

MERIDIAN OIL

RECEIVED

JUN - 8 1989

OIL CONSERVATION DIV.
SANTA FE

June 6, 1989

Mr. William LeMay
New Mexico Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87504

Dear Mr. LeMay:

This is a request for administrative approval for an unorthodox gas well location in the Basin Fruitland Coal Pool.

It is intended to locate the El Paso Natural Gas Company San Juan 28-5 Unit #200 at 1475' from the North line and 490' from the East line of Section 14, T-28-N, R-5-W, Rio Arriba County, New Mexico.

This non-standard location is necessary because of archaeology and terrain.

El Paso Natural Gas Company is the operator of the San Juan 28-5 Unit.

Plats showing the proposed well location and the terrain in Section 14, along with an ownership plat, are attached.

Sincerely yours,

Peggy Bradfield
Peggy Bradfield
encl.

*Call
Ilysic
in the A.M.*

3/22/89

*Spoke extensively w/ Ilysic Fairchild
w/ BLM in Farmington. All other locations
within the NE 1/4 structured window
is either condemned due to Arch., or
terrain. But a full problem exist
in the expansion of the two existing
poles. m.s.*

8/18/89 talked w/ Peggy Bradfield re sending the Report

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator El Paso Natural Gas			Lease SF-079250 San Juan 28-5 Unit		Well No. 200
Unit Letter H	Section 14	Township 28 North	Range 5 West	County NMPM	Rio Arriba
Actual Footage Location of Well: 1475 feet from the North line and 490 feet from the East line					
Ground level Elev. 7382'	Producing Formation Fruitland Coal		Pool Basin	Dedicated Acreage: 320 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☒ Yes ☐ No If answer is "yes" type of consolidation unitization

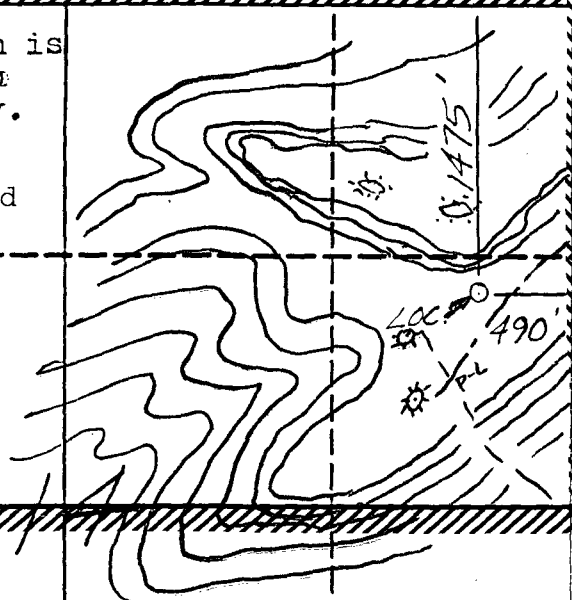
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

* Note: This location is non-standard due to terrain & archology.

Reissued to show moved location 9-26-89

El Paso
Fruitland



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature
Peggy Bradfield
Printed Name
Regulatory Affairs
Position
El Paso Natural Gas
Company
Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
Neal C. Edwards
Signature of Seal of
Professional Surveyor

Certificate No.
6857

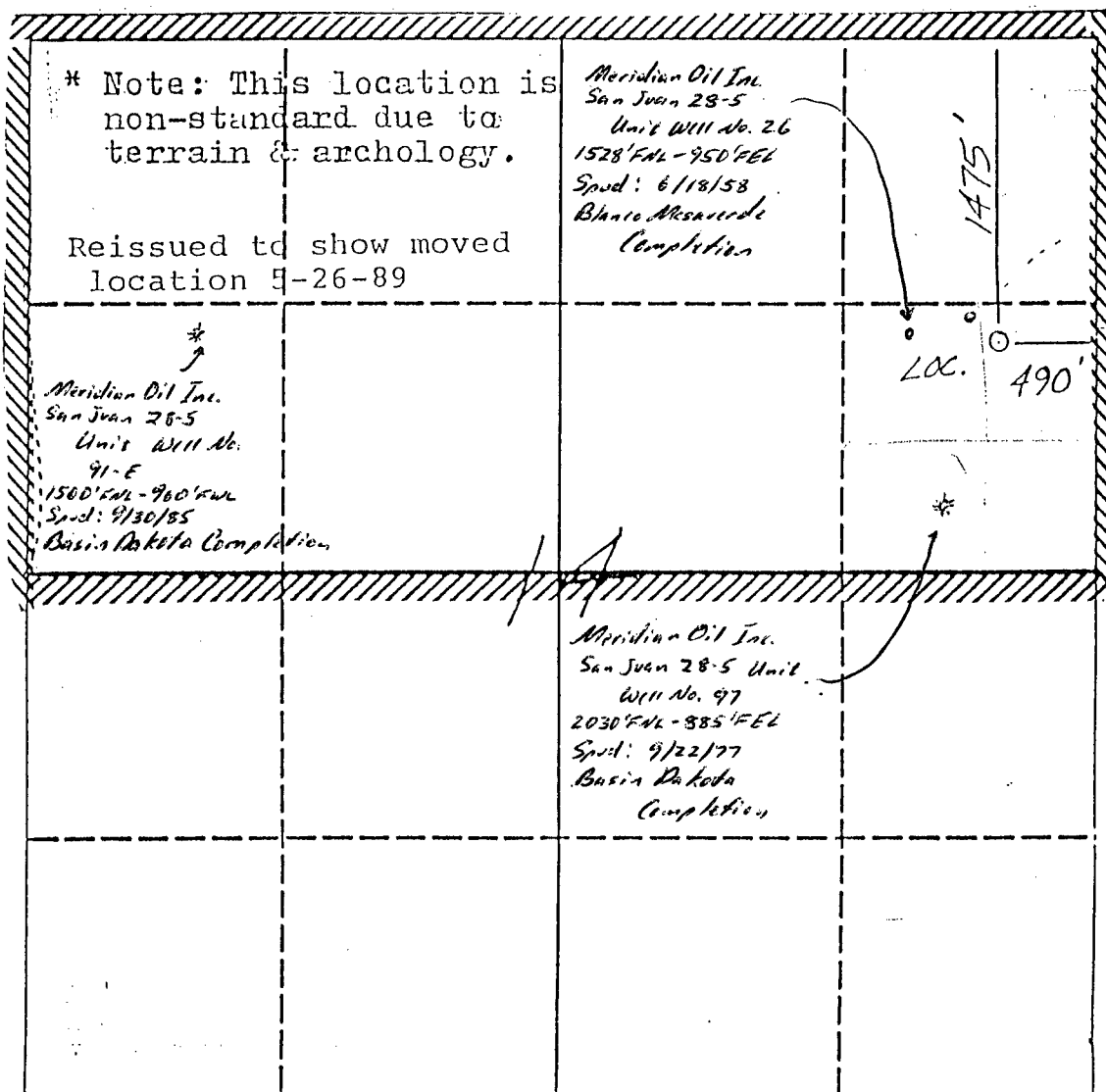
EL PASO NATURAL GAS COMPANY

Well Name San Juan 28-5 Unit #200, Fruitland Coal

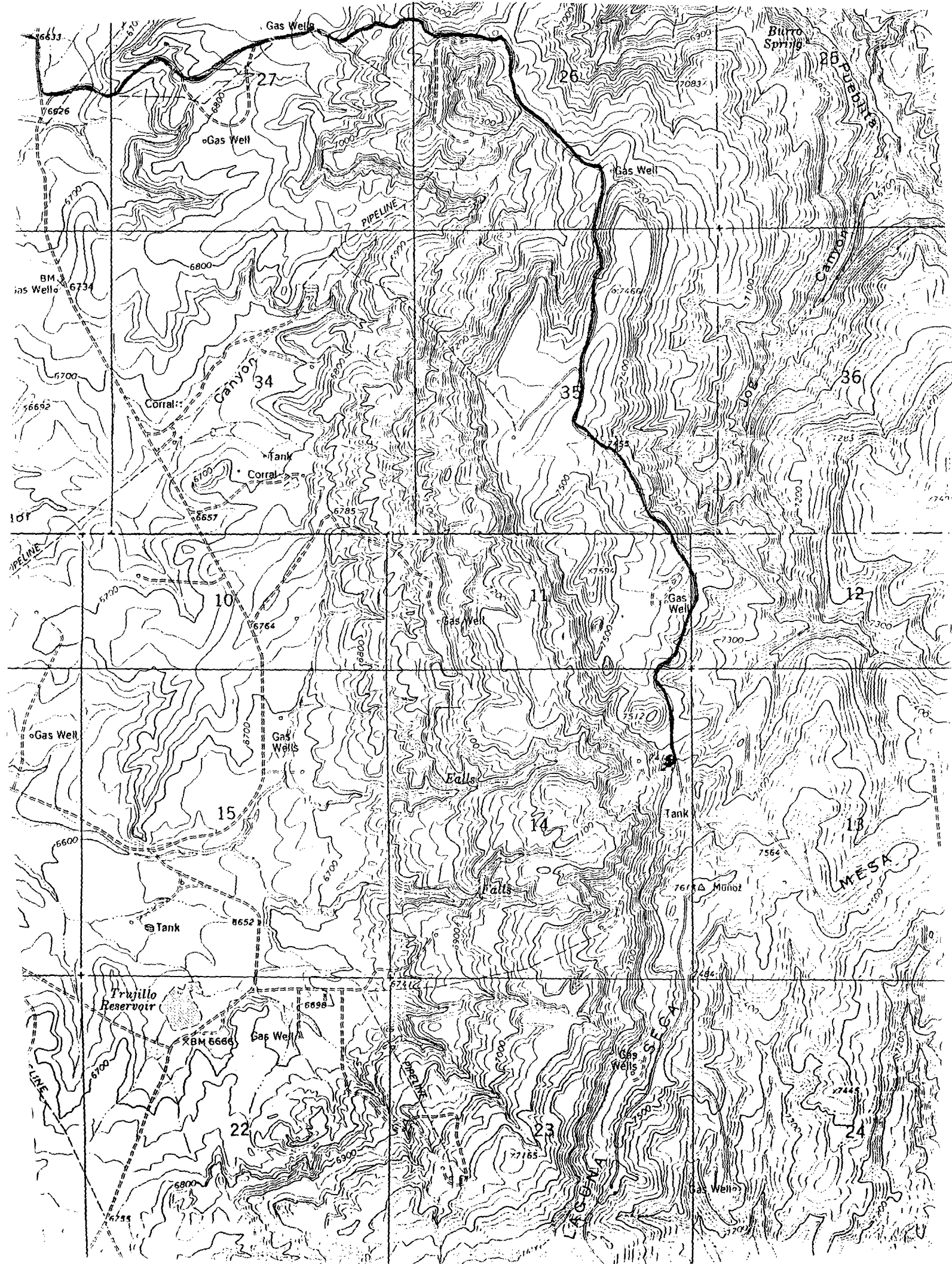
Footage---- 1475' FNL; 490' FEL

APPLICATION FOR NON-STANDARD LOCATION

County Rio Arriba State New Mexico Section 14 Township 28N Range 5W



REMARKS: All lands surrounding this proration are within the San Juan 28-5 Unit
Boundaries -- El Paso Natural Gas Company, Operator





geological consultants

and



Archaeological Division

File
**CURTIS MATTHEWS
STEPHANIE MATTHEWS
P.O. BOX 2922
DURANGO, CO 81302
303-247-5814**

May 12, 1989

Charles Werner
Meridian Oil Company
P.O. Box 4289
Farmington, New Mexico
87499-4289

