

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Conoco Inc.

3. ADDRESS OF OPERATOR

P.O. Box 460 Hobbs, N.M. 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)

At surface

790' FNL & 1050' FEL

At proposed prod. zone

Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

7186' GR

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	9 5/8"	36"	250'	100 SX.
8 3/4"	7"	23"	4250'	335 SX.
6 1/4"	4 1/2"	10.5"	6130'	213 SX.

It is proposed to drill a straight hole to a TD of 6130'
and complete as a Blanco Mesaverde gas well.

See attachments for 10-point well plan and 13-point Surface

Use Plan.

Acreage is dedicated to a purchaser



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

TITLE

Admin. Supervisor

DATE

12/14/79

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

FILE
BEA
M.J.L.
Release folder

ok Smith

*See Instructions On Reverse Side

DEC 17 1979

U. S. GEOLOGICAL SURVEY

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-107
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

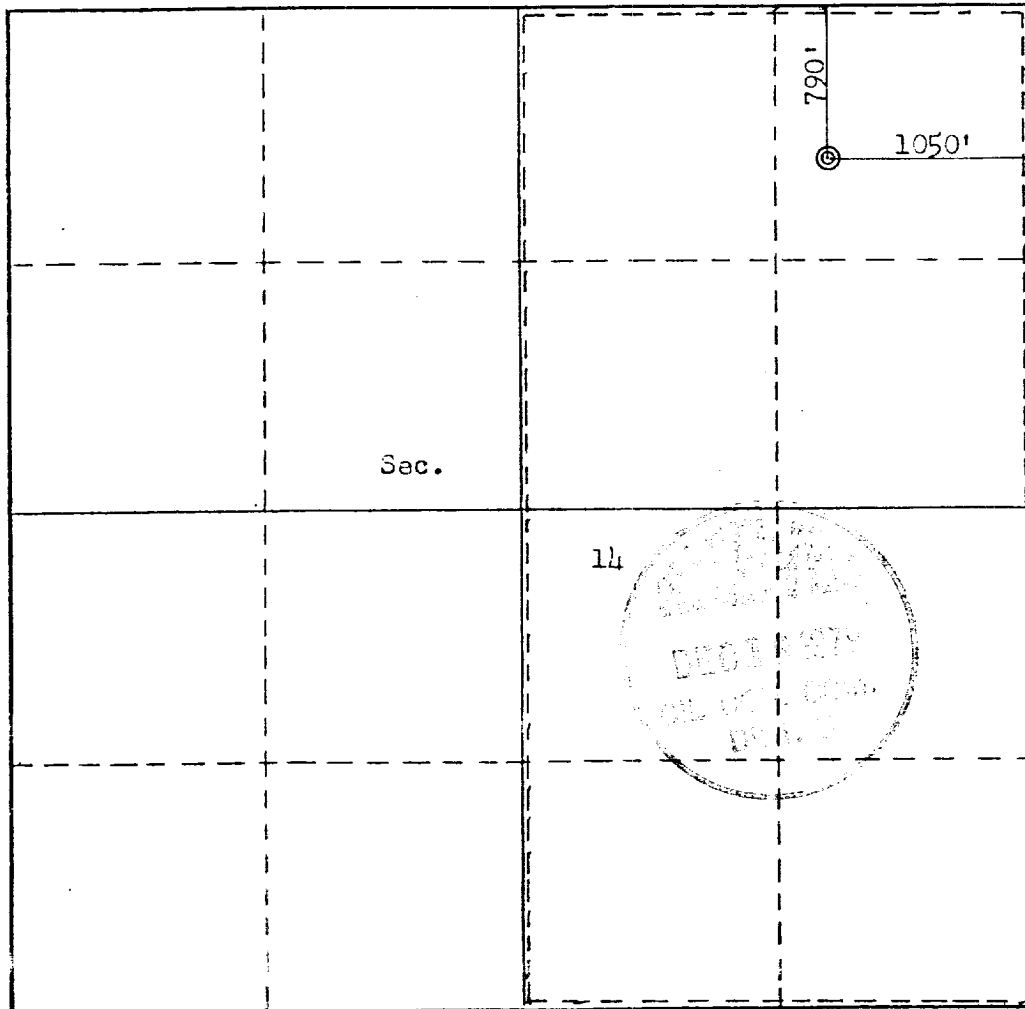
Operator CONTINENTAL OIL COMPANY			Lease AXI APACHE "M"		Well No. 8
Unit Letter A	Section 14	Township 25N	Range 4W	County Rio Arriba	
Actual Footage Location of Well: 790 feet from the North line and 1050 feet from the East line					
Ground Level Elev. 7186	Producing Formation Mesa Verde		Pool Blanco Mesaverde		Dedicated Acreage: 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure 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 interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

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 interests, has been approved by the Commission.



