

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

DEPCO, Inc.

## 3. ADDRESS OF OPERATOR

1000 Petroleum Building--Denver, CO 80202

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

At surface

990' FSL, 990' FEL, SE/4-SE/4, Sec. 30

At proposed prod. zone Same

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

12 miles south of Bloomfield, NM

## 15. DISTANCE FROM PROPOSED\*

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

990'

## 16. NO. OF ACRES IN LEASE

397.16

2.477.16

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

160

## 18. DISTANCE FROM PROPOSED LOCATION\*

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

2750'

## 19. PROPOSED DEPTH

1850'

## 20. ROTARY OR CABLE TOOLS

Rotary

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

6169' GR

6181' KB (Est)

## 22. APPROX. DATE WORK WILL START\*

1-15-81<sup>+</sup>

## 23.

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#, K55	120'	100 sx (Circulate)
7-7/8"	4-1/2"	10.5#, J55	1850'	375 sx

DRAWINGS AND SPECIFICATIONS ARE  
SUBMITTED WITH THIS APPLICATIONThis action is subject to administrative  
approval pursuant to 30 CFR 290.

1. Drill 12 1/4" surface hole and set surface casing as above.
2. Drill 7-7/8" hole to 1850'.
3. Run DIL, CNL-FDC w/GR-Caliper logs.
4. Set 4 1/2" casing string if warranted, or P&A in compliance with regulations.
5. The location will be reshaped to original topography. Stockpiled topsoil will be respread and the area reseeded.

## Exhibits attached to this APD

"A" - Well Location Plat; "B" - Ten Point Compliance Program; "C" - Blowout Preventer Diagram; "D" - Multipoint Surface Use Requirements; "E" - Road Access Map to area; "F" - Topographic Map of area, Road Access, and wells within one mile radius; "G" - Drilling Location Plan, Contours, Cuts and Fills; "H" - Drilling Log; "I" - Production Facilities Plan; "J" - Treatment Program Plan; "K" - Archaeology Report

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 Prod Supt.- So. Rky Mtn Dist DATE 12/16/80

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY: F. SIMS  
DISTRICT ENGINEER

TITLE

DATE

\*See Instructions On Reverse Side

## OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

STATE OF NEW MEXICO  
OIL AND MINERALS DEPARTMENTForm C-107  
Revised 10-1-78

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

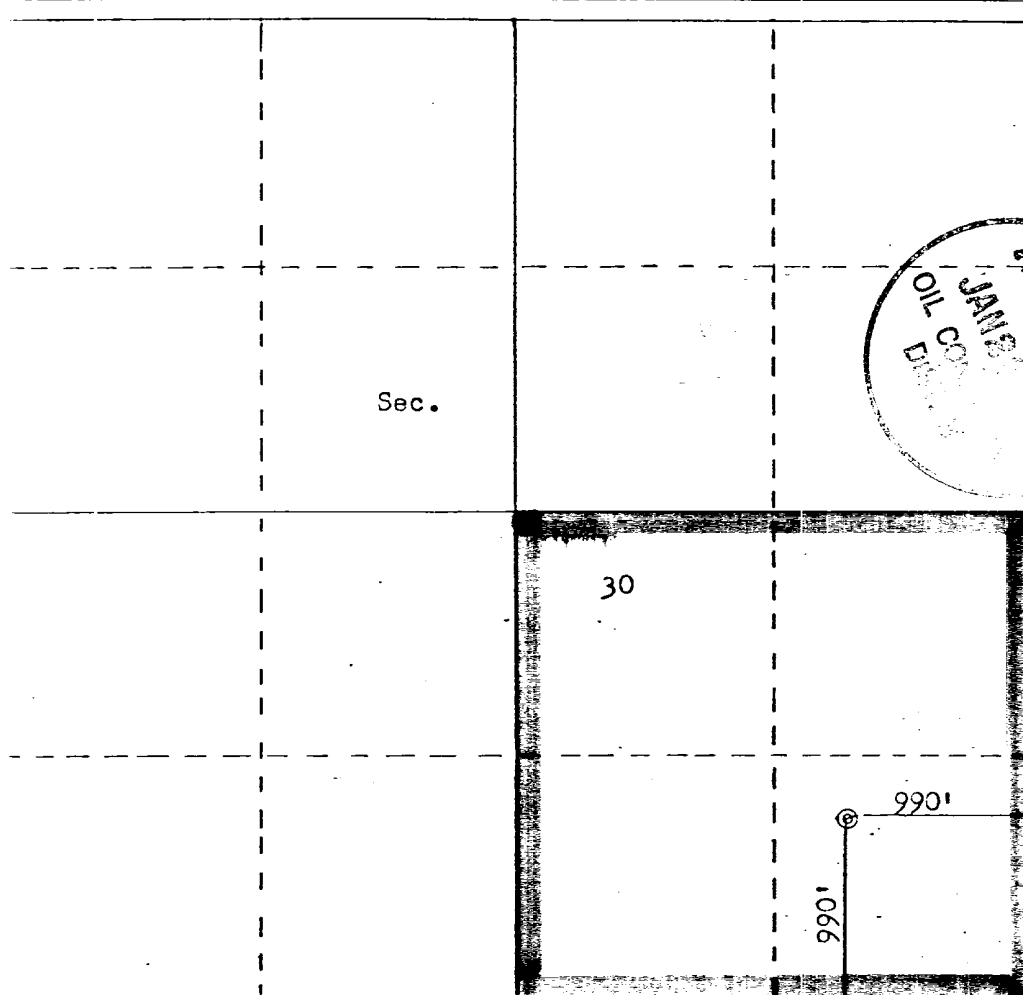
Operator <b>DEPCO, INCORPORATED</b>		Lease <b>FEDERAL 30</b>		Well No. <b>44</b>	
Unit Letter <b>P</b>	Section <b>30</b>	Township <b>27N</b>	Range <b>11W</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>990</b> feet from the <b>South</b> line and <b>990</b> feet from the <b>East</b> line					
Ground Level Elev. <b>6169</b>	Producing Formation <b>Pictured Cliffs</b>	Pool <b>West Kutz</b>		Dedicated Acreage <b>160</b> 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.



