



NMAS
New Mexico Archaeological Services, Inc.

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Reconnaissance
Excavation
Analysis
Explanation
Curation

5 April 1993

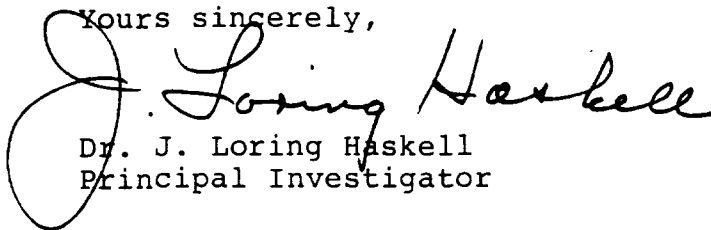
Mr. Darrell Roberts
SANTA FE ENERGY OPERATING PARTNERS, L.P.
550 West Texas, Suite 1330
Midland, Texas 79701

Dear Mr. Roberts:

Enclosed please find NMAS' Archaeological Survey Report for SANTA FE ENERGY OPERATING PARTNERS, L.P.'s proposed Kachina "5" Federal Well No. 5 and its associated access road in Lea County, New Mexico. One archaeological site NMAS 6059 (LA 100,101) was recorded during this survey. NMAS is suggesting clearance for this project provided the archaeological site is avoided.

If you have any questions pertaining to this report, please call my office. Thank you for asking NMAS to do these surveys.

Yours sincerely,



Dr. J. Loring Haskell
Principal Investigator

Enclosure

cc: Mr. Michael Kyte, BLM, Carlsbad

as

NEW MEXICO
OIL CONSERVATION DIVISION

EXHIBIT 4

CASE NO. _____

ARCHAEOLOGICAL SURVEY OF SANTA FE ENERGY OPERATING PARTNERS, L.P.'s
proposed Kachina "5" Federal Well No. 5, 660' FSL, 990' FWL, and
access road, Section 5, T18S, R33E, NMPM, Lea County, NM

FEDERAL LAND SURFACE

MAP REFERENCE: USGS DOG LAKE QUADRANGLE, 7.5 Minute Series,
1985, Prov. Ed.

REPORT NUMBER: 93-NMAS-07-A

by Dr. J. Loring Haskell, Principal Investigator

NEW MEXICO ARCHAEOLOGICAL SERVICES, INC.
P.O. Box 1341, Carlsbad, New Mexico 88221-1341
(505) 887-7646

PERMIT NUMBER: 14-2920-92-M

6 April 1993

Prepared for: SANTA FE ENERGY OPERATING PARTNERS, L.P.
550 W. Texas, Suite 1330
Midland, Tx, 79701

Attention: Darrell Roberts

Distribution: SANTA FE ENERGY OPERATING PARTNERS, L.P.
Bureau of Land Management (2)

NEW MEXICO ARCHAEOLOGICAL SERVICES, INC.
PERMIT NUMBER: 14-2920-92-M

CULTURAL RESOURCES EXAMINATION
REPORT NUMBER: NMAS-93-07-A

ABSTRACT: CLASS III SURVEY OF SANTA FE ENERGY OPERATING PARTNERS, L.P.'s proposed Kachina "5" Federal Well No. 5, 400' X 400', 4.44 acres, and access road, 100' X 1200', 2.75 acres. TOTAL SURVEYED AREA 7.19 ACRES. One archaeological site NMAS 6059 (LA 100,101) was recorded during this survey. Clearance is suggested provided the archaeological site is avoided.

LEGAL LOCATION: SW $\frac{1}{4}$ SW $\frac{1}{4}$, (660' FSL, 990' FWL), Section 5, and access road, SW $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, Section 5, T18S, R33E, NMPM, Lea County, NM

MAP REFERENCE: USGS DOG LAKE QUADRANGLE, 7.5 Minute Series, 1985, Prov. Ed.

LAND STATUS: BLM, Roswell District, Carlsbad Resource Area, NM

PROJECT DESCRIPTION: Location, 400' X 400', 4.44 acres, and access road, 100' X 1200', 2.75 acres.

TOPOGRAPHY/FLORAL FORMATION: The proposed location, situated south and west of the Llano Estacado, will be located on an aeolian landform marked by minor dune development. Areal soils host a mixed scrub/grassland formation. ELEVATION: 3959'.

