

## INTRODUCTION: A VIEW ACROSS THE CULTURAL LANDSCAPE OF THE LOWER COLORADO DESERT

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Cultural resource studies were conducted in the Lower Colorado Desert as part of a natural gas pipeline project. Native Americans and archaeologists worked with the pipeline company to avoid as many sites as possible along the route. To help address the concerns the local Native peoples had for the entire region, treatment measures included off right-of-way studies, along with more traditional data recovery excavations within the construction corridor. The studies outside of the construction right-of-way involved mapping geoglyphs, rock art, and trail segments. In addition to the known historic properties, numerous buried charcoal features were discovered during construction monitoring. Excavations revealed a number of cultural deposits. The following papers address these various components of the project.

The cultural resources investigations for the North Baja Pipeline project included a full suite of activities including an overview, inventory, Native American consultation, evaluation, mitigation, and construction monitoring for the 79.8-mi U.S. leg of a natural gas pipeline. The project traverses the Colorado Desert west of the lower Colorado River, crossing eastern Riverside County and eastern Imperial County, California, in a generally north to south direction (Figure 1).

### LOCATION

While the entire project was located in the Colorado Desert, there were distinct biogeographic subregions reflecting differences in terrain, hydrologic features, and biota (Figure 2). To facilitate our investigations, the project area was divided into six segments from north to south:

- *Palo Verde Valley* is a valley trending north to south within the floodplain of the Colorado River.
- *Palo Verde Mesa* is a terrace some 80 ft above the floodplain of the Colorado River.
- *Palo Verde Hills* are hills composed primarily of volcanic rocks and are virtually devoid of vegetation.

- *Midway* is an area of Pleistocene nonmarine sedimentary deposits with well-developed desert pavement and desert varnish.
- *South-Central* is an area characteristic of a wash woodland community with well-developed desert pavement on the terraces.
- *Ogilby* is the southernmost portion of the alignment, which is comprised of alluvial fans and low terraces covered with poorly developed desert pavement.

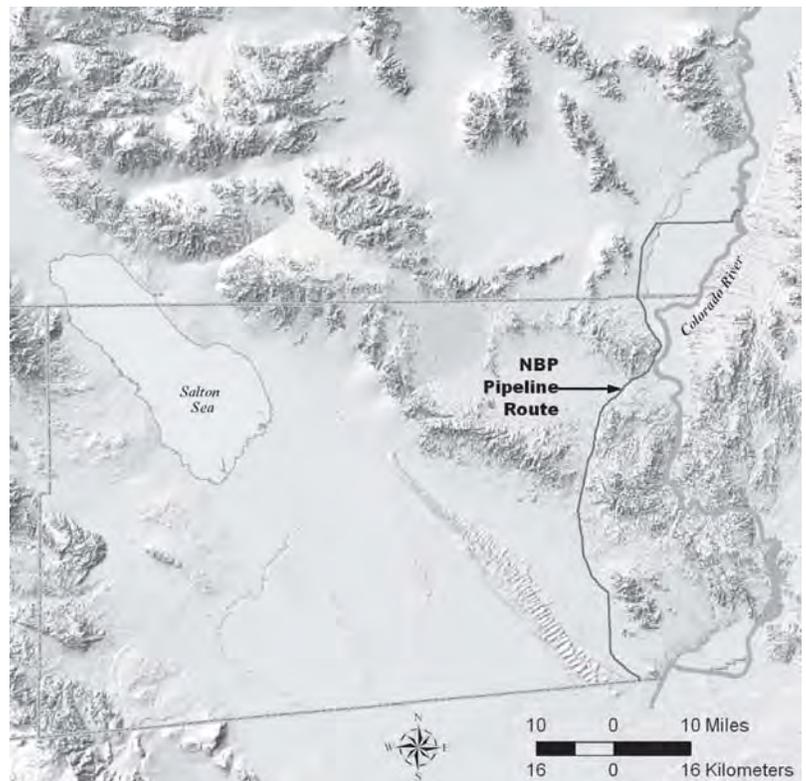


Figure 1: Project location map.

