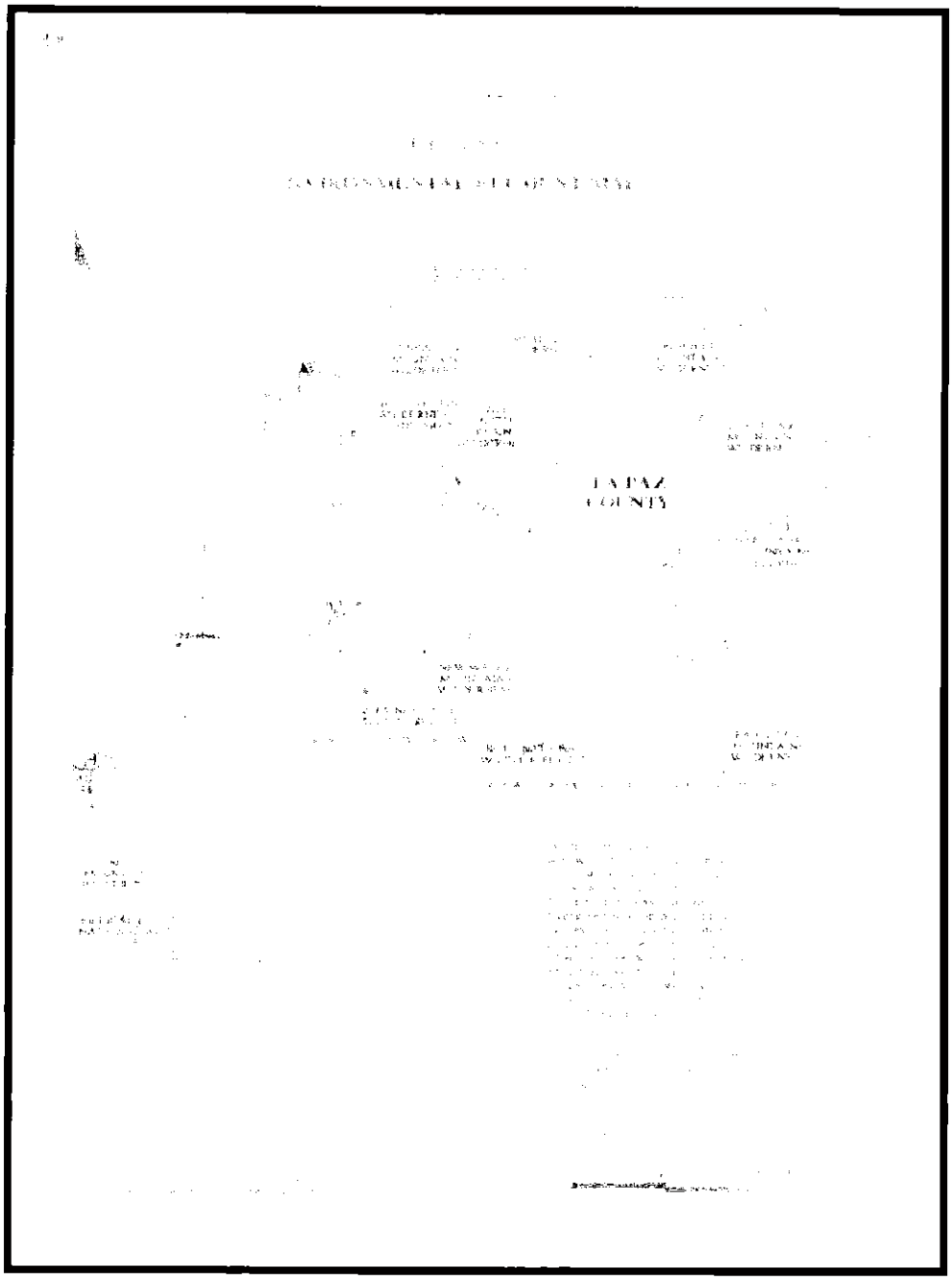


Figure 13
Locations of Designated Wilderness Areas
(Arroyos Preserve Subdivision)

11.0 LIST OF APPENDICES

Appendix 1 Biological Assessment
Appendix 2 Cultural Resources
Appendix 3 Census Data
Appendix 4 List of Wild and Scenic Rivers
Appendix 5 Correspondence

Appendix 1

BIOLOGICAL ASSESSMENT

Biological Evaluation for

Arroyos Preserve Subdivision and Access Road

Prepared for:

James Kunisch
Vanguard Development
2015 Freda Lane
Cardiff by the Sea, CA 92007

Prepared by:

NEI Environmental
1851 W. 24th Street
Yuma, AZ 85364

NEI Project No. 06-074

December 2006

Table of Contents

1 Project Location

The project is located in La Paz County approximately 5 miles south of Quartzsite, Arizona, and approximately 2 miles west of State Route 95 (see Figure 1).

The project site consists of a 40-acre parcel of privately owned land and a 0.5-mile linear stretch of land administered by the Bureau of Land Management (BLM). The BLM administered linear stretch of land is the proposed site for an access road to the 40 acres of private property. The privately owned land is located in Section 19 of Township 3 North, Range 19 West. The proposed road site is located in the same Township and Range on the section line of Sections 19 and 20 (see Figure 2).

The project site is located in a rural area. The private property is currently used as a residence and there is a residential community southeast of the south end of the proposed road. The land to the north is undeveloped private property. The proposed road and the property to the south, east, and west of the project site is land administered by BLM. There are existing right-of-ways on the BLM administered land; however, most of the land is vacant and undeveloped.

According to James Kunisch, the current owner, the private property has been used as a residence for quite some time. There is currently one mobile home and two trailers located on the private property. In addition there are two propane tanks, a windmill, and a large row of miscellaneous items.

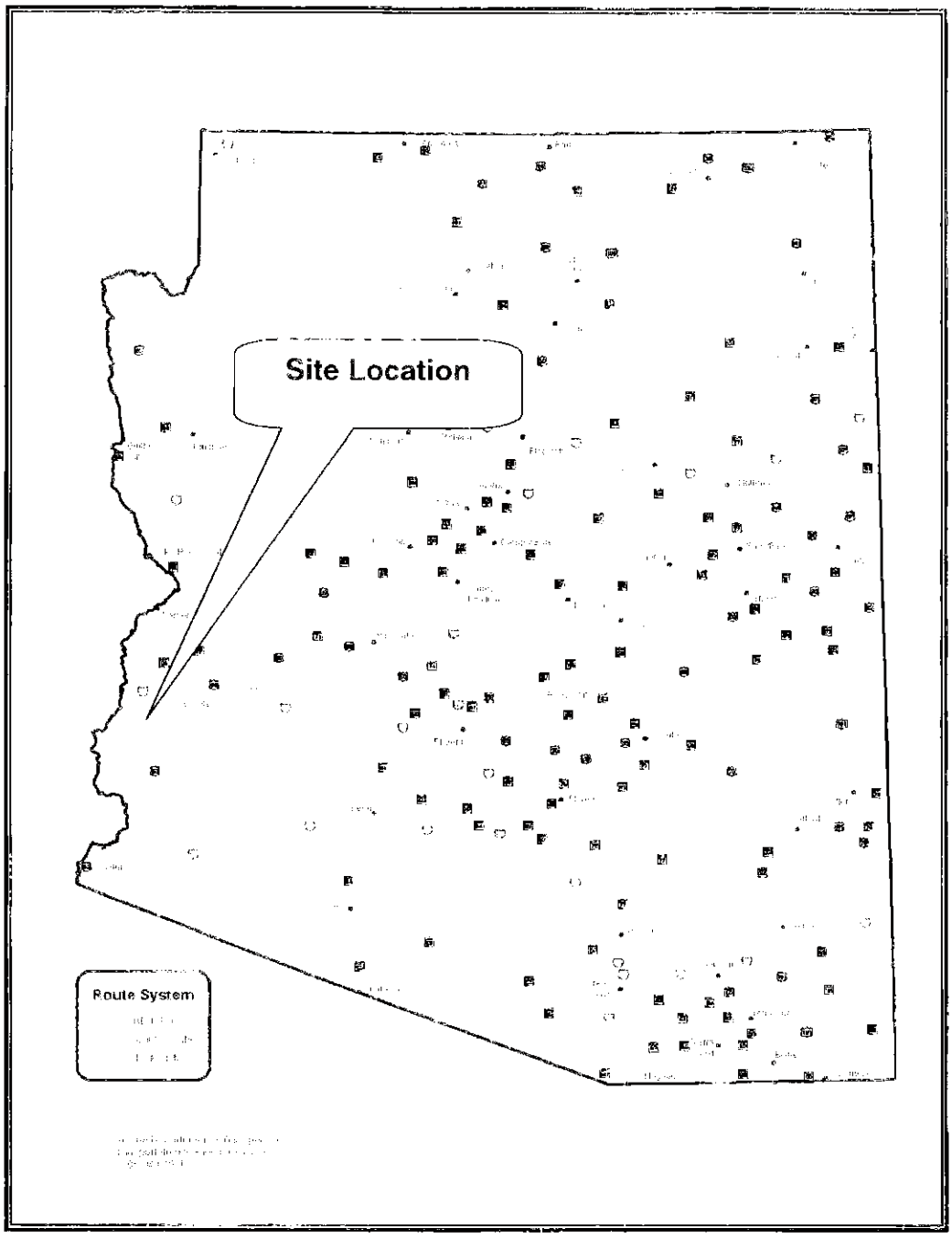


Figure 1
State Location Map
Vanguard Development (Arroyos Preserve Subdivision)
NEI Environmental 06-074

N

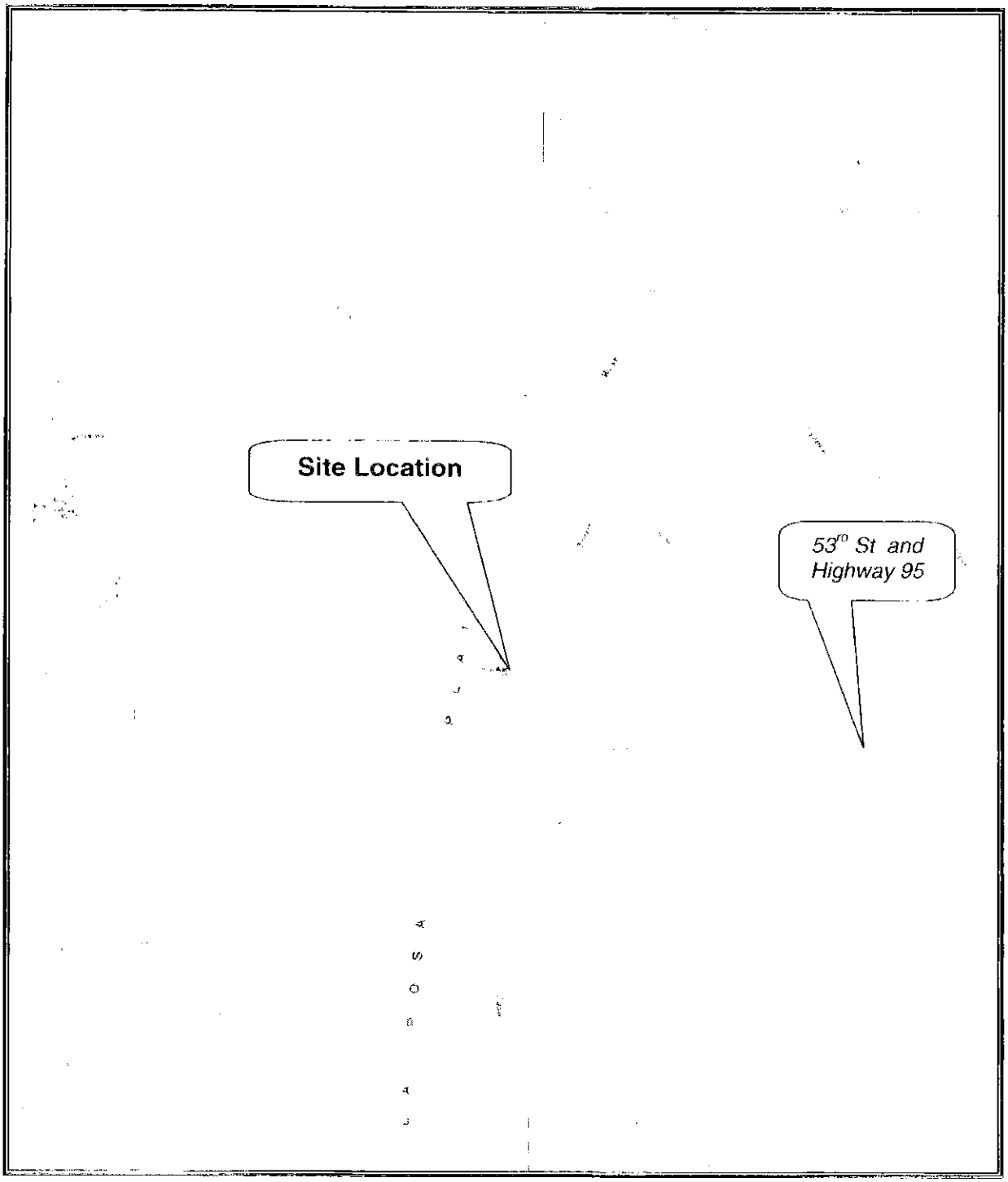


Figure 2
Vicinity Map
USGS Topographic Map
Vanguard Development (Arroyos Preserve Subdivision)
NEI Environmental 06-074

2 Project Description

Vanguard Development proposes to develop 40 acres of private property into a 122-lot subdivision. The proposed subdivision has already been approved by the La Paz County Board of Supervisors. Existing access consists of a 12-foot wide meandering dirt road, which is not suitable to serve the proposed subdivision. In order to access the property in a safe manner, La Paz County is requiring improvements to the existing dirt road.

La Paz County is seeking to increase the current right-of-way from 12 feet to 82 feet with a 16 foot raised median. The new right-of-way would extend north 0.5 miles from 53rd Street. The proposed road would be used only to access the private property and would not be used by commercial or industrial traffic. The proposed road would meet Arizona State standards and La Paz County construction standard specifications. Once the road construction is completed and approved, La Paz County would maintain it thereafter.

Because the private property is land-locked by land administered by BLM, both the private property and the proposed access road are considered in this biological evaluation.

Vanguard Development plans to develop the 122-lot subdivision with as little impact to the natural environment as possible. There are two medium-sized washes that cross through the 40-acre site and the proposed road (see Appendix 1). Vanguard does not seek to fill or divert these washes for housing pads. Instead, impact to the washes would be limited to access roads within the development at four proposed crossings.

3 Project Area

3.1 Methods

The evaluation of the site was based on describing and categorizing the vegetation and habitat communities of the project area to determine if the area might support any of the special status species listed by the Arizona Department of Game & Fish (AGFD), U.S. Fish and Wildlife Service (FWS), and BLM. Special status species are any plant or animal species of interest to federal, state, or local government.

Suzanne Detwiler, Environmental Professional, visited the site May 10, 2006 and Justin Hart, Biologist, visited the site on June 16, 2006. The 40-acre site and the 0.5-mile long proposed location for the site's access road were visually inspected in order to characterize the vegetation and land features.

3.2 Ecology

The biotic community in this area is classified as Sonoran Desertscrub within the Lower Colorado River Valley subdivision of the Sonoran Desert (Brown, 1994).

The elevation at this location ranges from approximately 1000-1100 feet above sea level (see Figure 2).

The soil consists of gravel and sand on the desert flatland and the washes contain gravel to medium-sized rocks (see Appendix 1: Site Photos).

The 40 acre site consists of relatively flat land with gravel to desert pavement covering much of the site and very little vegetation. There are two medium-sized washes running through the property west to east with an abundance of vegetation located in the washes. The washes are of importance to wildlife for food and cover.

The right-of-way site consists of a meandering dirt road with additional off-road vehicle dirt roads braiding through the proposed right-of-way. The washes located on the 40-acre site also cross the right-of-way.

3.2.1 Vegetation

The vegetation composition in the area is characterized as Creosote Bush-White Bursage series (Brown, 1994). Vegetation is sparse at the subject site and adjacent land. The washes contain a large amount of desert vegetation. Within the project site, plants observed include, but are not limited to, creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), blue palo verde (*Cercidium floridum*), ironwood (*Olneya tesota*),

ocotillo (*Fouquieria splendens*), honey mesquite (*Prosopis glandulosa*), and saguaro (*Cereus giganteus*) (see Appendix 1: Site Photos).

3.2.2 Wildlife

Wildlife observed within the project site consists of western tanager (*Piranga ludoviciana*), Gila woodpecker (*Melanerpes uropygialis*), common raven (*Corvus corax*), phainopepla (*Phainopepla nitens*), Gambel's quail (*Lophortyx gambelii*), white-winged dove (*Zenaida asiatica*), ladder-backed woodpecker (*Picoides scalaris*), black-tailed gnatcatcher (*Polioptila melanura*), Say's phoebe (*Sayornis saya*), verdin (*Auriparus flaviceps*), turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), a flycatcher (*Myiarchus sp.)* and desert cottontail (*Sylvilagus audubonii*). Additional wildlife likely to be found in the project area is listed in Table 1.

Table 1
Wildlife Likely to Occur in Project Area
Vanguard Development (Arroyos Preserve Subdivision)

Common Name	**Scientific Name**
Mammals	
Merriam's Kangaroo Rat	*Dipodomys merriami*
Cactus Mouse	*Peromyscus eremicus*
Coyote	*Canis latrans*
Birds	
Red-tailed Hawk	*Buteo jamaicensis*
American Kestrel	*Falco sparverius*
Common Poorwill	*Phalaenoptilus nuttallii*
Lesser Nighthawk	*Chordeiles acutipennis*
Ash-throated Flycatcher	*Myiarchus cinerascens*
Cactus Wren	*Campylorhynchus brunneicapillus*
Rock Wren	*Salpinctes obsoletus*
Ruby-crowned Kinglet	*Regulus calendula*
Northern Mockingbird	*Mimus polyglottos*
Crissal Thrasher	*Toxostoma crissale*
Black-throated Sparrow	*Amphispiza bilineata*

Common Name	Scientific Name
House Finch	*Carpodacus mexicanus*
Reptiles	
Side-blotched Lizard	*Uta stansburiana*
Zebra-tailed Lizard	*Callisaurus draconoides*
Tiger Whiptail	*Aspidoscelis tigris*
Common Kingsnake	*Lampropeltis getula*
Western Diamondback	*Crotalus atrox*

4 Identification of Species

4.1 Special Status Species

Special status species lists were obtained from the AGFD, FWS, and the BLM for this biological evaluation.

AGFD was asked to provide a list of special status species for consideration during this biological evaluation. There were no recorded occurrences of special status species in the AGFD Heritage Data Management System database within a 3-mile radius of the project site. AGFD also determined no designated or proposed Critical Habitat exists in the area.

A threatened and endangered species list for La Paz County was obtained online from FWS and was reviewed for this biological evaluation. Proposed and candidate species occurring in La Paz County were also considered.

All special status species lists can be found in Appendix 2.

4.2 Species Evaluations

Table 2 consists of special status species and evaluations.

Table 2
Special Status Species: Evaluations
Vanguard Development (Arroyos Preserve Subdivision)

Species	Status	Evaluation
Plants		
Parish Wild Onion *Allium parishii*	S	Unlikely to occur. Occurs on open rocky slopes. In addition, there are no known occurrences in La Paz County.
Kofa Mountain Barberry *Berberis harrisoniana*	S	Unlikely to occur. Species requires elevations of 2200 - 3500 feet.
Kearney's Sumac *Rhus kearneyi*	S	Unlikely to occur. Species occurs in steep canyons. The project area does not contain steep canyons. The only known population occurs in a canyon of the Tinajas Altas.

Species	Status	Evaluation
Blue Sand Lily *Triteleiopsis palmeri*	S	Unlikely to occur. Species requires drifting sandy soil. There is no drifting sandy soil in the project area.
Sand Food *Pholisma sonorae*	S	Unlikely to occur. Species requires drifting sandy soil. There is no drifting sandy soil in the project area.
Schott Wire-lettuce *Stephanomeria schottii*	S	Unlikely to occur. Species requires sand dunes and sandy flats. There are no dunes in the project area.
Varied Fishhook Cactus *Mammillaria viridiflora*	SR	Unlikely to occur. Species found on rocky or gravelly slopes, bajadas, or canyons at the upper edge of the Sonoran Desert.
Straw-top Cholla *Opuntia echinocarpa* *Cylindropuntia echinocarpa*	SR	Unlikely to occur. A shrubby plant that grows on plains and lower bajadas in the western portion of southwestern Arizona. No species were observed during the site visits. In addition, the HDMS reports no records within a 3-mile radius of the project site.
Scaly Sandplant *Pholisma arenarium*	HS	Unlikely to occur. Species found in sandy soil, edges of washes and dunes at elevations of 325-820 ft. Known range in Arizona is east and southeast of Parker.
Invertebrates		
Cheese-weed Moth Lacewing *Oliarces clara*	S	Unlikely to occur. Species found on or near bajadas. Found at elevation ranges of 0-328 ft.
MacNeill Sooty Wing Skipper *Hesperopsis gracielae*	S	Unlikely to occur. This species is a quailbush specialist and no quailbush exists in the project area.

Species	Status	Evaluation
Fish		
Razorback Sucker *Xyrauchen texanus*	E WSCA	Highly unlikely to occur. The project area does not contain aquatic habitat.
Gila Topminnow *Poeciliopsis occidentalis*	E WSCA	Highly unlikely to occur. The project area does not contain aquatic habitat.
Bonytail Chub *Gila elegans*	E WSCA	Highly unlikely to occur. The project area does not contain aquatic habitat.
Desert Pupfish *Cyprinodon macularius*	E WSCA	Highly unlikely to occur. The project area does not contain aquatic habitat.
Flannelmouth Sucker *Catostomus latipinnis*	S	Highly unlikely to occur. The project area does not contain aquatic habitat.
Amphibians		
Lowland Leopard Frog *Rana yavapaiensis*	WSCA	Highly unlikely to occur. Usually found in riparian habitat, but sometimes uses springs, wetlands, or other aquatic habitat. The project area does not contain aquatic habitat.
Reptiles		
Sonoran Desert Tortoise (*Gopherus agassizii*)	WSCA	Unlikely to occur. Species found on rocky slopes and bajadas. In addition, the HDMS reports no records within a 3-mile radius of the project site.
Chuckwalla *Sauromalus obesus*	S	Unlikely to occur. This species requires rocky cover such as large rock outcrops, boulder piles. There is no large rocky cover in the project area.
Rosy Boa *Lichanura trivirgata*	S	Unlikely to occur. This species requires rocky cover such as large rock outcrops, boulder piles. There is no large rocky cover in the project area.

