



NMAS

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Reconnaissance
Excavation
Analysis
Explanation
Curation

11 November 1986

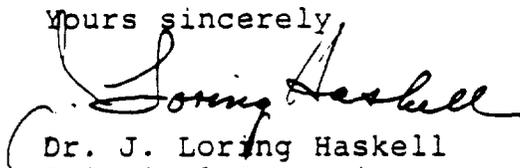
Mr. Bill Dawson
MERIDIAN OIL COMPANY
21 Desta Drive
Midland, Texas 79701

Dear Mr. Dawson:

Enclosed please find NMAS' Archaeological Clearance Report for MERIDIAN OIL COMPANY's proposed Benson "3" Federal Well No. 1 and its associated access road in Eddy County, New Mexico. One archaeological site (NMAS 5818) and one instance of burned caliche (BC) were 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 this survey.

Yours sincerely,


Dr. J. Loring Haskell
Principal Investigator

Enclosure

cc: Mr. Mark Calamia, BLM, Carlsbad
Mr. Thomas W. Merlan, SHPO, Santa Fe

as

BEFORE EXAMINER SIGNER OIL CONSERVATION SERVICE
MERIDIAN OIL NO. 5
CASE NO. 9116

Archaeological Clearance Report

for

MERIDIAN OIL COMPANY

Benson "3" Federal Well No. 1

Prepared

By

Dr. J. Loring Haskell

Submitted

By

Dr. J. Loring Haskell
Principal Investigator
New Mexico Archaeological Services, Inc.
Carlsbad, New Mexico

11 November 1986

Permit No. 14-2920-86-C

Report Number: NMAS-1986-3-N

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ABSTRACT

New Mexico Archaeological Services, Inc., representing MERIDIAN OIL COMPANY, Midland, undertook a Class III survey of Bureau of Land Management lands scheduled to be impacted by the construction of a drill location and access road. Field work was conducted under clear, sunny conditions with light winds during mid-afternoon. The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres). The access road will measure 20 X 600 ft (actual area surveyed 1.38 acres). Total surveyed acreage/5.82 acres. They will be situated in Section 3, T19S, R30E, NMPM, Eddy County, New Mexico. One archaeological site (NMAS 5818) and one instance of burned caliche (BC) were recorded during this survey. NMAS is suggesting clearance for MERIDIAN OIL COMPANY's proposed work provided the archaeological site is avoided.

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Introduction

On 5 November 1986, New Mexico Archaeological Services, Inc., (NMAS), Carlsbad, undertook for MERIDIAN OIL COMPANY, Midland, an archaeological survey of federal lands administered by the Bureau of Land Management in Eddy County, New Mexico. The reconnoitered areas will be impacted by the construction of a drill location and its associated access road. This project was advanced by Mr. Bill Dawson, MERIDIAN OIL COMPANY, and administered by Dr. J. Loring Haskell, Principal Investigator, NMAS, Inc. This survey was undertaken by Dr. Haskell. Field work was conducted under clear, sunny conditions with light winds during the afternoon. Ground visibility ranges between 80 and 85%. Field time 2½ hours.

Survey Technique

For this investigation, MERIDIAN OIL COMPANY's proposed location was reconnoitered for evidence of man's past activities by walking it in a series of 25 ft wide, close interval (15° or less), zigzag transects. In addition, an added zone extending 20 ft on each side of the staked 400 X 400 ft location, and lying outside the bounds of the proposed work area was reconnotiered by a similar means. The access road was walked in two, 50 ft wide transects. Lathe is considered to be the center of the proposed road. Methodologically, these procedures served to promote optimal conditions for the visual examination of the areas to be impacted by construction-related activities.

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Benson "3" Federal Well No. 1

Location

The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres) on federal lands and will be situated 760 ft from the north and 2080 ft from the east line.

Section 3, T19S, R30E, NMPM, Eddy County, NM

Thus it will be situated in the:

NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 3, T19S, R30E, NMPM, Eddy County, NM

The associated access road will measure approximately 20 X 600 ft (actual area surveyed 1.38 acres) and is situated in the:

NE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 3, T19S, R30E, NMPM, Eddy County, NM

NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 3, T19S, R30E, NMPM, Eddy County, NM

Map Reference: USGS HACKBERRY LAKE QUADRANGLE, 7.5 Minute Series, 1985 (Prov. Ed.)

The proposed access road will parallel the south side of an existing Phillips Petroleum Company pipeline easement. The site of the location has not been previously impacted by mechanical means.