Dear Mr. Werner:

Dave Kayser of the Farmington Resource Area-Bureau of Land Management office came out on May 10, 1989 to the location San Juan 28-5 Unit #200. I examined the site recorded by Roger Moore in November of 1988 with Dave Kayser and Neale Edwards and decided the location could be moved southwards. The south end of the archaeological site still falls within the 75' construction zone. Dave Kayser said that the least the BLM could accept as mitigation is the following:

- 1) a permanent fence on that side of the well pad
- 2) test trenching of that portion of the site falling within the 75' construction zone
- 3) technical archaeological surveying of the entire site, which is 94' x 50', and the surveying in of all features and cultural materials
- 4) surface collection of artifacts on the entire site
- 5) monitoring of fence construction and well pad construction

The estimate for doing 2, 3, and 4 is in the range of \$4000-5000 if nothing unexpected occurs, and no lab tests of any sort are required.

The monitoring would probably take one day, if no further cultural materials are found while constructing the pad.

A report on the new location is in progress.

If Meridian does not agree to the above mitigation, please send me a formal reply which I can talk to Dave Kayser about, as this may eliminate the need for me to write up a special mitigation report for the BLM and SHPO.

If you have any questions, please call us.

Sincerely,

S. Sofranoff (Matthews)
Supervisory Archaeologist

Project No. 210-88-C

Cultural Resource Use Permit
7-2920-89-I (NM BLM)

An Addendum to
An Archaeological Survey of the
San Juan 28-5 No. 200 Well Pad

for

Meridian Oil

by

Patricia M. Hancock
Supervisory Archaeologist

Submitted by

Byron P. Johnson
Director

DIVISION OF CONSERVATION ARCHAEOLOGY

Technical Report No. 1471 Addendum
San Juan County Archaeological Research Center and Library

April 25, 1989

PROJECT DESCRIPTION

EPNG San Juan 28-5 Unit No. 200 (Figure 1)

Legal Description: T28N, R5W, Section 14, W 1/2 SE 1/4 NE 1/4 (original
E 1/2 SW 1/4 NE 1/4 location)
W 1/2 SE 1/4 NE 1/4 (proposed
SE 1/4 SE 1/4 NE 1/4 location)
SE 1/4 SW 1/4 NE 1/4 "
2215' F/NL, 1340' F/EL (original
location)
2155' F/NL, 1160' F/EL (proposed
location)

N.M.P.M., Rio Arriba County, New Mexico

Map Source: U.S.G.S. 7.5' Gobernador, New Mexico (1963, photorevised 1982)

Land Jurisdiction: Bureau of Land Management

Project Area: 450' x 450' (well pad)

Surveyed Area: 650' x 650' (well pad with buffer)
9.70 Acres*

*no new areas were surveyed.

Description: The proposed well pad is located on the western edge of Laguna Seca Mesa overlooking a tributary canyon of Gobernador Canyon to the west. The pad area is in rugged terrain and slopes steeply to the northwest. There is an outcrop of many large sandstone boulders along the mesa edge. The soil is both sandy and clayey. The woodland ground cover varies from 40 to 80%. Ponderosa pine (Pinus ponderosa) dominates the landscape. Gambel oak (Quercus gambelii) is also in abundance. Other species in the area are pinyon pine (Pinus edulis), snakeweed (Gutierrezia sarothrae), rabbitbrush (Chrysothamnus nauseosus), cliffrose (Cowania sp.), mountain mahogany (Cercocarpus montanus), narrowleaf yucca (Yucca angustissima), broadleaf yucca (Y. baccata), and grasses. Crested wheat (Agropyron cristatum) is on the disturbed area.

Access will be from existing well pad EPNG San Juan 28-5 Unit No. 97 (1850' F/NL, 800' F/EL) which is directly to the northeast.

Subsequent to the original survey on November 14, 1988 (Hancock 1989), Meridian Oil Company requested that the location of San Juan 28-5 Unit No. 200 be moved from T28N, R5W, Section 14, 2215' F/NL, 1340' F/EL to T28N, R5W, Section 14, 2155' F/NL, 1160' F/EL. This new location is 60 ft to the north and 180 ft to the east of the original location.

A new archaeological survey will not be necessary because the new location is partially on existing well pad San Juan 28-5 Unit No. 97 (1850' F/NL, 800' F/EL) and partially on the original well pad.

Cultural Resources: One isolated locus, IL #1, was found near the center stake of the original location. It was documented in the original report (Hancock 1989). The isolate is an Obsidian Ridge obsidian core measuring 5 x 3 cm.

Recommendations: Recordation of the isolate has exhausted its research potential. Archaeological clearance is recommended.

REFERENCE CITED

Hancock, Patricia M.

- 1989 An Archaeological Survey of Proposed Well Pad San Juan 28-5 Unit No. 200 East of the Carson National Forest, Rio Arriba County, New Mexico. Division of Conservation Archaeology Technical Report No. 1471. Farmington, New Mexico.



geological consultants

and



Archaeological Division

CURTIS MATTHEWS
STEPHANIE MATTHEWS
P.O. BOX 2922
DURANGO, CO 81302
303-247-5814

May 14, 1989

S.T. 78-5 d n.t #700

Mr. Charles Werner
Meridian Oil Company
P.O. Box 4289
Farmington, New Mexico
87499-4289

RECEIVED

AUG 21 1989

OIL CONSERVATION DIV.
SANTA FE

Dear Mr. Werner:

Our report on the restaked location survey of the proposed well is enclosed. A site survey report as required by the FRA-BLM was also completed for the site NM-01-35197.

Mitigation recommended includes permanent fence for the northern well pad boundary, test excavation of the portion of the site falling within the 75' construction zone, technical surveying of the entire site and its features, collecting of artifacts from the entire site, and monitoring of the construction of fence and well pad.

If the mitigation as detailed here and in a letter with estimates sent to you separately is acceptable to Meridian Oil Company, please let me know, as excavation permitting is a long process.

Enclosed is an invoice for our services. We have enjoyed working with you and hope we can be of service in the future. If you have any questions, please call us. We will be happy to help you.

Sincerely,

Stephanie Sofranoff (Matthews)
Supervisory Archaeologist

cc: Resource Area Manager, BLM, Farmington

Project No. 89-5

Cultural Resource Use Permit
78-2920-89-A (NM BLM)

An Archaeological Survey
of One Well Location,
Rio Arriba County, New Mexico

for

Meridian Oil Company

San Juan 28-5 Unit #200

Prepared and Submitted by

Stephanie Sofranoff (Matthews)
Principal Investigator

Archaeological Division
m & m Geological Consultants

Archaeological Report #5

May 14, 1989

ABSTRACT

On May 5, 10, and 12, 1989, an archaeological survey of the restaked well location and the nearby site for Meridian Oil Company was completed. The survey area is located in

Section 14, T28N, R5W

on top of Laguna Seca Mesa, and is under the jurisdiction of the Bureau of Land Management. Approximately 2.05 acres exclusive of the archaeological site were surveyed. Both the restaked location and the archaeological site were intensively inventoried.

The site, which was previously recorded in November of 1988 by Moore Anthropological Research, is of Navajo Gobernador cultural affiliation. It is located within the buffer zones of the restaked location. It consists of two fork stick hogan circles, a dense concentration of ceramic sherds of fingernail-impressed and punctate brownware, two fragments of a single mano, and two obsidian flakes. Mitigation due to the site has been discussed in detail in the body of the report.

INTRODUCTION

On May 5, 10, and 12, 1989, the Archaeological Division of m & m Geological Consultants conducted an archaeological survey for Meridian Oil Company of Farmington, New Mexico. Ross Lankford and Charles Werner of Meridian Oil Company requested the survey on May 4, 1989, and Charles Werner administered the project. Stephanie Sofranoff (Matthews) administered the archaeological consulting for the Archaeological Division of m & m Geological Consultants. Neale Edwards of Meridian Oil Company accompanied the survey team on May 10, 1989. The Farmington Resource Area office of the Bureau of Land Management, San Juan County, New Mexico, has jurisdiction over this project. On May 10, 1989, D. Kayser of the FRA office was present on the location to discuss possibilities in mitigation of the site previously recorded by Moore Anthropological Research, and listed at the BLM-FRA office as NM-01-35197.

Recognizing that archaeological remains are non-renewable in nature, the federal government has enacted legislation designed to protect and conserve these resources. The principal legislation includes the Antiquities Act of 1906 (PL 52-209), the Historic Preservation Act of 1966 (PL 89-665), and, as amended (PL 96-515), the National Environmental Policy Act of 1969 (PL 91-852), the 1971 Executive Order No. 11593, the Archaeological and Historical Conservation Act of 1974 (PL 93-291), and the Archaeological Resources Protection Act of 1979 (PL 96-95). In addition, the Navajo Nation and the states of Arizona, New Mexico, Utah and Colorado have enacted laws to ensure compliance with federal legislation, and to protect archaeological resources within their jurisdiction. Work conducted in the course of this project is intended to comply with these statutes and is governed by the stipulations of Cultural Resources Use Permit 78-2920-89-A (NM BLM).

Stephanie Sofranoff (Matthews), consulting archaeologist, surveyed the project area and archaeological site for cultural remains.

METHODS

The restaked location was surveyed by walking parallel transects with a 3-4m spacing across the well pad. Natural barriers eliminated the need for surveying buffer zones, except for the northern area, which has been surveyed previously in November of 1988 by Moore Anthropological Research. The archaeologist recorded all cultural remains, which turned out to be only within the site previously recorded by Moore Anthropological Research in 1988. Pertinent environmental data were also recorded. The well location was delineated by seven stakes, including one at the center point, placed there by surveyors prior to the archaeological survey.