CERTIFICATION

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

Name
Wm A. Butler
Position
Administrative Supervisor
Company
Conoco Inc.
Date
12/14/79

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
October 3, 1979
Registered Professional Engineer
and/or Land Surveyor
Fred B. Kerz
Fred B. Kerz Jr.
Certificate No.
3950

ATTACHMENT TO FORM 9-331 C
APPLICATION FOR PERMIT TO DRILL

Conoco Inc.
AXI Apache M No. 8
Sec. 14, T-25N, R-4W
Rio Arriba County, New Mexico

1. The geologic name of the surface formation is Tertiary Sand.
2. The estimated tops of important geologic markers are shown on the attached Proposed Well Plan.
3. The estimated depths at which anticipated water, oil, gas or other mineral-bearing formations to be encountered are shown on attached Proposed Well Plan.
4. The proposed casing program is as follows:
0' - 250' 9 5/8", 36#, H-40, ST&C
0' - 4250' 7", 23#, J-55, ST&C
4200' - 6130' 4 1/2", 10.5#, J-55, ST&C
5. A drawing of an API Series 900 Blowout Preventer Specification is attached. Pipe rams and blinds will be checked to 1,000 PSI for 30 minutes when BOP is installed. BOP will be checked when casing string is set and operated for daily checks.
6. The proposed mud program is as follows:
0' - 250' 8.5 - 9.5 ppg Spud Mud
250' - 4250' 8.5 - 9.0 ppg fresh gel mud
4250' - 6130' air
7. The auxiliary equipment to be used is:
(1) Kelly cocks
(2) Floats at the bit
8. It is proposed to run GR CAL CNL FDC PDC logs at selected intervals and SP-IES log from TD to approximately 4250'.
9. No abnormal pressures or temperatures are expected to be encountered in this well.
10. The anticipated starting date is April 7, 1980 with a duration of approximately 15 days.

