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Negative Findings Report Cultural Resource Survey Woodward Wind Conduit Realignment Pecos County, Texas

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**Negative Findings Report
Cultural Resource Survey
WOODWARD WIND
CONDUIT REALIGNMENT
Pecos County, Texas**

Report prepared for

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Jeff Turpin, Principal Investigator

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ABSTRACT

During May of 2018, TAS Inc. conducted a cultural resources assessment of a proposed electrical conduit realignment on the Woodward Wind Farm located east of Fort Stockton, TX, in northeast Pecos County. The project is located north of Interstate 10, on the southeast edge of Big Mesa, approximately 10 miles northwest of Bakersfield on University Lands, in the northwest corner of Block 20; Section 3. The project was sponsored by Permian Environmental Services acting as agents of FPL Energy Pecos Wind I, LLC and FPL Energy Pecos Wind II, LLC and was authorized by Texas Antiquities Permit 8423 with Dr. Jeff Turpin acting as Principal Investigator. The project entailed the examination of a single conduit realignment between two existing wind mills within an active windmill farm. The entire project covered 303 ft (92 m) of 100 ft (30 m) wide survey corridor. The realignment runs 30 m northwest of the mapped location of previously recorded archeological site 41PC529. No evidence of the site was found within or near the realignment corridor, leading to the conclusion that the site was either destroyed by subsequent construction and traffic or the original data were in error. As a result, the National Register of Historic Places (NRHP) or State Antiquities Landmark (SAL) status of 41PC529 could not be addressed. No evidence of historic or prehistoric occupation or use was found along the survey corridor indicating that cultural resources will not be affected by this project.

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INTRODUCTION

During mid-May of 2018, TAS Inc. archeologists Billy Turner and Carrie Davis assessed the potential for cultural resources along a proposed electrical conduit realignment on the Woodward Windfarm located northeast of Fort Stockton, Texas in northeastern Pecos County (Fig. 1). The survey was sponsored by Permian Environmental Services acting as agents for FPL Energy Pecos Wind I, LLC and FPL Energy Pecos Wind II, LLC and authorized by Texas Antiquities Permit 8423 with Dr. Jeff Turpin acting as Principal Investigator. This cultural resource assessment consisted of an archival search, an intensive pedestrian survey and preparation of a report suitable for review in accordance with the Texas Historical Commission's Archeological Survey Standards for Texas.

The survey was conducted within an existing wind farm on University Lands in the northwest corner of Block 20, Section 3, 1.7 miles north of Interstate 10, and 10 miles west/northwest of Bakersfield (Fig. 2). An intensive examination of 303 ft (92 m) of 100 ft (30 m) wide survey corridor covered an Area of Potential Effect (APE) of 0.69 acres. The proposed realignment approaches the mapped location of previously recorded archeological site 41PC529, which was plotted 30 m to the southeast. The site was recorded as a midden "stain", dispersed hearths, and scattered lithics and stone tools. The site was considered destroyed by erosion in 2000 when it was recorded (Atlas). No evidence of the site was observed within or near the current survey corridor or in its plotted location. The absence of historic or prehistoric remains indicates that cultural resources will not be affected by the planned construction.