Species	Status	Evaluation
Mojave Fringe-toed Lizard *Uma scoparia*	WSCA	Unlikely to occur. This species requires dune habitat The project site contains no dune habitat nor is there dune habitat near this site.
Birds		
American Peregrine Falcon *Falco peregrinus anatum*	WSCA	Unlikely to occur. This species nests in cliffs and requires high perching grounds to overlook areas for prey. There are no cliffs or suitable perches located at the project site.
Clark's Grebe *Aechmophorus clarkii*	WSCA	Unlikely to occur. This species requires open water. The project area does not contain open water.
Least Bittern *Ixobrychus exilis*	WSCA	Unlikely to occur. This species requires wetland or riparian habitat. The project area does not contain wetland or riparian habitat.
Great Egret *Ardea alba*	WSCA	Unlikely to occur. This species requires wetland or riparian habitat. The project area does not contain wetland or riparian habitat.
Bald Eagle *Haliaeetus leucocephalus*	T WSCA	Unlikely to occur. This species requires open water. The project area does not contain open water or riparian habitats.
Brown Pelican *Pelecanus occidentalis*	E	Unlikely to occur. This species requires open water. The project area does not contain open water and is outside the known range.
California Black Rail *Laterallus jamaicensis coturniculus*	WSCA	Unlikely to occur. This species requires marsh habitat. The project area does not contain wetland or riparian habitat.
Yuma Clapper Rail *Rallus longirostris yumanensis*	E WSCA	Unlikely to occur. This species requires wetland or riparian habitat. The project area does not contain wetland or riparian habitat.

Species	Status	Evaluation
Western Yellow-billed Cuckoo *Coccyzus americanus occidentalis*	C WSCA	Unlikely to occur. This species requires wetland or riparian habitat. The project area does not contain wetland or riparian habitat.
Western Burrowing Owl *Athene cunicularia hypugea*	S	Unlikely to occur. Species requires flat, open land with small mammal burrows and is commonly found near agricultural lands. The project area consists of gravel to desert pavement with very few burrows. No agricultural land exists in the project area. In addition, the HDMS reports no records within a 3-mile radius of the project site.
Southwestern Willow Flycatcher *Empidonax traillii extimus*	E WSCA	Unlikely to occur. This species requires aquatic or riparian habitat. The project area does not contain aquatic or riparian habitats.
Mammals		
Allen's Big-eared Bat *Idionycteris phyllotis*	S	Unlikely to occur. Elevation range is 1320-9800 ft.
Small-footed Myotis *Myotis ciliolabrum*	S	Unlikely to occur. Species habitat requirements not well understood. However, species known to occur at elevations between 2120-8670 ft.
Fringed Myotis *Myotis thysanodes*	S	Unlikely to occur. Species inhabits forested areas and requires caves or abandoned mines for roosting. Neither of these habitats exist in the vicinity of the project area.
Big Free-tailed Bat *Nyctinomops macrotis*	S	Unlikely to occur. Species requires rocky cliffs for roosting. There are no rocky cliffs in the vicinity of the project area.
Arizona Myotis *Myotis lucifugus occultus*	S	Unlikely to occur. Species feeds over water and are found over or near water. There is no water in the project area.

Species	Status	Evaluation
Western Red Bat *Lasiurus blossevillii*	WSCA	Unlikely to occur. This species requires riparian and wooded areas for roosting. There are no riparian or wooded areas in the vicinity of the project area.
Western Yellow Bat *Lasiurus xanthinus*	WSCA	Unlikely to occur. This species roosts in leafy trees near wetland areas and is most commonly found within California palm groves. There are no suitable roosting trees nor wetland areas near the project site.
California Leaf-nosed Bat *Macrotus californicus*	WSCA	Unlikely to occur. Species requires caves or abandoned mine shafts for roosting. There are none of these in the vicinity of the project area.
Pocketed Free-tailed Bat *Nyctinomops femorosaccus*	S	Unlikely to occur. Species requires rocky outcrops for roosting. There are no rocky outcrops in the vicinity of the project area.
Cave Myotis *Myotis velifer*	S	Unlikely to occur. Species requires caves or abandoned mine shafts for roosting. There are none of these in the vicinity of the project area.

E-Endangered; T-Threatened; P-Proposed; C-Candidate; S-Sensitive, WSCA-Wildlife of Special Concern in Arizona; HS-Highly Safeguarded; SR-Salvage Restricted

5 Species Determination

The following species were evaluated for the purpose of this assessment:

PLANTS

- Parish Wild Onion — *Allium parshii*
- Kofa Mountain Barberry — *Berberis harrisonianan*
- Kearney's Sumac — *Rhus kearneyi*
- Blue Sand Lily — *Triteleiopsis palmeri*
- Sand Food — *Pholisma sonorae*
- Schott Wire-lettuce — *Stephanomeria schottii*
- Varied Fishhook Cactus — *Mammillaria viridiflora*
- Straw-top Cholla — *Opuntia echinocarpa* or *Cylindropuntia echinocarpa*
- Scaly Sandplant — *Pholisma arenarium*

INVERTEBRATES

- Cheese-weed Moth Lacewing — *Oliarces clara*

FISH

- Razorback Sucker — *Xyrauchen texanus*
- Gila Topminnow — *Poeciliopsis occidentalis*
- Bonytial Chub — *Gila elegans*
- Desert Pupfish — *Cyprinodon macularius*
- Flannelmouth Sucker — *Catostomus latipinnis*

AMPHIBIANS

- Lowland Leopard Frog — *Rana yavapaiensis*

REPTILES

- Sonoran Desert Tortoise — *Gopherus agassizii*
- Chuckwalla — *Sauromalus obesus*
- Rosy Boa — *Lichanura trivirgata*
- Mojave Fringe-toed Lizard — *Uma scoparia*

BIRDS

- American Peregrine Falcon — *Falco peregrinus anatum*
- Clark's Grebe — *Aechmophorus clarkia*
- Least Bittern — *Ixobrychus exillis*
- Great Egret — *Ardea alba*
- Bald Eagle — *Haliaeetus leucocephalus*
- Brown Pelican — *Pelecanus occidentalis*
- California Black Rail — *Laterallus jamaicensis coturniculus*
- Yuma Clapper Rail — *Rallus longirostrs yumanensis*

- Western Yellow-Billed Cuckoo — *coccyzus americnus occidentails*
- Western Burrowing Owl — *Athene cunicularia hypugea*
- Southwestern Willow Flycatcher — *empidonaz traillii extimus*

MAMMALS

- Allen's Big-eared Bat — *Idionycteris phyllotis*
- Small-footed Myotis — *Myotis ciliolabrum*
- Fringed Myotis — *Myotis thysanodes*
- Big Free-tailed Bat — *Nyctinomops macrotis*
- Arizona Myotis — *Myotis lucifugus occultus*
- Western Red Bat — *Lasiurus blossevillii*
- Western Yellow Bat — *Lasiurus xanthinus*
- California Leaf-nosed Bat — *Macrotus californicus*
- Pocketed Free-tailed Bat — *Nyctinomops femorosaccus*
- Cave Myotis — *Myotis velifer*

Finding:

__X__ No adverse affect to special status species or their habitat

Further information regarding the exclusion of these species can be obtained in Section 4.2. All the special status species listed by BLM, AGFD, and USFWS for the project area has been evaluated. The agencies special status species lists can be found in Appendix 2. None of the species were determined to be affected by the proposed project.

___ May affect species, not likely to adversely affect species or its habitat
___ May beneficially affect species or its habitat
_____ Likely to adversely affect species or its habitat

6 Coordination

The lists of special status species were obtained through correspondence with AGFD, FWS, and BLM.

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8 Signatures of Environmental Professionals

Stacy Gutierrez, P.E.
Vice President

Date

Suzanne Detwiler
Environmental Professional

Date

9 Qualifications of Environmental Professionals

The resumes of the individuals participating in the preparation of this Biological Evaluation have been included on the following pages.

Stacy Gutierrez, P.E.
Vice President, Environmental Engineer

Education:

Master of Science in Environmental Technology from Arizona State University (2004)
Bachelor of Science in Environmental Engineering from California Polytechnic State University in San Luis Obispo (1996)

Relevant Certifications:

Registered Professional Engineer (Environmental) – License #36702
Certified for Hazardous Waste Operations & Emergency Response (40hr)
Certified AHERA Building Inspector, Management Planner, Contractor/Supervisor, and Project Designer for Asbestos Inspections, Management, and Abatement.
Certified Lead Based Paint Inspector
Certified Microbial Remediation Supervisor
ASTM Phase I Training Certification
ASTM Phase II Training Certification

Relevant Experience:

- **NEPA Environmental Assessments**
  Arizona Housing Development Corporation
  Quechan Housing
  San Carlos Housing
  Yavapai-Apache Housing

- **Phase I Environmental Site Assessments**
  City of Yuma Giss Parkway, Yuma County Right of Way Annex, Wellton-Mohawk Property Transfer, Albertson's Shopping Center, Alexander Ford, Bienestar, Avenue A Widening, Mohave County Administration Complex, San Luis Industrial Park, Yuma Regional Medical Center, Yuma International Airport

- **Environmental Protection Plans/Health and Safety Programs**
  Emergency Response Coordination - City of Yuma
  Standard Operating Procedure for TB Isolation Rooms - Yuma County
  Respiratory Protection Program – Yuma County
  Emergency Evacuation Plan – Dole
  Health and Safety Plan – South Yuma County Landfill

- **Underground Storage Tank Closures/Site Characterization**
  Little Ole's Food and Fuel, Cocopah Easy Corner, Stuckey's Convenience Store, Cocopah Vocational Training Center, Mohave County Highway Department

- **Asbestos and Lead Based Paint Inspections**
  Yuma County, Arizona Western College, Dakotas, Karl Model, Former K-Mart, Southwest Cancer Center, Town of Wellton

- **Soil Sampling at Potentially Contaminated Sites**
  Yuma County, Shay Oil, Arizona Department of Corrections, City of Yuma, Yuma Proving Ground, South Yuma County Landfill, Sturges Estate

- **Aqueous Sampling**
  Yuma County, Kinder Morgan, Little Ole's, Marine Corps Air Station, Mission Citrus, Shay Oil Company

- **State-of-the-Art Municipal Solid Waste Landfill Design**
  South Yuma County Landfill

- **Indoor Air Quality Investigations and Mold Abatement Projects**
  Numerous Residential Properties, Citrus Plaza, AEA Federal Credit Union, Yuma County Court House, Yuma County Recorders Office, Gastroenterology Center

- **Radon Sampling**
  Numerous Residential Properties
  Silver Mesa Apartments, Terracina Apartments, Villa Nueva Apartments

Professional and Community Involvement:

Active Member of ASPE and ASCE
American Indoor Air Quality Council
Environmental Information Association
Rotary International

Suzanne Detwiler
Environmental Professional

Education:

Bachelor of Arts in Liberal Studies – Environmental Science; Northern Arizona University
Associate of Applied Science - Business, *Highest Academic Distinction*; Arizona Western College

Certifications:

ASTM Phase I Environmental Site Assessment for Commercial Real Estate
ASTM Phase II Environmental Site Assessment for Commercial Real Estate
Certified for Hazardous Waste Operations & Emergency Response (40hr)
Certified AHERA Building Inspector
Environmental Reviews for HUD Assisted Projects, Office of Native American Programs
Biological Assessment Workshop, Southwest Strategy
Flat-tailed Horned Lizard Monitor
ArcView 3.0
Introduction to ArcGIS II
GPS Field Mapping

Relevant Experience:

- **NEPA Environmental Assessments**
  - Yuma County, 8th Street and Somerton Avenue Intersection Improvement
  - Quechan Education Complex
  - Jacobson Company, Golf Course and Subdivision Wash Crossings
  - Yuma County Sheriff's Office, Telegraph Pass Cell Tower
  - Paradise Casino Parking Lot Expansion and Roadway Improvements
  - Wellton Microtel Inn & Suites
  - Moapa Band of Paiutes, Water Line
  - San Carlos Housing Authority, 18 Scattered Sites
  - San Carlos Housing Authority, Subdivision

- **Biological Assessments**
  - Yuma County, 8th Street and Somerton Avenue Intersection Improvement
  - Jacobson Company, Golf Course and Subdivision Wash Crossings
  - Yuma County Sheriff's Office, Telegraph Pass Cell Tower
  - BLT Companies, Batch Plant #2
  - Komick Limited Partnership, Hualapai Vista RV Park and Subdivision
  - Paradise Casino Parking Lot Expansion and Roadway Improvements
  - Wellton Microtel Inn & Suites
  - D & R Development, Utility Lines
  - H & S Developers, Water Line (Fortuna Wash)
  - AB-SUB Development, Inc., Water and Sewer Lines (Fortuna Wash)

- **Permits and Regulatory Compliance**
  - BLT Companies, ADOT Material Source Provider Clearance
  - San Carlos Housing Authority, Environmental Review Written Procedures

- **Biological Monitoring**
  - Flat-tailed Horned Lizard, San Luis Commercial Port of Entry
  - Flat-tailed Horned Lizard, Ron Watson Middle School

- **Phase I Environmental Site Assessments**
  - Joe Shapiro, Triple S Industrial Park Lots 27 and 28
  - Foundation for Senior Living, Proposed Senior Apartments
  - City of Yuma, Crossroads Mission Property
  - City of Yuma, Avenue 6E Right-of-way
  - City of Yuma, Associated Citrus Packers
  - City of Yuma, 36th/40th Street West Interceptor
  - City of Yuma, Yuma West Wetlands
  - City of Yuma, 16th Street and 4th Avenue
  - Yuma County, New Yuma County Jail District Facility
  - BPLW, New San Luis Port of Entry
  - Mohave County, Former Mohave County Sheriff's Office
  - Mohave County, Lake Havasu City Senior Center
  - cdg Architects, Sunset Community Health
  - Yuma Elementary School District #1, Ron Watson Middle School
  - Arizona Grain, 23rd Lane Site
  - Fred Crabtree, Superlite Block
  - National Bank, The Links at Coyote Wash

- **Stormwater Pollution Prevention Plans**
  - Texas Roadhouse
  - Desert Plaza Shopping Center
  - 40th Street Sewer Line
  - Barco Metal Stamping

- **Asbestos Inspections**
  - Arizona Western College, College Union
  - COY Hoover Avenue Property
  - COY Yuma West Wetlands Property
  - Paradise Casino Bar Expansion
  - Trinity United Methodist Church, Narthex

- **Noise Attenuation Testing**
  - Spring Gardens Mobile Home Park
  - Various Residential Properties

- **Water Sampling**
  - Shay Oil Company
  - Stuckey's

- **Soil Sampling**
  - Yuma County, DDS Facility
  - Principal Engineering Group, Friendship Water Tower

- **Spill Prevention, Control, and Countermeasure Plan**
  - Yuma Regional Medical Center

- **Underground Storage Tank Closures/Site Characterization**
  - Shay Oil Company
  - Jack's Discount Services

Professional and Community Involvement:

- Environmental Information Association, Arizona Chapter
- Yuma Audubon Society, Treasurer
- Arizona Native Plant Society

Justin Hart
Biologist

Education:

Bachelor of Environmental Science (Biology Emphasis); Summa Cum Laude; Northern Arizona University

Relevant Experience:

- **Water Sampling**
  - Apple's Radiator
  - Tijuana River NERR Estuarine Water Studies
  - Johnson Controls
  - Hidden Shores LUST
  - Wachtel Water Testing at County 20 ½ Street
- **Soil Sampling**
  - Apple's Radiator
  - Tijuana River NERR
  - Brock Research Center
  - El Centro- Wake Avenue and Corfman Road Intersection
- **Biological Assessments**
  - Arroyo de Fortuna
  - Arroyos Preserve NEPA
- **Storm Water Pollution Prevention Plan (SWPPP)**
  - Shay Oil- 8th Street and Avenue C Intersection
- **Phase I Environmental Site Assessments**
  - KJOCK Radio
  - Somerton County 20 ½ Street and Highway 95 Intersection
  - COY- 1203 1st Avenue
  - Braden Trust Site- 16th Street and Arizona Avenue Intersection
  - Palo Fiero- Quartzite
- **Environmental Inspections**
  - RV Peddler
- **Microbial Investigations**
  - Residential units
- **Biological Monitoring**
  - Tijuana River NERR Fish Population Studies
  - Tijuana River NERR Plant Dispersal Studies
  - Tijuana River NERR Invasive Species Studies
  - Tijuana River NERR Coliform Counts
  - Mitri Lake Tree Identification and Counts
- **Biological Restoration**
  - Tijuana River NERR Invasive Species Removal and Native Plant Restoration

- **Noise Attenuation Testing**
  Sierra Pacific Mobile Home Park
  Sunset Trailer and Auto Sales

10 Appendices

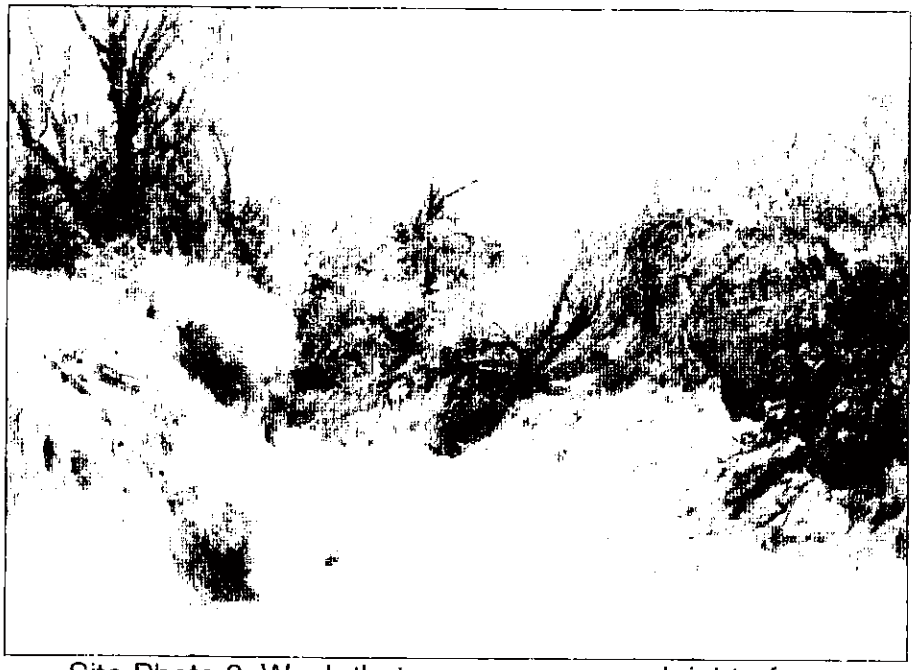
1. Site Photographs
2. Agency Correspondence
3. Statement of Limitations

Appendix 1

Site Photographs

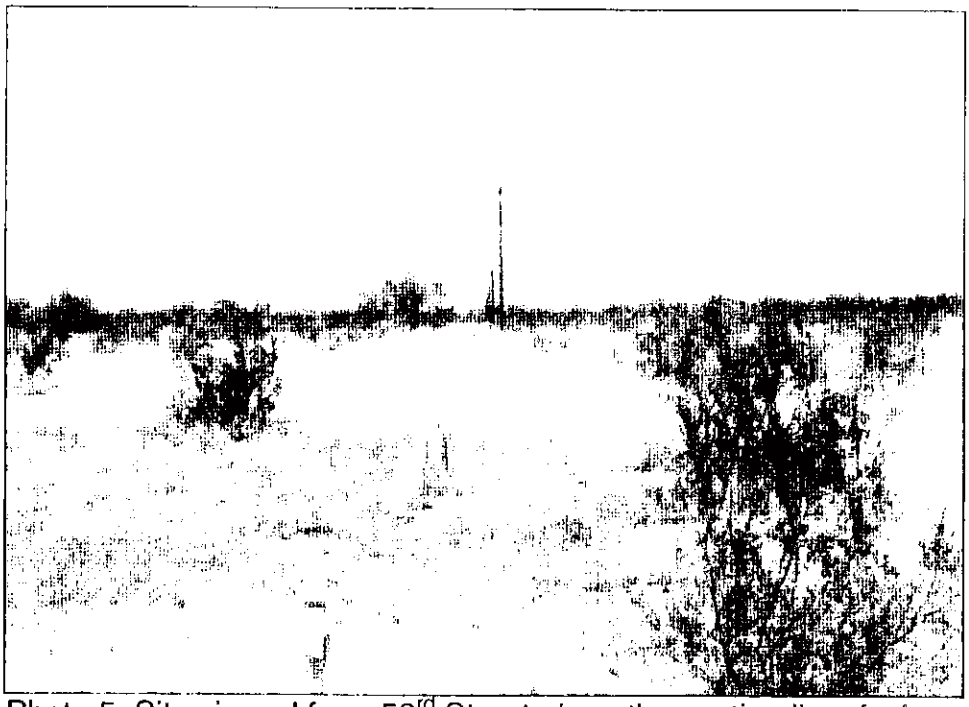
Site Photo 1: 40 acre property

Site Photo 2: 40 acre property viewed from northwest corner facing east



Site Photo 3: Wash that crosses proposed right-of-way

Site Photo 4: Site viewed facing south along section line



Site Photo 5: Site viewed from 53rd Street along the section line, facing north

Appendix 2

Agency Correspondence

U.S. Fish & Wildlife Service

Endangered Species List

Back to Start

List of species by county for Arizona:

Counties Selected: La Paz

Select one or more counties from the following list to view a county list:

Apache
Cochise
Coconino
Gila
Graham

View County List

La Paz County

Common Name	Scientific Name	Species Group	Listing Status	Species Image	Species Distribution Map	Critical Habitat	More Info
bald eagle	*Haliaeetus leucocephalus*	Birds	AD, T				P
bonytail chub	*Gila elegans*	Fishes	E			Final	P
brown pelican	*Pelecanus occidentalis*	Birds	DM, E				P
desert pupfish	*Cyprinodon macularius*	Fishes	E				P
Gila topminnow (incl. Yaqui)	*Poeciliopsis occidentalis*	Fishes	E				P
razorback sucker	*Xyrauchen texanus*	Fishes	E			Final	P
southwestern willow flycatcher	*Empidonax traillii extimus*	Birds	E				P
yellow-billed Cuckoo	*Coccyzus americanus*	Birds	C				P
Yuma clapper rail	*Rallus longirostris yumanensis*	Birds	E				P

Arizona BLM Sensitive Species List (October, 2005) **Key: V=Verified Occurrence** **X=Probable/Possible Occurrence**	**AZ-100** **Arizona Strip**	**AZ-200** **Phoenix**	**AZ-310** **Kingman**	**AZ-410** **Safford**	**AZ-320** **Yuma**	**AZ-420** **Tucson**	**AZ-330** **Lake Havasu**
Plants							
Aquarius milkvetch (*Astragalus newberryi var. aquarii*)			V				
Aravaipa woodfern (*Thelypteris puberula var. sonorensis*)			V	V			
Aravaipa sage (*Salvia amissa*)				V			
Arizona Sonoran rosewood (*Vauquelinia californica* ssp *sonorensis*)		V					
Bartram stonecrop (*Graptopetalum bartramii*)						V	
Black Rock daisy (*Townsendia smithii*)	V						
Blue sand lily (*Triteleiopsis palmeri*)					V		
California flannelbush (*Fremontodendron californica*)		V	V				
Chisos Mountains coralroot (*Hexalectris revoluta*)						X	
Cliff milkvetch (*Astragalus cremnophylax* var.*myriorraphus*)	V						
Clifton rock daisy (*Perityle ambrosiifolia*)				V			
Dalhouse spleenwort (*Asplenium (Ceterach) dalhousiae*)						V	
Diamond Butte milkvetch (*Astragalus toanus* var.*scidulus*)	V						
Fish Creek fleabane (*Erigeron piscaticus*)				X			
Gentry indigo bush (*Dalea tentaculoides*)						X	
Giant sedge (*Carex spissa* var. *ultra*)		V		V		V	
Grand Canyon rose (*Rosa stellata* var.*abyssa*)	V						
Huachuca golden aster (*Heterotheca rutteri*)						V	
Huachuca milkvetch (*Astragalus hypoxylus*)						X	
Kaibab pincushion cactus (*Pediocactus paradinei*)	V						
Kearney sumac (*Rhus kearneyi* ssp *kearneyi*)					V		
Kofa Mt barberry (*Berberis harrisoniana*)		X			X		X
Marble Canyon Milkvetch (*Astragalus cremnophylax* var. *hevronii*)	V						
Mt Trumbull beardtongue (*Penstemon distans*)	V						
Murphey agave (*Agave murpheyi*)		V					

Arizona BLM Sensitive Species List (October, 2005) **Key: V=Verified Occurrence** **X=Probable/Possible Occurrence**	**AZ-100** **Arizona Strip**	**AZ-200** **Phoenix**	**AZ-310** **Kingman**	**AZ-410** **Safford**	**AZ-320** **Yuma**	**AZ-420** **Tucson**	**AZ-330** **Lake Havasu**
Paria Plateau fishhook cactus (*Sclerocactus sileri*)	V						
Parish phacelia (*Phacelia parishii*)			V				
Parish wild onion (*Allium parishii*)					X		X
Pima Indian mallow (*Abutilon parishii*)				V		V	
Pinto beardtongue (*Penstemon bicolor*)			V				
Purple-spike coralroot (*Hexalectris warnockii*)						V	
Round-leaf broom (*Errazurizia rotundata*)				V			
San Pedro River wild buckwheat (*Eriogonum terrenatum*)						V	
Sand food (*Pholisma sonorae*)					V		
Scaly sand food (*Pholisma arenaria*)							V
Schott wire-lettuce (*Stephanomeria schottii*)		O			V		
September 11 stickleaf (*Mentzelia memorabilis*)	V						
Sheep Range beardtongue (*Penstemon petiolatus*)	V						
Silverleaf sunray (*Enceliopsis argophylla*)	V						
Sticky wild buckwheat (*Eriogonum viscidulum*)	V						
Three hearts (*Tricardia watsonii*)	X		X				
Three-cornered milkvetch (*Astragalus geyeri* var *triquetrus*)	V						
Tumamoc globeberry (*Tumamoca macdougalii*)		V				V	
White-margined penstemon (*Penstemon albomarginatus*)			V				
Invertebrates							
Arizona giant sand treader cricket (*Daihinibaenetes arizonensis*) (Petrified Forest)				X			
Navajo Jerusalem cricket (*Stenopelmatus navajo*) (Petrified Forest)				X			
Santa Rita Mountains chlorochroan bug (*Chlorochroa rita*)						X	
Cheese-weed moth lacewing (*Oliarces clara*) (larvae likely feed on creosote roots)					X		

Arizona BLM Sensitive Species List (October, 2005) Key: V=Verified Occurrence X=Probable/Possible Occurrence	AZ-100 Arizona Strip	AZ-200 Phoenix	AZ-310 Kingman	AZ-410 Safford	AZ-320 Yuma	AZ-420 Tucson	AZ-330 Lake Havasu
Maricopa tiger beetle *(Cicindela oregona maricopa)*, (central to east-central Arizona)		X		X			
Chiricahua water scavenger beetle *(Cymbiodyta arizonica)* (standing water)				X			
MacNeill sooty wing skipper *(Hesperopsis gracielae)* (host plant is quailbush)	X	X			X		X
Cockerell's striate disc *(Discus shemeki cockerelli)*						X	
Succineid snails (all species in family Succineidae) on public land	X						
Hydrobiid spring snails (all species in genus *Pyrgulopsis*) on public land	V		V	V			
Fish							
Longfin dace *(Agosia chrysogaster)*		V	V	V		V	V
Flannelmouth sucker (*Catostomus latipinnis*)	V	V		V	V	V	V
Desert sucker (Catostomus [Pantosteus] clarki)	V	V	V	V		V	
Sonora sucker (Catostomus insignis)		V	V	V		X	
Speckled dace *(Rhinichthys osculus)*	V	V	V	V		V	
Reptiles & Amphibians							
Giant spotted whiptail (*Aspidoscelis burti stictogrammus*)				X		V	
Chuckwalla (*Sauromalus obesus*)	V	V	V	V	V	V	V
Rosy boa *(Charina trivirgata)*		V	V	X	V	V	V
Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*)		V				V	
Texas horned lizard (Phrynosoma cornutum)				X		V	
Banded Gila monster (only pops NW of Colorado River) (Heloderma suspectum cinctum)	V				X		X
Northern sagebrush lizard *(Sceloporus graciosus graciosus)*	X			X			

Arizona BLM Sensitive Species List (October, 2005) Key: V=Verified Occurrence X=Probable/Possible Occurrence	AZ-100 Arizona Strip	AZ-200 Phoenix	AZ-310 Kingman	AZ-410 Safford	AZ-320 Yuma	AZ-420 Tucson	AZ-330 Lake Havasu
Birds							
Western burrowing owl *(Athene cunicularia hypugea)*	V	V	V	V	V	V	V
Mountain Plover (*Charadrius montanus*) Breeding populations				V			
Mammals							
Underwood's mastiff bat *(Eumops underwoodi)*						V	
Allen's (Mexican) big-eared bat *(Idionycteris phyllotis)*	V	V	V	V	X	V	V
Small-footed myotis *(Myotis ciliolabrum)*	V	V	V	V	V	V	V
Long-eared myotis *(Myotis evotis)*	V		X				
Fringed myotis *(Myotis thysanodes)*	V	V	V	V	V	V	V
Cave myotis *(Myotis velifer)*		V	V	V	V	V	V
Long-legged myotis *(Myotis volans)*	V	V	V	V		V	V
Big free-tailed bat *(Nyctinomops macrotis)*	V	V	V	V	V	V	V
Pocketed free-tailed bat *(Nyctinomops femorosaccus)*		X		X	X	V	
Arizona Myotis *(Myotis lucifugus occultus)*			X	X	V	X	V

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
2221 WEST GREENWAY ROAD
PHOENIX, AZ 85023-4399
(602) 942-3000 • AZGFD.GOV

April 7, 2006

Ms. Suzanne Detwiler
NEI Environmental
1851 W. 24th St.
Yuma, AZ 85364

Re: Special Status Species Information for **Township 3 North, Range 19 West, Section 19; Proposed Dirt Road Widening to BLM Right-of-Way.**

Dear Ms. Detwiler:

The Arizona Game and Fish Department (Department) has reviewed your request, dated April 5, 2006, regarding special status species information associated with the above-referenced project area. The Department's Heritage Data Management System (HDMS) has been accessed and current records do not indicate the presence of any special status species in the project vicinity (3-mile radius). In addition this project does not occur in the vicinity of any Designated or Proposed Critical Habitats.

The Department's HDMS data are not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity.

Making available this information does not substitute for the Department's review of project proposals, and should not decrease our opportunities to review and evaluate new project proposals and sites. The Department is also concerned about other resource values, such as other wildlife, including game species, and wildlife-related recreation. The Department would appreciate the opportunity to provide an evaluation of impacts to wildlife or wildlife habitats associated with project activities occurring in the subject area, when specific details become available.

Special Status Species in the Arizona HDMS, listed alphabetically by county, by taxon, by scientific name.
Updated April 2006

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	USFS	STATE
Greenlee	PLANT	Eriogonum capillare	San Carlos Wild-buckwheat	SC			SR
Greenlee	PLANT	Gentianella wislizeni	Wislizeni Gentian	SC		S	SR
Greenlee	PLANT	Goodyera repens	Lesser Rattlesnake Plantain				SR
Greenlee	PLANT	Hackelia ursina	Chihuahuan Stickseed			S	
Greenlee	PLANT	Heuchera glomerulata	Arizona Alum Root			S	
Greenlee	PLANT	Lupinus lemmonii	Lemmon's Lupine			S	
Greenlee	PLANT	Malaxis porphyrea	Purple Adder's Mouth				SR
Greenlee	PLANT	Penstemon linarioides ssp. maguirei	Maguire's Penstemon				SR
Greenlee	PLANT	Penstemon ramosus	Branching Penstemon			S	
Greenlee	PLANT	Penstemon superbus	Superb Beardtongue			S	
Greenlee	PLANT	Perityle ambrosiifolia	Lace-leaf Rockdaisy		S		
Greenlee	PLANT	Platanthera hyperborea	Boreal Bog Orchid				SR
Greenlee	PLANT	Platanthera purpurascens	Slender Bog Orchid				SR
Greenlee	PLANT	Rumex orthoneurus	Blumer's Dock	SC		S	HS
Greenlee	PLANT	Schiedeella arizonica	Fallen Ladies'-tresses				SR
Greenlee	PLANT	Senecio quaerens	Gila Groundsel	SC		S	SR
Greenlee	PLANT	Trifolium neurophyllum	White Mountains Clover	SC		S	
Greenlee	PLANT	Zigadenus virescens	Green Death Camas				SR
Greenlee	REPTILE	Thamnophis rufipunctatus	Narrow-headed Gartersnake	SC		S	WSC
La Paz	AMPHIBIAN	Bufo microscaphus	Arizona Toad	SC		S	
La Paz	AMPHIBIAN	Rana yavapaiensis	Lowland Leopard Frog	SC		S	WSC
La Paz	BIRD	Aechmophorus clarkii	Clark's Grebe				WSC
La Paz	BIRD	Ardea alba	Great Egret				WSC
La Paz	BIRD	Athene cunicularia hypugaea	Western Burrowing Owl	SC	S		
La Paz	BIRD	Coccyzus americanus occidentalis	Western Yellow-billed Cuckoo	C		S	WSC
La Paz	BIRD	Empidonax traillii extimus	Southwestern Willow Flycatcher	LE		S	WSC
La Paz	BIRD	Falco peregrinus anatum	American Peregrine Falcon	SC		S	WSC
La Paz	BIRD	Haliaeetus leucocephalus	Bald Eagle	LT,PDL		S	WSC
La Paz	BIRD	Haliaeetus leucocephalus (wintering pop.)	Bald Eagle	LT,PDL		S	WSC
La Paz	BIRD	Ixobrychus exilis	Least Bittern				WSC
La Paz	BIRD	Laterallus jamaicensis coturniculus	California Black Rail	SC		S	WSC
La Paz	BIRD	Plegadis chihi	White-faced Ibis	SC	S		
La Paz	BIRD	Rallus longirostris yumanensis	Yuma Clapper Rail	LE			WSC
La Paz	FISH	Cyprinodon macularius	Desert Pupfish	LE			WSC
La Paz	FISH	Gila elegans	Bonytail	LE			WSC
La Paz	FISH	Poeciliopsis occidentalis occidentalis	Gila Topminnow	LE			WSC
La Paz	FISH	Xyrauchen texanus	Razorback Sucker	LE		S	WSC

Special Status Species in the Arizona HDMS, listed alphabetically by county, by taxon, by scientific name.

Updated April 2006

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	USFS	STATE
La Paz	MAMMAL	Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC			
La Paz	MAMMAL	Eumops perotis californicus	Greater Western Bonneted Bat	SC			
La Paz	MAMMAL	Lasiurus blossevillii	Western Red Bat				WSC
La Paz	MAMMAL	Lasiurus xanthinus	Western Yellow Bat				WSC
La Paz	MAMMAL	Macrotus californicus	California Leaf-nosed Bat	SC	S		WSC
La Paz	MAMMAL	Myotis velifer	Cave Myotis	SC	S		
La Paz	MAMMAL	Myotis yumanensis	Yuma Myotis	SC			
La Paz	MAMMAL	Nyctinomops femorosaccus	Pocketed Free-tailed Bat		S		
La Paz	PLANT	Cirsium mohavense	Mohave Thistle		S		
La Paz	PLANT	Ephedra funerea	Death Valley Mormon Tea		S		
La Paz	PLANT	Mammillaria viridiflora	Varied Fishhook Cactus				SR
La Paz	PLANT	Opuntia echinocarpa	Straw-top Cholla				SR
La Paz	PLANT	Pholisma arenarium	Scaly Sandplant		S		HS
La Paz	REPTILE	Charina trivirgata gracia	Desert Rosy Boa	SC	S	S	
La Paz	REPTILE	Gopherus agassizii (Sonoran Population)	Sonoran Desert Tortoise	SC			WSC
La Paz	REPTILE	Heloderma suspectum cinctum	Banded Gila Monster	SC	P		
La Paz	REPTILE	Uma scoparia	Mojave Fringe-toed Lizard				WSC
Maricopa	AMPHIBIAN	Bufo microscaphus	Arizona Toad	SC		S	
Maricopa	AMPHIBIAN	Gastrophryne olivacea	Great Plains Narrow-mouthed Toad				WSC
Maricopa	AMPHIBIAN	Pternohyla fodiens	Lowland Burrowing Treefrog				WSC
Maricopa	AMPHIBIAN	Rana yavapaiensis	Lowland Leopard Frog	SC		S	WSC
Maricopa	BIRD	Ardea alba	Great Egret				WSC
Maricopa	BIRD	Athene cunicularia hypugaea	Western Burrowing Owl	SC	S		
Maricopa	BIRD	Buteogallus anthracinus	Common Black-Hawk			S	WSC
Maricopa	BIRD	Ceryle alcyon	Belted Kingfisher				WSC
Maricopa	BIRD	Charadrius alexandrinus nivosus	Western Snowy Plover			S	WSC
Maricopa	BIRD	Coccyzus americanus occidentalis	Western Yellow-billed Cuckoo	C		S	WSC
Maricopa	BIRD	Dendrocygna autumnalis	Black-bellied Whistling-Duck				WSC
Maricopa	BIRD	Egretta thula	Snowy Egret				WSC
Maricopa	BIRD	Empidonax traillii extimus	Southwestern Willow Flycatcher	LE		S	WSC
Maricopa	BIRD	Falco peregrinus anatum	American Peregrine Falcon	SC		S	WSC
Maricopa	BIRD	Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	LE			WSC
Maricopa	BIRD	Haliaeetus leucocephalus	Bald Eagle	LT,PDL		S	WSC
Maricopa	BIRD	Haliaeetus leucocephalus (wintering pop.)	Bald Eagle	LT,PDL		S	WSC
Maricopa	BIRD	Ictinia mississippiensis	Mississippi Kite				WSC
Maricopa	BIRD	Ixobrychus exilis	Least Bittern				WSC
Maricopa	BIRD	Pandion haliaetus	Osprey				WSC

Appendix 3

Statement of Limitations

Statement of Limitations

This biological evaluation has been conducted for Vanguard Development. Use of this report shall be limited to Vanguard Development and BLM. This report may not be relied upon by any other entity for any reason. Vanguard Development and BLM have agreed that NEI Environmental is not responsible for any claims brought about by other parties, which may arise in connection with this biological evaluation.

Appendix 2

CULTURAL RESOURCE INVENTORY

A Cultural Resources Inventory of a 40-Acre Parcel and Adjoining 0.5-Mile-Long Right-of-Way South of Quartzsite in La Paz County, Arizona

Work Conducted under Bureau of Land Management
Cultural Resource Use Permit No. AZ-000127

for Mr. Jim Kunisch and the Bureau of Land Management Yuma Field Office

BLM Cultural Resource Project Record No. BLM-AZ-320-2006-057

Prepared by:

James Moses
Field Director

Laurie V. Slawson, Ph.D., RPA
Principal Investigator

Submitted to:

Nicklaus Engineering, Inc.
1851 West 24th Street
Yuma, Arizona 85364

Technical Report No. 2006-37

October 9, 2006

Abstract

Agency:
Bureau of Land Management (BLM) Yuma Field Office; BLM Cultural Resource Use Permit No. AZ-000127; BLM Cultural Resource Project Record No. BLM-AZ-320-2006-057

Project Title:
A Cultural Resources Inventory of a 40-Acre Parcel and Adjoining 0.5-Mile-Long Right-of-Way South of Quartzsite in La Paz County, Arizona (report dated 10/9/2006

Project Description:
Class I and III surveys of a 40-acre parcel of privately owned land and a 0.5-mile-long, 90-foot-wide access road right-of-way on land under the jurisdiction of the Yuma Field Office of the Bureau of Land Management south of Quartzsite, Arizona, were conducted for Nicklaus Engineering, Inc., and Mr. Jim Kunisch. The purpose of the inventory was to locate and describe any cultural resources that might be adversely affected by the construction of a private residential development and associated access road.

Location:
The 40-acre parcel consists of the entire NE¼SE¼ of Section 19, Township 3 North, Range 19 West, whereas the proposed 0.5-mile-long right-of-way is located along the western 66 feet of the W½SW¼ of Section 20, Township 3 North, Range 19 West; U.S.G.S. Cunningham Mountain, Arizona 7.5 Minute quadrangle maps; La Paz County, Arizona

Number of Acres Surveyed:
57.9 acres

Number of Sites:
Two: AZ R:7:120 and AZ R:7:121 (ASM)

Number of National Register-Eligible Sites:
One: AZ R:7:120 (ASM); eligible under Criterion D

Number of National Register-Ineligible Sites:
One: AZ R:7:121 (ASM)

Comments:
AZ R:7:120 (ASM) is eligible for the National Register of Historic Places under Criterion D (i.e., has yielded, or may be likely to yield, information important in prehistory or history). Significant indications of the presence of buried cultural materials, especially associated with Feature 3, were observed. It is recommended that the area in and around site AZ R:7:120 be

avoided. A 100-foot-wide buffer zone beyond the site boundary would be adequate to avoid any adverse impact that the proposed development could have on this site. If avoidance is not possible, then an archaeological testing plan would need to be developed. This would need to take place before any construction activities associated with the proposed development could occur in the vicinity of this site. A comprehensive testing plan would include adequate mapping, research, and excavations to successfully evaluate the site in terms of NRHP criteria. Excavations should focus on Feature 3.

AZ R:7:121 (ASM) is ineligible for the National Register of Historic Places. Due to its lack of associated diagnostic artifacts and lack of depth, the recording of this site during the current survey has exhausted its research potential and no more significant information remains.

Archaeological clearance is recommended for the remainder of the project area. However, if any unknown cultural resources are found during construction, it is recommended that work temporarily stop in the immediate vicinity of the find(s) and a qualified archaeologist be contacted to assess significance and determine appropriate mitigation procedures.

A Cultural Resources Inventory of a 40-Acre Parcel and Adjoining 0.5-Mile-Long Right-of-Way South of Quartzsite in La Paz County, Arizona

A cultural resources inventory of a 40-acre parcel and a 0.5 mile-long, 90-foot-wide access road right-of-way south of Quartzsite, in La Paz County, Arizona was conducted by Aztlan Archaeology, Inc. (AAI), for Nicklaus Engineering, Inc., and Mr. Jim Kunisch (BLM Case File No. AZA 33392). The 40-acre parcel consists entirely of privately owned land, whereas the proposed right-of-way is under the jurisdiction of the Yuma Field Office of the Bureau of Land Management (BLM). The purpose of the inventory was to locate and describe any cultural resources that might be adversely affected by the construction of a private residential development and associated access road. The client wishes to use the right-of-way to pave the existing dirt road. This would be used year round by residents of the property it will serve. The road will not be used for any industrial uses, including livestock or agricultural transportation. Tasks completed as part of this project consisted of a Class I overview (i.e. records check and literature search) and a Class III archaeological survey (100% coverage).

Fieldwork was conducted on September 18, 2006, by James Moses (project director) and Elizabeth Majchrowicz (field archaeologist); Laurie V. Slawson, Ph.D., acted as the principal investigator. The survey was conducted under a Field Authorization for BLM Cultural Resource Use Permit No. AZ-000127; the project is BLM Cultural Resource Project Record No. BLM-AZ-320-2006-057.