PROPOSED WELL PLAN OUTLINE

WELL NAME: AXI APACHE "M" NO. 8

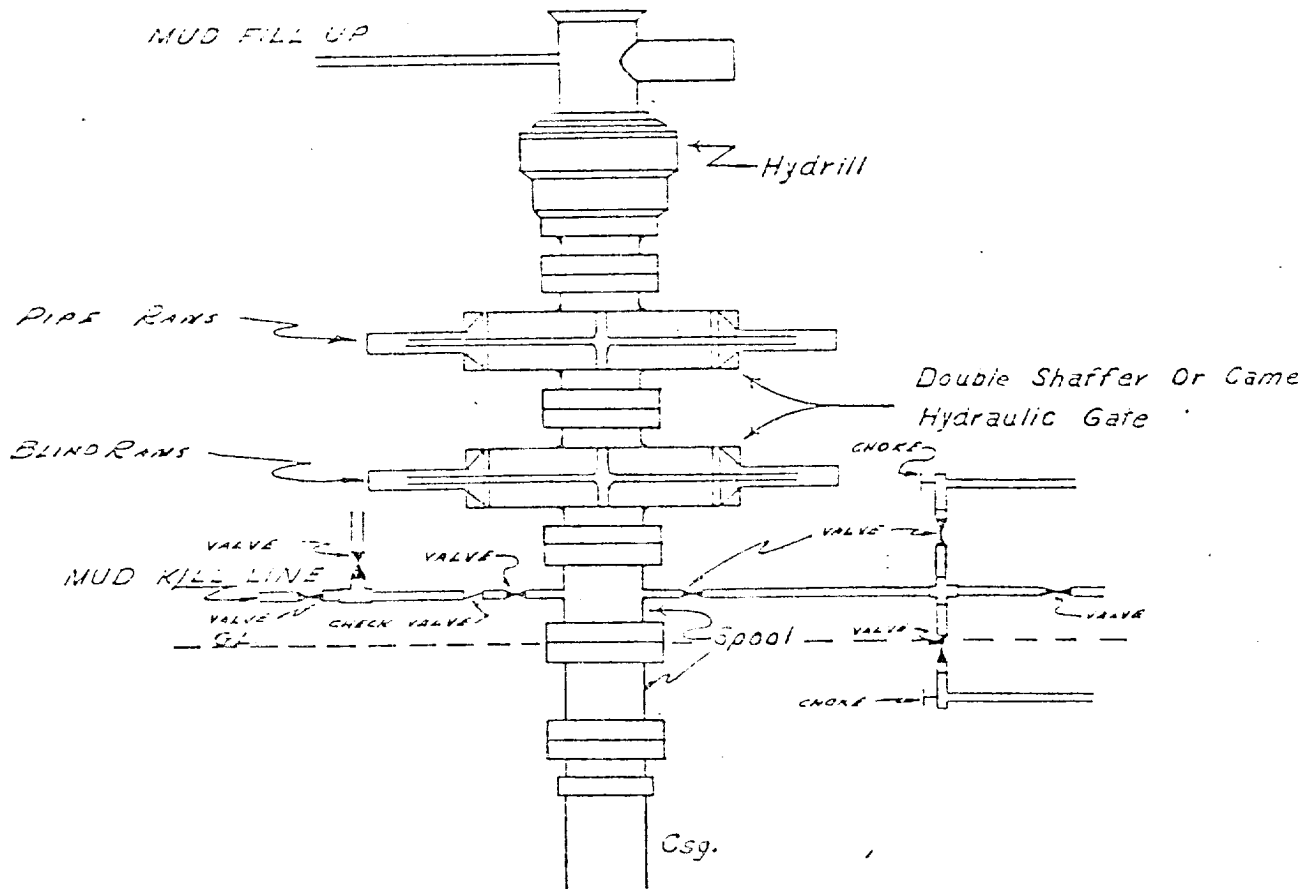
COUNTY: RIO ARRIBA

LOCATION: 790' FNL & 1050' FEL
Sec. 14, T-25N & R-4W

STATE: NEW MEXICO

DEPTH	FORMATION TOPS & TYPE	DRILLING PROBLEMS	TYPE OF FORMATION EVALUATION	HOLE SIZE (IN)	CASING		FRACTURE GRADIENT	FORMATION PRESSURE GRADIENT	MUD	
					SIZE (IN)	DEPTH (FT)			WEIGHT	TYPE
	QUATERNARY		Geolograph 0-TD	12-1/4	9-5/8	250	-	-	8.5 to 9.5	Spud
1000										
2000										
3000	OJO ALAMO SS 3000'	Fresh water zone								
	KIRTLAND SH 3300'									
4000	PICTURED CLIFFS SS 3640'	Possible severe lost circulation zone	SP-IES TD-4250' 2" & 5"	8-3/4	7	4250	-	-	8.5 to 9.0	Fresh Gel M (Low Solids
5000	CHACRA SS 4600'									
	CLIFF HOUSE SS 5340'	Possible severe	GR-CAL-FDC TD-4250'							
	POINT LOOKOUT SS 5770'	lost circulation zone	(Pull GR to 3400') 2" & 5"							
6000	TD-6130'		PDC TD-5100'	6-1/4	4-1/2	6190	13.0 to 14.0	Less than 8.5	-	AIR

CONTINENTAL OIL COMPANY
Blow-out Preventer Specifications



NOTE:

API SERIES 900

Manual and Hydraulic controls with closing unit no less than 75' from well head.
Remote controls on rig floor.

DUE TO SUBSTRUCTURE CLEARANCE,
HYDRILL ☐ ☐ ☐ NOT ☐ USED.

SURFACE USE PLAN
Conoco Inc.
AXI Apache M Nos. 7, 8
AXI Apache N Nos. 11A, 12A, 13A, 14A
T-25N, R-4W
Rio Arriba County, New Mexico

This plan is to accompany "Application for Permit to Drill" the subject well. The following is a discussion of pertinent information concerning possible effect which the proposed drilling of the well may have on the environment of the well and road sites and surrounding acreage. A copy will be posted on the derrick floor so that all contractors and sub-contractors will be aware of all items of this plan.

1. Existing Roads

A. The proposed well sites are as follows:

AXI Apache M No. 7 1100' FNL & 800' FEL, Section 13, T-25N, R-4W
AXI Apache M No. 8 790' FNL & 1050' FEL, Section 14, T-25N, R-4W
AXI Apache N No. 11A 1120' FNL & 1520' FEL, Section 12, T-25N, R-4W
AXI Apache N No. 12A 1695' FSL & 825' FWL, Section 11, T-25N, R-4W
AXI Apache N No. 13A 1520' FSL & 1050' FEL, Section 2, T-25N, R-4W
AXI Apache N No. 14A 1550' FSL & 1520' FWL, Section 1, T-25N, R-4W

B. Exhibit "A" is a portion of an AXI Apache M or AXI Apache N lease map showing existing roads and proposed new roads and locations.

C. The access roads are shown on Exhibits "A" and "B".

2. Planned Access Roads

Refer to the attached archaeological report.

3. Location of Existing Wells

See Exhibit "A".

4. Location of Existing and/or Proposed Facilities

A. Tank Batteries: One 400 Bbl. tank and a production unit will be located on each well site.

B. Rehabilitation: Pits will be backfilled and leveled as soon as practical to original condition. Commencement of rehabilitation operations will immediately follow removal of drilling and completion equipment from location and rehabilitation of the surface is planned to be completed within 45 days from commencement.

5. Water Supply

The supply of water will be hauled from Largo Wash in the NE/4 of the SE/4 of Section 13, T-25N, R-4W, Rio Arriba County, New Mexico.

6. Source of Construction Materials

Not applicable. Drilling pad to be compacted.

7. Methods for Handling Waste Disposal

Waste Disposal: Well cutting will be disposed in reserve pit. Barrel trash containers to be in accessible locations within drill site area during drilling and completion procedures. All detrimental waste will be hauled away, burned or buried with a minimum cover of 24" of dirt. See Exhibit "D" for location of pits. If well is productive, maintenance waste will be placed in special trash cans and hauled away periodically. Any produced water will be collected in tanks until hauled to an approved disposal system, or separate disposal applications will be submitted to the survey for appropriate approval.

8. Ancillary Facilities

None.

9. Well Site Layout

Exhibit "D" shows the relative location and dimensions of the well pad, mud pit, reserve pit, etc. The reserve pit will be lined with plastic. The pad and pits are staked.

10. Plans for Restoration of Surface

Pits will be backfilled and leveled as soon as practical to original condition. Commencement of rehabilitation operations will immediately follow removal of drilling and completion equipment from location and rehabilitation of the surface is planned to be completed within 45 days from commencement.

11. Other Information

- A. Terrain: "A" through "C" refer to the attached archaeological report.
- B. Soil:
- C. Vegetation:
- D. Surface Use: Suitable for grazing.
- E. Ponds and Streams: None within one mile
- F. Water Wells: See Exhibit "C".
- G. Residences & Buildings: None within one mile.
- H. Arroyos, Canyons, Etc.: See attached topographic map, Exhibit "B".
- I. Well Sign: Sign identifying and locating well will be maintained.
- J. Open Pits: All pits containing mud or other liquids will be fenced.
- K. Archaeological Resources: See attached report.