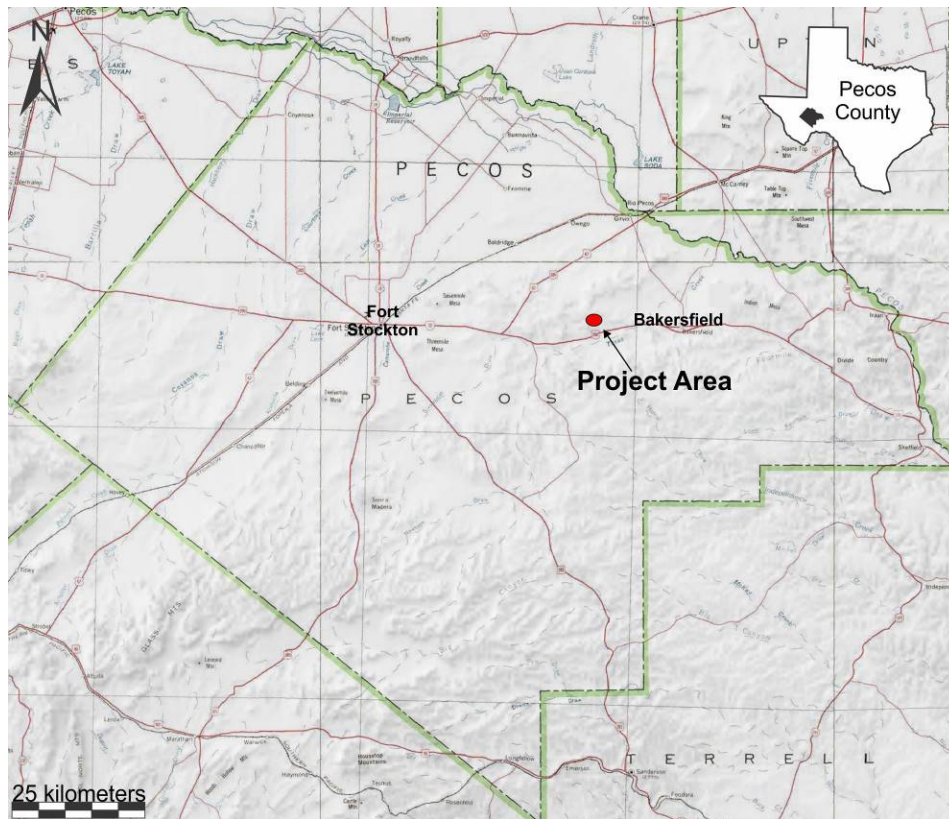


Figure 1. General location of project area (source: National Geographic Topo).

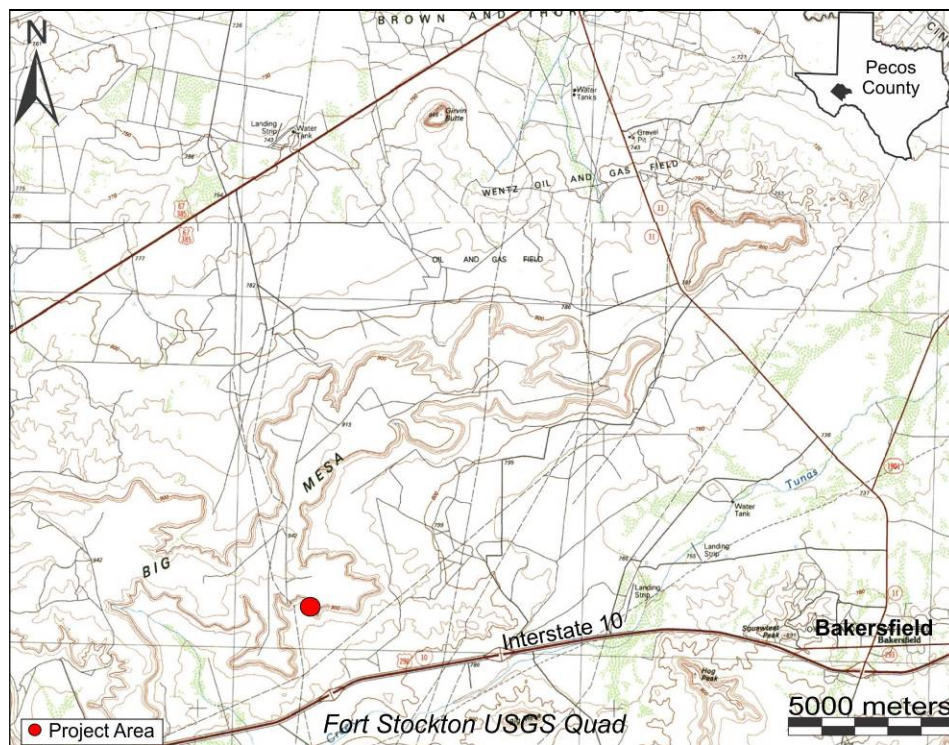


Figure 2. Project location map (source: Terrain Navigator).