Terrain

MERIDIAN OIL COMPANY's proposed location will be situated on the south-facing shoulder of a locally prominent eminence whose surface is overlain by a Holocene- and Pleistocene-aged, aeolian deposit of variable thickness. Associated coppice dunes range between 0.30 and 1.50 m in height. Dune development increases in magnitude toward the south; interdunal areas are uniformly the object of intense sheetwash which discharges into a subsidence basin located southwest of the project area. Some gullying occurs on the south. Overall, this area is coextensive with the Loco Hills polje, a complex, latitudinally shaped collapse

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structure. Surficial deposits are dominated by the sand separate and harbor caliche inclusions. Croute calcaire underlies the coeval surface. Soil individuals, made up of loose, non-calcareous, sandy loams and loamy sands, fall within the Typic Torripsamment subgroup/Kermit- Berino Series. Nearest potable water supply occurs in the form of seeps and springs within the polje. Elevation is approximately 3446 feet.

Floristics

Attendant soil individuals are supportive of a scrub-type, floral community. Principal denizens of the floral community's overstory are Condalia ericoides, Larrea tridentata, Prosopis juliflora, Yucca glauca, Acacia greggii, and Condalia lycioides. Most commonly occurring forbs are Gutierrezia sarothrae, locally omnipresent, along with Lesquerella sp., Croton sp., Dyssodia sp., Perezia nana, and Dalea formosa. The Gramineae is represented by Aristida sp., Bouteloua sp., Sporobolus flexuosus and Tridens pulchellus. Opuntia macrocentra is present on a recurrent basis on the upper slope.

Cultural Resources

Prefield 5 November 1986/Ariva Slate, no archaeological sites.

During the course of this survey, one archaeological site (NMAS 5818) and one instance of burned caliche (BC) were recorded.

Burned Caliche (BC)

Two pieces of burned caliche were noted at a point 150 ft northwest of the center of the location in an erosional gully.

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NMAS 5818

Location: SE¼NW¼NE¼, Section 3, T19S, R30E, NMPM, Eddy
County, NM

UTM: Zone 13, N3,617,710; E597,720

Map Reference: USGS HACKBERRY LAKE QUADRANGLE, 7.5 Minute Series,
1985 (Prov. Ed.).

Ownership: Bureau of Land Management Administration

Dimension of Resources: 60 x 90 m

Typological Designation: Task Locus

Authorship/Temporality: Unknown

Nature of Cultural Resources: NMAS 5818, a small task locus,
is situated on the crest and upper slope of a locally
prominent eminence which overlooks an extensive portion
of the Loco Hills polje. Locally, the coeval surface is
distinguished by a continuous system of low coppice dunes
and closed, shallow, deflation basins. Microrelief ranges
between 0.30 and 0.70 m in height. Sheetwash is character-
istic of most areas.

Observed cultural properties include three, highly
eroded, calich-type, fire hearths, a light, but continuous
scatter of burned caliche, and occasional quartzite primary-
and secondary- decortication flakes and angular debris. The
three fire hearths nucleate near the crest of the eminence,
with a light and amorphous scatter of burned caliche occurring
elsewhere. Lithic detritus flakes and angular debris is uniformly
scarce albeit do occur throughout the site's universe. This
site has been termed a task locus as activities here focused

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principally on camping. Occupancy was brief and occurred once. No diagnostic artifacts were noted; consequently, authorship and temporality remain unknown. Additionally, retrieval of radiometric dating material is doubtful owing to the highly eroded state of the fire hearths. A fence cuts across the site from north-northwest to south-southeast. The possibility of sub-surface remains is slim at NMAS 5818 because of the severity of sheetwash. NMAS 5818 is previously unrecorded; no collection was made.

This site is of limited scientific value on account of the highly eroded state of the fire hearths and the very limited and narrow range of artifacts associated with it. Regardless, the site is important in terms of its relationship to pre-historic land usage and hence settlement pattern in the Loco Hills District.

Recommendations

NMAS suggests clearance for MERIDIAN OIL COMPANY's proposed Benson "3" Federal Well No. 1 provided NMAS 5818 is avoided (Fig. 1). Its presence should not pose a problem as the site lies to the east of the location (Fig. 2). Men and materiel are to avoid the archaeologically sensitive area altogether during all phases of work. If additional cultural properties are encountered during construction, the BLM and NMAS should be notified immediately. Duned settings are notorious for covering and uncovering cultural properties. Clearance, of course, is granted by the Bureau of Land Management.