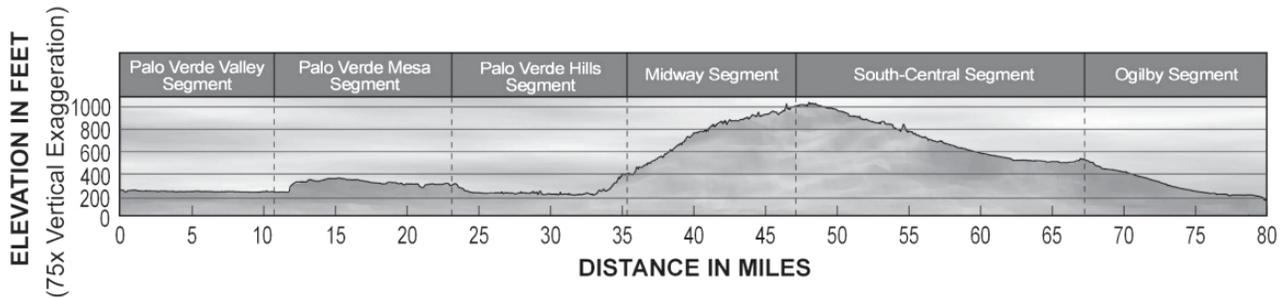


Figure 2: Project elevation map.

**PARTIES / AGENCIES**

As part of a large environmental compliance effort, EDAW, Inc. (EDAW) conducted the cultural resources studies. The project was subject to certification by the Federal Energy Regulatory Commission. The route crossed federal lands managed by the Bureau of Land Management and the Bureau of Reclamation. The project was subject to Section 106 of the National Historic Preservation Act and other relevant federal laws and regulations. Additionally, cultural resources investigations were required under the California Environmental Quality Act, under which the California State Lands Commission served as lead state agency.

**NATIVE AMERICANS**

Most of the North Baja Pipeline route passes through land traditionally occupied by the Quechan Tribe, but ethnographic information indicated that other groups, including the Chemehuevi, Mohave, Colorado River Indian Tribes, Yavapai, Hualapai, Cocopah, and Hopi, could have concerns for the project area as well.

Native American consultation began before the surveys and continued through the completion of the project. Consultation resulted in a characterization of the region as a whole with an important and significant cultural landscape. Contemporary tribal representatives reminded us that these diverse cultural resources were part of an overall landscape and could not be analyzed or understood by looking at individual parts. The entire network of places and connecting trails must be considered.

Native American concerns were addressed through several measures. In addition to consultation, field trips and monitoring were part of a program to keep the Native American community involved (Figure 3). North Baja Pipeline LLC made an effort to site the pipeline in previously disturbed areas. In a number of cases, the route was shifted to avoid important sites and pristine areas. Except for some trail crossings, none of the major features identified through survey or consultation were directly impacted by the pipeline.

**CULTURAL STUDIES TIMELINE**

Cultural resources surveys and Native American consultation for the project were initiated in 2000, and supplemental surveys continued through the construction phase (Table 1). In all, the project resulted in the recordation of some 200 archaeological and historical sites, including those found on alternative routes (Figure 4).

Many of these sites were avoided in project planning, but archaeological test excavations and/or historical evaluations were conducted at 128 sites in the Area of Potential Effects in 2001 (Figure 5). Key findings of the survey and evaluation programs include the following:

- Most of the identified sites are prehistoric surface sites with little or no depth.
- Lithic scatters on desert pavements comprise the most frequently encountered site type in upland settings.

Table 1: Timeline for all cultural studies.

Year	Task	Results
2000	Survey	200+ sites
2001	Testing and Evaluation	128 sites tested 54 sites determined eligible for the NRHP
2001-2003	Data Recovery	6 sites (exclusive of discoveries) 14+ km of trail recordation 2 NRHP nominations
2003	Monitoring	10 discoveries- 1 tested- 5 avoided- 4 data recovery



Figure 3: Quechan representative Barbarita Aguilar monitoring construction.



Figure 4: EDAW archaeologists and Quechan representatives surveying.