In addition to field inspection, the archaeologist conducted a search at the Bureau of Land Management, Farmington Resource Area office to determine if any cultural remains had been recorded within a one-mile radius of the restaked well location, and to obtain a copy of the site report done by MAR in November of 1988. Site and project records required by the BLM and the New Mexico Historic Preservations Division were completed.

All directions noted in the report and on the maps are with respect to true, not magnetic North.

PREVIOUSLY RECORDED SITES

Six previously recorded sites are within a one-mile radius of the restaked San Juan 28-5 Unit #200 location.

These range from sparse artifact scatters from prehistoric time, to habitation sites.

Table 1. Previously Recorded Sites Within a One-Mile Radius of the Project Location, Presented by Project Location

Site #	Affiliation	Description
35197	Navajo Gobernador	recorded as a ceramic/groundstone scatter re-recorded in present study
33181	Anasazi - PI	scatter of chipped stone and sherds, slab-lined hearth
33182	Anasazi - PI	artifact scatter, mano fragment, proj pt base
31535	Anasazi - PI	possible pithouses, scatters of ceramics, chipped and ground stone, baked mud with stick impressions
33035	Anasazi - PI	possible pithouse, mound structure, artifact scatter
31312	Anasazi - PI	possible pithouse, ceramics, chipped and ground stone scatters

The data source for the previously recorded sites is the Farmington Resource Area office, BLM, proprietary files.

PROJECT DESCRIPTION

SAN JUAN 28-5 UNIT #200-Old location (from BLM report 89(1)091F)

Legal Description: T28N, R5W, Section 14, SE 1/4 NE 1/4 NE 1/4
1335' FHL, 540' FEL) N.M.P.M., Rio Arriba County, New Mexico

Map Source: USGS 7.5' Gobernador, NM, 1963 Ed, Photorevised 1982

Land Jurisdiction: BUREAU OF LAND MANAGEMENT

Elevation: 7400'

Project Area: 350' x 350' (well pad)

Surveyed Area: 650' x 650' (well pad with buffers, 9.70 ac)

Description: The well is on a broad upper bench of Laguna Seca Mesa. About 75 ft north of the proposed well pad is a 60 ft high sandstone boulder-covered talus slope. A pipeline right-of-way and bladed roads parallel the east side of the pad, and another road and pipeline parallel the south buffer zone. The soil is characterized as a reddish-brown to brown sand with woodland providing 15-25% cover of pinon pine, juniper, gambels oak, grama grass, antelopebrush, mountain mahogany, broad leaf yucca, buckwheat, Indian ricegrass, and prickly pear cactus.

Cultural Resources: One archaeological site (NM-01-35197, MAR-88-17) and two isolated loci were found. For further detailed discussion of this site by the recorder, Moore Anthropological Research, please refer to the site survey report of the above-mentioned FRA-BLM file number and the accompanying well location survey report, also as mentioned above.

Due to the presence of this site, and the constricted possible alternate locations, S. Sofranoff (Matthews) was called upon by Meridian Oil Company to examine the site and discuss possibilities with the FRA-BLM archaeologist, D. Kayser, concerning mitigation.

SAN JUAN 28-5 UNIT #200-New location

Legal Description: T28N, R5W, Section 14, SE 1/4 NE 1/4 NE 1/4
SW 1/4 NE 1/4 NE 1/4
NW 1/4 SE 1/4 NE 1/4
NE 1/4 SE 1/4 NE 1/4
1475' FNL, 490' FEL

N.M.P.M., Rio Arriba County, New Mexico

Map Source: USGS 7.5' Gobernador, NM, 1963 Ed, Photorevised 1982

Land Jurisdiction: BUREAU OF LAND MANAGEMENT

Elevation: 7400'

Project Area: 255' x 350' (well pad, 2.05 ac)

Surveyed Area: 255' x 350' (natural barriers eliminated buffers, old location survey covered existing buffers, 2.05 ac)

Description: The old location was moved 140' south and 50' east to form the new location. Access to the proposed well will be through the area already impacted, as seen in Figure 3. The project area is on a flat bench. There are no drainages because of the lack of slope. To the west of the well pad boundary is the steep dropoff into the valley. There is a pipeline on the southern edge of the well pad.

The area is in woodland, with the dominant vegetation consisting of an overstory of pinon pine, juniper, and an understory of gambels oak, bitterbrush, mountain mahogany, sage, rabbitbrush, yucca, prickly pear. Ground cover is approximately 40%. Visibility is 75-80%. The soil is a reddish-brown to grayish-brown sand. The ground was dry, the weather cool and windy.

Cultural Resources: The site previously recorded on the old location is now located within the construction and buffer zones to the north of the new well pad location. The site is of Navajo Gobernador cultural affiliation, and consists of two fork stick hogan circles, a dense concentration of ceramic sherds, two mano fragments that fit together, and two obsidian flakes.

For full details concerning the site, see the site survey form of the Laboratory of Anthropology, Museum of New Mexico.

The diagnostic features are the fork stick hogan circles and the fingernail-impressed and punctate brownwares with sand temper.

Recommendations: Because of the presence of this site within the construction and buffer zones, the following mitigation was deemed acceptable to the FRA-BLM during a discussion with D. Kayser of the FRA-BLM office on-site.

- 1) permanent fencing of northern boundary of well pad
- 2) trench testing of the portion of the site within the 75' construction zone
- 3) technical surveying of the entire site and its features
- 4) surface collection of artifacts from the entire site
- 5) monitoring of the permanent fence construction
- 6) monitoring of the well pad construction

The mitigation is extensive due to the fact that this is a Category 2 site, because it has approximately 100 surface artifacts, contains 2 fork stick hogan circles, one of which contains datable charcoal in a hearth, and the site is intact. Although the depth of sandy soil is shallow, it is felt that there is much additional data outside of what has been recorded in the surface analysis of the site survey report.

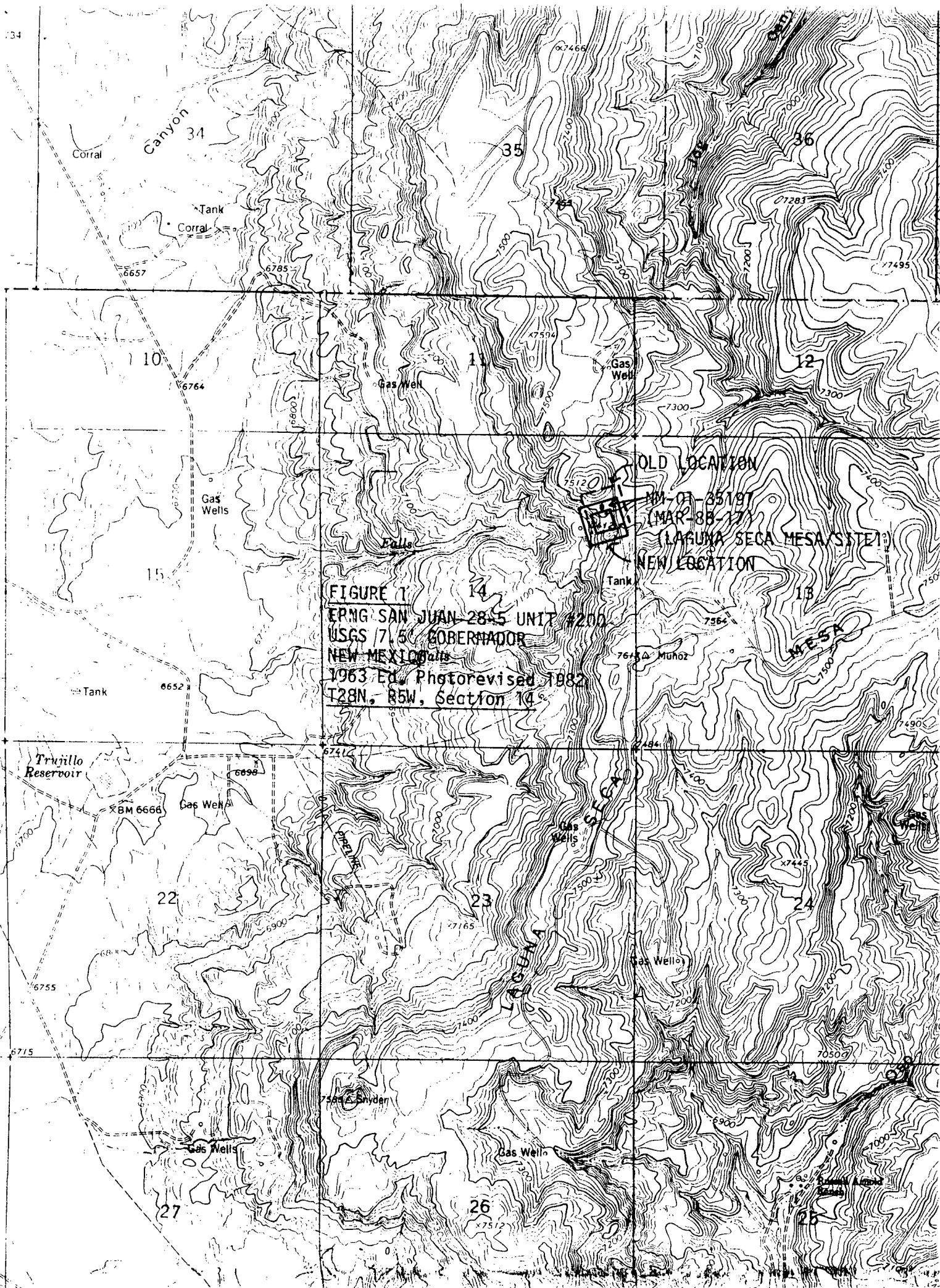


FIGURE 1
ERNG SAN JUAN 28.5 UNIT #200
USGS 7.5 GOBERNADOR
NEW MEXICO
1963 Ed. Photorevised 1982
T28N, R5W, Section 14