ENVIRONMENTAL CONTEXT

The context of the surveyed area is typical West Texas uplands with thin sandy loam and gravel over limestone bedrock. The area is a barren upland mesa top with low desert vegetation including mesquite, acacia, lechuguilla, and prickly pear (Fig. 3). This area is in the eastern Trans Pecos Natural Region, west of the Edwards Plateau Section of the Great Plains Province of the Interior Plains (Fig. 4). The Edwards Plateau is an uplifted and elevated expanse originally formed 100 million years ago from marine deposits of sandstone, limestone, shales, and dolomites during the Cretaceous Period when the region was covered by a shallow sea. The western portion remains a relatively flat elevated plateau whereas the eastern portion, known as the Hill Country, is deeply eroded (TPWD). The realignment under consideration is on a large mesa top characterized by gently rolling terrain with minimal topsoil covering limestone bedrock.

Northeast Pecos County is in the Eastern Trans-Pecos region, a northern extension of the Chihuahuan Desert (Blair 1950:105) in a physiographic zone that is most distinctive for its variability. Pecos County is large, covering over 4,740 square miles. This vast expanse encompasses habitats that range from level or undulating grasslands in the north to mountain ranges that are extensions of the Sierra Madre. The eastern section of the county is part of the Edwards Plateau resource area, topographically expressed as rolling plains interrupted by steep-walled mesas. The northwestern part is an extensive semi-arid desert which gives way in the southwestern corner to the Glass Mountains. The terrain generally dips east toward the Pecos River, the only major watercourse in the county. The elevation ranges from about 2,200 feet near the Pecos River to about 5,200 feet in the mountains. The study area is in the northeast part of the county in the zone characterized by high mesas and rolling hills. The Woodward Windfarm is located on the southeast edge of Big Mesa at an elevation of 3020 ft amsl.



Figure 3. General environment across survey area.

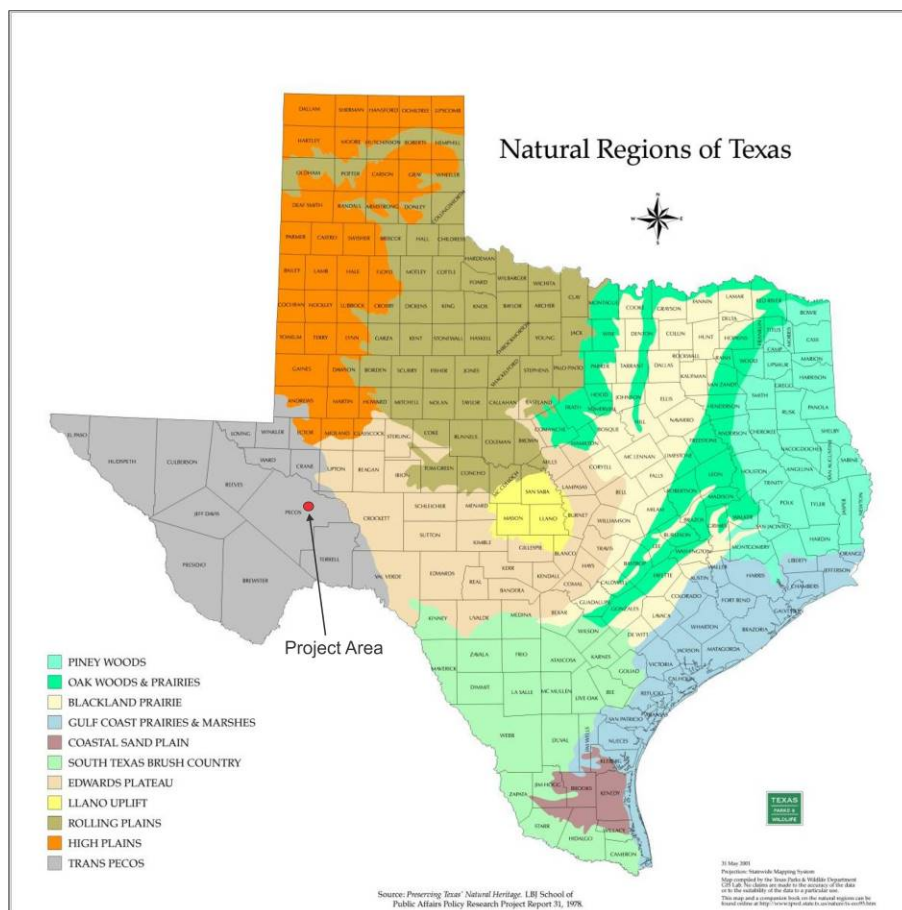


Figure 4. Natural region of the project area (source: Texas Parks and Wildlife).