Figure 5: Data recovery excavation.

- Ceramics scatters, cleared circles, geoglyphs, rock features, and prehistoric trails are also common in upland settings.
- Native American groups expressed strong cultural concerns for all archaeological sites in the project area and for the desert landscape across which the project was built.
- There is evidence of recent and continuing Native American traditional use of sites within the region.
- Archaeological sites and other places of traditional cultural concern within the region are connected by a prehistoric regional trail system, much of which is intact on desert pavements.
- A complex of petroglyphs, geoglyphs, trails, and rock features of particular cultural importance was identified in the Palo Verde Point vicinity, which is skirted by the project route.
- Very few sites associated with Euroamerican historical period use of the project area were affected by the project. However, the route does cross the outskirts of the site of the now abandoned railroad town of Ogilby.

In view of these findings, the Historic Properties Treatment Plan proposed an innovative mitigation program. The following are key components:

- Ongoing Native American consultation and participation.
- Avoidance of impacts, wherever possible, with special consideration for geoglyphs, rock art, rock features, trails, and cleared circles.
- Archaeological and Native American monitoring of construction in culturally sensitive areas.
- Enhancement of long-term preservation of key resources, including petroglyphs and geoglyphs in the Palo Verde Point area and trails. Activities included submeter Global Positioning System mapping and the completion of two National Register nominations:
  - o Trail CA-IMP-398, a prehistoric trail and 53 associated features, including pot drops, cleared areas, flaking stations, a rock ring, and a stacked stone feature. Approximately 14 km of the trail was recorded.
  - o Site CA-IMP-268/6905, a Palo Verde Point Petroglyph site, which consists of 12 rock art loci containing 229 prehistoric and historic panels, milling features, cleared areas, rock features, trail segments, ceramic scatters, flaking stations, groundstone quarry areas, a historic road segment, and a low-density scatter of flaked lithics.
- Data recovery included archaeological investigations at eight prehistoric and one historic site. Features of the prehistoric sites included lithic and ceramic scatters, trails, and milling and rock features.
- Enhanced technical studies of lithic and ceramic assemblages recovered during the evaluation program.

## RESULTS

EDAW's efforts resulted in a comprehensive data recovery report. Key findings are listed below.

- The distribution of archaeological sites across the Colorado Desert west of the river appears to

reflect a high degree of use of the land for travel and ritual, and very little use for subsistence-related activities.

- Buried Patayan period habitation sites do in fact exist on the margins of the Colorado River floodplain.
- The stratigraphic positioning of ceramic types at the buried sites discovered on the route does not fully correspond to the existing lower Colorado River seriation.

EDAW realized early on that this pipeline was crossing a special area. The papers within this symposium represent the details and findings of our investigations within the context of a cultural landscape.

## Acknowledgments

*This project involved the dedication and hard work of many dozens of people. The work was conducted under a variety of scheduling and funding constraints, and frequently under harsh field conditions. In addition to EDAW personnel involved in the project, special acknowledgment needs to go to numerous individuals. John Cassady managed all aspects of the environmental studies for NBP and provided great support for the cultural resources investigations.*

*A special acknowledgement should go to the cultural and Native American monitors, who endured long, dusty days (and sometimes nights) in extreme conditions, and to Lorey Cachora of the Quechan Tribe, the Quechan Cultural Committee, Chad Smith of Fort Mojave Indian Reservation, David Halmo of the Chemehuevi Reservation, and Betty Cornelius of the Colorado River Indian Tribes, who all provided useful ethnographic information and were very patient in responding to many questions regarding sensitive cultural topics.*

*Agency personnel that were instrumental in reviewing the project included Laurie Boros (Federal Energy Regulatory Commission), Russ Kaldenberg (formerly U.S. Bureau of Land Management [BLM]), Joan Oxendine (BLM), Wanda Raschkow (BLM), Margaret Hangan (BLM), Carol Telles (formerly BLM), Pat Hicks (U.S. Bureau of Reclamation), Mike Hawks (Cibola National Wildlife Refuge), and Kirk Walker (California State Lands).*

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