OLD LOCATION
NM-01-35197
(MAR-88-17)
(LAGUNA SECA MESA SITE 1)
NEW LOCATION

Trujillo
Reservoir

LAGUNA
SECA

MESA

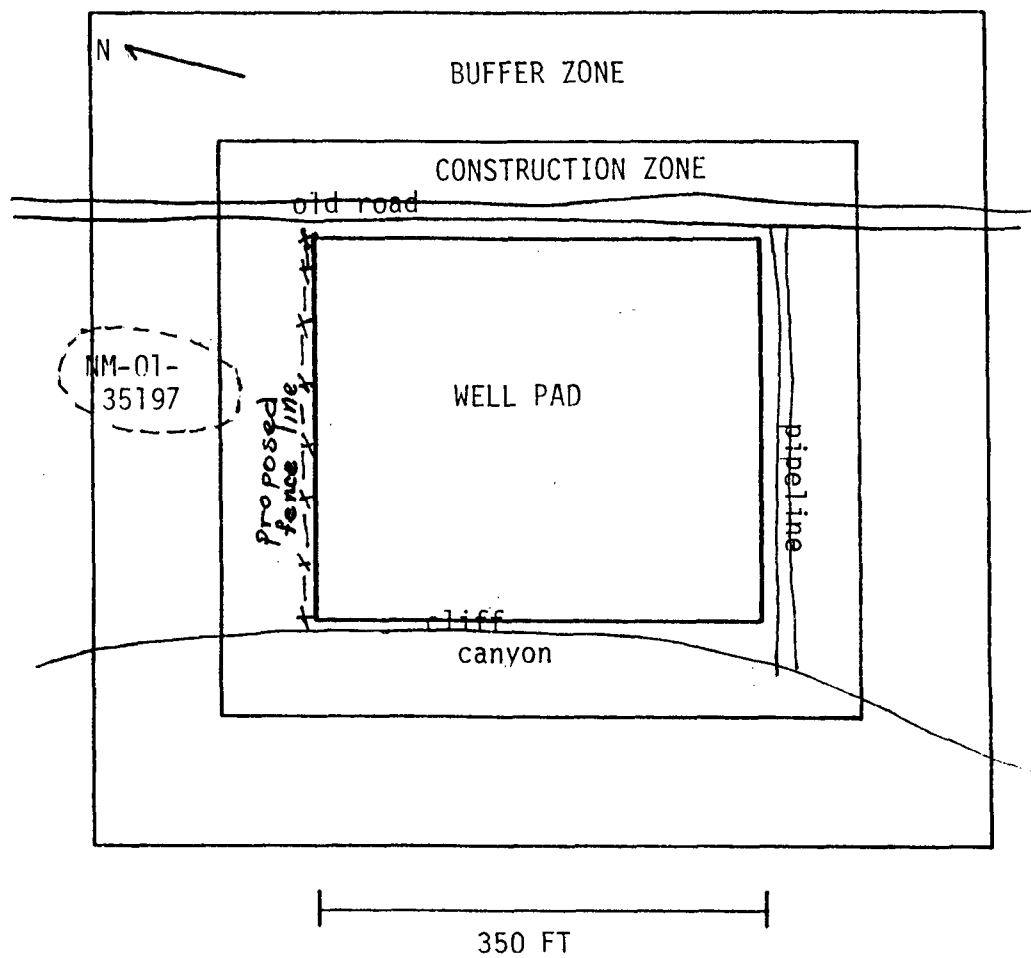


FIGURE 3. SURVEY AREA FOR THE NEW LOCATION OF
SAN JUAN 28-5 UNIT #200



geological consultants

and



Archaeological Division

**CURTIS MATTHEWS
STEPHANIE MATTHEWS
P.O. BOX 2922
DURANGO, CO 81302
303-247-5814**

May 20, 1989

Mr. Charles Werner
Meridian Oil Company
P.O. Box 4289
Farmington, New Mexico 87499-4289

Dear Mr. Werner:

Enclosed is an addendum to our report on the San Juan 28-5 Unit #200, following upon a conversation with Dave Kayser of the FRA-BLM. As he requested, here is my final opinion on necessary mitigation of the archaeological site located 63' away from the new location well pad boundary.

I was happy to hear that it will not be necessary to do lengthy testing and excavation and artifact collecting for this site.

Please add this to the appropriate well file. If you have any questions, please let me know.

Sincerely,

S. Sofranoff (Matthews)
Supervisory Archaeologist

ADDENDUM TO ARCHAEOLOGICAL REPORT #5, SAN JUAN 28-5 UNIT #200

Trowel testing along the southern boundary of the site mentioned in the report indicates that the new well pad location will be 63' away from the site boundary. Following a discussion of the mitigation recommendations proposed in the report in light of the distance between the well pad location and the site boundary, it is suggested that the mitigation recommendations be modified to the following:

- 1) monitor a permanent fence construction at the northern well pad boundary
- 2) monitor the construction of the well pad for any additional cultural remains beneath the surface

These mitigation actions should sufficiently prevent any impacts due to well construction and production maintenance.

Project No. 88-14

Cultural Resource Use Permit
No. 77-2920-88-A

An Archaeological Survey of
Five Well Locations near Gobernador
in Rio Arriba County, New Mexico

for

Meridian Oil Company
San Juan 28-5 Unit 200
San Juan 28-5 Unit 203
San Juan 28-5 Unit 204
San Juan 28-6 Unit 402
San Juan 28-6 Unit 403

Written and
Submitted by

Roger A. Moore, Jr.
Principal Investigator

November 14, 1988

Moore Anthropological Research

Technical Report No. 88-14

M.A.R., P.O. Box 1156, Aztec, New Mexico 87410

ABSTRACT

On November 7, 1988 Moore Anthropological Research conducted a Class III archaeological survey of five proposed well locations and access routes for Meridian Oil Company of Farmington, New Mexico. The survey areas are located on Laguna Seca Mesa (T28N, R5W, Section 14) and on Fourmile Mesa (T28N, R5W, Sections 17 & 18, T28N, R6W, Sections 11 & 12) south of Gobernador in Rio Arriba County, New Mexico and is under the jurisdiction of the Bureau of Land Management, Farmington Resource Area. A total of 54.24 acres were inventoried.

One archaeological site and eleven isolated loci were discovered during the survey.

The documentation of the isolates in the field has sufficiently exhausted their research potential for the purpose of this project. Site MAR-88-17 is on well San Juan 28-5 Unit 200. Archaeological clearance is not recommended for this well. Archaeological clearance is recommended for the other four well locations.

INTRODUCTION

On November 7, 1988 Moore Anthropological Research (M.A.R.) conducted a Class III archaeological survey for Meridian Oil Company Farmington, New Mexico. Mr. Charles Werner of Meridian Oil Company requested the survey on November 3, 1988 and administered the project. Roger A. Moore administered the project for M.A.R.

Over the years the people of the United States have become more aware of the nonrenewable nature of their archaeological resources and their cultural heritage. As a result of this growing concern federal, state and local governments have passed laws and enacted ordinances designed to protect and conserve archaeological, historical, and anthropological resources. The principal legislation affecting federal lands, federally administered projects, or federally funded projects includes the Federal Antiquities Act of 1906 (P.L.52-209), the Reservoir Salvage Act of 1960 as amended (16 U.S.C 469), the National Historic Preservation Act of 1966 (P.L.89-665) as amended in 1980 (P.L.96-515), the National Environmental Policy Act of 1969 (P.L.91-852), Executive Order No. 11593 of 1971 (35 F.R.8921, 16 U.S.C. 470), the Archaeological Resource Protection Act of 1979 (P.L.96-95), and the American Indian Religious Freedom Act of 1979 (P.L.95-341). The principal legislation affecting non-federal lands in New Mexico is the Cultural Properties Act. Work conducted in the course of this project is intended to comply with the above-mentioned laws and is governed by the stipulations of Federal Cultural Use Permit No. 77-2920-88-A.

Roger A. Moore, M.A.R. archaeologist, surveyed the project area for cultural remains. The Bureau of Land Management (B.L.M.) Farmington Resource Area was notified of the proposed survey prior to beginning fieldwork. Odell Farley accompanied the archaeologist during fieldwork.

METHODS

The project area was surveyed by walking parallel transects 15m apart across the well pads and a single zigzag transect along the access routes. A construction zone 50ft wide and a buffer zone 100ft wide around the well pads and 30ft wide on the 35ft wide access routes was included in the survey. The project area was marked with orange painted lath at the well pad corners and center stake, and orange flagged brush along the access routes prior to conducting the survey. The construction zone around the well pads was marked with yellow and black striped flagging. All cultural remains were recorded relative to known points within the project area. Archaeological sites were recorded on the appropriate state site forms, photographed, and a sketch map prepared. Isolated Loci were recorded according to the permitting agency guidelines. Pertinent environmental data were also recorded. Locational information presented in this report is derived from plats or vicinity maps provided by the client.

MAR-88-17: The site is on a broad and level mesa bench near the mesa top. A higher bench and talus slope are about 80m to the north, and the edge of the bench is about 90m to the west. A pinyon and juniper dominated woodland provides a 15 to 20% cover. The soil is 0 to 50cm deep on the bench (based on road cut). On the site the loose sand is up to 10cm deep, with artifacts occurring to a depth of up to 7cm.

The site is a scatter of ceramic artifacts, a broken mano and a cobble sized chunk of burned sandstone. The mano is about 1/4 of the original tool and is made of a piece of vesicular basalt. The sherds are reddish-brown Dineta plainware (about 25 items) and patterned punctate brownware jar sherds (about 15 items). The punctate sherds are a variety of Gobernador Indented ware with temper is quartz sand. The plainware temper is arkosic sand like that which is in the local outcrop. The plainware was noticeably easier to break with the fingers than the punctate ware. At least three vessels appear to be represented. A trowel hole did not reveal any features or hearths, but did show sherds occurring up to at least 7cm below the surface.

The site has research potential for studies of Navajo Gobernador Phase land use and ceramic technology. The site may therefore be eligible for nomination to the National Register of Historic Places.

Recommendations: Archaeological clearance is not recommended for this location.

PROJECT AREA

San Juan 28-5 Unit 203

Legal Description: T28N. R5W, Section 17, SE1/4 NW1/4 NE1/4
Section 17, 1280' F/NL, 1725' F/EL

New Mexico Prime Meridian: Rio Arriba County, New Mexico, 6580' Elevation

Map Source: U.S.G.S. 7.5' Fourmile Canyon, New Mexico 1963 (Photorevised 1982)

Land Jurisdiction: Bureau of Land Management, Farmington Resource Area

Project Area: 350' x 350' (Well Pad)

450' x 450' (Well Pad with Construction Zone)

Surveyed Area: 650' x 650' (Well Pad and Construction Zone with Buffer Zone)
9.70 Acres

Environment: The proposed well is on a gently sloping northeast facing ridge end above the west side of Gobernador Canyon (Figure 2). A bladed road goes northeast to southwest about 100ft north of the pad. On the uphill side of the pad the soil is eroding just enough to reveal the outline of the soils pedogenic structure. A nearby arroyo indicates the soils are up to 2m deep in this area, and a sandstone outcrop northeast of the pad indicates the soils are shallow on the downslope sides of the pad. A scrubland/grassland provides a 20% cover of grama grass, sagebrush, wheatgrass, and galleta grass. Just downslope to the north and northeast is a sparse pinyon and juniper woodland. The well pad area appears to have been cleared of sagebrush and the grass planted sometime in the last 5 to 15 years.