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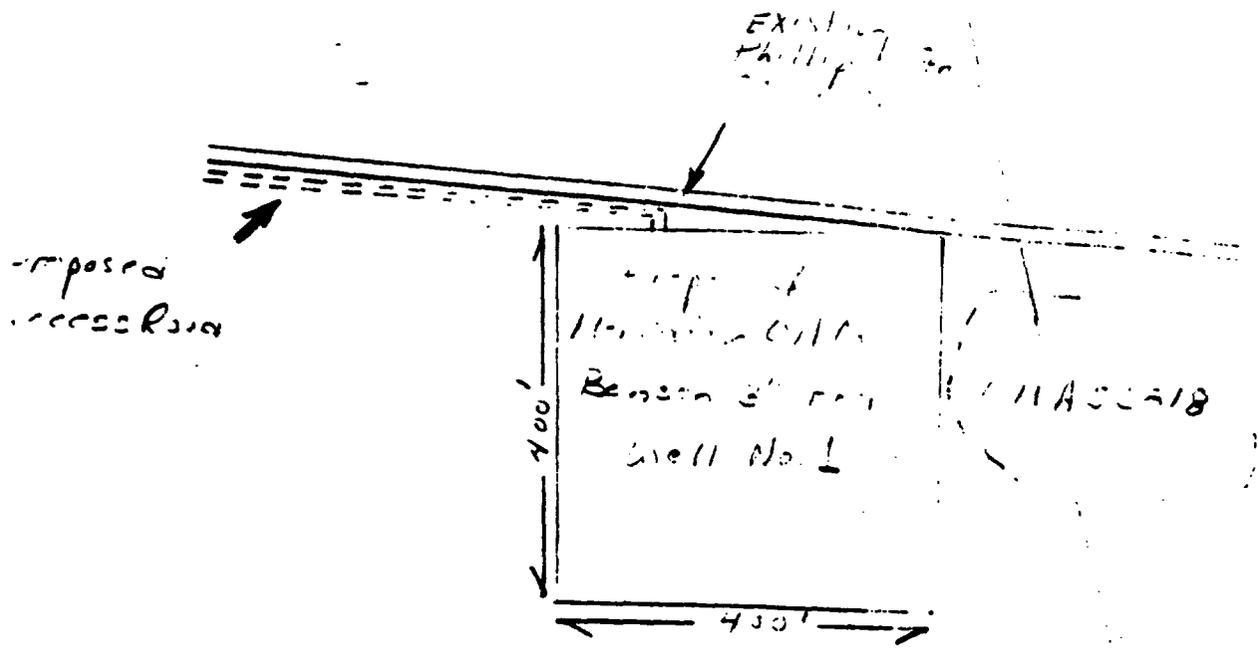


Fig. 2. Schematic representation showing MERIDIAN OIL COMPANY's proposed Benson "3" Federal Well No. 1 and access road vis à vis NMAS 5818.

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As used by NMAS, a "site" is defined as any cultural material containing clear evidence of other than en passant human occupation. (A site is a physical location of past human activities or events. Cultural resource sites are extremely variable in size, and range from a cluster of several objects or materials to structures with associated objects or features.)

OCCUPATION ZONE

An occupation zone is a site at which associated cultural properties occur scattered over an extensive tract of land. Specifically, resources occur as a light, but extensive, scatter, and lack overall concentration. Sites of this type, may or may not, reflect one task-specific activity.

TASK LOCUS

A task locus is a site at which an individual, or social unit, carries out a single task-related activity, e.g., a milling station or a lithic fabrication station (one type of cultural resource).

SPECIAL ACTIVITIES ZONE

A special activities zone is distinguished by a small range of related tasks, e.g., milling tools in association with hide working tools (more varied cultural resources).

LIMITED BASE

A limited base is characterized by a wider range of socio-economic activities resulting from more sustained occupation. Although it contains a wider array of task-related activities than at the above, it represents less than the full range of expected cultural resources construed as constituting a local group.

HOME BASE

A home base is a site which evidences signs of year-around occupation and hence was occupied by the full spectrum of social units normally construed as constituting a local group, i.e., the full range of cultural resources.

ISOLATED CULTURAL RESOURCE(S)

Isolated Occurrences generally contain fewer than 10 artifacts, have densities of less than one artifact per square meter, and have only a single type of material present.