Project Area Location

The project area consists of a 40-acre parcel of privately held land and an adjacent BLM-administered 0.5-mile-long, 90-foot-wide access road (total 57.9 acres) located 5 miles south of Quartzsite in La Paz County, Arizona. The 40-acre parcel consists of the entire NE¼SE¼ of Section 19, Township 3 North, Range 19 West, whereas the proposed right-of-way is located along the western 66 feet of the W½SW¼ of Section 20, Township 3 North, Range 19 West. The township and range are located with respect to the Gila and Salt River Baseline and Meridian, on the U.S.G.S. Cunningham Mountain (1990), Arizona 7.5 Minute quadrangle map. The project area location is shown in Figure 1.

Environmental Setting

The project area is situated within the Basin and Range physiographic province and surrounding vegetation is characteristic of the Lower Colorado River Subdivision of the Sonoran Desertscrub Formation (Brown and Lowe 1994). The plant composition is made up of native vegetation and no exotic plant species were found in or near the site. Major vegetation within the

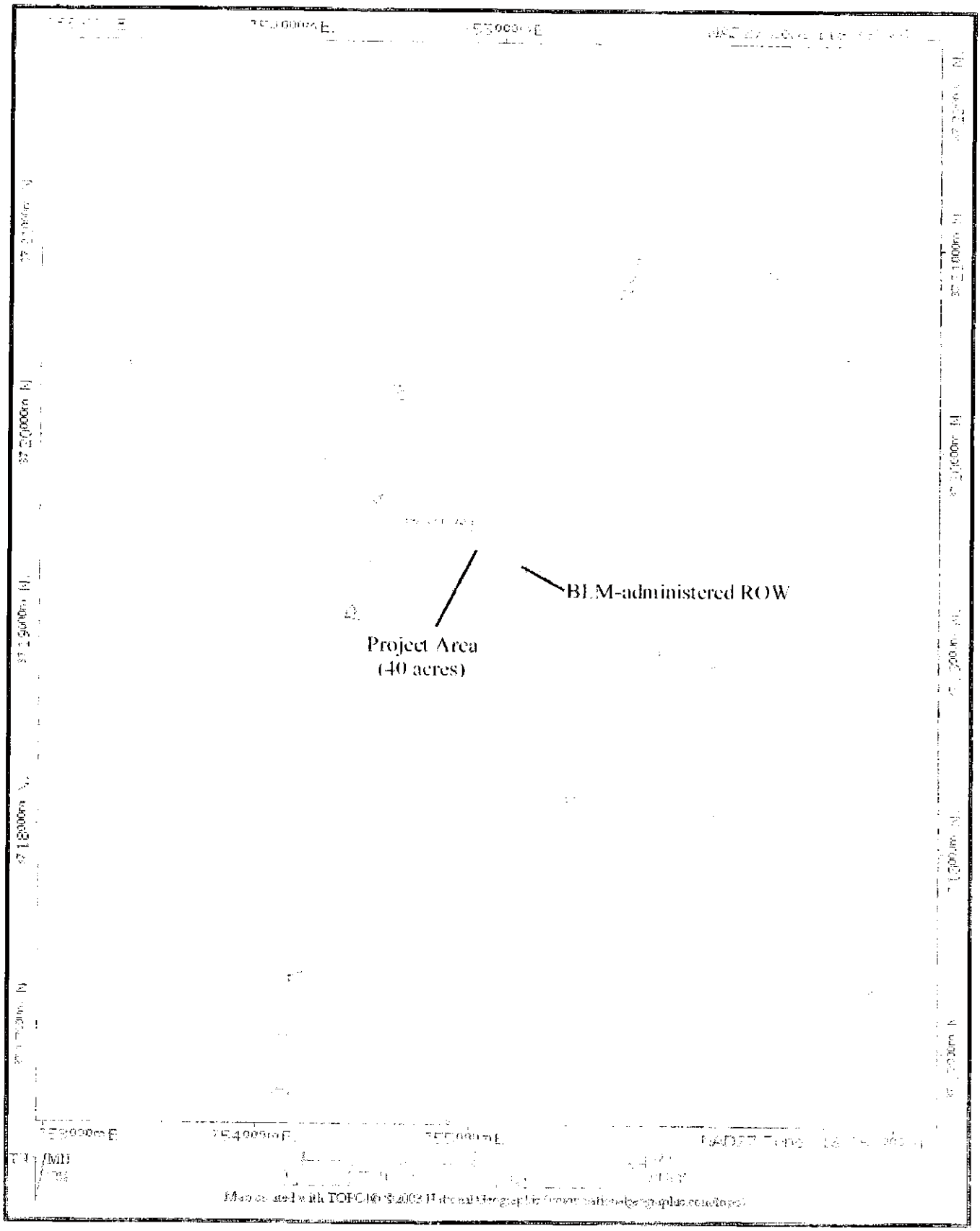


Figure 1. Project area location (U.S.G.S. Cunningham Mountain and South of Quartzite, Arizona 7.5 Minute quadrangle maps, T3N, R19W).

project area includes creosote bush (*Larrea tridentata*), mesquite (*Prosopis glandulosa*), little leaf paloverde (*Parkinsonia microphyllum*), ironwood (*Olneya tesota*), catclaw acacia (*Acacia greggii*), saguaro (*Cereus giganteus*), and various grasses and weeds. Other vegetation present includes hedgehog cactus (*Echinocereus engelmannii*), Indian wheat (*Plantago purshii*), and desert mistletoe (*Phoradendron californicum*). No faunal observations were made during the survey and no endangered or threatened plant species were noted.

Topography throughout the project area generally is characterized by desert flats incised by small, incised rills. The ground surface mostly is covered by desert pavement and gravel. The soil is consistent with a sandy loam that is light in color. The area appears to be in stable condition and not actively eroding. The project area averages 1,000 feet above mean sea level.

Culture History

Human occupation in Arizona began with a long and relatively stable lifeway that was based on the hunting and gathering of native animal and plant foods. This form of subsistence adaptation continued relatively unchanged for several thousand years. Around A.D. 200 to 300, new cultures developed that were based on a farming economy and a sedentary way of life. For more than 1,000 years, these cultures flourished in Arizona. When the first European explorers arrived in the seventeenth century, however, many regions that had been occupied by substantial populations in prehistoric times no longer were so. Permanent settlement by Euroamericans began once the Arizona territory was acquired by the United States and the U.S. Army had established an effective military presence.

The culture history of the lower valley of the Colorado River beyond a few hundred years is not well understood. The relative paucity of archaeological study in the region compared with that of other areas in the Southwest seems to be in direct correlation with the attractiveness of the prehistoric sites and artifacts themselves. In contrast with other ceramic assemblages of the southwest, those of southwestern Arizona traditionally have been less appealing to archaeologists. As McGuire (1982a) commented more than 20 years ago, most researchers came to work in the area not because of the attraction of the cultural resources, but because funding was available. It would seem intuitive that such a large desert riverine environment like the lower Colorado River would have a rich prehistoric archaeological record and hold relatively large numbers of prehistoric sites; however, just the opposite seems to be true. And given the 20-mile-long expanse between Quartzsite and the Colorado River, and the incredible aridity of this region, it is logical why so few prehistoric sites have been discovered in the project area.

Prehistoric Period

The earliest period of culture history in Arizona is that of Paleoindian, which has come to signify hunting and gathering cultures of late Pleistocene and early Holocene age. The Clovis or Llano tradition, an apparently distinct Paleoindian hunting-gathering culture that focused on the exploitation of now-extinct megafauna, has been recognized in the approximately 11,500 to 10,000

years Before Present (B.P) time range in southern Arizona. Although Clovis culture is well documented in the San Pedro River Valley in southeastern Arizona, elsewhere generally only isolated Clovis points have been found. The current lack of evidence for Clovis occupation in much of Arizona may be misleading due to a number of factors, including geological preservation and the presence of later prehistoric occupations, which may be obscuring evidence for earlier cultures.

The next period of culture history is the Archaic, which is associated with a variety of hunting-gathering, largely preceramic, and, for the most part, nonagricultural, cultures that employed milling stone technology and were ancestral to many of the better-known agricultural societies. The Archaic period may be characterized as a time of increasing sophistication in hunting and gathering techniques through both technological development and the evolution of ever more complex subsistence-settlement systems, in conjunction with a gradually increasing dependence upon floral food resources. A transition to a partial reliance on agriculture accompanied population growth and the development of more sedentary settlement patterns

Two broad traditions have been associated with the Archaic period in Arizona: the Cochise culture, first defined in the San Pedro, Sulphur Spring, and San Simon valleys of southeastern Arizona (Sayles 1983; Sayles and Antevs 1941); and the Amargosa Complex, initially identified in the Mohave Desert of California and adjacent parts of the Great Basin (Haury 1950; Hayden 1970, 1976; Rogers 1966). The Archaic period generally is estimated at about 10,000 to 1500 years B.P. in the Southwest, although the terminal date varies considerably from one place to another.

Data from this period (6,000 B.C.-A.D. 200) vary considerably throughout different areas of the Southwest and it is possible that this period extended as late as A.D. 500-700 in southwestern Arizona (Marmaduke and Dosh 1992). In some parts of southern Arizona, the late Archaic period (1500 B.C.-A.D. 200) is now referred to as the Early Agricultural period. Archaeological data from several sites, specifically along the Santa Cruz River in the Tucson Basin, has shed light on this period and has suggested that agriculture, and consequently a more sedentary way of life, was well established by this time. It is clear, however, that this was not the case throughout the Southwest.

During the subsequent Formative period, ceramic-producing, agriculturally based peoples of the prehistoric Southwest inhabited a variety of highly contrasting environments from the low deserts to the high plateaus. The Patayan of the Lower Colorado River Valley, the Hohokam of the eastern Sonoran Desert, the Mogollon of the mountain and transition zone, and the Anasazi of the Colorado Plateau each developed unique subsistence lifestyles that represented behavioral and demographic adaptations to short-term and long-term environmental fluctuations.

Of these four major cultural groups, the Patayan is the least well-known due to the paucity of major archaeological studies that have been conducted in the region, especially when compared to areas associated with the Hohokam, Mogollon, and Anasazi cultures. As a result, few culturally independent dates are available (none of which is based on dendrochronology or archaeomagnetic dating) and very few vertically stratified sites are known. For the most part prior work has failed to produce a significant body of data on the lowland Patayan (Cordell 1984; McGuire 1982b; Schroeder 1979). Elsewhere in the upland areas of the Patayan, some *rancheria*-type sites have been investigated; however, as with the lowland areas, little is known about their cultural prehistory (Cordell 1984); however, three traditions have been identified: Prescott, Cohonina, and

Cerbat. The latter branch is most closely associated with the vicinity of the project area. The Cerbat culture, which is distinguished by the presence of Tizon Brownware ceramics, probably was restricted to the desert and riverine areas bordering the Colorado River in the vicinity of the Mohave valley from about A.D. 700 to 1150 (Cordell 1984 citing Euler 1977).

Historic Period

Although the first documented European contacts in Arizona were expeditions led by Melchior Diáz in 1539, Juan de Oñate in 1604, and Padre Eusebio Francisco Kino in 1697, little European influence occurred. The first known Anglo-Americans to travel the area were fur trappers who conducted several expeditions along the Big Sandy River during the late 1820s, whereas the U.S. invasion of Mexico in 1846 brought U.S. troops into Arizona for the first time (Wagoner 1975). With the signing of the Treaty of Guadalupe Hidalgo in 1848, Mexico ceded lands north of the Gila River to the United States (Wagoner 1975). With the Gadsden Purchase of 1853, the rest of Arizona became United States territory, and a series of military forts was developed, transportation systems were improved, and Anglo-American immigration increased. While exploring along the 35th Parallel for a railroad route, Lieutenant Amiel W. Whipple became the first military explorer to travel directly along the Big Sandy River

Between 1880 and 1900, population doubled in the Southwest, doubling once again from 1900 to 1920 (Meinig 1971). This increase in the local labor force, in conjunction with the availability of inexpensive transportation in the form of the railroads, made the mining of Arizona's large low-grade copper deposits profitable for the first time, resulting in a series of copper mining booms beginning in the 1880s (Teague 1980). However, the mining boom was relatively short-lived, lasting approximately from 1880 to 1915, with depressions occurring in 1883 and 1902 (Feil 1968).

The earliest European explorers encountered the Yuman-speakers of the lower Colorado River region living in rancherías along both sides of the Colorado and Gila Rivers (Marmaduke and Dosh 1992). Kroeber (1920) writes that, besides the Mohave and Yuma, "five or six" other tribes of Yuman lineage once occupied the banks of the lower Colorado River. By the early twentieth century, however, all but two, the Cocopa and Kamia, had either disappeared or merged with adjacent groups. Historically, the Yuman-speaking economy was based almost entirely on resources obtainable from the floodplain and terraces of the rivers, with a rather limited reliance on uplands for hunting and gathering.

The annual economic cycle was reconstructed by Castetter and Bell (1951). As they outline it, the spring was for harvesting agave, hunting and gathering, and preparing their floodplain fields for the coming summer floods. At this point, fields usually were sectioned off in 1- to 4-acre parcels and designated to individuals or families. Snowmelt from the western Rocky Mountains would reach its height in June and the Colorado River would flood. When the river receded, planting was done, which consisted mainly of corn, beans, and squash. Wheat was introduced by the Spanish and became a popular crop for people as it often could be sold for cash. The planting season was the leanest time of the year when food stores often were depleted. This was followed in July by the harvesting of mesquite beans, which was of great importance to other Gila River tribes. Such was the reliance on the mesquite that two months of the traditional

calendar of the Pima, who reside upstream from the Yuma-speaking tribes, refer to this plant (Russell 1975). By September, the crops were beginning to ripen, and a full harvest of all crops was completed by October. The contribution of agriculture to the total annual needs of Yuman peoples ranged from about 30 to 50 percent (Castetter and Bell 1951). Interestingly, according to several historic accounts, fish did not constitute a very important component of the Yuman diet.

One of the very earliest, if not the earliest, Europeans to record contact with Yuman-speaking peoples of the lower Colorado River valley was the Spanish foreigner Alarcón in 1540 (Kroeber 1920). He mentions the usual effects of everyday life including maize, beans, squashes or gourds, pottery, clubs, and dress. He also makes mention of aspects of social life including cremation practices, intertribal warfare, attitude toward strangers, and relations with the mountain tribes. He goes on to mention more individual traits like temperament, stubbornness under fatigue or provocation, and a generally cheery emotionality whether of anger, alarm, or friendship. Others followed Alarcón including Oñate in 1605, Kino in 1702, and Garcés in 1776. All found conditions to be similar to when the later Euro-Americans arrived; tribes battled, shifted, and occasionally disappeared. However, among these conflicts, customs remained stable and the basis and manner of life were conservative (Kroeber 1920).

Methodology

Tasks completed during the cultural resources inventory involved archival investigations (Class I overview) and a pedestrian survey of the project area (Class III survey).

Class I Overview

Survey and site records at the Arizona State Museum (ASM), State Historic Preservation Office (SHPO), and BLM Yuma Field Office were reviewed for pertinent information; a historic General Land Office map of the area was obtained from the BLM Public Room in Phoenix; and the AZSITE and National Register of Historic Places databases were consulted online. The files and databases indicate that six surveys have been conducted within a 1-mile-radius of the project area. Fifteen sites have been recorded within that same distance. No properties are listed within 1 mile of the project area on either the State or National Registers of Historic Places.

Information obtained during the records search, which was conducted September 15 and 19, 2005, is discussed below. The locations of the previous surveys and previously recorded sites are shown in Figure 2.

Previous Archaeological Surveys

The ASM, SHPO, and BLM files and AZSITE database indicate that six archaeological surveys have been conducted within 1 mile of the project area.

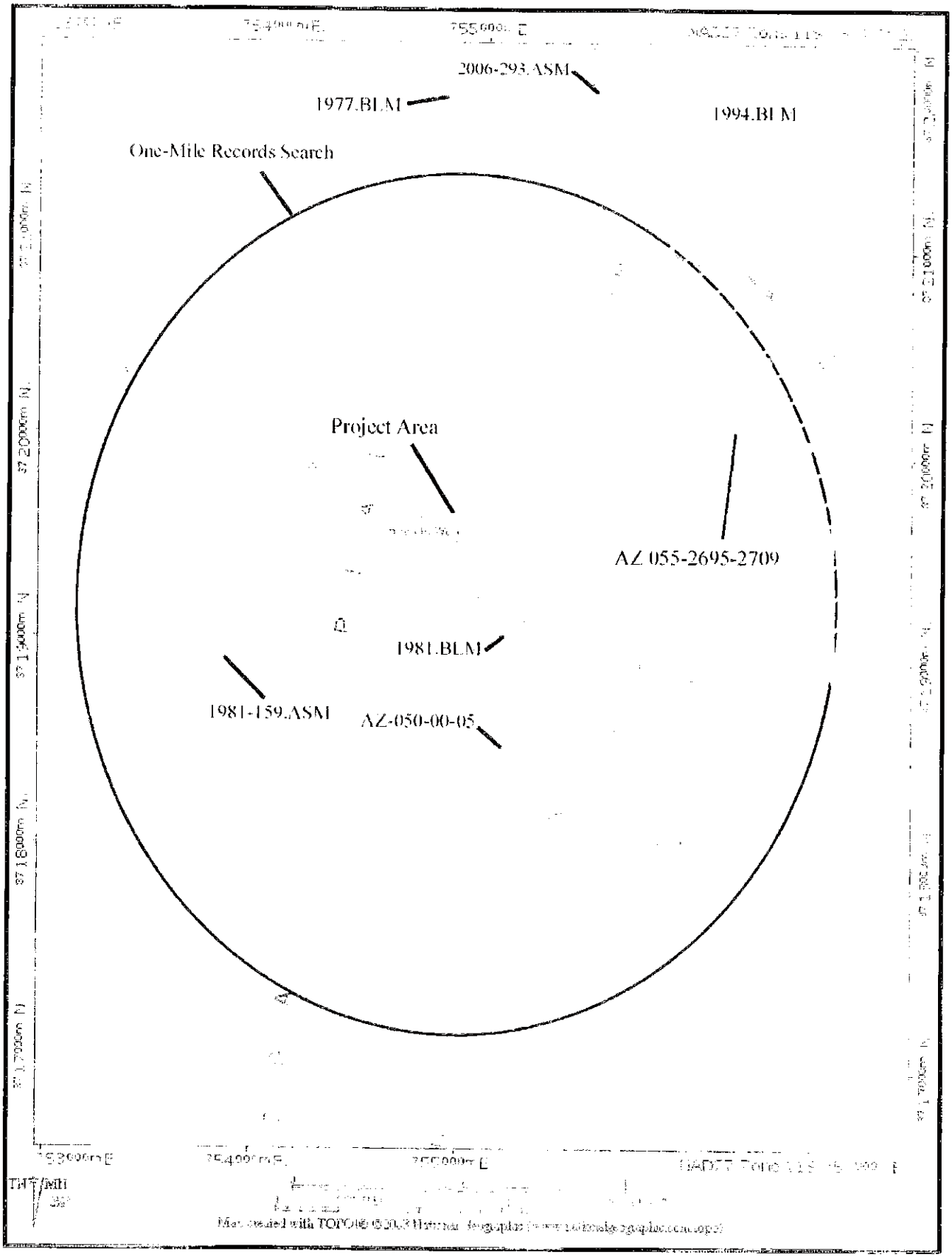


Figure 2 Previous surveys and previously recorded sites within 1 mile of the project area (U.S.G.S. Cunningham Mountain and South of Quartzite, Arizona 7.5 Minute quadrangle maps, T3N, R19W).

ASM Project No. 2006-293
This survey, conducted in 2004 by Transcon USA of Mesa for the Western Area Power Administration, is located a mile northeast of the current project area (Bassett 2006). It was a linear, multi-mile survey performed along the Parker-Gila 161-kV Transmission Line Quartzite Reroute corridor. No additional information regarding this survey is available.

ASM Project No. 1981-159
This survey was conducted in 1976 by the Museum of Northern Arizona for the Southern California Edison Company. It consisted of the area along the Palo Verde-Devers 500 kV transmission line corridor. This was a multi-mile, linear survey. No additional information regarding this survey is available.

BLM Project No. AZ-050-00-05
This survey was conducted on July 21, 2000, by the BLM Yuma Field Office. It consisted of a 1,000-foot-long, 15-foot-wide right-of-way corridor that would be used to provide electricity to a residential customer. The total project area was 15,000 square feet. The survey yielded negative results (Johnson 2000).

BLM Project 1994
This was a large block survey conducted by the BLM Yuma Field Office in 1994. This survey covered approximately 1,280 acres and recorded multiple Native American sites. Most sites recorded during this survey consist of isolated stone features and/or cleared areas. No additional information regarding this survey is available.

BLM Project 1981
This survey appears on the BLM Yuma Field Office site file maps in the same location as the current survey's right-of-way corridor (*see* Figure 2). No cultural properties were recorded during this survey. The survey yielded negative results. No additional information regarding this survey is available.

BLM Project 1977
This survey appears on the BLM Yuma Field Office site file maps. No additional information regarding this survey is available.

Previously Recorded Archaeological Sites

The ASM, SHPO, and BLM site files and the AZSITE database indicate that 15 archaeological sites have been recorded within 1 mile of the project area (*see* Figure 2). All of these sites were recorded during a 1994 block survey in Section 20 (T3N, R19W) performed by the BLM Yuma Field Office and are cross-listed with ASM site numbers. They consist of individual stone features and/or cleared areas that likely represent the remains of historic and/or prehistoric Native American activity. A brief description of each is given below.

AZ 055-2695 (cross listed as AZ R:8:749 [ASM])
This site consists of a single rock cluster and a message rock. No artifacts were discovered in association.

AZ 055-2696 (cross listed as AZ R:8:750 [ASM])
This site consists of two rock rings, one cleared area, four rock alignments, and seven message rocks. No artifacts were discovered in association.

AZ 055-2697 (cross listed as AZ R:8:751 [ASM])
This site consists of four message rocks and a single rock cluster or alignment. No artifacts were discovered in association.

AZ 055-2698 (cross listed as AZ R:8:752 [ASM])
This site consists of a single mound and cleared area. No artifacts were discovered in association.

AZ 055-2699 (cross listed as AZ R:8:753 [ASM])
This site consists of one rock ring and one rock alignment. No artifacts were discovered in association.