RECORDS SEARCH

A records search was conducted prior to field inspection at the B.L.M., Farmington Resource Area office on November 4, 1988 to determine if any sites had been recorded within a one mile radius of the project area. Projects in this area for which previous cultural resource inspections have been conducted include oil and gas related development projects. The records search showed 25 previously recorded sites within one mile of the project areas (BLM Supplement Map [for BLM archaeologist only]). One site is within 1000 ft of the project area. La32897 is located 400ft from proposed well San Juan 28-6 Unit 403. The site is upslope of the project and is far enough from the well pad that it will not be directly impacted.

PROJECT AREA

San Juan 28-5 Unit 200

Legal Description: T28N, R5W, Section 14, SE1/4 NE1/4 NE1/4
Section 14, 1335' F/NL, 540' F/EL

New Mexico Prime Meridian, Rio Arriba County, New Mexico, 7400' Elevation

Map Source: U.S.G.S. 7.5' Gobernador, New Mexico 1963 (Photorevised 1982)

Land Jurisdiction: Bureau of Land Management, Farmington Resource Area

Project Area: 350' x 350' (Well Pad)

450' x 450' (Well Pad with Construction Zone)

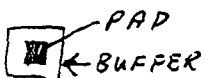
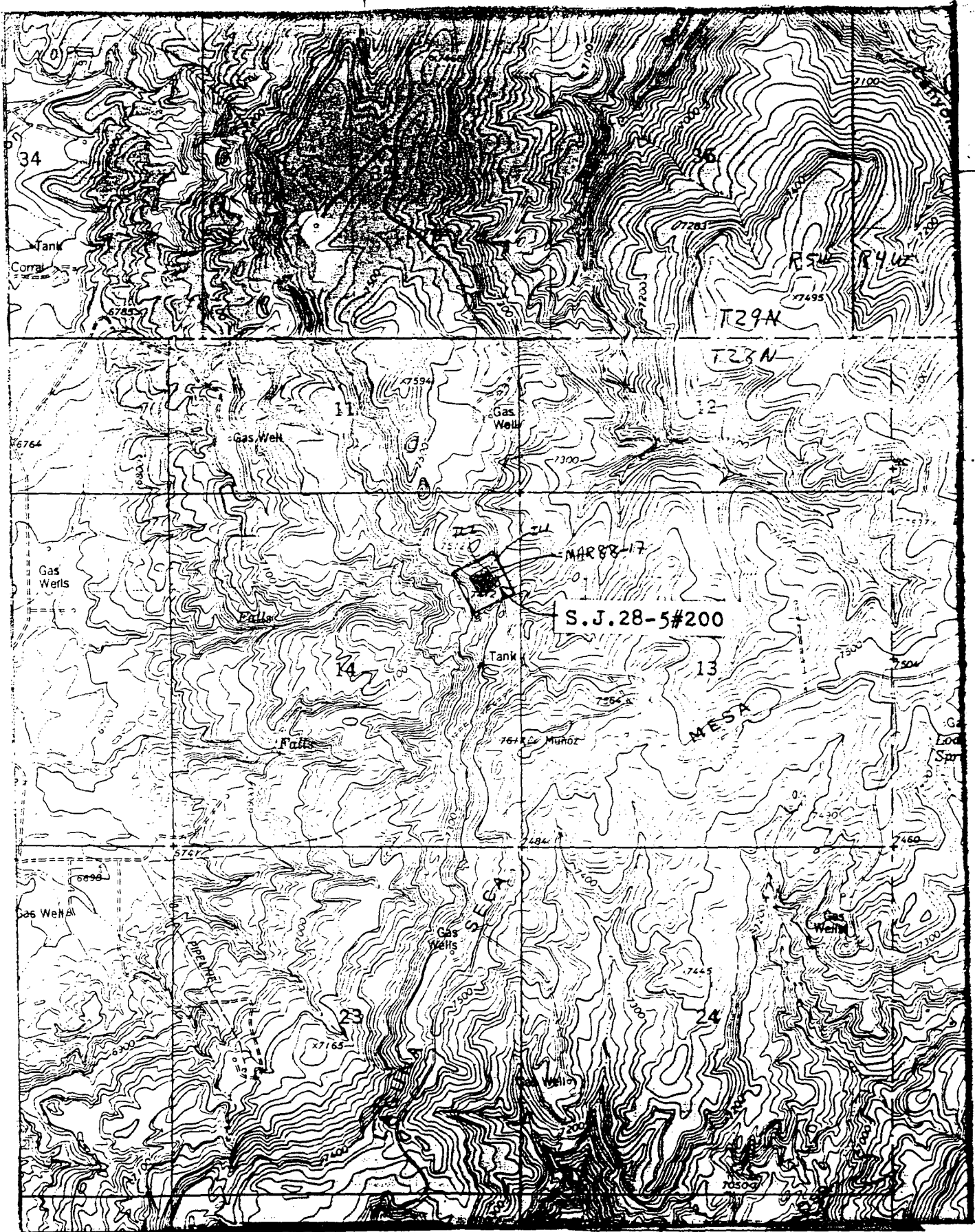
Surveyed Area: 650' x 650' (Well Pad and Construction Zone with Buffer Zone)
9.70 Acres

Environment: The well is on a broad upper bench of Laguna Seca Mesa (Figure 1). The west edge of this bench is just west of the well boundary. About 75ft north of the proposed well pad is a 60ft high sandstone boulder covered talus slope. A pipeline right-of-way and bladed roads parallels the east side of the pad and another road and pipeline parallels the south buffer zone. The soil is thin where it occurs and is characterized as a reddish-brown to brown sand with sandstone clasts. A woodland provides a 15 to 25% cover of pinyon pine, juniper, gambel oak, grama grass, antelopebrush, mountain mahogany, broad leaf yucca, buckwheat, Indian ricegrass, and prickly pear cactus. Deer and tarantulas were noted. The area has been used for wood cutting in the past.

Project Description: This is a gas well pad and short access road. The access goes east from the north end of the east side of the pad. The access road falls within the buffer zone.

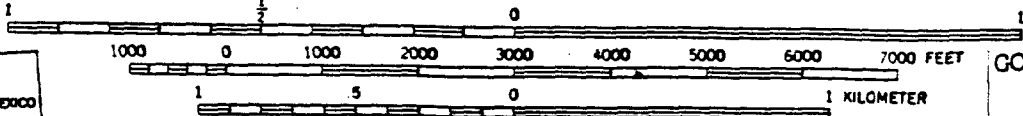
Cultural Resources: One archaeological site (MAR-88-17) and two isolated loci (Table 1) were found. The isolates may be related to use areas associated with the site.