EXAMINATION PROCEDURE: Zigzag transects, 8.0 m wide, close interval (15° or less). The access road was walked in two, 15 m wide, zigzag transects. FIELD TIME: 2½ hours. AREA DELINEATION: Staked by clinet. VISIBILITY: 75 to 85%. WEATHER: Sunny, partly cloudy conditions, 2 April 1993, clear, sunny and calm conditions, 9 August 1992.

FINDINGS: BLM Records, Arita K. Slate, 9 October 1992, Section 5 (seven archaeological sites), T18S, R33E.
Section 5, T18S, R33E.

*NMAS 5395 is situated no closer than 700' of the proposed location.

*AR-30-6-137 is situated no closer than 900' of the proposed location.

NMAS 5751 is situated no closer than 3700' of the proposed location.

NMAS 5978 is situated no closer than 2800' of the proposed location.

NMAS 5750 is situated no closer than 3500' of the proposed location.

NMAS 5393 is situated no closer than 4500' of the proposed location.

NMAS 5396 is situated no closer than 600' of the proposed location.

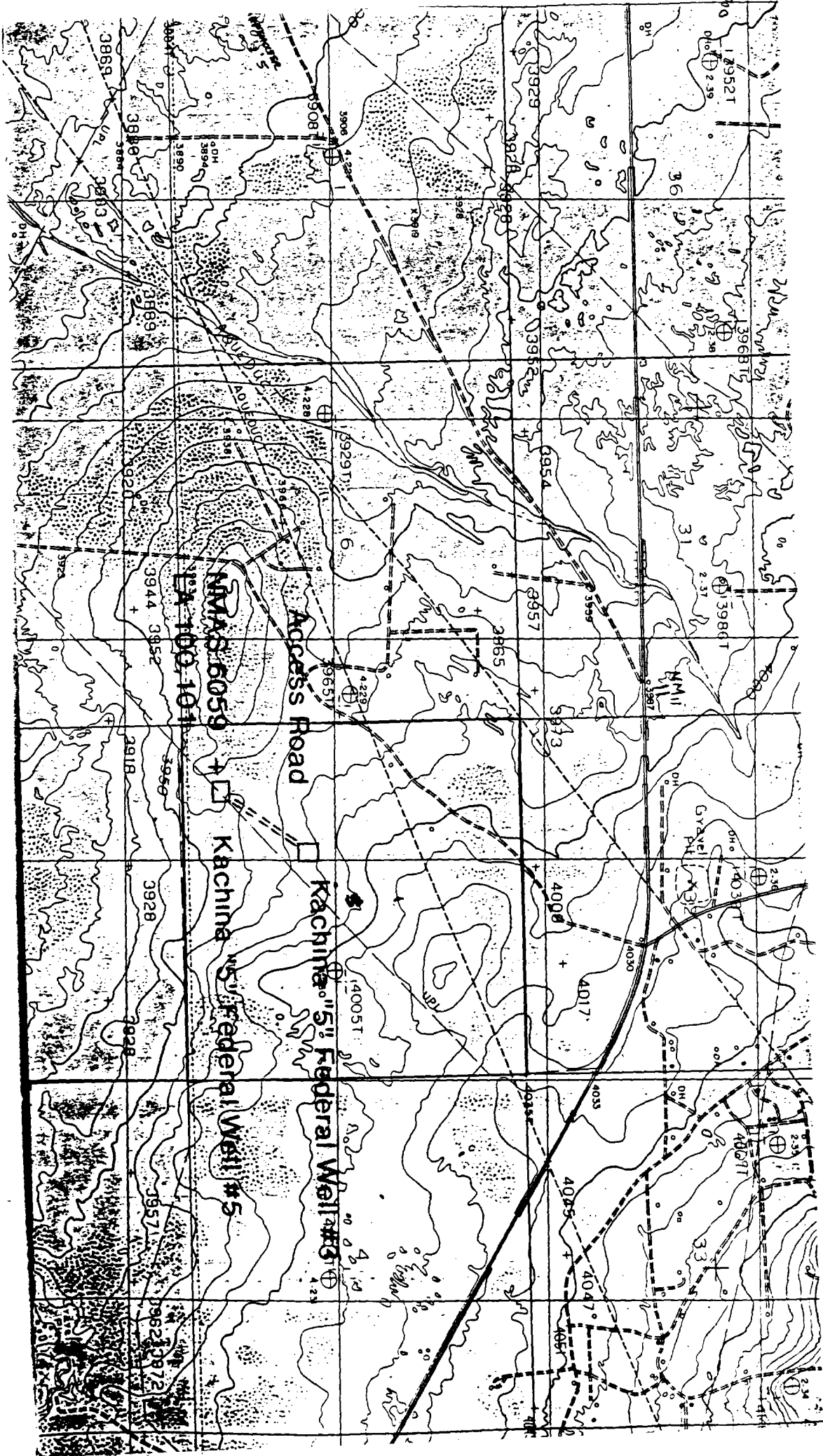
During the course of this survey, one archaeological site, NMAS 6059 (LA 100, 101), was recorded.