Hydrology

The project area is dry desert upland. The nearest water source is Tunas Creek located 4.1 km (2.5 miles) south of the project area. The region drains generally northeast toward the Pecos River which is joined by Tunas Creek 26.7 km (16.6 miles) northeast of the current area of interest. The fragile desert nature of the region is demonstrated by the number of springs that have gone dry since irrigation farming accelerated in the mid-1940's (Brune 1981:356). The most notable is Comanche Springs in Fort Stockton. The spring once produced 60 million gallons a day but ceased flowing in 1952 (Rives 1980:01). Brune (1981:356) describes a prehistoric Pecos River fed by numerous springs and marshy rush-lined streams that supported a vast array of animals as recently as the late 19th century. The numerous springs listed by Brune (1981) are now all dry. Recent work at Diamond Y Springs, 10 miles north of Ft. Stockton, has produced a reconstruction of environmental conditions over the past 7000 years (Hoyt 2000) that liken the area to a prairie with extensive grasslands sweeping west from the Pecos River, interrupted by marshes and riparian growth at the many springs. Now, under average rainfall conditions, the dominant vegetation is grass, forbs and low thorny scrub, such as cholla, prickly pear, coyotillo, yucca and creosote (Texas Parks and Wildlife Vegetation Map). The Woodward Windfarm is on a gently rolling mesa top with no internal drainages or water. The most reliable sources prehistorically were probably tinajas at the base of the pour offs of intermittent drainages, thus accounting in part for the use of the rims above them for camping and food production.

Soils

Area soils are primarily of the order Aridisoles, typical of semiarid regions with grassland ecosystems. Mapped soils are Lozier association and Lozier rock outcrop (USDA/NRCS). Lozier series consists of very shallow, permeable soils over bedrock. The soils formed in loamy residuum and colluvium derived from thick-bedded limestone of the Cretaceous formations (USDA/NRCS). The mesa top was primarily exposed limestone with a thin spotty layer of brown sand and gravel (Fig. 5).



Figure 5. Rocky terrain across survey area.

Plants and Animals

Vegetation is sparse and, in years with sufficient precipitation, consists of a plant community of shrubs and short or mid grasses. The plant community of Pecos County once included juniper, mesquite, lotebush, live oak, Texas oak, sumac, Texas prickly pear, tasajillo, kidneywood, netleaf hackberry, agarito, yucca, sotol, catclaw, Mexican persimmon, various gramas, threeawn, Texas wintergrass, little bluestem, Halls panicum, buffalo grass, cedar sedge, two-leaved senna, mat euphorbia, rabbit tobacco and hairy tridens. Scrub mesquite has infested the project area, to the detriment of native vegetation. Blacktailed jackrabbits (*Lepus californicus*) are the dominant wild species in the region today but archeological and historical evidence indicate that the faunal community was large and diverse prior to the introduction of domesticated animals. The bison kill site in the bed of the Big Lake testifies to more benign grassland before 8000 years ago, followed by a period of severe drought that would have driven herd animals north to the Plains (Turpin et al. 1997). Pioneers camping on the shores of the Big Lake mention a wide variety of long-gone game, including bears, antelope and bison (Prine 1920). Although no faunal studies have been done in the immediate vicinity of the study area, it can be assumed that the composition

of the faunal community in general was equally fluid and dependant on the vagaries of climate and rainfall.

CULTURAL CONTEXT

The project area is within a large transitional zone between three defined cultural areas: the High Plains to the north, the Edwards Plateau to the east and the Trans Pecos to the west, near the convergence of the Trans Pecos and the Edwards Plateau. Both areas are arid and settlement patterns tended to follow water. The many studies in Pecos County have shown that the most applicable chronology is that of the Lower Pecos where radiocarbon analyses have refined the sequence (Table 1). For the purposes of this report, however, only the major divisions are relevant since no temporal diagnostics were found.