FIGURE 1



QUADRANGLE LOCATION

SCALE 1:24 000

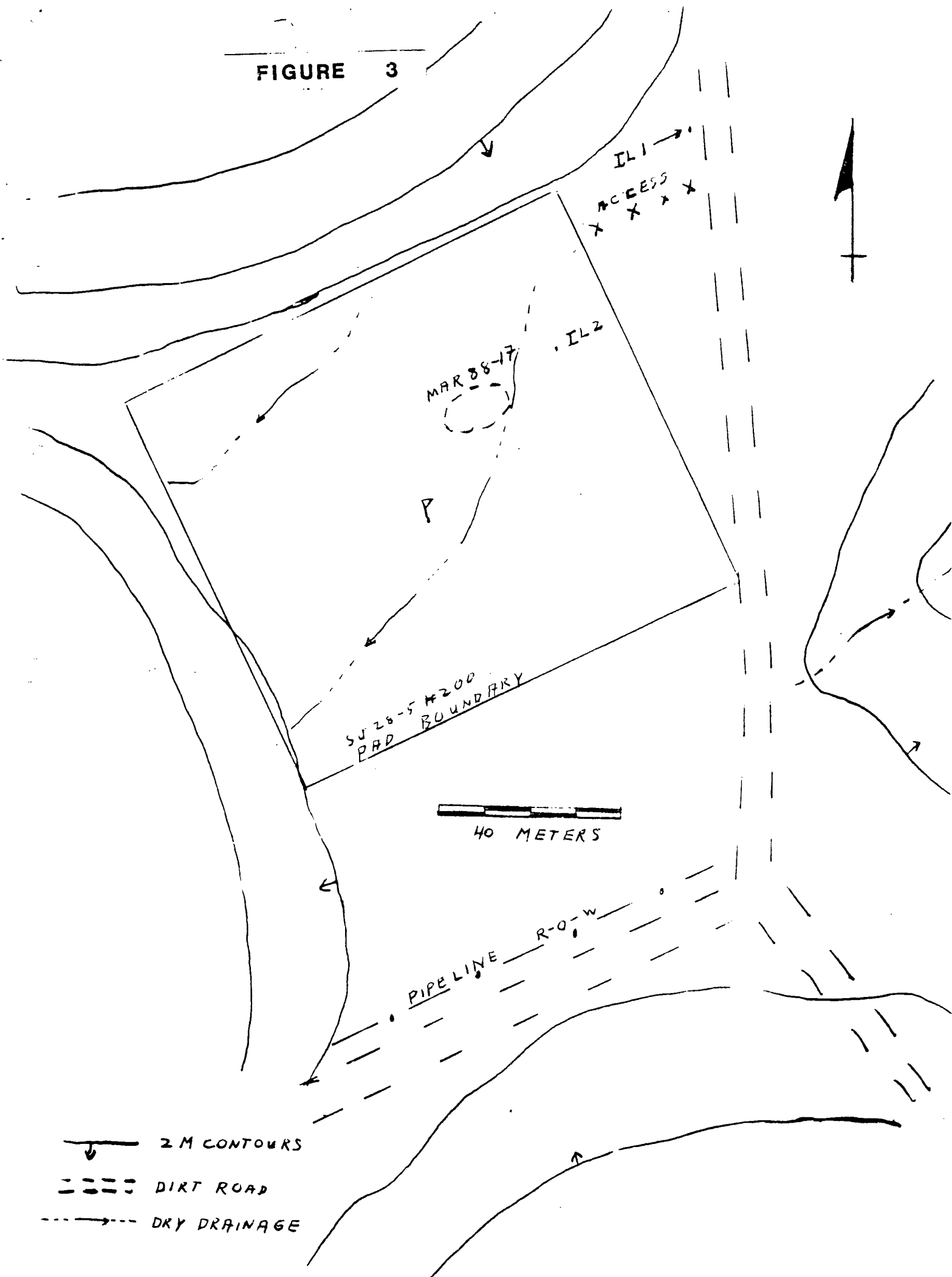


CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

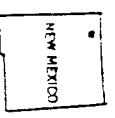
GOBERNADOR, N.
N3637.5-W10715/7

1963
PHOTOREVISED 196
DMA 4557 III NE-SERIES

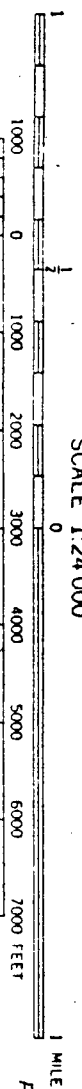
FIGURE 3



QUADRANGLE LOCATION



1 MILE
PAP
BUFFER



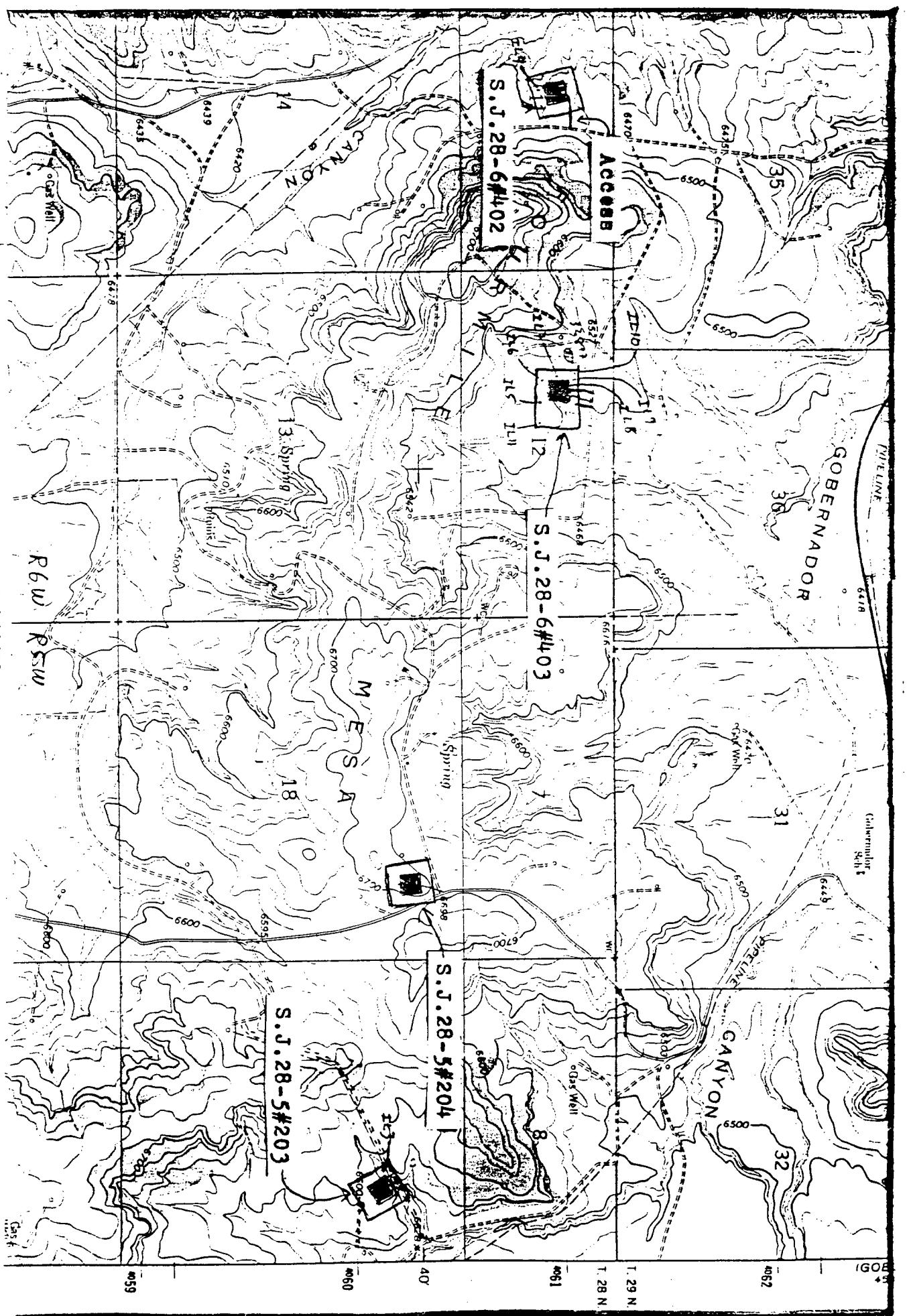
SCALE 1:24,000

FOURMILE CANYON, N. MEX.

1963

PHOTOREVISED 1962

DMA 4552 III NW-SERIES VB81



Project Description: This gas well pad has a laydown of S-65degrees-W. The access goes north and downslope from the northwest corner of the pad to a bladed road. The access falls within the well pad buffer. The south buffer zone covered part of the north side of the existing El Paso Natural Gas Well San Juan 28-5 Unit 75 (1650' FNL, 1500' FEL, Sec. 17, T28N, R5W, 6589' GL).

Cultural Resources: No archaeological sites were found but one isolated locus was discovered (Table 1). The research potential of the isolated locus has been sufficiently exhausted by recording.

Recommendations: Archaeological clearance is recommended.

PROJECT AREA

San Juan 28-5 Unit 204

Legal Description: T28N, R5W, Section 18, SW1/4 NE1/4 NE1/4
Section 18, 790' F/NL, 1185' F/EL

New Mexico Prime Meridian: Rio Arriba County, New Mexico, 6705' Elevation

Map Source: U.S.G.S. 7.5' Fourmile Canyon, New Mexico 1963 (Photorevised 1983)

Land Jurisdiction: Bureau of Land Management, Farmington Resource Area

Project Area: 350' x 350' (Well Pad)
450' x 450' (Well Pad with Construction Area)
30' x 225' (Access Route)
Surveyed Area: 650' x 650' (Well Pad and Construction Area with Buffer Zone)
100' x 225' (Access Route with Buffer Zone)
10.22 Acres

Environment: The project area is on the northeast end of a broad and gently sloping ridge near the east end of Fourmile Mesa (Figure 2). The brown sandy loam supports a scrubland/grassland (25% cover) dominated by wheatgrass, sagebrush, and grama grass. Current use of the area is for cattle grazing. The east half of the north buffer zone and the edge of the east buffer zone are adjacent to bladed roads.

Project Description: The project area is a proposed gas well pad and access route. The access route goes north-northeast from the east side of the north pad boundary to a T-intersection.

Cultural Resources: No archaeological sites or isolated loci were found.

Recommendations: Archeological clearance is recommended.

PROJECT AREA

San Juan 28-6 Unit 402

Legal Description: T28N, R6W, Section 11, SE1/4 NE1/4 SW1/4
Section 11, 1525' F/SL, 2505' F/WL

New Mexico Prime Meridian, Rio Arriba County, New Mexico, 6475' Elevation

Map Source: U.S.G.S. 7.5' Fourmile Canyon, New Mexico 1963 (Photorevised 1982)

Land Jurisdiction: Bureau of Land Management, Farmington Resource Area

Project Area: 350' x 350' (Well Pad)
450' x 450' (Well Pad with Construction Zone)
30' x 400' (Access Route)
Surveyed Area: 650' x 650' (Well Pad and Construction Zone with Buffer Zone)
100' x 400' (Access Route with Buffer Zone)
10.62 Acres

Environment: The proposed well pad is on a west-facing bench on the west side of Fourmile Mesa (Figure 2). The east half of the pad is on level to gently sloping terrain while the west half is on about a 12 degree west-facing slope about 100ft east of the west side of the bench. The soil is a reddish-brown sand. A scrubland/grassland provides a 25 to 35% cover of grama grass, sagebrush, Indian ricegrass, snakeweed, wheatgrass, and juniper. Animals noted include cottontail rabbits and deer.

Project Description: The project consists of a gas well pad and an access route. The access goes east from the northeast corner of the pad under a powerline to a bladed road.

Cultural Resources: No archaeological sites were found but one isolated locus (Table 1) was discovered. Recording the isolate has sufficiently exhausted its research potential for the purpose of this project.

Recommendation: Archaeological clearance is recommended.

PROJECT AREA

San Juan 28-6 Unit 403

Legal Description: T28N, R6W, Section 12, SW1/4 NE1/4 SW1/4
Section 12, 1540' F/SL, 1850' F/WL

New Mexico Prime Meridian, Rio Arriba County, New Mexico, 1540' Elevation

Map Source: U.S.G.S. 7.5 Fourmile Canyon, New Mexico, 1963 (Photorevised 1982)

Land Jurisdiction: Bureau of Land Management, Farmington Resource Area

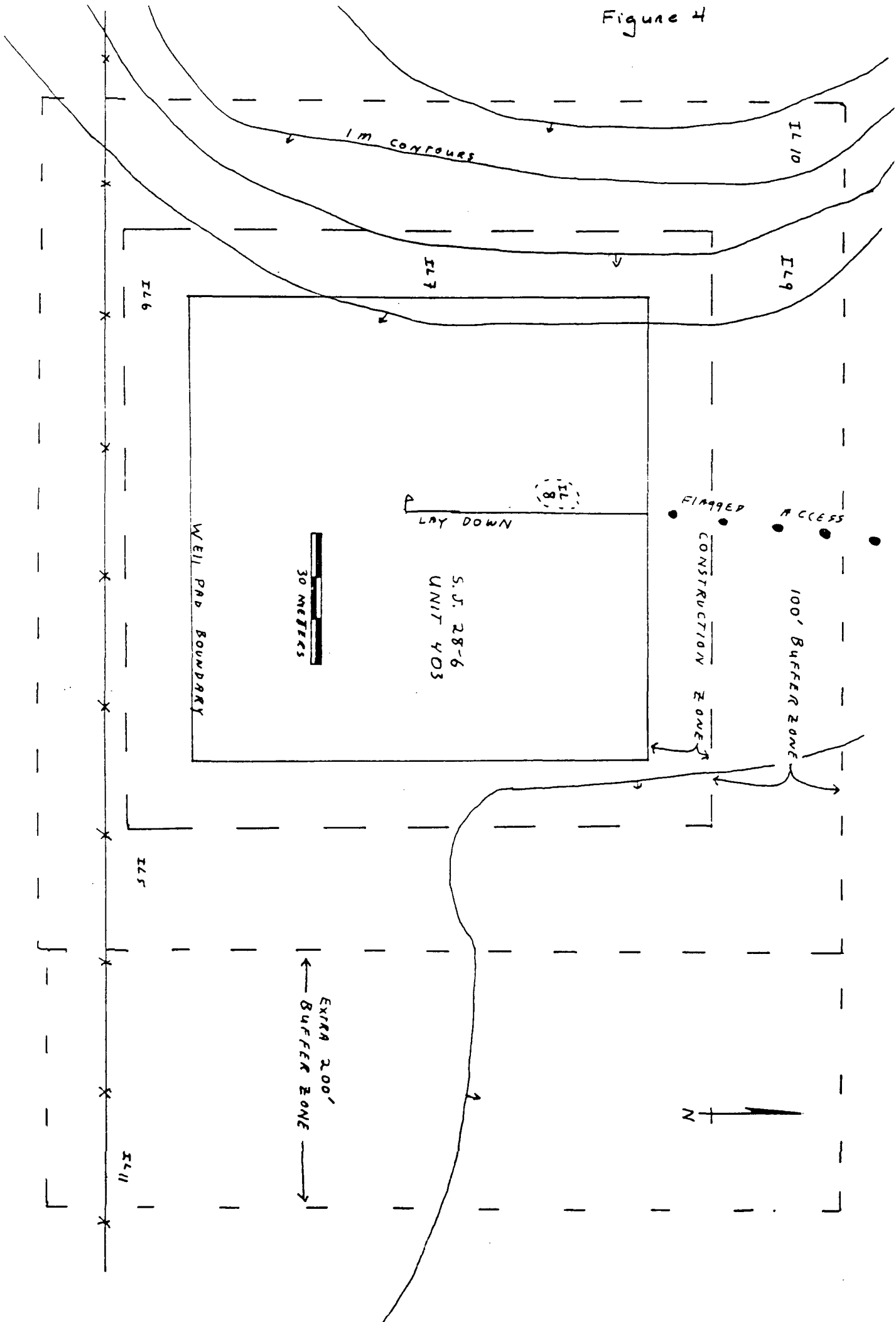
Project Area: 350' x 350' (Well Pad)
450' x 450' (Well Pad with Construction Zone)
30' x 400' (Access Route)
Surveyed Area: 650' x 850' (Well Pad and Construction Zone with Buffer Zone)
100' x 400' (Access Route with Buffer Zone)
10.62 Acres