NMAS 6059 (LA 100,101) Category 2
 LOCATION: NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, Section 5, T18S, R33E, NMPM, Lea County, NM
 UTM: Zone 13, N3,626,430; E622,550
 MAP REFERENCE: USGS DOG LAKE QUADRANGLE, 7.5 Minute Series, 1985, Prov. Ed.
 OWNERSHIP: Bureau of Land Management Administration
 DIMENSION OF RESOURCES: 60m X 60 m
 TYPOLOGICAL DESIGNATION: Task Locus
 AUTHORSHIP/TEMPORALITY: Unknown
 NATURE OF CULTURAL RESOURCES: NMAS 6059, a small task locus, is situated on an aeolian landform whose surface is marked by low- to mid-sized (0.60 to 1.50 m), coppice-type dunes and typically interconnected, interdunal areas. Chert inclusions, cobble size, frequently occur in associated soils. Elevation is 3960'. Slope is 0.80°. Aspect is multiple (360°). Areal soils are supportive of a scrub formation. Observed cultural resources include chert angular debris, several, chert, tested cores, chert secondary decortication flakes, a hammerstone, and broken- and discontinuous-scatters of fire-cracked caliche gravels and cobbles. Cultural properties occur in the form of a light- to moderate- scatter, two to three pieces per 10 meters square. The site has been termed a task locus as activities focused on a modicum of chipped-stone production and camping- related tasks. No diagnostic artifacts were noted; consequently, authorship and temporality remain unknown. Occupancy was brief and occurred once. Owing to the combined forces of aeolian activity and colluvial processes, there is a high probability for some burial of material cultural remains.
 NMAS 6059 has not been impacted by mechanical means. The site is previously unrecorded; no collection was made.
 NMAS 6059 is important as it relates to areal settlement pattern, site selection and resource procurement.

RECOMMENDATIONS: NMAS suggests clearance for SANTA FE ENERGY OPERATING PARTNERS, L.P.'s Kachina "5" Federal Well No. 5 and access road provided NMAS 6059 (LA 100,101) is avoided (Fig. 1). Its presence should not pose a problem as the nearest cultural properties associated with it are located 150' to the west (Fig. 2).

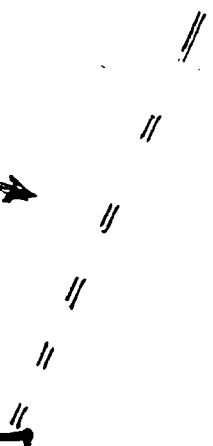
TIME AND DATE OF INVESTIGATION: Mid-afternoon, 2 April 1993, mid-morning, 9 August 1992.

FIG. 1. USGS DOG LAKE QUADRANGLE, 7.5 Minute Series, 1:24,000, 1985, Prov. Ed., showing SANTA FE ENERGY OPERATING PARTNERS, L.P.'s proposed Kachina "5" Federal Well No. 5, 660' FSL, 990' FWL, and access road, Section 5, T18S-R33E, NMPM, Lea County, New Mexico, vis à vis NMAS 6059 (LA 100,101).





Access
Road



NMAS
6059

A

Proposed
Santa Fe Energy
Op. Partners, L.P.
Kachina "5"
Federal Well
No. 5

Section 5

0' 200'
Scale

Fig. 2. Schematic representation showing SANTA FE ENERGY OPERATING PARTNERS, L.P.'s proposed Kachina "5" Federal Well No. 5, vis à vis NMAS 6059 (LA 100,101). As proposed, the location will be situated 150' from the nearest cultural properties.