12. Operator's Representative

Field personnel who can be contacted concerning compliance of this Surface Use Plan are as follows:

B. E. Anderson
Petroleum Center Building
Room 215
501 Airport Drive
Farmington, New Mexico
Phone: (505) 327-9557

L. P. Thompson or J. R. Kemp
1001 North Turner
Hobbs, New Mexico 88240
Phone: (505) 393-4141

13. Certification

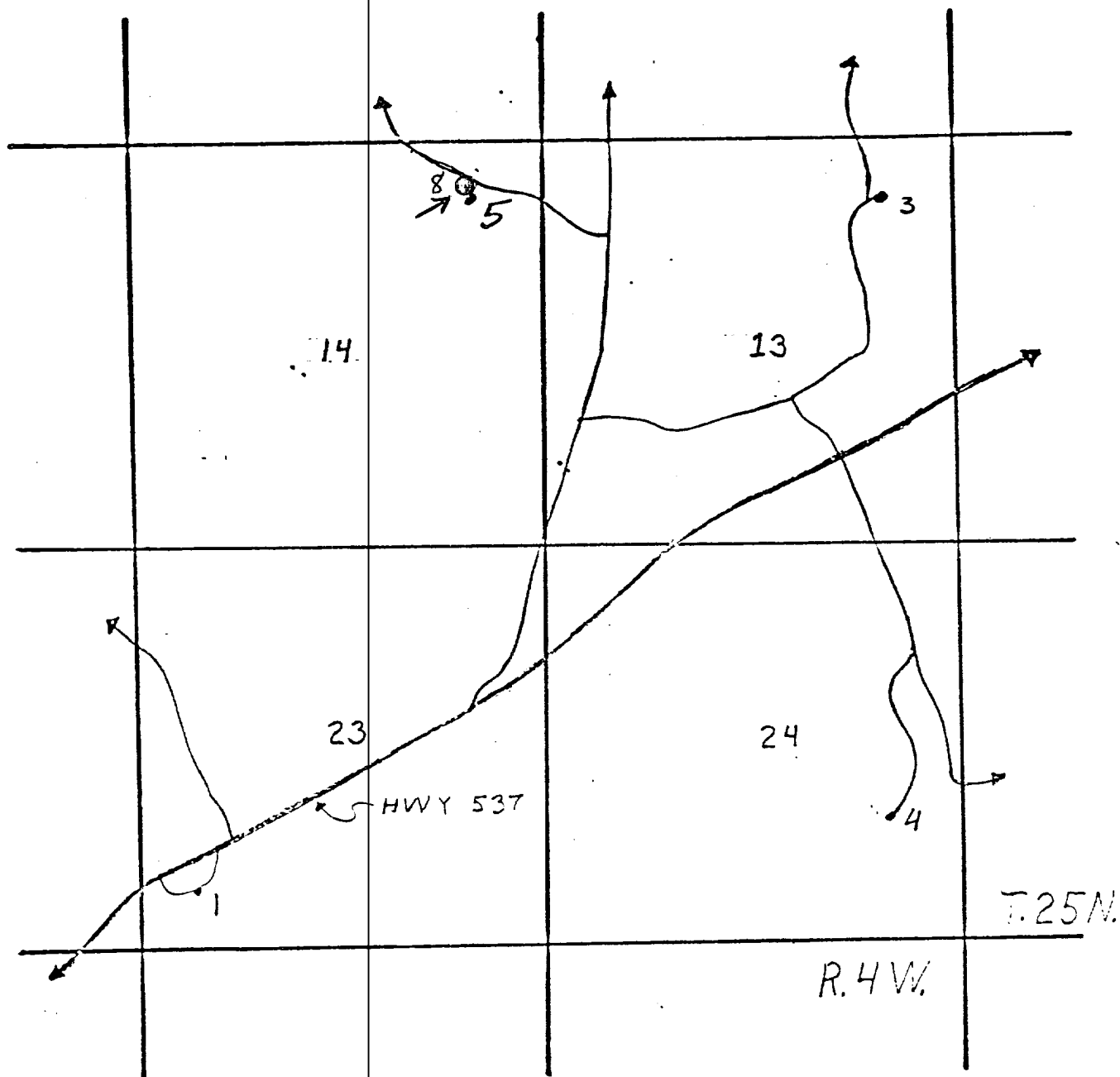
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Conoco Inc. and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