Environment: This proposed well is on gently sloping terrain below the north side of Fourmile Mesa and on the south side of Gobernador Canyon (Figure 2). A hill is just west of the staked well location. An east/west boundary fence is about 60ft south of the well pad. The tan sandy soil supports a mixed scrubland/grassland which provides a 30 to 35% cover. Species include grama grass, sagebrush, and wheatgrass. Jackrabbits were seen. Current use of the area is energy development and cattle grazing.

Project Description: This is a gas well pad and access route. From the north side of the well pad the access goes north to a bladed road. Because of the isolates were found in the west half of the pad an extra 200ft of buffer zone east of the well was included in the survey. This will allow the pad to be moved up to 200ft east should the B.L.M. require avoidance of the isolates.

Cultural Resources: No sites were found but seven isolates were discovered (Table 1 and Figure 4). A low ridge about 100ft south of the section fence (60ft south of pad) may have a site on it (on private property). IL 5 may be related to this site. The other isolates are in the west half of the pad or west buffer zone on or below the hill slope there. These may have been washed downslope from the previously recorded site La32897 located about 200 ft west of the project area. There is an area (IL8) 10m x 7m where the hill slope changes from steeper to much more level ground where there are 15 grayware sherds, 4 flakes and two fire-cracked rocks. Several trowel tests were made in this area and on the west side of the area. These tests were 10 to 18cm deep. No artifacts were found below 2cm and no features were found. Since this is an area of slope where water borne material would be deposited (because the slope becomes less steep), it may be possible these artifacts have collected as a result of wash down from the site.

Figure 4



Recommendations: Archaeological clearance is recommended with the stipulation that construction be monitored, or that the well be moved at least 150 to 200ft east to avoid monitoring. An extra 200ft buffer zone has been surveyed east of the pad to facilitate the second option.

Table 1: Isolated Loci Descriptions

Well#	IL#	Legal Description						U.T.M.		MAP	Veg. Zone	Land Form
		T	R	Sec.	1/4	1/4	1/4	Northing	Easting			
200	1	28N	5W	14	SE	NE	NE	4060080	292600	GB	WD	B
200	2	28N	5W	14	SE	NE	NE	4060060	292580	GB	WD	B
203	3	28N	5W	17	SE	NW	NE	4060140	287300	FC	S/G	R
402	4	28N	6W	11	SE	NE	SW	4061040	282245	FC	S/G	B
403	5	28N	6W	12	SW	NE	SW	4061000	283700	FC	S/G	B
403	6	28N	6W	12	SW	NE	SW	4061000	283600	FC	S/G	B
403	7	28N	6W	12	SW	NE	SW	4061070	283590	FC	SC	H
403	8	28N	6W	12	SW	NE	SW	4061110	283640	FC	S/G	H
403	9	28N	6W	12	SW	NE	SW	4061160	283610	FC	SC	H
403	10	28N	6W	12	SW	NE	SW	4061160	283580	FC	SC	H
403	11	28N	6W	12	SW	NE	SW	4061000	283800	FC	SC	H

Descriptions:

1. One purple quartzite tertiary core reduction flake fragment.
2. Three Gobernador utility ware sherds, Navajo.
3. One medium grained quartzite secondary core reduction flake fragment (possibly heat treated).
4. One Anasazi EM III-P I grayware rim sherd.
5. Two Anasazi grayware sherds.
6. One sandstone groundstone fragment in erosional area.
7. One Anasazi plain grayware sherd.
8. 10 x 7m area with 15 Anasazi grayware sherds, 2 fire cracked rock, four quartzite and chert tertiary core reduction flakes.
9. One black chalcedony flake fragment.
10. One white chert tertiary core reduction flake fragment.
11. One Anasazi plain grayware sherd.

Codes:

Maps:GB=7.5' Gobernador, N.M. 1963 (Photorevised 1982)

FC=7.5' Fourmile Canyon, N.M. 1963 (Photorevised 1982)

Vegetation Zone:

WD=Woodland

S/G=Mixed Scrubland/Grassland

SC=Scrubland

Landforms:

B=Mesa Bench

R=Ridge

H=Hillside

All isolates are in the N.M.P.M. in Rio Arriba County, New Mexico,
UTM Zone 13

PHOTOGRAPHIC SHEET

Film 35mm color print
 Photographer: C.B. Matthews
 28mm Wide-angle lense

Roll 1

Frame #	Well Location	IO/Site #	Description
	San Juan 28-5 Unit #200	Laguna Seca Mesa/ Site 1	
20A		MAR-88-17	View south from just north of core concentration of artifacts, approx center of site, trowel points North
21A			View looking west from east edge of site towards core concentration of artifacts marked by pin flags, trowel points North
22A			View from south edge of site looking North, trowel points North
23A			view from cliff to west of site, looking southwest
24A			view to west from edge of site just past clump of trees hiding northern half of site, trowel points North
25A			view to north from clump of trees in 24A (seen as shadow on extreme left in 24A)
26A			view from north edge of site looking south, trowel points North
27A			heaviest artifact concentration at west edge of southern half of site, flag at mano fragment, punctate sherds nearby, trowel points North
28A			cobble concentration just south of south edge of site, looking east, trowel points North

PHOTOGRAPHIC SHEET CONTINUATION

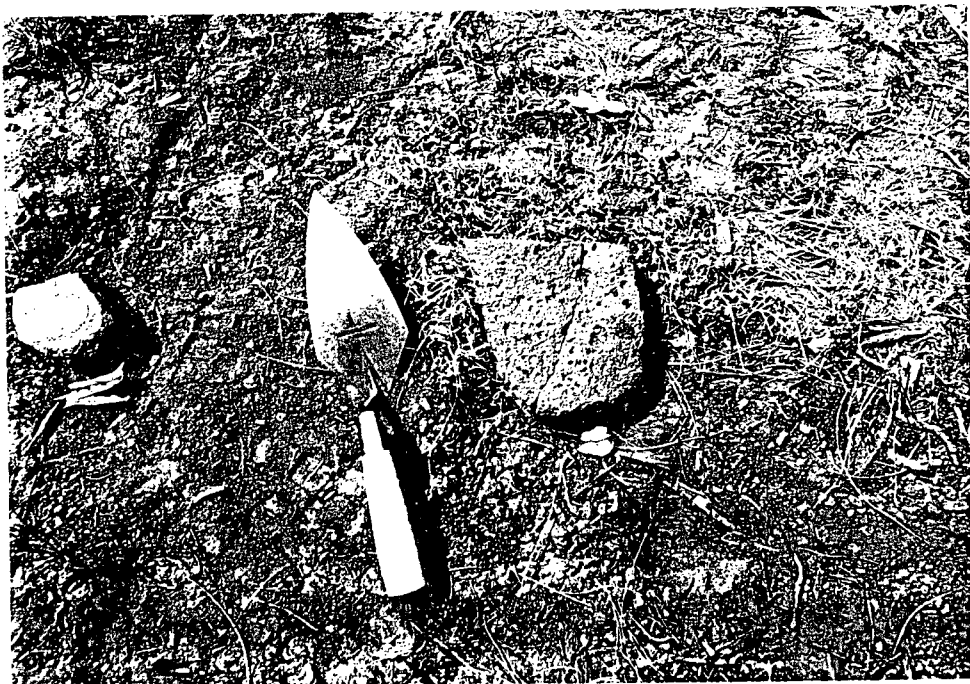
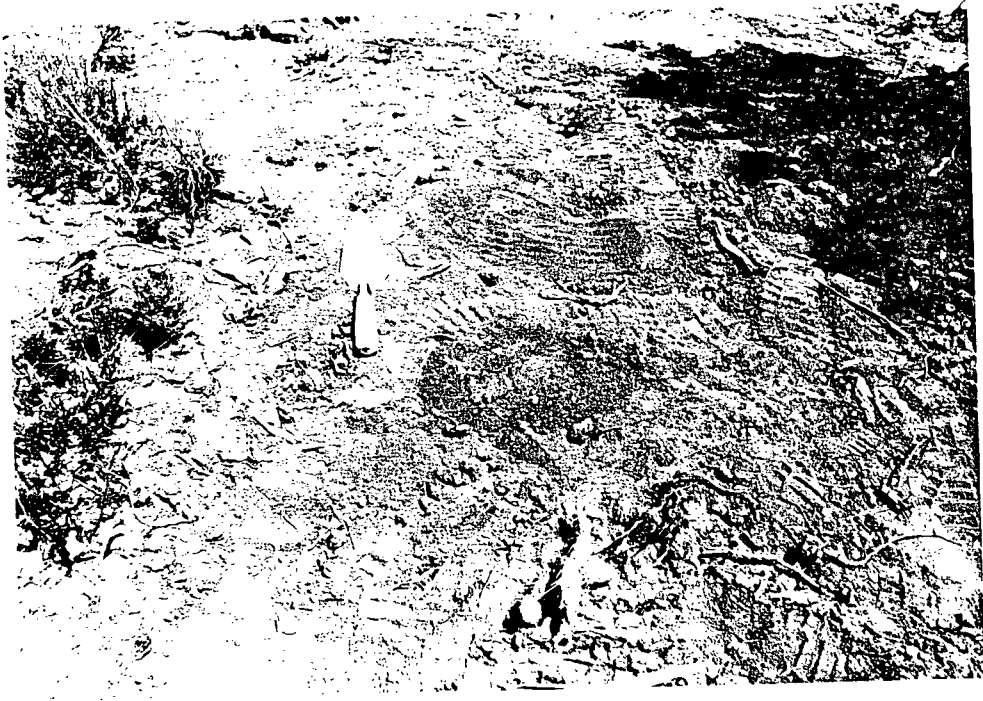
Roll 1