AZ 055-2700 (cross listed as AZ R:8:754 [ASM])
This site is described as a message rock alignment. No artifacts were discovered in association.

AZ 055-2701 (cross listed as AZ R:8:755 [ASM])
This site consists of a single message rock. No artifacts were discovered in association.

AZ 055-2702 (cross listed as AZ R:8:756 [ASM])
This site consists of a single message rock No artifacts were discovered in association.

AZ 055-2703 (cross listed as AZ R:8:757 [ASM])
This site consists of a sleeping circle, 43 message rocks,2 rock rings, and a single rock cluster. No artifacts were discovered in association.

AZ 055-2704 (cross listed as AZ R:8:758 [ASM])
This site consists of two message rocks No artifacts were discovered in association.

AZ 055-2705 (cross listed as AZ R:8:759 [ASM])
This site is described as a single cleared area This site consists of a single message rock. No artifacts were discovered in association.

AZ 055-2706 (cross listed as AZ R:8:760 [ASM])
This site consists of a single rock ring. No artifacts were discovered in association

AZ 055-2707 (cross listed as AZ R:8:761 [ASM])
This site is described as a message rock alignment consisting of three message rocks. No artifacts were discovered in association

AZ 055-2708 (cross listed as AZ R:8:762 [ASM])
This site consists of a single message rock. No artifacts were discovered in association.

AZ 055-2709 (cross listed as AZ R:8:763 [ASM])
This site is described as a single rock cluster. No artifacts were discovered in association.

General Land Office Map

One General Land Office (GLO) map, dating to June 1919, is available for Township 3 North, Range 19 West. This map shows properties labeled as "windmill & tank" and "corral" within the project area (Figure 3). This is site AZ R:7:120 (ASM) that was recorded during the current survey. A single, north-south running unnamed road also appears on this map approximately 0.5 miles east of the current project area on the other side of Tyson Wash. No other properties or standing structures appear on this historic map.

Class III Survey

The pedestrian field survey of the entire project area was conducted on September 18, 2006, by James Moses (project director) and Liz Majchrowicz (field archaeologist). During the survey, 10-meter wide transects were walked throughout the entire project area. To ensure complete and adequate coverage, a 42-meter-wide corridor (21 meters [69 feet] on either side of the right-of-way centerline) was surveyed. During site recording, an area 50 meters beyond the site boundary was inspected to ensure complete and adequate recording. No problems occurred during the survey.

Results

During fieldwork ASM guidelines (Fish 1994) were followed in distinguishing isolated occurrences from archaeological sites. According to these guidelines all sites should contain physical remains of past human activity that are at least 50 years old. Additionally, a site should consist of at least one of the following.

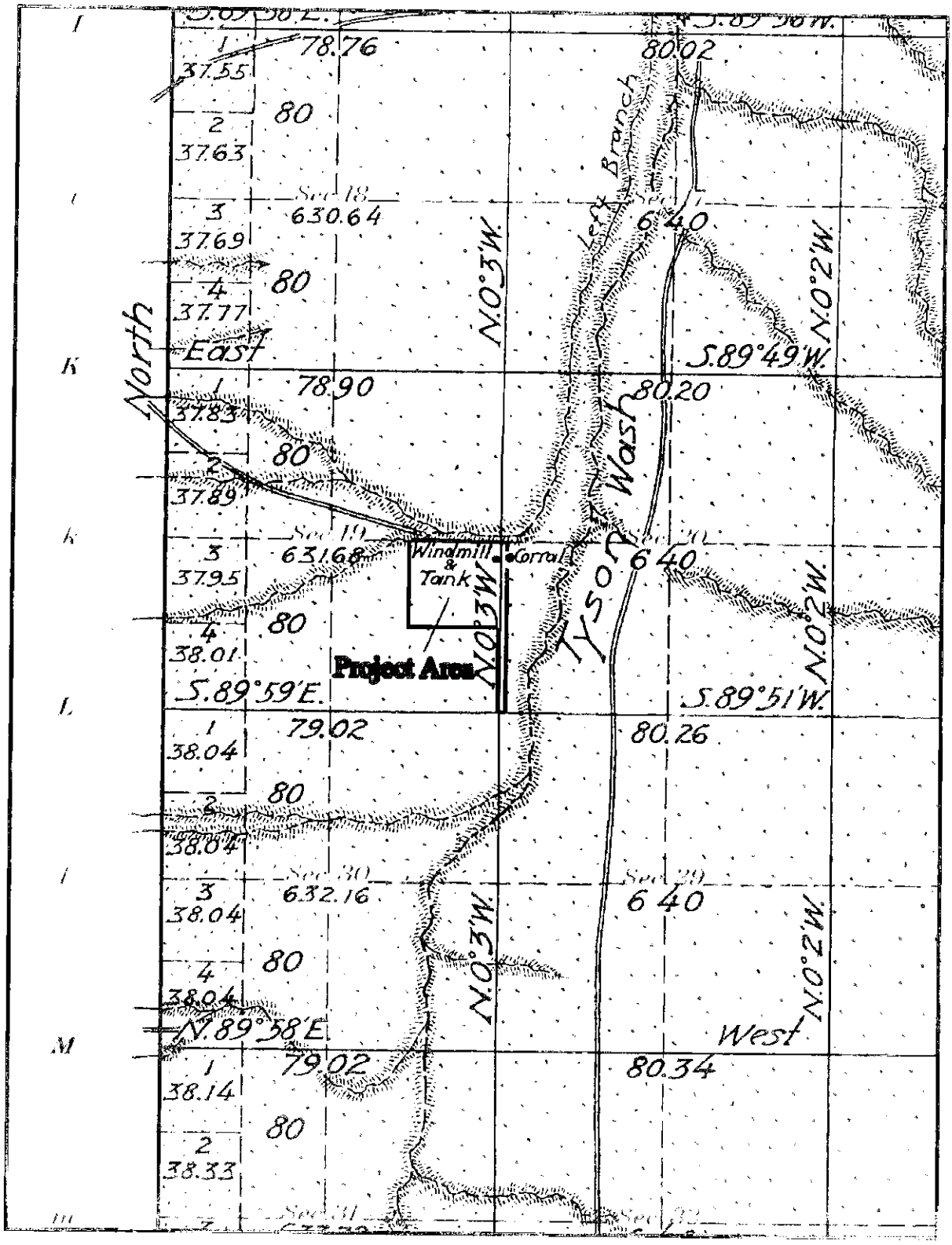


Figure 3. 1919 GLO Map No. 2690 detail showing site AZ R 7:120 (ASM)

1. Thirty or more artifacts of a single class within a 15-meter-diameter area. The only exception to this is when all the pieces appear to originate from a single source (e.g., potbreak).

2. Twenty or more artifacts that include at least two classes of artifact types within a 15-meter-diameter area.

3. One or more archaeological features in temporal association with any number of artifacts.

4. Two or more temporally associated archaeological features that lack associated artifacts.

In accordance with these guidelines, cultural resources encountered during the survey were classified as either an archaeological site or isolated occurrence. Two previously unknown archaeological sites and one isolated occurrence were identified.

Archaeological Sites

Two archaeological sites, AZ R:7:120 (ASM) and AZ R:7:121 (ASM) were identified during the survey. Their locations, and that of the isolated occurrence, are shown in Figure 4.

AZ R:7:120 (ASM)

During the survey, a previously unknown site, AZ R:7:120 (ASM), was recorded in the NE¼NE¼SE¼ of Section 19 and the NW¼NW¼SW¼ of Section 20, Township 3 North, Range 19 West of the U.S.G.S. Cunningham Mountain, Arizona 7.5 Minute quadrangle map. This is an historic corral that appears on the June 1919 GLO map of the area (*see* Figure 3). An inscription of "MAR 8 1917" is present on the cement water trough (Feature 1), and another inscription of "1931" appears in a repaired section of the same feature. A site map is provided in Figure 5.

The site measures 85 meters east-west by 78 meters north-south. Artifact density over most of the site is low (less than 1 artifact per square meter). However, an area of relatively high artifact density is present in the northern area of the site south of a small wash (*see* Figure 5). Artifacts consist mainly of metal cans (solder top and tobacco), wire, springs, and clear and brown glass. Several pieces of porcelain also were noted. AZ R:7:120 is located on both BLM-administered and privately held lands and is bounded on the north by a small, unnamed wash (*see* Figure 5). UTM coordinates for the site datum are Zone 11, N3719554, and E0755142, recorded in NAD 27.

The site contains four distinct features within a corral area and an associated artifact scatter. They are described in the following sections and photographs of each are provided.

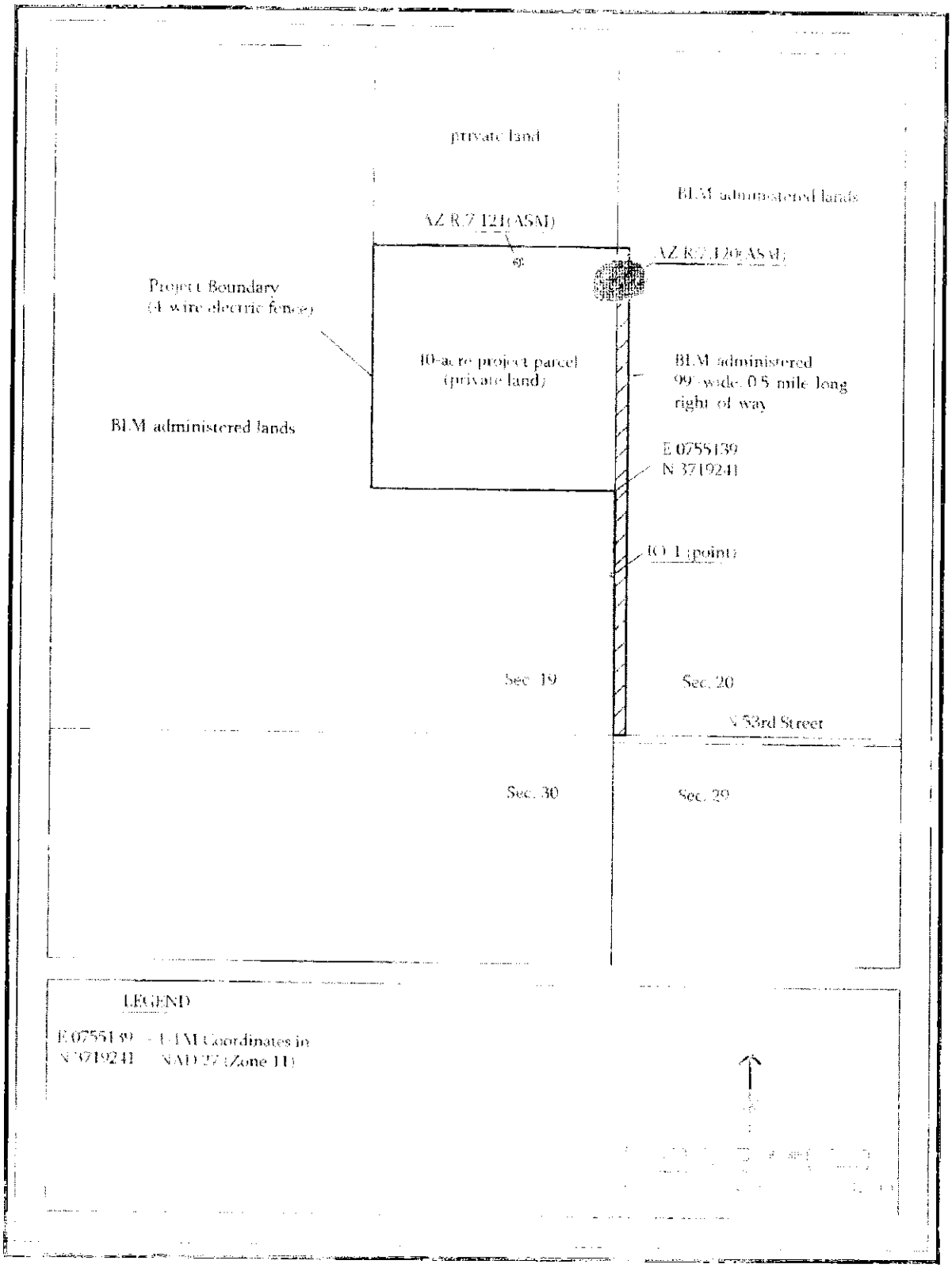


Figure 4 Project area detail showing newly-recorded sites and IO-1

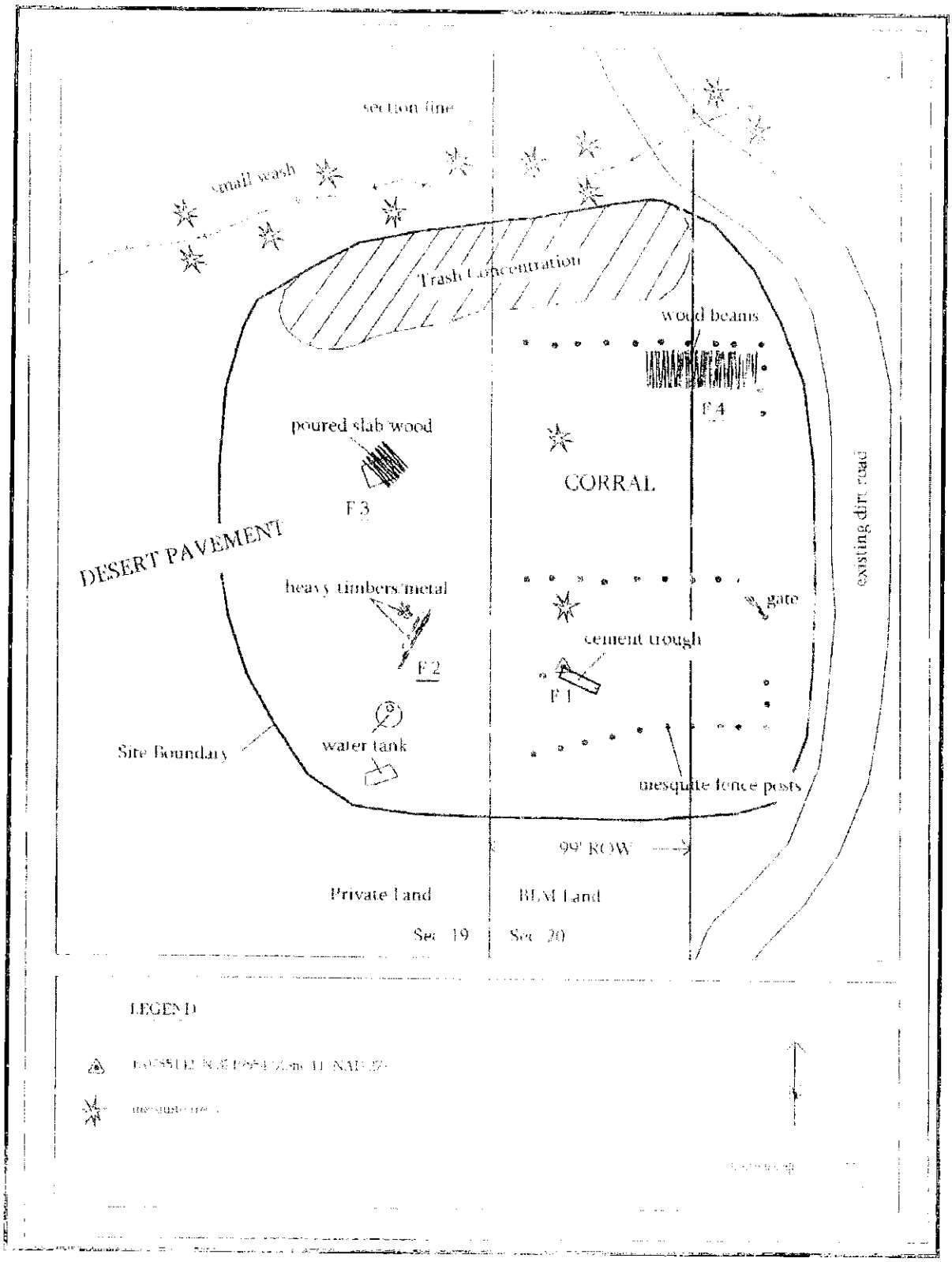


Figure 5. AZ R:7:120 site map.

Feature 1 Feature 1 is a standing poured cement water trough measuring 20 feet long, 4 feet wide, and 2 feet high (Figure 6). It is located within what remains of the corral area (*see* Figure 5). A date of "MAR 8 1917" was inscribed into the cement shortly after the trough was poured and it is assumed to represent the date the trough was constructed. A subsequent date of "1931" is inscribed in the cement where the trough later was repaired. A metal pipe is present at the eastern end that would have been used to fill the trough with water

Feature 2: Feature 2 consists of four separate poured cement footers, associated heavy timbers, and metal (Figure 7). The timbers measure 12 inches by 16 inches and are up to 10 feet in length. They may represent the remains of the windmill that appears on the 1919 GLO map (*see* Figure 3).

Feature 3: Feature 3 is a poured cement slab measuring approximately 8 feet by 10 feet. Several wooden 2-inch by 4-inch beams also are present (Figure 8). It is possible that this feature contains buried cultural deposits as it may represent the remains of a structure.

Feature 4: Feature 4 is the fallen remains of a wooden ramada (Figure 9). It measures approximately 10 feet by 25 feet and is located within the northeast corner of the corral (*see* Figure 5).

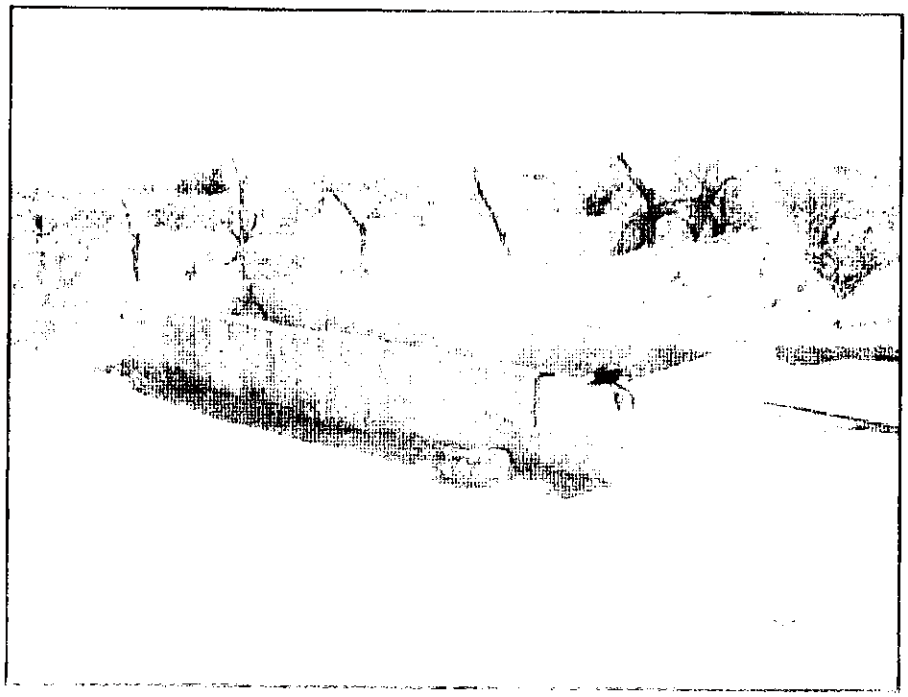


Figure 6. Feature 1 at AZ R:7:120, cement water trough. View to the southeast.

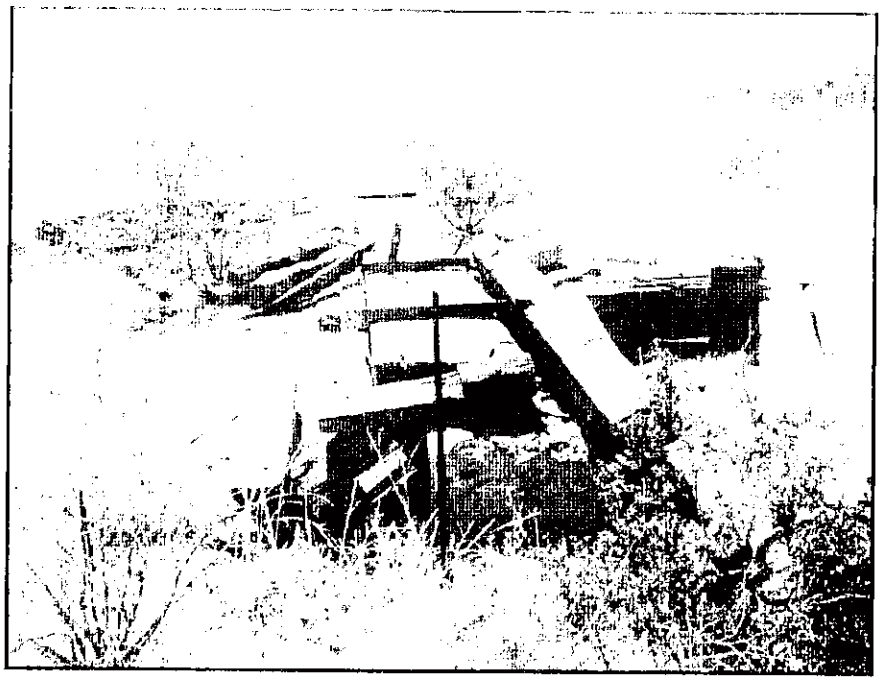


Figure 7. Feature 2 at AZ R:7:120, possible remains of a windmill. View to the southwest.