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LITHIC DEFINITIONS

- CORES:** The block or nodules of raw material from which flakes are removed in the manufacture of chipped-stone tools.
- UNPREPARED CORE:** A core which possesses no systematic shaping of lateral edges and primary flaking is limited to preparation of a striking platform.
- PREPARED CORE:** A core which displays systematic preparation of the lateral edges.
- PRIMARY DECORTICATION FLAKE:** A flake struck during the initial shaping of a core which displays cortex over the entire dorsal surface.
- SECONDARY DECORTICATION FLAKE:** A flake struck during the initial shaping of the core which exhibits cortex over only part of the dorsal surface. An important difference between primary and secondary decortication flakes is that the latter are often utilized as tools themselves in a modified or unmodified state.
- TABULAR FLAKE:** Flake struck from an unprepared core, exhibiting a quadrilateral cross-section. The dorsal and ventral surfaces of these flakes are flat and parallel.
- PARALLEL-SIDED FLAKE:** Flake struck from a prepared core; large, thick flakes possessing a triangular cross section.
- RECTANGULAR FLAKE:** Flake struck from a prepared core exhibiting parallel, or slightly expanding lateral edges in relation to its longitudinal axis. These flakes are generally smaller than Parallel-Sided flakes and are believed to be struck from the edges, toward the center of a pyramidal core.
- LAMELLAR FLAKE:** Flake struck from a prepared core which exhibits a thinner, more regular shape than the other flakes detached from prepared cores. The symmetry and length-width ratio of Lamellar Flakes cause them to possess traits intermediate between those of flakes and blades. Indeed, they are removed from cores prepared similarly to the ones true blades are struck from, but lack the careful attention to the striking platform necessary to produce such a blade.
- THINNING FLAKE:** Flake removed to thin a piece for artifact manufacture.
- BLADE:** A specialized flake which possesses parallel lateral edges and a length equal to or more than twice the width. Blades are manufactured from carefully prepared

LITHIC DEFINITIONS (Cont.)

core, utilizing a blade technique which results in a unique pattern of ridges on the dorsal surface.

GRAVER: Chipped stone tool designed to possess a point or spur which is generally assumed to function as an incising implement. Frequently, heavy wear on such a spur is a diagnostic trait of such tools.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 9116
ORDER NO. R-8452

APPLICATION OF MERIDIAN OIL INC. FOR
AN UNORTHODOX LOCATION, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on April 22, 1987, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 3rd day of June, 1987, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Meridian Oil Inc., seeks to have its Benson "3" Federal Well No. 1 located 760 feet from the North line and 2080 feet from the East line (Unit B) of Section 3, Township 19 South, Range 30 East, NMPM, Eddy County, New Mexico, approved as an unorthodox oil well location pursuant to the Special Rules and Regulations for the Benson-Strawn (Oil) Pool as promulgated by Division Order No. R-6129-A, dated May 14, 1980. IN THE ALTERNATIVE, the applicant seeks to have said well approved as an unorthodox gas well location if the application of Yates Petroleum Corporation in Division Case No. 9109 to reclassify the Benson-Strawn Pool as a gas pool is granted.

(3) Division Order No. R-8446, dated May 29, 1987, issued in Cases Nos. 9109 and 9110, granted Yates Petroleum Corporation's request to reclassify the Benson-Strawn Pool from an oil pool to a gas pool to be governed by Statewide Rules and Regulations, including those provisions for 320-acre standard gas spacing units. Said Order also denied Meridian Oil Inc.'s request to amend the Special Rules and

Regulations for the Benson-Strawn (Oil) Pool to provide for increases in the depth bracket allowable and the gas/oil ratio limitation.

(4) Since the Benson-Strawn (Oil) Pool has been reclassified as a gas pool by said Order No. R-8446, that portion of this application seeking an unorthodox oil well location should be dismissed.

(5) The E/2 of said Section 3 is to be dedicated to the well.

(6) A well at said unorthodox gas well location will better enable applicant to produce the gas underlying the proration unit.

(7) No interested party objected to the proposed unorthodox location.

(8) Approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the affected pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of Meridian Oil, Inc., for an unorthodox gas well location for the Strawn formation is hereby approved for a well to be located at a point 760 feet from the North line and 2080 feet from the East line (Unit B) of Section 3, Township 19 South, Range 30 East, NMPM, Benson-Strawn Gas Pool, Eddy County, New Mexico.

(2) The E/2 of said Section 3 shall be dedicated to the above-described well.

(3) That portion of this application seeking an unorthodox oil well location for said well in the Benson-Strawn (Oil) Pool is hereby dismissed.

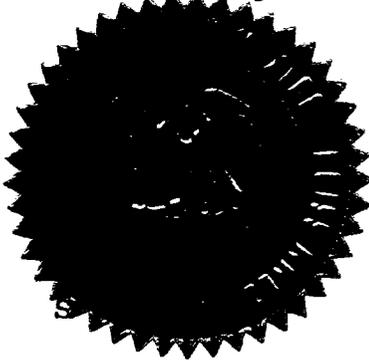
(4) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

-3-

Case No. 9116

Order No. R-8452

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director