35mm color print

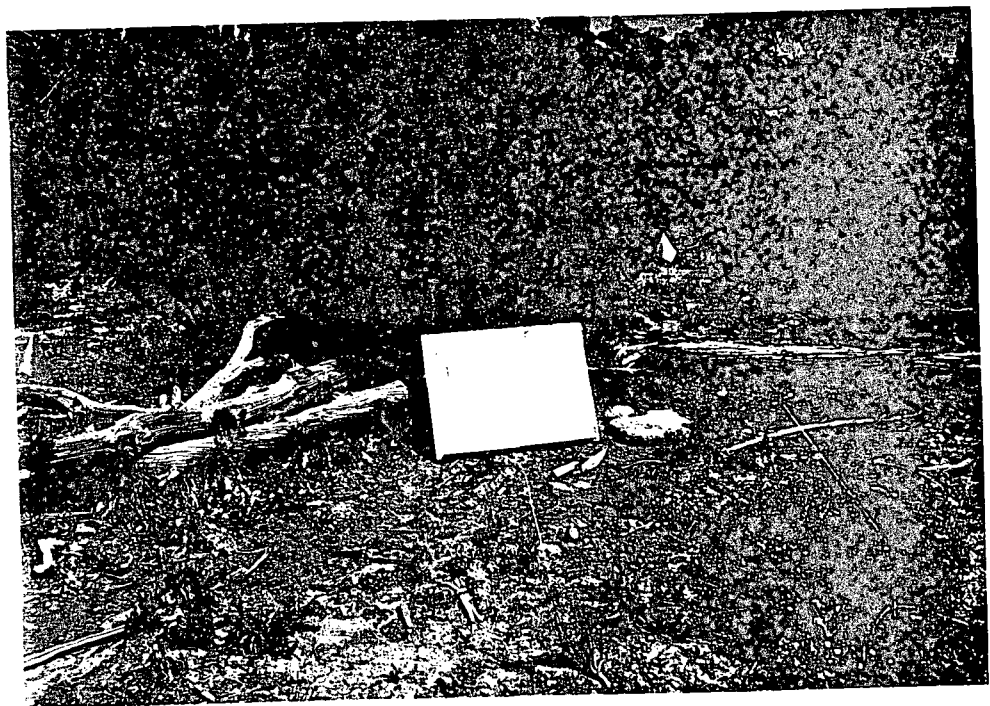
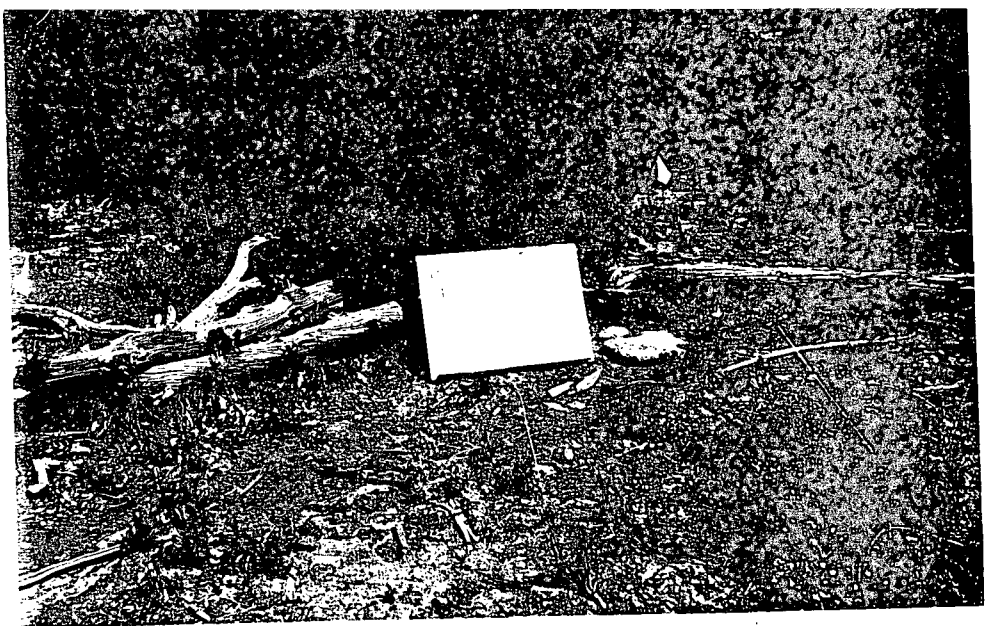
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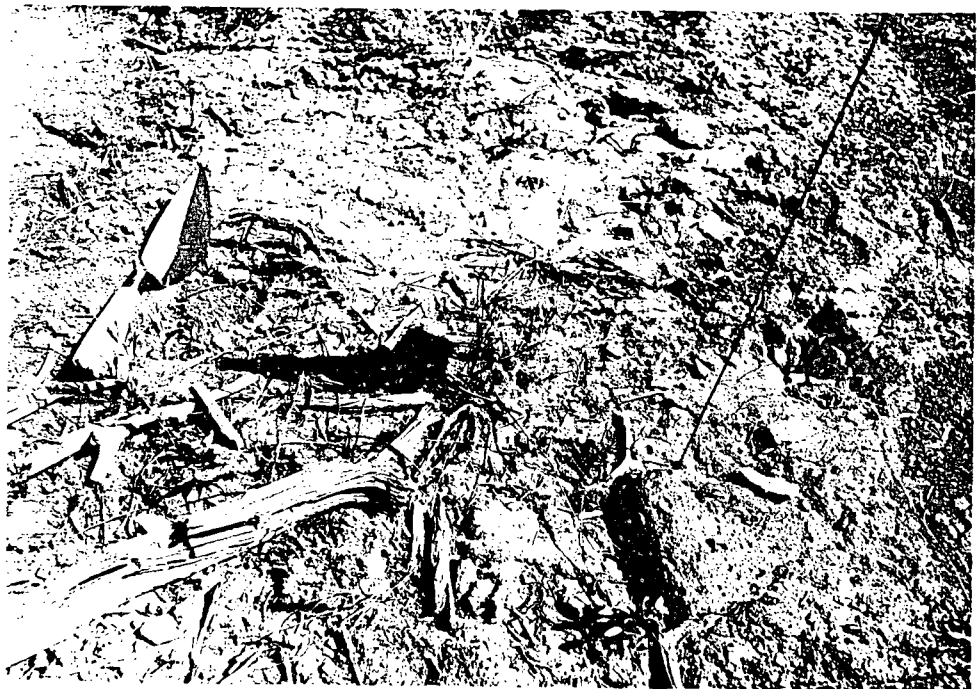
28mm Wide-angle lense

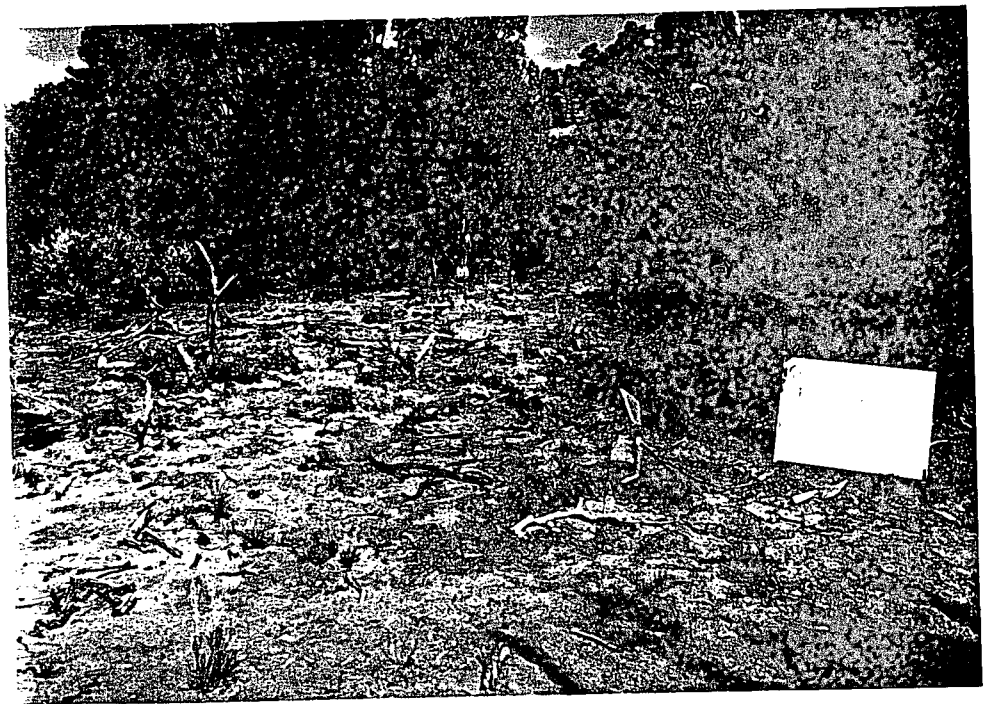
Frame #	Well Location	IO/Site #	Description
29A			Same as 28A
30A			Feature 1, hogan circle, looking northeast, trowel points north, visible in distance in 22A
31A			Same as 30A
32A			Feature 1, hogan circle, looking south from northern edge of circle, trowel points North
33A			Feature 2, hogan circle, looking North from 20feet north of Feature 1 northern boundary, trowel points North
34A			view Northwest from Southeast corner of site, showing cliffs nearby, core concentration of artifacts and Feature 1 hogan circle visible in foreground
35A			Mano fragment from 27A fitted together with another fragment from nearby
36A			Feature 1 dark soil















STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

GARREY CARRUTHERS
GOVERNOR

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Date: 7-11-89

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

RECEIVED

Re: Proposed MC _____
Proposed DHC _____
Proposed NSL X _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

JUL 17 1989
OIL CONSERVATION DIV.
SANTA FE

Gentlemen:

I have examined the application dated 6-7-89
for the Mindias Oil Inc. S.J. 28-5#200
Operator Lease & Well No.

H-14-28N-SW and my recommendations are as follows:
Unit, S-T-R

Approved

Yours truly,

Ernest Brach