Date

12/13/79

John R Kemp

KJH:bep



CONOCO

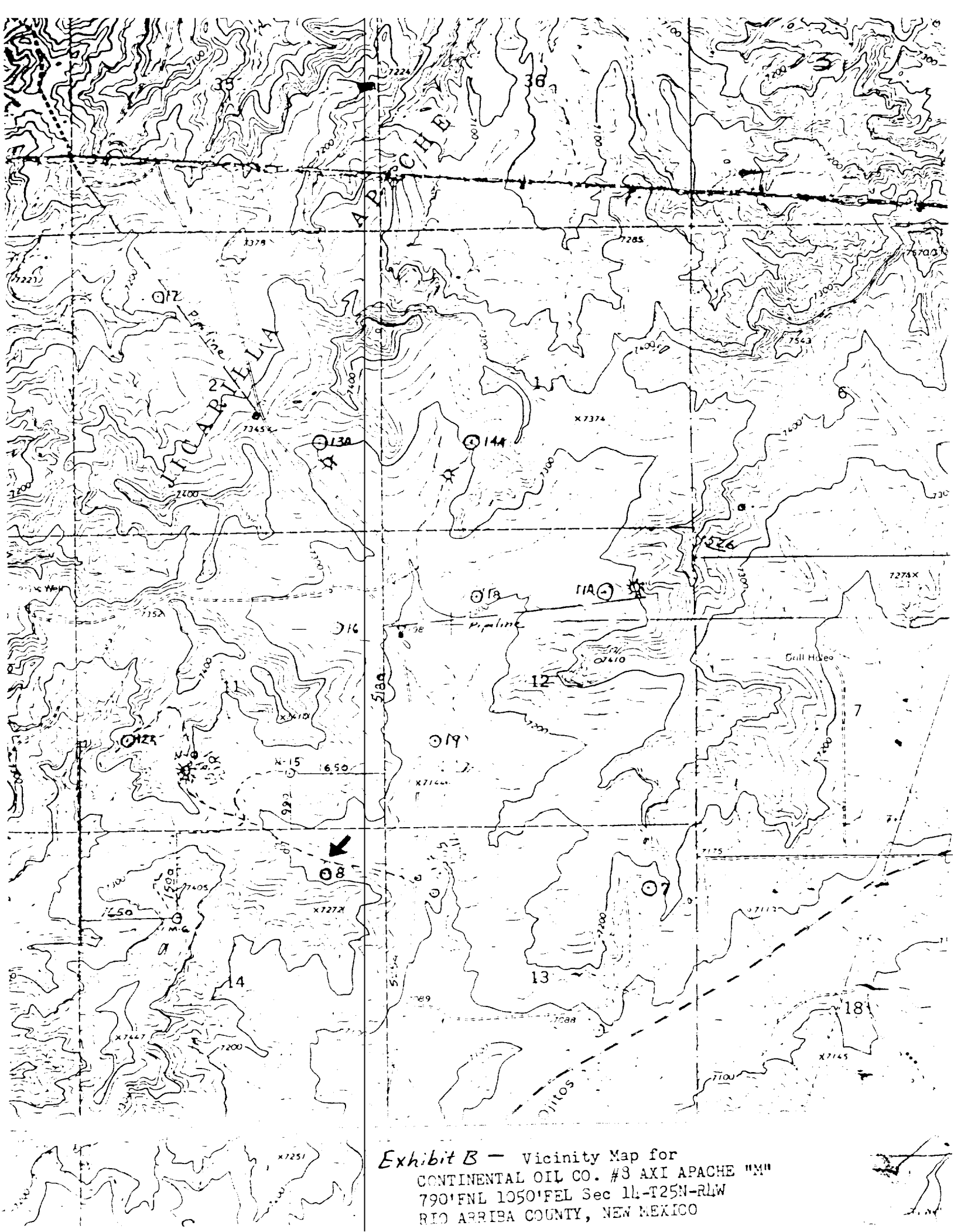
PRODUCTION DEPT. HOBBS DIV.
AXI APACHE "M" LEASE 8

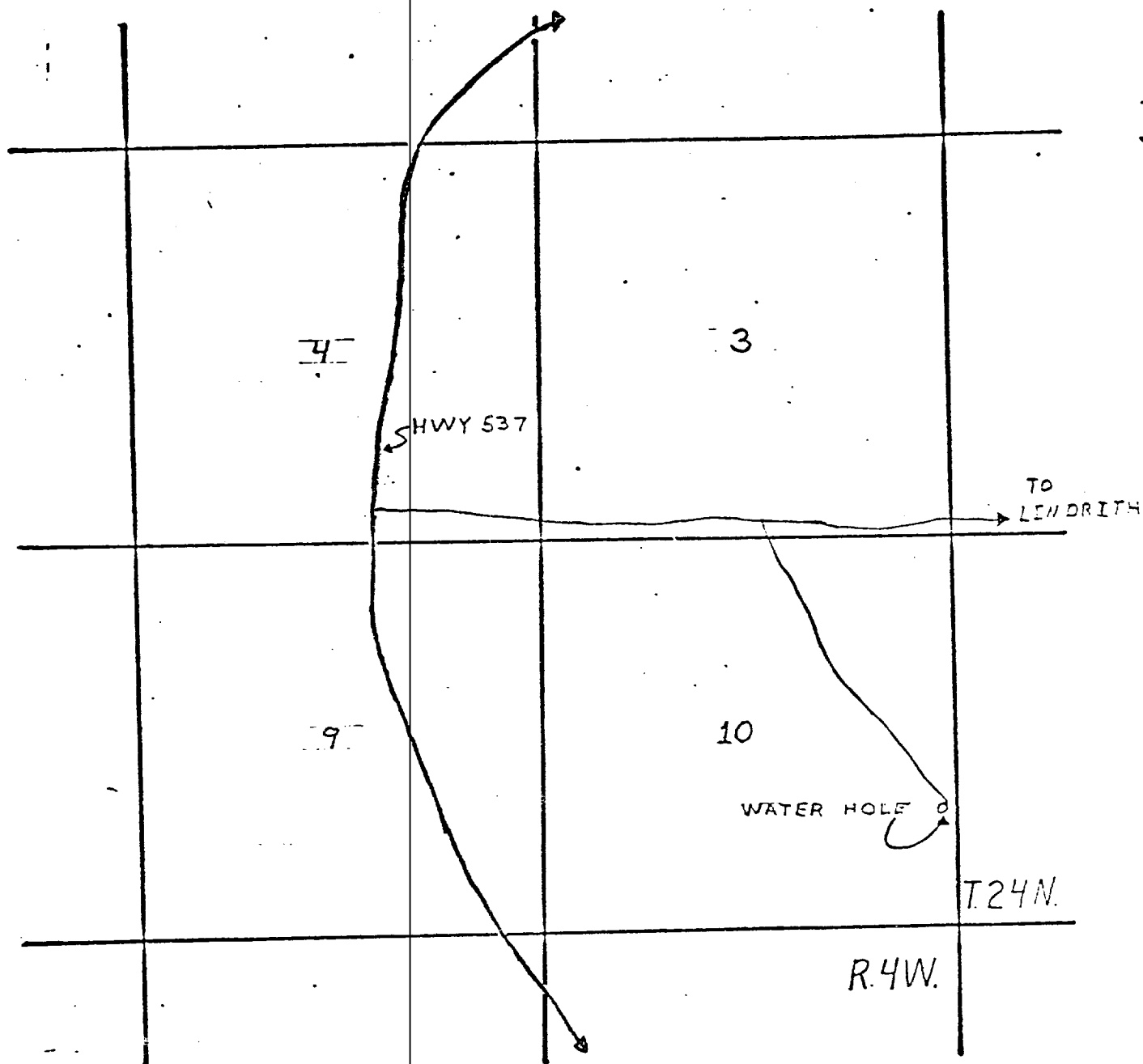
LEGEND

- CONOCO WELL
- TRAIL BATTERY
- LEASE ROAD
- HWY.