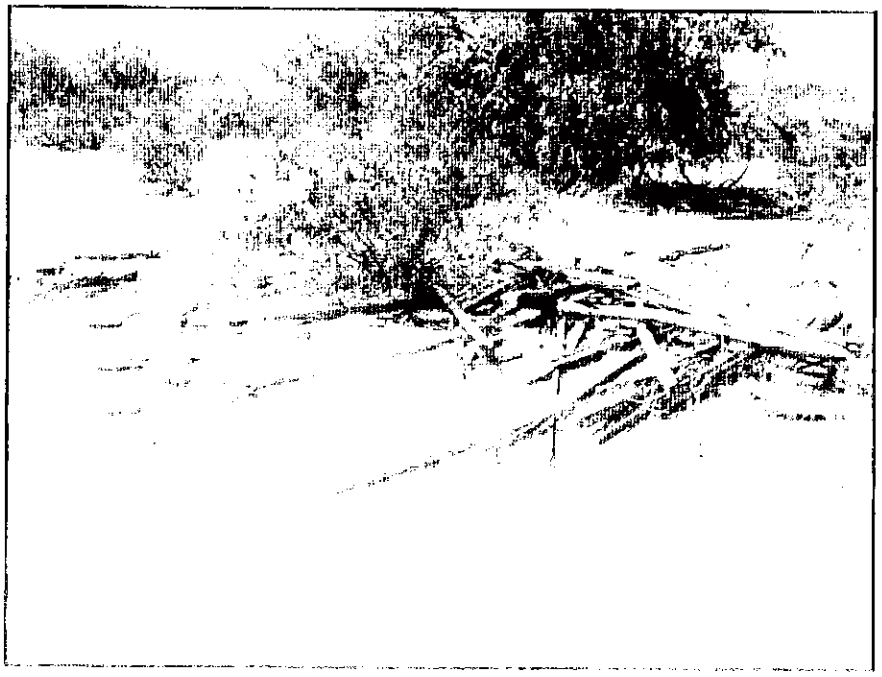


Figure 8. Feature 3 at AZ R:7:120, poured cement slab and associated wood beams. View to the northwest.

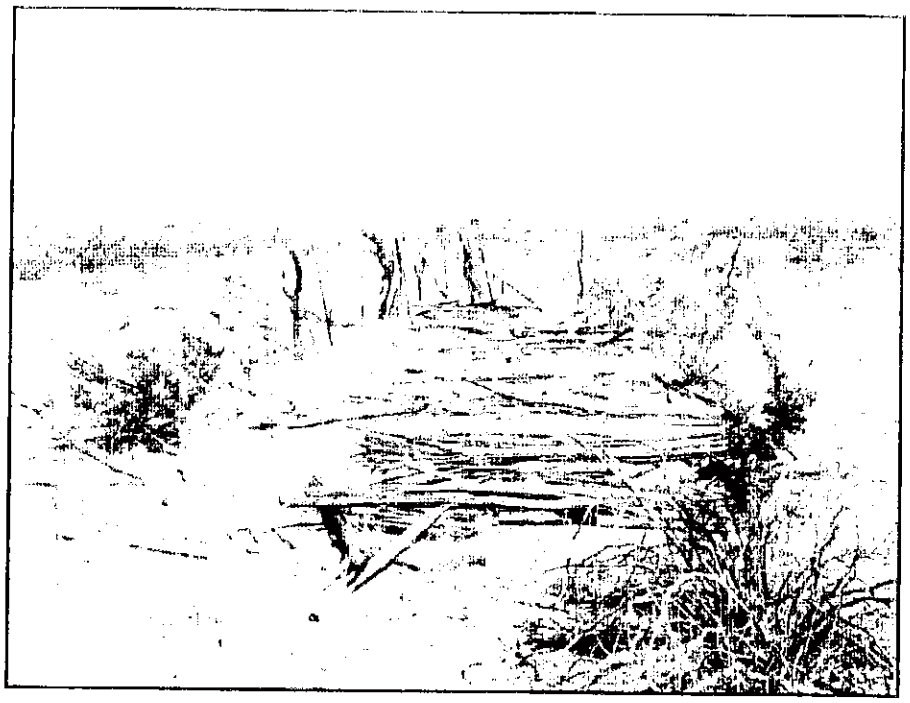


Figure 9. Feature 4 at AZ R:7:120, fallen ramada. View to the east.

Figure 10. Top of a metal water tank at AZ R:7:120.

Two pieces of a defunct water tank are present in the southwest portion of AZ R:7:120 (*see* Figure 5). They are made from galvanized metal and consist of the top and a portion of the side (*see* Figure 10).

AZ R:7:121(ASM)

During the survey, another previously unknown site, AZ R:7:121 (ASM), was recorded in the NE¼NE¼SE¼ of Section 19, Township 3 North, Range 19 West of the U.S.G.S. Cunningham Mountain, Arizona 7.5 Minute quadrangle map (Figure 11). The site is the remains of Beamer Well, which appears on the 1971 Cunningham Mountain, Arizona 7.5 Minute U.S.G.S. map (*see* Figure 1). The site measures 25 meters east-west by 30 meters north-south. It consists of two capped metal well pipes and is 30 feet in diameter and 3 feet deep. Associated artifacts are scarce, consisting of only 2 metal barrel loops, 4 pieces of broken wire, 10 small pieces of metal cans, and a single piece of clear bottle glass. Three 20-inch-diameter stones of unknown function are present southwest of the Feature 2 depression (*see* Figure 11). UTM coordinates for the site datum are Zone 11, N3719609, and E0754950, recorded in NAD 27

Feature 1: Feature 1 consists of two capped metal well pipes. One pipe is 12 inches in diameter, and the other is 6 inches in diameter. Both rise approximately 12 inches above the surrounding ground surface. This is the capped Beamer Well.

Feature 2: Feature 2 consists of a shallow depression measuring 30 feet in diameter and 3 feet in depth. Vegetation is heavy around this feature, which probably represents the remains of the original well. A view of Feature 2 is provided in Figure 12.

Isolated Occurrences

One Isolated Occurrence (IO-1) was discovered during the survey of the access road right-of-way (*see* Figure 4). As can be seen in Figure 13, IO-1 is a complete large projectile point. It was recovered from BLM-administered land within the proposed right-of-way in an area that recently had been bladed. The location of IO-1 was Zone 11, N3719106, E0755137 (NAD 27).

The point, made of petrified wood, measures 10.5 centimeters in length, 3.5 centimeters in basal width, and 0.5 centimeters in thickness. It is side-notched- more deeply on one side than the other. No use-wear or damage is apparent, which suggests that it was lost shortly after being made. The point most likely is Archaic in age as it lacks the classic basal thinning of Paleoindian period points (C. Vance Haynes, personal communication, October 10, 2006).

Because this is a rare and unusual find, and as it was found in an area that is subject to ongoing disturbance from local traffic and road blading, it was collected and brought to AAI's office for further analysis. It will be curated at the ASM, unless otherwise directed by the BLM Yuma Field Office.

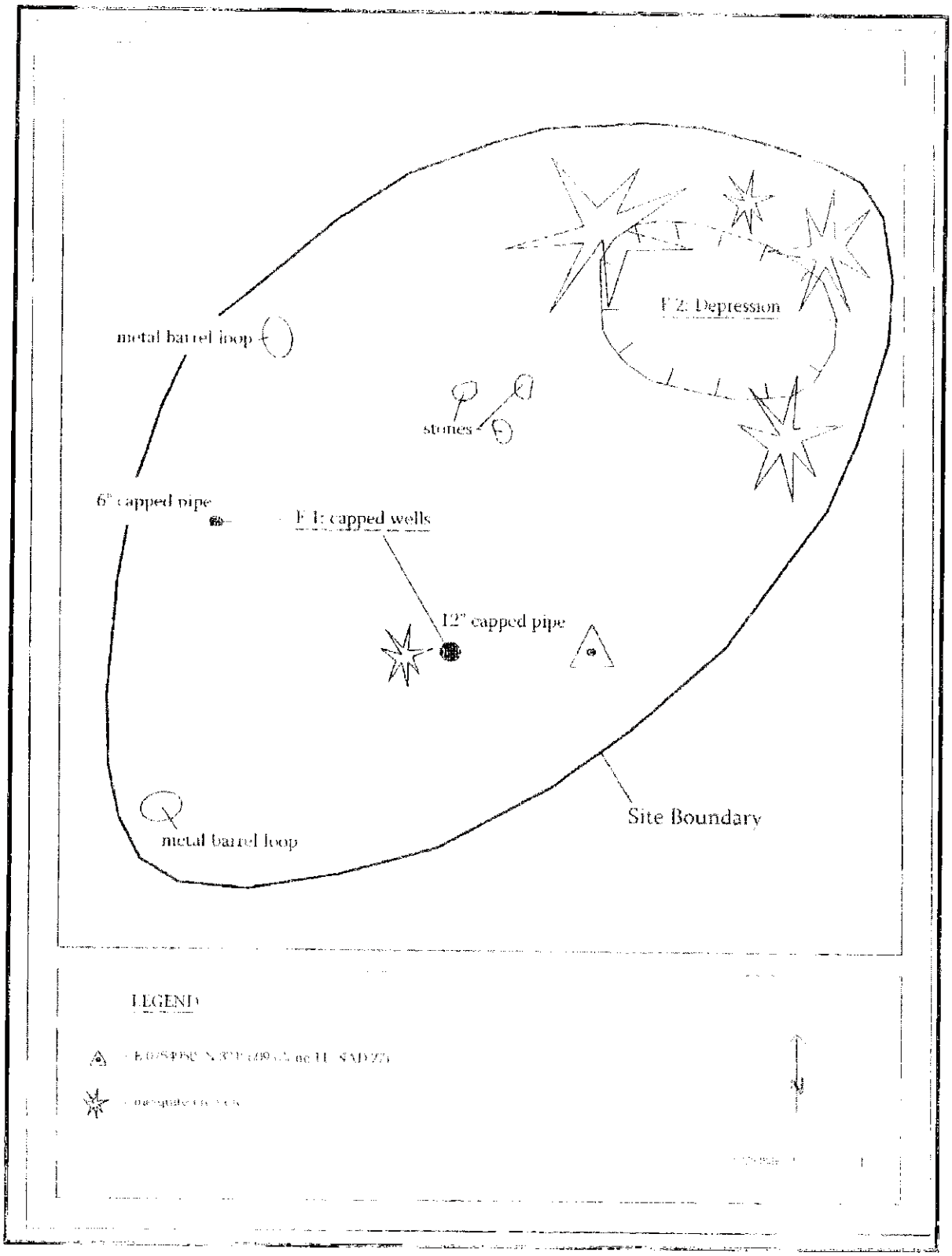


Figure 11. AZ R 7 121 site map

Figure 12. Feature 2 at AZ R:7:121. View to the northwest.

Figure 13. Isolated Occurrence #1

Research Objectives

The goals of the survey were to (1) identify any cultural resources within the project area, (2) evaluate such resources in terms of eligibility for the National Register of Historic Places, and (3) assess the effects of the proposed undertaking on such resources. Historic context, historic significance, and historic integrity are the three interrelated concepts on which eligibility for listing in the National Register is based. A property's significance depends upon its association with an important historic context and upon retaining the integrity of those features necessary to convey its significance.

Historic contexts are defined as "those patterns, themes, or trends in history by which a specific occurrence, property, or site is understood and its meaning (and ultimately its significance) within history is made clear" (National Register Staff 1991:7). Essentially, the historic context is "the analytical framework within which the property's importance can be understood" (Townsend et al. 1993).

Historic significance is defined as "the importance of a property to the history, architecture, archaeology, engineering, or culture of a community, state, or the nation" (McClelland 1991:3). The criteria used to determine significance recognize different types of values embodied in the various types of cultural resources: districts, sites, buildings, structures, and objects. These values fall into one or more categories (National Register Staff 1991:11):

> Associative Value (Criteria A and B): Cultural resources significant for their association or linkage to events (Criterion A) or persons (Criterion B) important in the past.
>
> Design or Construction Value (Criterion C): Cultural resources significant as representatives of the manmade expression of culture or technology.
>
> Information Value (Criterion D): Cultural resources significant for their ability to yield important information about prehistory or history.

Historic integrity is defined in general as "the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic period" (McClelland 1991:4). For archaeological sites significant under Criterion D, the property's importance resides in its potential to answer questions relevant to its historic context. This, in turn, means that its historic integrity is defined by the presence of sufficiently intact archaeological features and deposits (Townsend et al. 1993).

The evaluation process follows a basic sequence that requires determination of: (1) the appropriate category - building, structure, object, site, or district - for the property; (2) the historic context the property represents; (3) the criterion or criteria under which the property is significant; and (4) the integrity of the property.

Based on the nature of the site, the dates inscribed at the site, and archival research, a date range of early twentieth century (specifically post-1917) is proposed for AZ. R:7:120. In

consideration of the appearance of Beamer Well on a 1971 U.S.G.S. map and the absence of this property on the 1919 GLO map, a date range of 1920 to 1971 is proposed for AZ R:7:121. The following historic context is proposed for the two sites:

> *Historic-period settlement/subsistence systems*. This context deals primarily with ranching-related settlements and associated lifeways, with an emphasis on the remains of small ranches established in the late nineteenth and early twentieth century.

Management Summary and Recommendations

Considering the types of cultural resources that are present within the project area, and the possible contributions to the current data base that may be made by these resources, recommendations were developed for the archaeological sites and isolated occurrence recorded during the Class III archaeological survey.

National Register-Eligible Archaeological Site

AZ R:7:120 (ASM) is eligible for the National Register of Historic Places under Criterion D (i.e., has yielded, or may be likely to yield, information important in prehistory or history). Significant indications of the presence of buried cultural materials, especially associated with Feature 3, were observed. It is possible that additional information is present at this site that could contribute to the aforementioned historic context.

It is recommended that the area in and around site AZ R:7:120 be avoided. A 100-foot-wide buffer zone beyond the site boundary would be adequate to avoid any adverse impact that the proposed development could have on this site. If avoidance is not possible, then an archaeological testing plan would need to be developed. This would need to take place before any construction activities associated with the proposed development could occur in the vicinity of this site. A comprehensive testing plan would include adequate mapping, research, and excavations to successfully evaluate the site in terms of National Register criteria. Excavations should focus on Feature 3.

National Register-Ineligible Archaeological Site

AZ R:7:121 (ASM) is ineligible for the National Register of Historic Places. Due to its lack of associated diagnostic artifacts and lack of depth, the recording of this site during the current survey has exhausted its research potential and no more significant information remains. It is unlikely that additional unrecorded information is present at this site that could contribute to the aforementioned historic context. Archaeological clearance is recommended for this site.

Isolated Occurrence

No additional fieldwork is necessary for the isolated occurrence recorded in the project area. By definition, Isolated Occurrences are National Register-ineligible.

Project Area

Archaeological clearance is recommended for the remainder of the project area. However, if any unknown cultural resources are found during construction, it is recommended that work temporarily stop in the immediate vicinity of the find(s) and a qualified archaeologist be contacted to assess significance and determine appropriate mitigation procedures.

Laurie V. Slawson, Ph.D., RPA
Principal Investigator

James Moses
Project Director

Appendix A

ASM Site Cards for AZ R:7:120 and AZ R:7:121

Side A

ARIZONA STATE MUSEUM ARCHAEOLOGICAL SITE CARD

Field No: 01 Recorders: J. Moses/E. Majchrowicz

Natl Reg Opinion: Eligible

Recording Organization: Aztlan Archaeology, Inc. Date Recorded: 9/18/06

Proj. Name: Dome Valley Survey

Site Name:

Land status (check one): PVT_X_ CTY__ CO__ ST__ TRIB__ USFS__ USFW__ NPS__ BLM_X_ DOD__ ACE__ BOR__ RTC__

Owner/Agency Name:

Survey Colls: Y___ N_X_ Repository Inst:

Report Title: A Cultural Resources Inventory of a 40-Acre Parcel and Adjoining 0.5-Mile-Long Right-of-Way South of Quartzsite, in La Paz County, Arizona. AAI Technical Report No. 2006-37.

Map name USGS: Cunningham Mt. Series: 7.5' State: AZ County: La Paz El: 1,000 ft

Site size: (in Ft__ or M_X_) Length: 85 m Width: 78 m How measured: EST__ PACE_X_ MAP__ TAPE__

cntr UTM: Z 11N3719554E0755142			BL	TWN 3N	RNG 19W	SC 19/20	SUBDIV SE 1/4
peri UTM: Z	N	E	BL	TWN	RNG	SC	SUBDIVISION
peri UTM: Z	N	E	BL	TWN	RNG	SC	SUBDIVISION
peri UTM: Z	N	E	BL	TWN	RNG	SC	SUBDIVISION
peri UTM: Z	N	E	BL	TWN	RNG	SC	SUBDIVISION

How were UTMs derived: USGS Map___ GPS_X_

Site Description/Remarks:

AZ R:7:120 is an historic corral that appears on the June 1919 GLO map of the area. An inscription of "MAR 8 1917" is present on a cement water trough (Feature 1), and another inscription of "1931" appears in a repaired section of the same feature. The site contains four distinct features, a corral area, and an associated artifact scatter.

Artifact density is low over most of the site (less than 1 artifact per square meter). However, an area of relatively high artifact density is present in the northern area of the site south of a small wash. Artifacts consist mainly of metal cans (solder top and tobacco), wire, springs, and clear and brown glass. Several pieces of porcelain also were noted.

The site is eligible for the National Register of Historic Places under Criterion D. Significant indications of the presence of buried cultural materials, especially associated with Feature 3, were observed. It is possible that additional information is present at this site.

Additional Documentation Type Document Location

Agency Site No: in

Agency Proj. No: in

Natl Reg Rec: in

ASM Site No: AZ R:7:120 (ASM) ASM Proj. No. ASM Permit No: 2006-002bl

ASM USE ON: Y Class: Within AZ : (ASM) Corrections:

QP Contains AZ : (ASM)

QP Biblio Ref. Plotted / / by

QP Acc.No AZSITE DE by

ASM Site No: AZ R.7:120 (ASM) Side C

Depositional Context: (choose as many as apply)
___ (1) Open, no depth _ (5) Rockshelter, no depth _ (8) Cave, no depth
_X_ (2) Open, depth _ (6) Rockshelter, depth __ (9) Cave, depth
___ (3) Open, depth unknown _ (7) Rockshelter, depth unknown __ (10) Cave, depth unknown
_ (4) Open, exposed only in profile

Topo.setting: On desert flats

Vegetation: Creosote

Geology/soils: Cobbles on sandy loam

Site Condition: Good

Site Type (choose one): __ (a) Artifact Scatter (No other features visible on the surface)
_X_ (b) Features with associated artifacts __ (c) Features with NO associated artifacts

Assemblage Composition (indicate quantities as counts, estimated ranges, P for types known only to be present,
0 for types not seen at the site)

_0_ prehis ceramic	_0_ FCR	_P_ glass	_0_ animal/artifacts
_0_ chipped stone	_0_ shell	_P_ metal	_0_ plant/artifacts
_0_ ground stone	_P_ hist ceramic	_P_ hist wood	_0_ human remains

Diagnostics (indicate quantity of cultural/temporal/functional types as counts, estimates, or P)

Assemblage Remarks:

Feature Data: (Complete one feature record for each feature recorded for this site)

Feature No. 1

Name*	Count	Use*	Cult*	Age*	Per/Phase*
Tank	1		Euroam	Historic	

Feature Remarks:

Feature 1 is a standing poured cement water trough measuring 20 feet long, 4 feet wide, and 2 feet high (Figure 6). It is located within what remains of a corral area. A date of "MAR 8 191/" was inscribed into the cement shortly after the trough was poured and it is assumed to represent the date the trough was constructed. A later date of "1931" is inscribed in the cement where the trough was repaired later. A metal pipe is present at the eastern end that would have been used to fill the trough with water

ASM Site No: AZ R:7:120 (ASM)

Feature No. 2

Name*	Count	Use*	Cult*	Age*	Per/Phase=
Windmill	1		Euroam	Historic	

Feature Remarks:

Feature 2 consists of four separate poured cement footers, associated heavy timbers, and metal. The timbers measure 12 inches by 16 inches and are up to 10 feet in length. This may represent the remains of the windmill that appears on the 1919 GLO map.

Feature No. 3

Name*	Count	Use*	Cult*	Age*	Per/Phase=
Histstru	1	unknown	Euroam	Historic	

Feature Remarks:

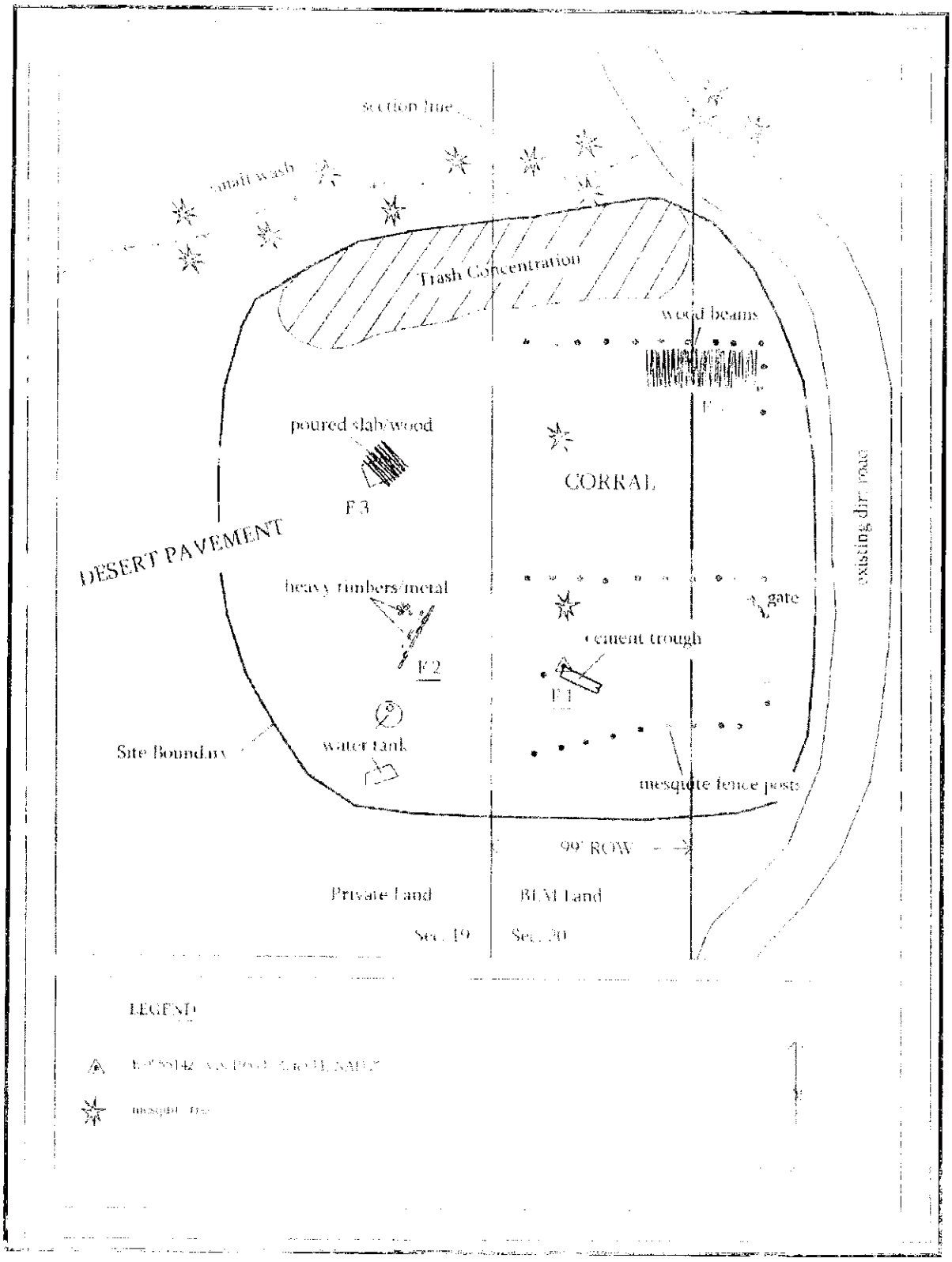
Feature 3 is a poured cement slab measuring approximately 8 feet by 10 feet. Several wooden 2-inch by 4-inch beams also are present. It is possible that this feature contains buried cultural deposits as it may represent the remains of a structure.