Archeological research began in earnest prior to the construction of Interstate 10 when the Texas Highway Department and the Texas Archeological Society conducted an intensive survey of one canyon system, Muskhog Canyon, southeast of Indian Mesa. Test excavations followed at two sites in Pecos County, the Rams Head site and Squawteat Peak, as well as a number of sites in Crockett County (Young 1980, 1982).

In the intervening years, the site inventory has increased to over 800 records due to numerous pipeline and seismic surveys as well as inventories of publicly owned land managed by the University System. Most recently, wind and solar farms have contributed yet another suite of sites from different environmental zones (Atlas). Specifically, the Woodward development was first investigated in 2000 (Godwin 2004). The sites recorded during this early phase of work on the mesa were primarily burned rock middens, hearths, and lithic scatters – all types now known extensively throughout the county.

Table 1. Time Periods in prehistory.

Period	Subperiod	Radiocarbon Years (BP)	Trans-Pecos
Paleoindian		<12,000-9,800	<12,000-8500
	Aurora	14,500-11,900	
	Bonfire	10,700-9,800	
Late Paleoindian		9,400-9,000	
	Oriente	9,400-8,800	
Early Archaic		9,000-6,000	8,500-1,000
	Viejo	8,900-6,500	
Middle Archaic		6,000-3,000	
	Eagle Nest	5,500-4,100	
	San Felipe	4,100-3,200	
Late Archaic		3,000-1,000	
	Cibola	3,150-2,300	
	Flanders	2,300??	
	Blue Hills	2,300-1,300	
Late Prehistoric		1,000-350	
	Flecha	1,320-450	
	Infierno (phase)	450-250	
Historic		350-0	

METHODS

Prior to fieldwork, the county site files and maps on the Texas Historical Commission's (THC) Archeological Site Atlas were searched for previously recorded site locations and references to archeological surveys undertaken near the current project. Attempts to relocate the one previously recorded archeological site in the area (41PC529) failed. Pedestrian survey was conducted in a single out-and-back transects following a given centerline. The survey transect was 30 m wide and covered 303 ft (92 m). The ground surface was predominantly exposed limestone, but small areas contained a thin layer of gravely sandy loam less than 2 cm thick. Due to the lack of topsoil, no shovel tests were dug. No artifacts were observed or collected.

SURVEY RESULTS

The Woodward Wind project plans to realign an electric conduit/power cable between two windmill towers within an existing wind farm. Only the segments of realignments on University Lands were examined by this survey. Another firm (Antiquities Planning and Consulting) will conduct the work on the remainder of the Woodward Wind realignments on privately owned property west and north of University Lands. The survey area is exposed limestone with a thin intermittent veneer of sandy loam and gravel. The absence of topsoil negated the need to dig shovel tests. Parts of the planned realignment occur within existing windmill pads that have been cleared or altered in the past (Fig. 6).



Figure 6. Aerial showing project location between two existing windmills (source: Google Earth image 2-22-17).

The mapped location of previously recorded site 41PC529 is plotted 30 m southeast of the current project area. In 2000, at the time of recording, the site contained a midden “stain”, hearths, scattered lithics, and stone tools that dated the site to the Transitional Archaic period. The site was located along a pour-off that channels rainfall off the mesa to the plain below. The site was considered

destroyed by erosion during the 2000 survey (Atlas), and no trace of it was observed near or within the current survey boundaries, indicating that either it has been fully eradicated by wind farm construction and subsequent traffic and erosion or that the original site information is incorrect.

CONCLUSIONS

At the request of Permian Environmental Services, 303 ft of proposed electrical conduit realignment was examined for cultural resources. The survey took place within an existing wind farm on a broad mesa top with exposed limestone. Examination of 0.69 acres of APE failed to identify any cultural resources. A broad area around the plotted location of 41PC529 was investigated, but no artifacts or features were found. The datum given on the Texas Historical Commission's Texas Archeological Sites Atlas (Atlas) shows the site 30 m southeast of the current project area, but no cultural remains were found in that location or within the nearby APE.

The site was considered ineligible for the NRHP at the time of recording and it is unlikely that its condition has improved since wind farm construction. In either case the planned realignment will have no effect on known cultural resources, and construction should be allowed to proceed.

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