Exhibit A

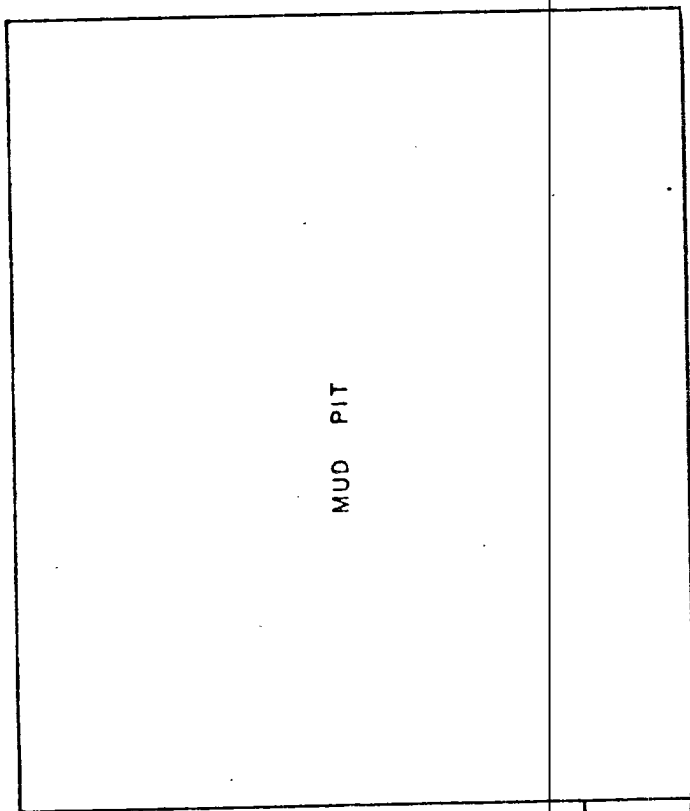
NTS
CHAVEZ





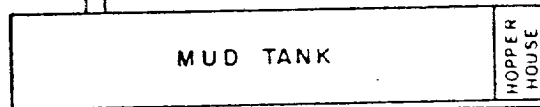
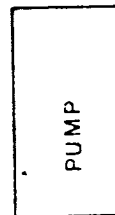
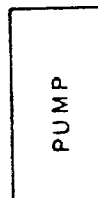
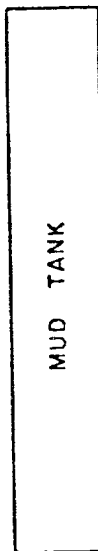
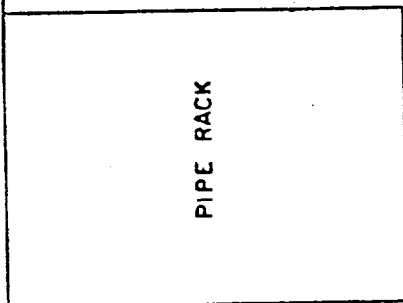
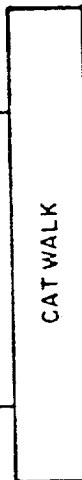
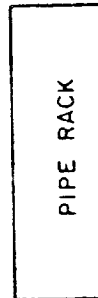
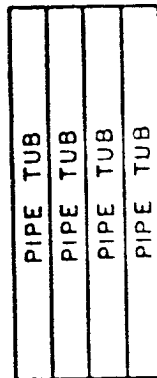
CONOCO	
PRODUCTION DEPT. HOBBS DIV.	
LARGO WATER HOLE	
LEGEND	
•	CONOCO WELL
△	TANK BATTERY
—	LEASE ROAD
—	HWY.
NTS CHAVEZ	

Exhibit C

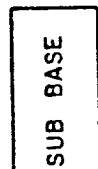


BRIDGE
PIT

APPROX. RIG SITE DIMENSIONS
160' x 200'



HOPPER
HOUSE



WELL
O



NOTE
200' x 400'
Parking area for
frac. trucks located
on East side of
drill site. →

CONTINENTAL OIL COMPANY
PRODUCTION DEPARTMENT



RIG LAYOUT

Exhibit D

Engineer: ~~REDACTED~~

Draftsman: ~~REDACTED~~

Date: 1-4-73

Project No. 88-79-MK

Permit No. Federal Antiquities
Permit #79-NM-178

Archaeological Examinations of
Nine Proposed Wells
on the Jicarilla Apache Reservation

for

Conoco, Inc.