Feature No. 4

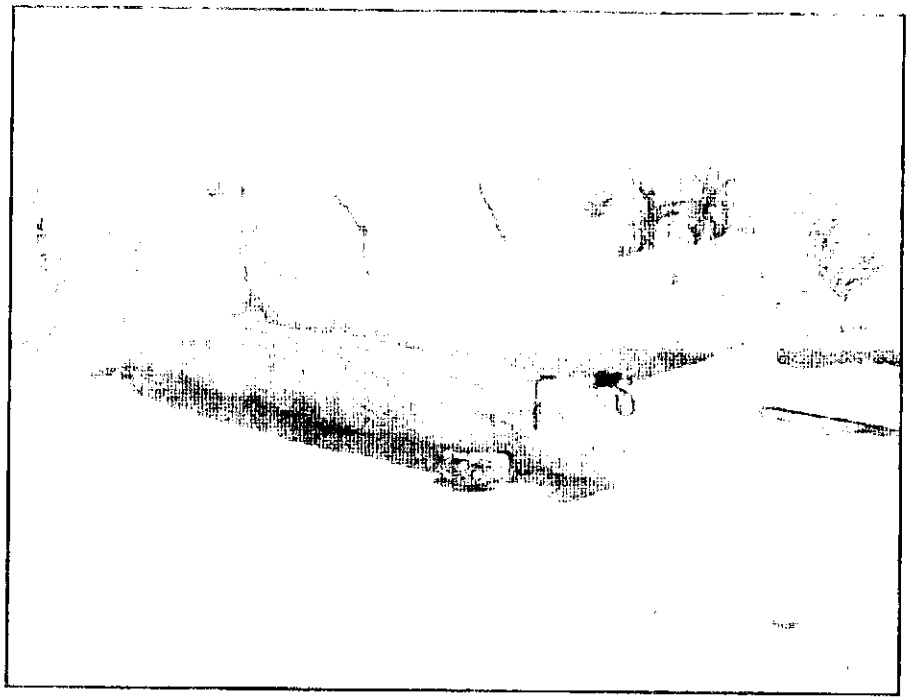
Name*	Count	Use*	Cult*	Age*	Per/Phase=
Ramada	1		Euroam	Historic	

Feature Remarks:

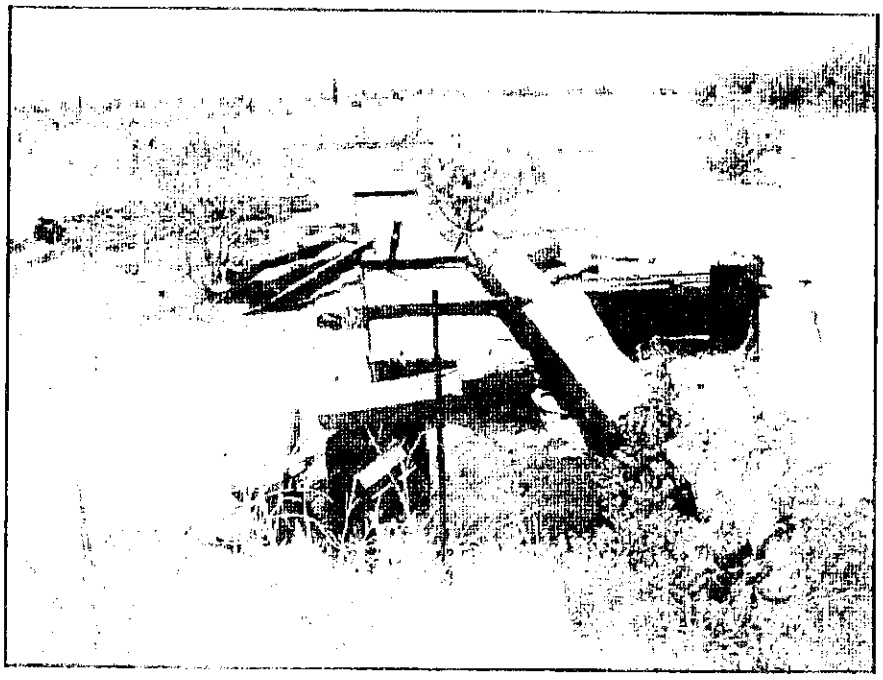
Feature 4 is the fallen remains of a wooden ramada. It measures approximately 10 feet by 25 feet and is located within the northeast corner of the corral.



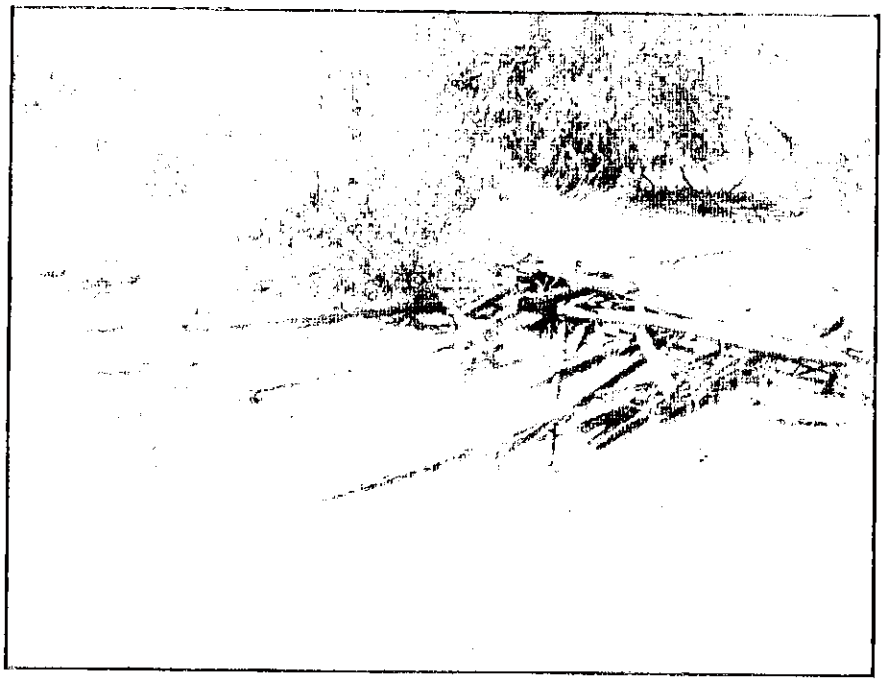
AZ R-3-120 (ASM) Site Map



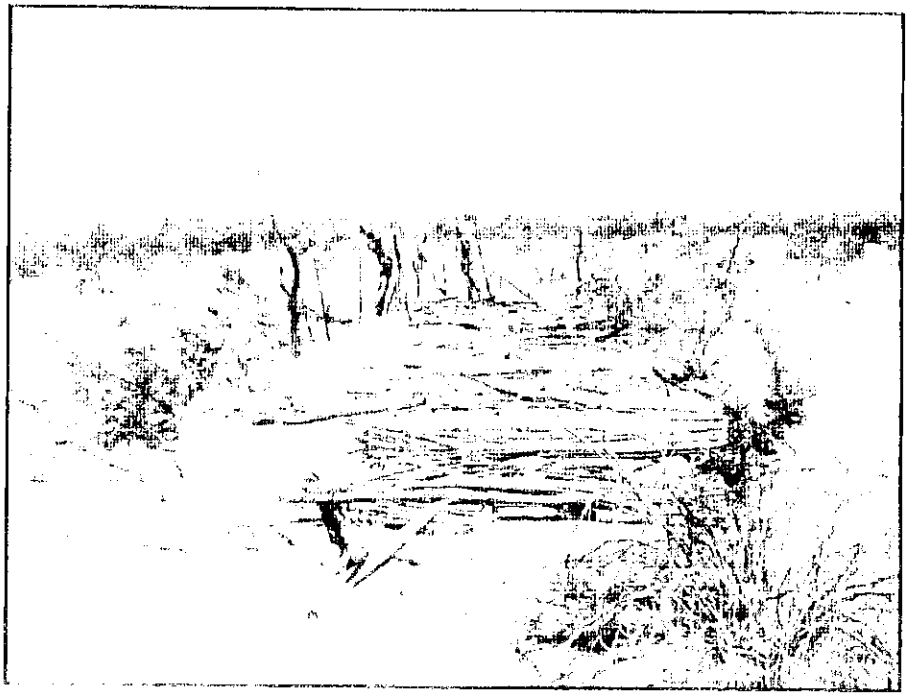
Feature 1 at AZ R:7:120, cement water trough. View to the southeast.



Feature 2 at AZ R:7:120, possible remains of a windmill. View to the southwest



Feature 3 at AZ R:7:120, poured cement slab and associated wood beams. View to the northwest.



Feature 4 at AZ R:7:120, fallen ramada. View to the east.

Form AZ 8110-1
(June 1999)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE

EVALUATION AND ACCESS RECORD

Site No. AZ R : 7 : 120 (ASM)

EVALUATION

Site Discussion (include temporal and spatial relationship to other sites or districts; relationship between features, components): AZ R:7:120 consists of a historic-period corral that appears on the June 1919 GLO map of the area. An inscription that reads "MAR 8 1917" is present on the cement water trough. Another that reads "1931" appears in a repaired section of the same feature. The site measures 85 meters east-west by 78 meters north-south and contains four distinct features and an associated artifact scatter. Artifact density over much of the site is relatively low (less than 1 artifact per square meter).

Site Significance (National Register qualities including integrity, justification of local, state or national importance): AZ R:7:120 is eligible for the National Register of Historic Places. Significant indications of buried cultural materials, especially regarding Feature 3, are present. It is possible that buried cultural deposits are present at this site that could provide additional information regarding cattle ranching in the early twentieth century.

Site Evaluation (assess and explain use potential according to the Use Categories defined in BLM Manual 8110):

Site is an historic cattle ranching site and a possible structure (Feature 3). Potential avenues of research include historic ranching.

Management Recommendations: It is recommended that the area in and around site AZ R:7:120 (ASM) be avoided. An avoidance distance of 100 feet beyond the site boundary is adequate. If avoidance to this site is not possible, then an archaeological testing plan would need to be developed. This would need to take place before any construction activities associated with the proposed development could occur in the vicinity of this site. A comprehensive testing plan would include adequate mapping, research, and excavations to successfully evaluate the site in terms of NRHP criteria.

ACCESS INFORMATION

Access (explain how to reach site, include mileages, reference well-known landmarks, key to attached sketch map and location map: Site is located 0.5 miles due north of the western terminus of 53rd Street and west of Tyson Wash. 53rd Street runs east to west and is located approximately 5 miles south of the town of Quartzite and off of Highway 95. Legal description is the NE¼NE¼SE¼ of Section 19, and the NW¼NW¼SW¼ of Section 20, Township 3 North, Range 19 West of the U.S.G.S. (1971) Cunningham Mountain, Arizona 7.5 Minute quadrangle map. UTM coordinates for the site datum are Zone 11, N3719554, and E0755142, recorded in NAD 27.

Contact Name: Laurie V. Slawson or James Moses Phone: (520) 620-1480

Contact Address: Aztlan Archaeology, Inc., 1026 North Columbus Boulevard, Tucson, AZ 85711

Side A

ARIZONA STATE MUSEUM ARCHAEOLOGICAL SITE CARD

Field No. 02 Recorders: J. Moses/E. Majchrowicz

/ Natl Reg Opinion: Ineligible

Recording Organization. Aztlan Archaeology Inc. Date Recorded. 9/18/06

Proj. Name: Dome Valley Survey

Site Name:

Land status (check one): PVT_X_CTY CO_ ST_ TRIB_ USFS_ USFW NPS_ BLM_ DOD_ ACE_ BOR_ RTC_

Owner/Agency Name:

Survey Colls. Y_ N_X_ Repository Inst:

Report Title: Cultural Resources Inventory of a 40-Acre Parcel and Adjoining 0.5-Mile-Long Right-of-Way South of Quartzsite, in La Paz County, Arizona. AAI Technical Report No. 2006-37

Mapname USGS: Cunningham Mt. Series: 7.5' State: AZ County: La Paz El: 1,000 ft

Site size: (in Ft_ or M_X_) Length: 25 m Width: 30 m How measured: EST_ PACE X_ MAP_ TAPE_

cntr UTM: Z	11N3719609E0754950	BL	TWN 9N	RNG 19W	SC 19	SUBDIV SE 1/4	
peri UTM: Z	N	E	BL	TWN	RNG	SC	SUBDIVISION
peri UTM: Z	N	E	BL	TWN	RNG	SC	SUBDIVISION
peri UTM: Z	N	E	BL	TWN	RNG	SC	SUBDIVISION
peri UTM: Z	N	E	BL	TWN	RNG	SC	SUBDIVISION

How were UTMs derived: USGS Map___ GPS_X_

Site Description/Remarks:

This site is the remains of Beamer Well, which appears on the 1971 Cunningham Mountain, Arizona 7.5 Minute U.S.G.S. map. It consists of two capped metal well pipes and is 30 feet in diameter and 3 feet deep. Associated artifacts are scarce, consisting of only 2 metal barrel loops, 4 pieces of broken wire, 10 small pieces of metal cans, and a single piece of clear bottle glass. Three 20-inch-diameter stones of unknown function are present southwest of the Feature 1 depression.

The site is ineligible for the National Register of Historic Places due to its location on the lack of associated diagnostic artifacts and lack of depth. The recording of this site has exhausted its research potential and no more significant information remains.

	Additional Documentation Type	Document Location
Agency Site No:		in
Agency Proj. No:		in
Natl Reg Rec:		in

ASM Site No: AZ R:7:121 (ASM) ASM Proj. No. ASM Permit No 2006 002bl

ASM USE ONLY Class: Within AZ : . (ASM) Corrections:

QP Contains AZ : . (ASM)

QP Biblio Ref. Plotted / / by

QP Acc.No AZSITE DE by

ASM Site No: AZ R:7:121 (ASM) Side C

Depositional Context: (choose as many as apply)
_X_ (1) Open, no depth __ (5) Rockshelter, no depth __ (8) Cave, no depth
___ (2) Open, depth _ (6) Rockshelter, depth __ (9) Cave, depth
___ (3) Open, depth unknown ___ (7) Rockshelter, depth unknown __ (10) Cave, depth unknown
__ (4) Open, exposed only in profile

Topo.setting: On desert flats

Vegetation: Creosote

Geology/soils: Cobbles on sandy loam

Site Condition: Good

Site Type (choose one): _X_ (a) Artifact Scatter (No other features visible on the surface)
__ (b) Features with associated artifacts __ (c) Features with NO associated artifacts

Assemblage Composition (indicate quantities as counts, estimated ranges, P for types known only to be present,
0 for types not seen at the site)

_0_ prehis ceramic	_0_ FCR	_1_ glass	_0_ animal/artifacts
_0_ chipped stone	_0_ shell	_16_ metal	_0_ plant/artifacts
_0_ ground stone	_0_ hist ceramic	_0_ hist wood	_0_ human remains

Diagnostics (indicate quantity of cultural/temporal/functional types as counts, estimates, or P)

Assemblage Remarks:

Feature Data: (Complete one feature record for each feature recorded for this site)

Feature No. 1

Name*	Count	Use*	Cult*	Age*	Per/Phase=
Well	1		Euroam	Historic	

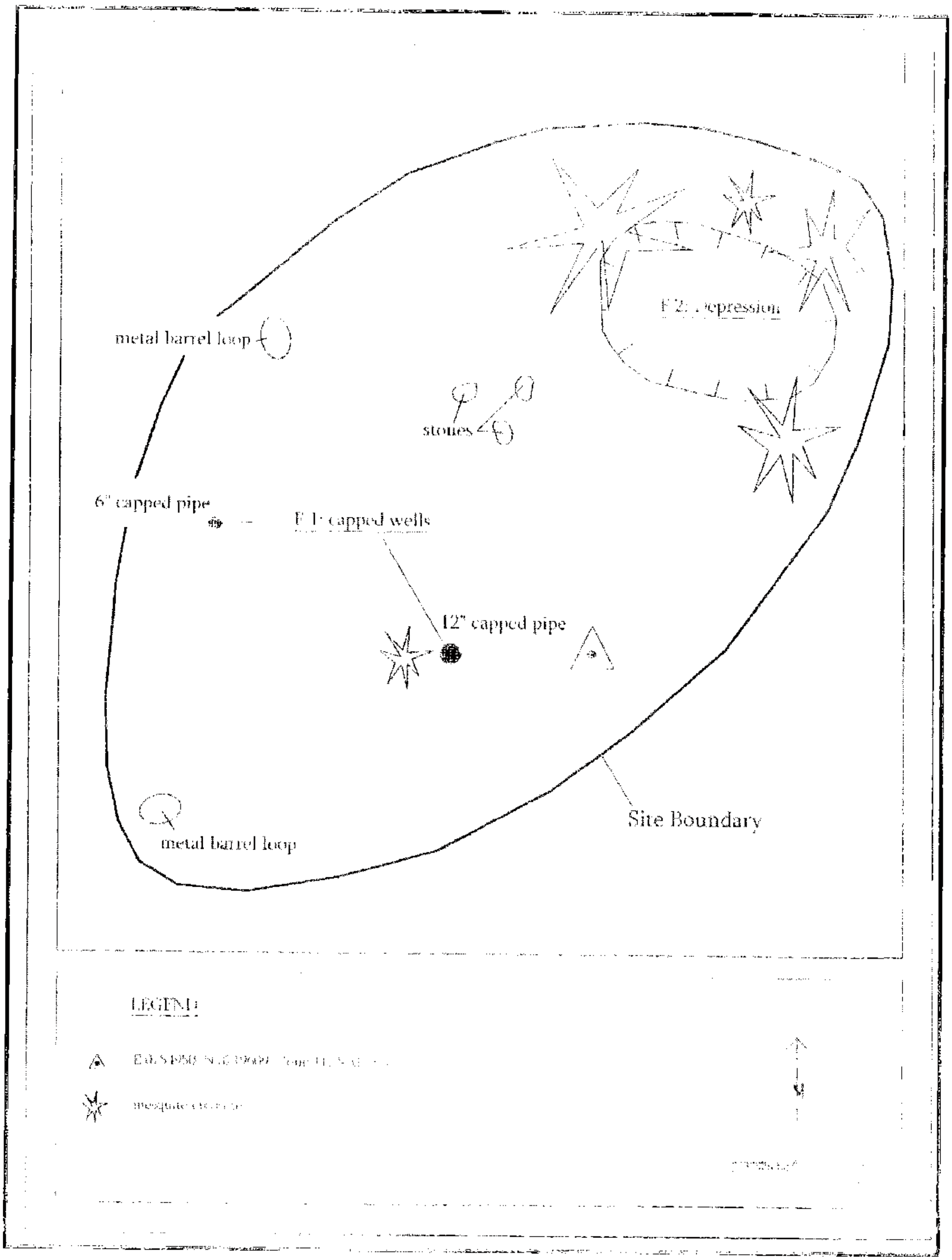
Feature Remarks:
Feature 1 consists of two capped metal well pipes. One pipe is 12 inches in diameter, and the other is 6 inches in diameter. Both rise approximately 12 inches above the surrounding ground surface.

Feature No. 2

Name*	Count	Use*	Cult*	Age*	Per/Phase=
Well	1		Euroam	Historic	

Feature Remarks:

Feature 2 consists of a shallow depression measuring 30 feet in diameter and 3 feet in depth. Vegetation is heavy around this feature which probably represents the remains of the original well.



AZ R:7:121 site map.

Feature 2 at AZ R:7:121. View to the northwest.

Form AZ 8110-1
(June 1999)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE

EVALUATION AND ACCESS RECORD

Site No. AZ R 7 , 121 (ASM)

EVALUATION

Site Discussion (include temporal and spatial relationship to other sites or districts; relationship between features, components): Previously unknown site AZ R:7:121 (ASM) is the remains of Beamer Well, which appears on the 1971 Cunningham Mountain, Arizona 7.5' U.S.G.S. map. The site measures 25 meters east-west by 30 meters north-south. It consists of two capped metal well pipes and a 30-foot diameter and 3-foot-deep. Artifacts are scarce and consist of two metal barrel loops, four pieces of broken wire, ten small pieces of metal cans, and a single piece of clear bottle glass. Three 20-inch-diameter stones of unknown function are present southwest of the Feature 1 depression

Site Significance (National Register qualities including integrity, justification of local, state or national importance): AZ R:7:121 (ASM) is ineligible for the National Register of Historic Places. Due to its lack of associated diagnostic artifacts and lack of depth, the recording of this site during the current survey has exhausted its research potential and no more significant information remains. It is very unlikely that additional unrecorded information is present at this site.

Site Evaluation (assess and explain use potential according to the Use Categories defined in BLM Manual 8110): Site is a historic/modern period well that was used by the local residents of the area. It now appears abandoned and has been capped.

Management Recommendations:

Archaeological clearance is recommended for site AZ R:7:121 (ASM). However, if any unknown cultural resources are found during construction, it is recommended that work temporarily stop in the immediate vicinity of the find(s) and a qualified archaeologist be contacted to assess significance and determine appropriate mitigation procedures.

ACCESS INFORMATION

Access (explain how to reach site, include mileages, reference well-known landmarks, key to attached sketch map and location map: Site is located 0.5 miles north/northwest of the western terminus of 53rd Street and west of Tyson Wash. 53rd Street runs east to west and is located approximately 5 miles south of the town of Quartzite and off of Highway 95. Legal description is the NE¼NE¼SE¼ of Section 19, Range 19 West of the U.S.G.S. (1971) Cunningham Mountain, Arizona 7.5 Minute quadrangle map. UTM coordinates for the site datum are Zone 11, N3719609, and E0754950, recorded in NAD 27.

Contact Name: Laurie V. Slawson or James Moses Phone: (520) 620-1480

Contact Address: Aztlan Archaeology, Inc., 1026 North Columbus Boulevard, Tucson, AZ 85711

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Appendix 3

CENSUS DATA

MCDC Demographic Profile 1, 2000 Census

Quartzsite town, AZ 04-58010

Subject	Number	Pct
1. Total Population Trends		
2000	3,354	x
1990	1,876	x
Change, 1990-2000	1,478	78.8
2. Age		
Under 5 years	36	1.1
5 to 9 years	45	1.3
10 to 14 years	66	2.0
15 to 17 years	44	1.3
18 to 19 years	26	0.8
20 to 24 years	34	1.0
25 to 34 years	95	2.8
35 to 44 years	162	4.8
45 to 54 years	319	9.5
55 to 59 years	285	8.5
60 to 64 years	399	11.9
65 to 74 years	1,129	33.7
75 to 84 years	614	18.3
85 years and over	100	3.0
Median Age	66.5	x
17 and under	191	5.7
18 to 24 years	60	1.8
25 to 44 years	257	7.7
45 to 64 years	1,003	29.9
62 years and over	2,112	63.0
65 years and over	1,843	54.9
3. Race		
One Race	3,314	98.8
White	3,169	94.5
Black or African American	8	0.2
American Indian and Alaska Native	39	1.2
Asian	9	0.3

Subject	Number	Pct
5. Relationship of Persons in Households		
Total Persons in Households	3,354	x
Householder	1,850	55.2
Spouse	1,092	32.6
Child	229	6.8
Own Child under 18 years	165	4.9
Other relatives	62	1.8
Under 18 years	25	0.7
Non relatives	121	3.6
Unmarried Partner	72	2.1
6. Households by Type		
Total Households	1,850	x
Family households (families)	1,176	63.6
With own children under 18 years	92	5.0
Married Couple Family	1,092	59.0
with own children under 18 years	60	3.2
Female householder, no husband present	54	2.9
With own children under 18 years	21	1.1
Non Family Households	674	36.4
Householder living alone	583	31.5
Householder 65 years and over	354	19.1
Households with individuals under 18 years	107	5.8
Average Household size	1.8	x
Average Family Size	2.2	x
7. Group Quarters		
Population in Group Quarters	0	0.0
Institutionalized Population	0	0.0
Correctional	0	0.0

Native Hawaiian and Other Pacific Islander	2	0.1
Some other race	87	2.6
Race alone or in combination with one or more other races:		
White	3,209	95.7
Black or African American	12	0.4
American Indian and Alaska Native	59	1.8
Asian	10	0.3
Native Hawaiian and Other Pacific Islander	3	0.1
Some other race	102	3.0
Multi Race	40	1.2

4. Hispanic or Latino and Race		
Hispanic or Latino (of any race)	169	5.0
Mexican	141	4.2
Puerto Rican	3	0.1
Cuban	1	0.0
Other Hispanic or Latino	24	0.7
Not Hispanic or Latino	3,185	95.0
White alone	3,100	92.4

Institutions		
Nursing Homes	0	0.0
Noninstitutionalized Population	0	0.0
College Dormitories (includes college quarters off campus)	0	0.0
Military Quarters	0	0.0
Other Non Institutional group quarters	0	0.0

8. Housing Occupancy and Tenure		
Total Housing Units	3,186	x
Occupied Housing Units	1,850	58.1
Owner Occupied	1,649	51.8
Renter Occupied	201	6.3
Vacant Housing Units	1,336	41.9
Vacant for Rent	51	1.6
Vacant for Sale	60	1.9
For Seasonal, Recreation or Occasional use	1,058	33.2
Homeowner Vacancy Rate	3.5	x
Rental Vacancy Rate	20.2	x
Average Household Size of owner-occupied units	1.8	x
Average Household Size of renter-occupied units	2.0	x

9. Miscellaneous		
Female Population	1,654	49.3
Population Per sq Mile/ Area sq Mile	92.4	36.28
Internal Pt. Coordinates (Lat / Long)	33.665116	114.220913

Related Trend Report 1990 - 2000 | Extract Data Via Dexter | Main Menu

Report by the Office of Social and Economic Data Analysis U. of Missouri Outreach & Extension
Under a contract with the Missouri Census Data Center
SOURCE: U.S. Bureau of the Census Summary File 1, 2000 Decennial Census

Generated on 03NOV06 using dp1_2k.sas, Rev 11/9/2005 2:58PM
Address questions and comments to [redacted]

This request took 1.79 seconds of real time (v9.1 build 1461)

Appendix 4

List of Wild and Scenic Rivers

List of Wild & Scenic Rivers

The following provides a quick listing, by state, of the rivers that have been designated as Wild ar
Also indicated is the agency responsible for managing those rivers. The following abbreviations ap

- ACOE = Army Corps of Engineers
- BLM = Bureau of Land Management
- NPS = National Park Service
- USFS = US Forest Service
- USFWS = US Fish and Wildlife Service
- State = the state indicated is responsible for management

[illegible] to visit the Wild & Scenic Rivers State by State list on the National Park Service's web site for [illegible] descriptions of the rivers listed below

[illegible]

Sipsey Fork of the West Fork, USFS

[illegible]

- Alagnak, NPS
- Alatna, NPS
- Andreafsky, USFWS
- Aniakchak, NPS
- Beaver Creek, BLM/USFWS
- Birch Creek, BLM
- Charley, NPS
- Chilikadrotna, NPS
- Delta, BLM
- Fortymile, BLM
- Gulkana, BLM
- Ivishak, USFWS
- John, NPS
- Kobuk, NPS
- Koyukuk (North Fork), NPS
- Mulchatna, NPS
- Noatak, NPS
- Nowitna, USFWS
- Salmon, NPS
- Selawik, USFWS
- Sheenjek, USFWS
- Tinayguk, NPS
- Tlikakila, NPS

- Unalakleet, BLM
- Wind, USFWS

- Verde, USFS

- Big Piney, USFS
- Buffalo, NPS
- Cossatot, ACOE/USFS/Arkansas
- Hurricane Creek, USFS
- Little Missouri, USFS
- Mulberry, USFS
- North Sylamore Creek, USFS
- Richland Creek, USFS

- American (Lower), California
- American (North Fork), BLM/USFS
- Big Sur, USFS
- Eel, BLM/USFS/California
- Feather, USFS
- Kern, NPS/USFS
- Kings, NPS/USFS
- Klamath, BLM/NPS/USFS/California
- Merced, BLM/NPS/USFS
- Sespe Creek, USFS
- Sisquoc, USFS
- Smith, USFS/California
- Trinity, BLM/USFS/California
- Tuolumne, BLM/NPS/USFS

- White Clay Creek, NPS/Pennsylvania

Wekiva, NPS

- Chattooga, USFS

Idaho

- Clearwater (Middle Fork), USFS
- Rapid, USFS
- Saint Joe, USFS
- Salmon, USFS
- Salmon (Middle Fork), USFS

[illegible]

- Snake, USFS

Illinois

- Vermilion (Middle Fork), Illinois

[illegible]

- Red, USFS

[illegible]

- [illegible] Bayou, USFS

[illegible]

[illegible], Maine

[illegible]

- [illegible], [illegible]
- [illegible]

[illegible]
[illegible]
[illegible]
[illegible]
- [illegible], USFS
[illegible]
[illegible], USFS
- Paint, USFS
[illegible]
Pine, USFS
[illegible]
- Sturgeon, USFS
Sturgeon, USFS
- Tahquamenon(East branch), USFS
- Whitefish, USFS
Yellow Dog, USFS

[illegible]

- St. Croix, NPS
- St. Croix (Lower), NPS
- St. Croix (Lower), Minnesota and Wisconsin

[illegible]

- Black Creek, USFS

[illegible]

- Eleven Point, USFS

[illegible]

- Flathead, NPS/USFS
- Missouri, BLM

[illegible]

- Niobrara, NPS/USFWS

[illegible]

- Missouri, NPS
- Missouri, NPS

[illegible]

- Lamprey, NPS
- Wildcat Brook, USFS

[illegible]

- [illegible] Harbor, NPS
- [illegible]

[illegible]

- Delaware (Middle and Lower), NPS

[illegible]

- Jemez (East Fork), USFS
- Pecos, USFS
- Rio Chama, BLM/USFS
- Rio Grande, BLM/USFS

[illegible]

- Delaware (Upper), NPS

- Horsepasture, USFS
- New, North Carolina
- Lumber River, North Carolina
- Wilson Creek, USFS

- Chattooga, USFS

- Big and Little Darby Creeks, Ohio
- Little Beaver Creek, Ohio
- Little Miami, Ohio

- Big Marsh Creek, USFS
- Chetco, USFS
- Clackamas, USFS
- Crescent Creek, USFS
- Crooked, BLM, Oregon
- Crooked (North Fork), BLM/USFS
  Deschutes, BLM/USFS
- Donnerund Blitzen, BLM
  Eagle Creek, USFS
- Elk, USFS
  Elkhorn Creek, BLM/USFS
- Grande Ronde, BLM/USFS
- Illinois, USFS
- Imnaha, USFS
  John Day, BLM
- John Day (North Fork), BLM
  John Day (South Fork), BLM
  Joseph Creek, USFS
  Pigeon Creek, BLM
  [illegible], BLM/USFS
  Little [illegible], BLM
  [illegible], USFS
- Malheur, USFS
  Malheur/North Fork, BLM
  McKenzie, USFS
  Metolius, USFS
  Minam, USFS
  North Powder, USFS
- North Umpqua, BLM/USFS
  Owyhee, BLM
- Owyhee (North Fork), BLM
  Powder, BLM
  Quartzville Creek, BLM
  Roaring, USFS
- Rogue, BLM/USFS
  Rogue (Upper), USFS

- Salmon, BLM/USFS
- Sandy, BLM/USFS
- Smith (North Fork), USFS
- Sprague (North Fork), USFS
- Squaw Creek, USFS
- Sycan, USFS
- Wallowa, BLM/Oregon
- Wenaha, USFS
- West Little Owyhee, BLM
- White, BLM/USFS
- WildhorseCreek, BLM
- Willamette (North Fork of the Middle Fork), USFS

[illegible]

- Allegheny, USFS
- Clarion, USFS

[illegible]

- White Clay Creek, NPS

Pennsylvania and New York

- Delaware (Upper), NP[illegible]

[illegible] Rico

- Rio Mameyes, USFS
- Rio de la Mina, USFS
- Rio Icacos, USFS

[illegible]

- Chattooga, [illegible]

[illegible]

[illegible]

[illegible]

- Klickitat, USFS
- Skagit, USFS
- White Salmon, USFS

- Bluestone, NPS

- Wolf, Wisconsin

- Yellowstone (Clarks Fork), USFS

Appendix 5

Coorespondences

NEI Environmental a Division of Nicklaus Engineering, Inc.

1851 West 24th Street, Yuma, Arizona 85364
(928) 344-8374 Fax: (928) 726-6994
email: neienv@neiaw.com

E. Vonne Nicklaus, P.E., President
Stacy Gutierrez, P.E., Vice-President
Karen A. Nicklaus, Secretary/Treasurer

December 13, 2006

Becky Heick
2555 East Gila Ridge Road
Yuma, AZ 85365

Reference: Proposed Right-of-Way for the Arroyos Preserve located at NE ¼ of Section 19, Township 3 North, Range 19 West from 53rd Street north to the entrance of the property.

Dear Ms. Heick,

Vanguard Development is intending to develop the Arroyos Preserve, a 40-acre parcel into a 129-lot residential community. The property is landlocked by Bureau of Land Management (BLM) land. One of the alternatives is to have the right-of-way along section 19 and 20. There are power poles on the section line. The right-of-way will require the construction of an 81-foot wide road. This is to include a 15-foot median to avoid moving the power poles. See enclosure for an illustration of the area.

Are there any concerns or issues pertaining to the 15-foot median? If so please let us know. Your earliest response would be greatly appreciated. If we do not receive a response by December 23, 2006, we shall assume that there are no issues or concerns on the proposed right of-way on the 15-foot median.

If you have any questions regarding this letter or the project, please contact me at (928) 344-8374.

Thank you for your time and continued assistance.

Respectfully,

Sandra Huff
Environmental Professional

Enclosure

... a division of Nicklaus Engineering, Inc.

1851 West 24th Street, Yuma, Arizona 85364
(928) 344-8374 Fax (928) 726 6994
email

E. Lorne Nicklaus P.E. President
Vice President
Karen J. Nicklaus Secretary Treasurer

December 13, 2006

Louis Fox
La Paz County, Arizona
1112 Joshua, Suite 202
Parker, AZ 85344

Reference: Proposed Right-of-Way for the Arroyos Preserve located at NE ¼ of Section 19, Township 3 North, Range 19 West from 53rd Street north to the entrance of the property.

Dear Ms. Fox,

Vanguard Development is intending to develop the Arroyos Preserve, a 40-acre parcel into a 129-lot residential community. The property is landlocked by Bureau of Land Management (BLM) land. One of the alternatives is to have the right-of-way along section 19 and 20. There are power poles on the section line. The right-of-way will require the construction of an 81-foot wide road. This is to include a 15-foot median to avoid moving the power poles. See enclosure for an illustration of the area.

Are there any concerns or issues pertaining to the 15-foot median? If so please let us know. Your earliest response would be greatly appreciated. If we do not receive a response by December 23, 2006, we shall assume that there are no issues or concerns on the proposed right-of-way on the 15-foot median.

If you have any questions regarding this letter or the project, please contact me at (928) 344-8374.

Thank you for your time and continued assistance.

Respectfully,

Sandra Huff
Environmental Professional

Enclosure

[illegible] a division of Nicklaus Engineering, Inc.

1851 West 24th Street, Yuma, Arizona 85364
(928) 344-8374 Fax (928) 726-6904
email: [illegible]

E. Vonn Nicklaus, P.E., President
[illegible], P.E., Vice President
Karen A. Nicklaus, Secretary/Treasurer

December 15, 2006

D. L Wilson
1221 Arizona Avenue
Parker, AZ 85344

Reference: Proposed Right-of-Way for the Arroyos Preserve located at NE ¼ of Section 19, Township 3 North, Range 19 West from 53rd Street north to the entrance of the property.

Dear Mr. Wilson,

Vanguard Development is intending to develop the Arroyos Preserve, a 40-acre parcel into a 129-lot residential community. The property is landlocked by Bureau of Land Management (BLM) land. One of the alternatives is to have the right-of-way along section 19 and 20. There are power poles on the section line. The right-of-way will require the construction of an 81-foot wide road. This is to include a 15-foot median to avoid moving the power poles. See enclosure for an illustration of the area.

Are there any concerns or issues pertaining to the 15-foot median? If so please let us know. Your earliest response would be greatly appreciated. If we do not receive a response by December 25, 2006, we shall assume that there are no issues or concerns on the proposed right-of-way on the 15-foot median.

If you have any questions regarding this letter or the project, please contact me at (928) 344-8374.

Thank you for your time and continued assistance.

Respectfully,

Sandra Huff
Environmental Professional

Enclosure

Sandra Huff, Environmental Professional
NEI Environmental
1851 West 24th Street
Yuma, Arizona 85364

Reference: Arroyos Preserve Right-of-Way

Dear Ms. Huff,

This is to acknowledge receipt of your December 15, 2006 letter regarding a proposed 81 foot wide roadway on BLM property with existing APS facilities to be left in a 15 foot median, and requesting a response by December 25 regarding concerns or issues.

APS does have concerns with this proposal. Depending upon roadway construction locating poles in the median could expose APS facilities to significantly greater exposure to damage than other locations and would complicate repairs and maintenance.

In order to provide a complete response we will require additional information on the proposed right-of-way as well as load requirements for the Arroyos Preserve Subdivision. Specifically I would request the following:

- Electrical load information for the subdivision to include water and waste water treatment systems, anticipated home sizes and types of construction.
- Proposed plan for right-of-way including intersection at N. 53rd Street and areas on private property in the NE ¼ of Section 19

Based upon what information I have at this time, it appears that APS will need to provide three primary phases to this development with a grounded system capable of providing underground distribution within the subdivision. The existing overhead distribution in the NE ¼ Section 19 is not three phase and is ungrounded. There are a number of options available to provide service to this development that need to be evaluated prior to arriving at a design or redesign of our existing facilities.

I may be contacted at 928-669-2248, extension 1 if you have additional questions on this matter.

Sincerely,

D.L. Wilson
Parker Area Manager

December 27, 2006

D. L. Wilson, Parker Area Manager
Arizona Public Service
1221 Arizona Avenue
Parker, AZ 85344

Reference: Proposed Right-of-Way for the Arroyos Preserve Subdivision, Located at NE ¼ of Section 19, Township 3 North, Range 19 West, 53rd [illegible] 0.5 miles to the entrance of the property

Dear Mr. Wilson,

Per our conversation on December 21, 2006 pertaining to the right of way for the Vanguard Development (The Arroyos Preserve), I have provided some information regarding the alternatives for the proposed right-of-way. Figure 1 has been included to illustrate the [illegible] the proposed project. Figure 2 illustrates the conceptual site plan for the proposed [illegible].

Two alternatives have been evaluated for the project. Alternative A is to obtain a [illegible] right-of-way along the section line between Sections 19 and 20. There are power poles on this section line. This alternative would result in the power poles being moved (see Figure 3). Alternative B would be to obtain [illegible] right-of-way with a raised [illegible] foot median between Sections 19 and 20 (see Figure 3).

[illegible] a raised median for the road (Alternative B) [illegible] of-way. Your earliest response would be greatly appreciated.

[illegible]

[illegible]

Respectfully,

[illegible]
Environmental Professional

[illegible]

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Yuma Field Office
[illegible] East Gila Ridge Road
Yuma, AZ 85365-2240

January 26, 2007

AZA 33392 (AZ 320)

Sandra Huff, Environmental Professional
NEI Environmental
1851 W. 24th Street
Yuma, AZ 85364

Dear Ms. Huff:

We received your letter dated December 13, 2006, requesting our concerns on the 15-foot median of the proposed road for La Paz County. Our comments to your request are the following:

1. The 15-foot median to avoid removing an APS power line should be an alternative that needs to be analyzed in the environmental assessment.

2. The application we received from La Paz County did not identify the median. La Paz County requested a 66-foot-wide road, 33 feet on either side of the section line, on sections 19 and 20, T. 3 N., R. 19 W., Gila and Salt River Meridian. If La Paz County is requesting the 15-foot median and increasing the road width to 81 feet, we need a request from them amending their application.

3. The map included in your December 13 letter needs to be more detailed. Your map shows the road only on section 19, and that does not match the application we received from La Paz County.

4. If the width of the road will be increased to 81 feet wide, the cultural and biological surveys will have to be modified to include this change. The existing biological evaluation and cultural report state that the road would be 66 feet wide.

We suggest you schedule a meeting with us to discuss the project. If you would like to schedule a meeting or have any questions regarding this letter, please contact Realty Specialist Francisca Mueller at (928) 317-3237.

Sincerely,

Rebecca Heick
Field Manager

cc: Lois Fox, Right-of-Way Agent, La Paz County, 1112 Joshua Avenue, Suite 207, Parker, AZ 85344

NEI Environmental a division of Nicklaus Engineering, Inc.

1851 West 24th Street, Yuma, Arizona 85364
(928) 344-8374 Fax: (928) 726-6994
email: nei@nei-az.com

E. Vonne Nicklaus, P.E., President
Stacy Gutierrez, P.E., Vice President
Karen A. Nicklaus, Secretary/Treasurer

January 31, 2007

D. L Wilson, Parker Area Manager
Arizona Public Service
1221 Arizona Avenue
Parker, AZ 85344

Reference: Proposed Right-of-Way for the Arroyos Preserve Subdivision. Located at NE ¼ of Section 19, Township 3 North, Range 19 West, 53rd Street north for 0.5 miles to the entrance of the property.

Dear Mr. Wilson,

NEI had a meeting with Bureau of Land Management (BLM) regarding the Environmental Assessment (EA) of the referenced right-of-way. BLM is requesting a letter from APS stating that there are no issues or concerns with the power poles remaining in the same location with a raised 16 foot median.

Your earliest response would be greatly appreciated.

If you have any questions regarding this letter or the project, please contact me at (928) 344-8374 ext. 38.

Thank you for your time and continued assistance.

Respectfully,

Sandra Huff
Environmental Professional

cc: Francisca Muller,
Realty Specialist
BLM Yuma Field Office
2555 E Gila Ridge Road
Yuma, AZ 85365

March 19, 2007

Sandra Huff, Environmental Professional
NEI Environmental
1851 West 24th Street
Yuma, AZ 85364

Reference: Proposed Right-of-Way for the Arroyos Preserve Subdivision

Dear Ms. Huff,

I have reviewed the documents related to the proposed right-of-way on BLM lands for access to the Arroyos Preserve Subdivision.

The proposed right-of-way extends approximately ½ mile to the north of the SE Corner of Section 19, T03N R19W, is 82 feet in total width reserving a 16 foot wide median to accommodate the existing APS overhead power line which is on the east side of the common section line between sections 19 and 20.

APS has no objection to the existing power line remaining in the 16 foot as indicated.

Sincerely,

D.L. Wilson
Parker Area Manager

CC: James Kunish
La Paz County Community Development