Locations

Northeast Haynes #1E
Northeast Haynes #2E
Northeast Haynes #3E
Conoco AXI Apache M #7
Conoco AXI Apache M #8
Conoco AXI Apache N #11A
Conoco AXI Apache N #12A
Conoco AXI Apache N #13A
Conoco AXI Apache N #14A

by

Margaret A. Powers
Supervisory Archaeologist

Submitted by
Meade F. Kemrer, Ph.D.
Principal Investigator

DIVISION OF CONSERVATION ARCHAEOLOGY

Contributions to Anthropology Series, No. 213
San Juan County Archaeological Research Center and Library

October 24, 1979

Abstract

At the request of Conoco, Inc., the Division of Conservation Archaeology of the San Juan County Archaeological Research Center and Library at Salmon Ruins conducted archaeological inspections of 9 proposed Conoco gas wells on the Jicarilla Apache Reservation on October 4, 1979. Isolated artifacts were found on 2 pads and two archaeological sites, DCA-79-137 and 139 were found, the first along the access road to Conoco AXI Apache N #12A, the second at Conoco AXI Apache M #8. The isolated finds were documented in the field. The access road was rerouted to avoid DCA-79-137. DCA-79-139 has been flagged for avoidance. Archaeological clearance is recommended for all locations with stipulations for Conoco AXI Apache M #8 and Conoco AXI Apache N #14A.

Introduction

On October 4, 1979, Ms. Margaret A. Powers of the Division of Conservation Archaeology of the San Juan County Archaeological Research Center and Library at Salmon Ruins conducted archaeological surveys of 9 proposed wells and access roads on the Jicarilla Apache Reservation. The survey was arranged by Mr. Joe McKinney of Achison Construction Company, for Conoco, Inc., Dr. Meade F. Kemrer, Principal Investigator, administered the project for the Division of Conservation Archaeology.

In recognition of the limited, non-renewable nature of archaeological remains, federal and state governments have enacted legislation that is designed to conserve and protect these resources. The principal federal legislation includes the Antiquities Act of 1906 (PL 52-209), the Historic Preservation Act of 1966 (PL 89-665), the National Environmental Policy Act of 1969 (PL 91-852), the 1971 Executive Order No. 11593, and the Archaeological and Historical Conservation Act of 1974 (PL 93-291).

In addition, the states of Arizona, New Mexico, Colorado, and Utah have enacted laws to ensure compliance with federal laws and to protect archaeological resources within their jurisdiction. Work undertaken in the course of this project is for purposes of compliance with these statutes

Mr. Andy Anderson of Conoco, Inc. and Mr. Joe McKinney were present during the inspections. Work was conducted under provisions of Federal Antiquities Permit 79-NM-178. Each proposed well was surveyed in a series of 15m interval parallel transects and each access road was covered with a single linear transect. All examinations were foot surveys. On October 8, 1979 the survey archaeologist returned to two pads that required additional site documentation not feasible during the time available in the initial survey.

Survey

The nine wells are all located within the Canyon Largo drainage. Details of each survey area are given below. Proposed wells and access roads are shown in Figures 1 and 2.

~~Cultural Resources: No cultural remains are located in the area of construction.~~

~~Recommendation: Archaeological clearance is recommended.~~

Location: Conoco AXI Apache M #8

Legal Description: 790' F/NL, 1050' F/EL, Section 14, T25N, R4W, N.M.P.M., Rio Arriba County, New Mexico (Figure 2).

Map Source: USGS 7.5 Schmitz Ranch, New Mexico Quadrangle (1963).

Land Jurisdiction: Jicarilla Apache.

Area Surveyed: 250' X 300' (pad); 20' X 400' (road).

Description: The proposed pad is located in a transition area between the pinyon-juniper woodland and the sage dominated valley floor. A shallow wash drains to the southeast, and eventually empties into the Canon de los Ojitos. The plant community is dominated by sage and native pinyon (Pinus edulis). In addition there is oak (Quercus gambelii), Rocky Mountain juniper (Juniperus scopulorum), snakeweed, and galleta grass. Rabbit and deer are both present in the area.

Cultural Resources: An area of eroded artifactual remains (DCA-79-139) is located approximately 30m (100 feet) south-southeast of the well stake. The artifacts consist of approximately 6-10 sherds derived from an area 20m (60 feet) farther upslope (Figure 3). The sherds consist of fragments of 2 vessels: one "Black-on-Brown" bowl (possibly misfired or weathered Mesa Verde Whiteware), and one plain gray vessel. Upslope the remains consist of a partially eroded scatter of sherd's including another "Black-on-Brown" bowl, brownware sherds, and gray ware sherds (including one corrugated sherd). Approximately 25m (80-85 feet) east of this scatter is a third concentration that include fire-cracked rock, ashy soil, quartzite flakes, and brownware sherds. The principal loci of prehistoric activity are beyond the area of impact. Those artifacts downslope are located on the margin of the pad and are not likely to receive any direct impacts. In any event, the fact that they are derived limits the information that may be extracted. One other loci, 12m (35 feet) east of this secondary deposit, may also be cultural. It contains an area of ashy soil and some small fragments of burned animal bone. Both are associated with a lightning struck tree and therefore

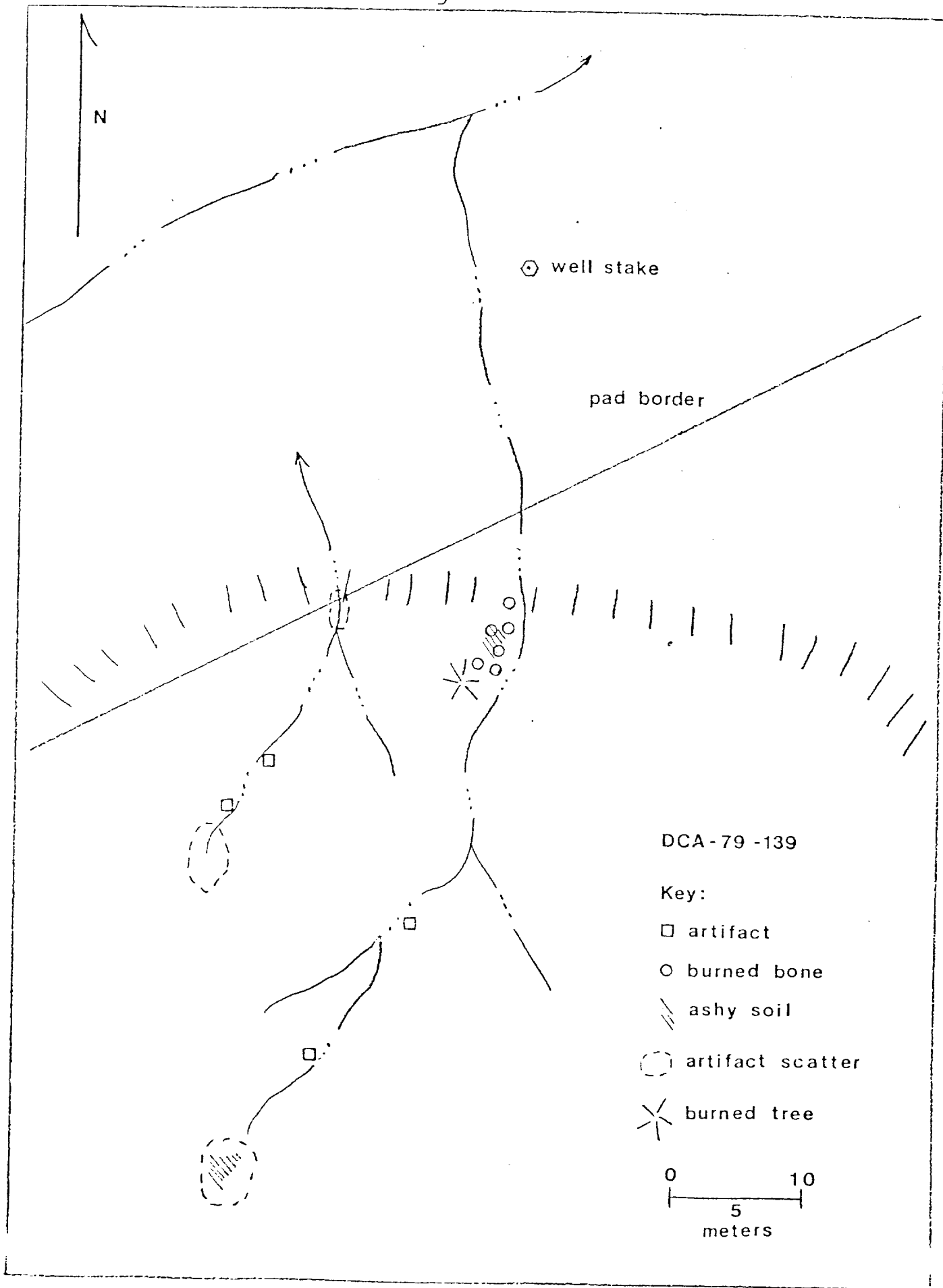


Figure 3.

may be entirely natural.

Evaluation: The pattern of artifacts suggests that the site comprised a temporary camp. If the burned bones are cultural remains, they may signify a hunting camp. The pottery falls within the Largo-Gallina tradition, probably late in the period. A Dogoszhi style design on one pottery fragment indicates a Pueblo II date for the site

Archaeological sites in the Largo-Gallina style occur widely in the drainage of Largo and Blanco Canyons. They are frequently located on protected ridges. Largo-Gallina sites are apparently based on an agricultural economy. Small activity areas, such as DCA-79-139, are less well known than the larger Largo-Gallina villages, which in turn are among the most poorly understood variants of the Puebloan agricultural adaptation.

DCA-79-139, however, appears to be partially disturbed by erosion and thus has reduced potential for adding to our understanding the Largo-Gallina manifestation.

Recommendation: Only the redeposited artifacts shown as cluster 1 (Figure 3) are endangered by the well pad construction as they lie on the margin of the pad. This area has been flagged with red pin flags to prevent inadvertent disturbance. With the proviso that well pad construction and related activities be restricted north of the red pin flags, archaeological clearance is recommended.

Location: Conoco AXI Apache N #11A

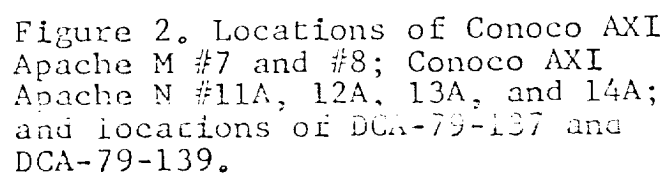
Legal Description: 1120' F/NL, 1520' F/EL, Section 12, T25N, R4N, N.M.P.M., Rio Arriba County, New Mexico (Figure 2).

Map Source: USGS 7.5 Schmitz Ranch, New Mexico Quadrangle (1963).

Land Jurisdiction: Jicarilla Apache.

Area Surveyed: 250' X 300' (pad); no road.

Description: The proposed well pad is located in a transitional area between pinyon-juniper woodland and sage-covered valleys. There is virtually no other understory vegetation. The soil is a sandy loam. Deer are evident in the area.



USGS 7 $\frac{1}{2}$ ' Schmitz Ranch, NM