Scale: 1"=1000'

Exhibit "A"

## CERTIFICATION

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

*[Signature]*  
Position  
Prof. Supt - So. Rky Mtn Dist.

Company  
DEPCO, Inc.

Date  
December 16, 1980

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  
December 9, 1980

Registered Professional Engineer  
and  
Land Surveyor

*[Signature]*  
Fred B. Kerr Jr.

Exhibit "A"  
1980  
KERR, JR.

FORM 24-11

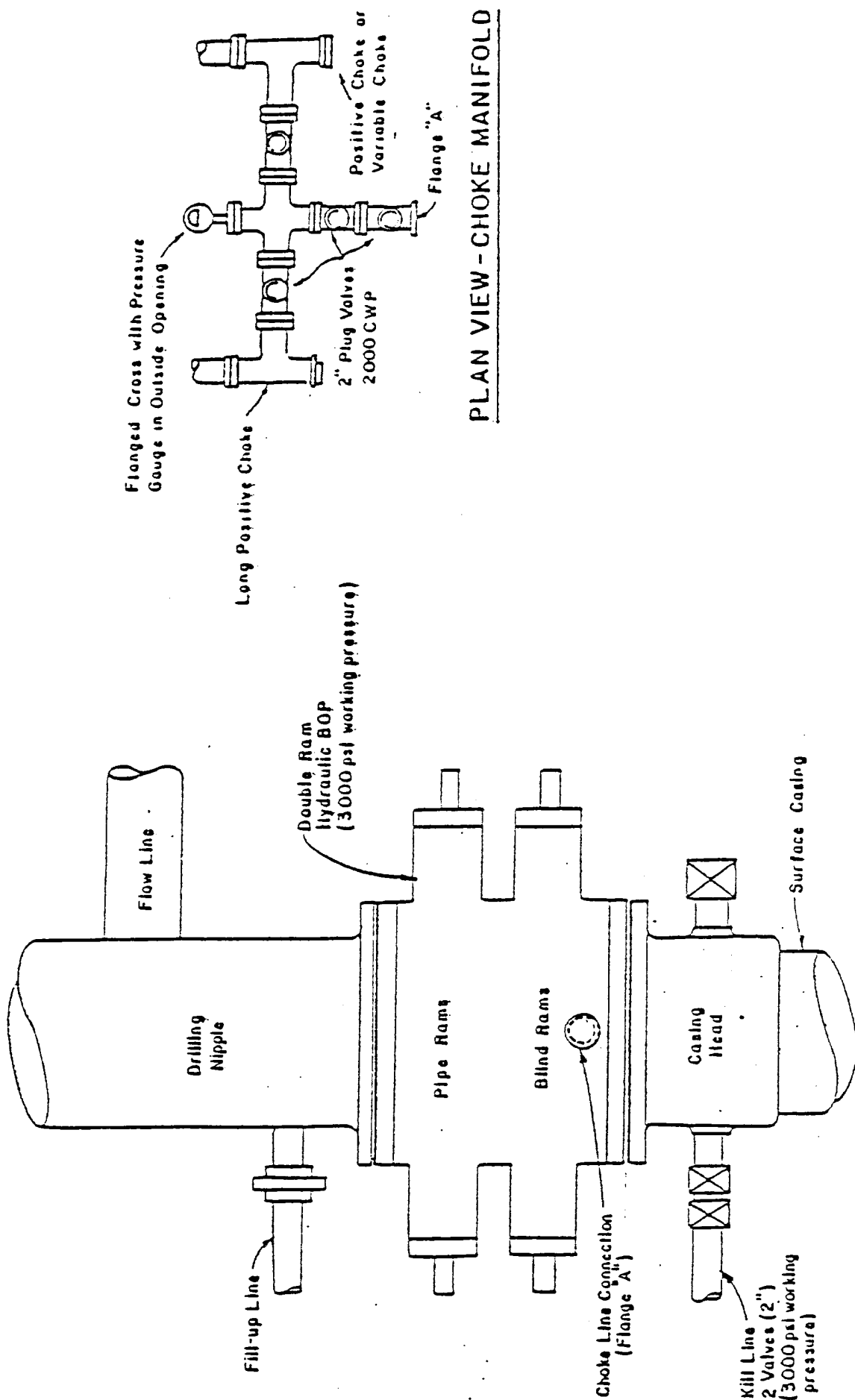
1. Surface formation - Wasatch of Tertiary Age
2. Estimated geologic tops: Ojo Alamo - 581' KB  
Pictured Cliffs - 1701' KB
3. Anticipated depth of oil, gas, water or other mineral-bearing formations:  
Coal - 1649' KB  
Coal - 1691' KB  
Gas - 1719' KB
4. Proposed casing program:  
Surface - 8-5/8" 24# K55 STC 0' - 120'  
Production - 4-1/2" 10.5# J55 STC 0' - 1850'
5. Operators minimum specification for pressure control equipment requires a 10" - 3000 psi single hydraulic blowout preventer. The BOP will be hydraulically tested to full working pressure after nipping up surface pipe and after any use under pressure. Pipe rams will be operationally checked each 24 hour period. The blind rams and annulus preventer will be checked each time pipe is pulled out of the hole. All testing will be recorded on the daily drilling sheets. Accessories to the BOP will include upper and lower kelly cocks, floor safety valve, drill string BOP and choke manifold with pressure rating equivalent to the BOP stack.
6. Proposed mud program:

<u>DEPTH</u>	<u>TYPE MUD</u>	<u>WT.</u>	<u>VISC.</u>	<u>W.L.</u>
0' - 1600'	Inhibited water	to control	heaving	shales
1600' - TD	Gel	9.8	40-50	-
7. Auxiliary equipment will consist of:
  - a. Kelly cock
  - b. Float above bit
  - c. Visual monitoring of mud tanks
  - d. Sub with valve to fit drill pipe and collars
8. No coring or drill-stem tests are planned.  
The anticipated logging program is as follows:  
DIL - Surface pipe - TD  
CNL-FDC w/GR - Surface pipe - TD  

Casing will be set and perforated in the Pictured Cliffs formation. The perforated section will be treated with a 60,000 lb  $\pm$  foam frac. Tubing will be run and the well cleaned up and tested.
9. No abnormal pressures or temperatures, hydrogen sulfide or other hazards are expected or known to exist at these depths in this area.
10. The anticipated starting date is during the first quarter of 1981, depending upon rig availability. Drilling operations should be completed within four days and completion operations are anticipated to require an additional five days.

Ten Point Compliance Program

Exhibit "B"



**PLAN VIEW - CHOKE MANIFOLD**

1. Existing Roads:

- A. The proposed well site is shown on Exhibit "A".
- B. Exhibit "E" shows the existing access roads to the proposed location. The site is located 11 miles south of Bloomfield on Highway 44, then 3 miles south-west then 1½ miles northwest, then 1 mile west to the location.
- C. Final access roads into the site are coded green.
- E. This well is classified as development and roads are shown on Exhibits "E" and "F".
- F. The existing gravel roads will be maintained during the drilling phase of this well. No improvements are planned.

2. Planned Access Roads:

Planned access roads are shown on Exhibit "F".

- (1) Width will not exceed 20 feet.
- (2) Maximum grades will not exceed 5%.
- (3) No turnouts are to be constructed.
- (4) No additional drainage construction is deemed necessary other than minor ditching.
- (5) No culverts, cuts, or fills are required.
- (6) The use of surfacing material is not planned at this time.
- (7) No gates, cattleguards, or fence cuts are necessary.
- (8) The new access road into the location is flagged.

3. Location of Existing Wells:

All existing wells are shown on Exhibit "F".

- (1) Water wells - No shallow, domestic nor deep, high volume wells are known to be in the immediate area.
- (2) Abandoned wells - As shown on Exhibit "F".
- (3) Temporarily abandoned wells - none
- (4) Disposal wells - none
- (5) Drilling wells - none
- (6) Producing wells - as shown on Exhibit "F"
- (7) Shut in wells - none
- (8) Injection wells - none
- (9) Monitoring or observation wells for other resources - none

4. Location of Existing and/or Proposed Facilities:

- A. Existing facilities owned or controlled by operator within a one-mile radius of this location:
  - (1) No tank batteries
  - (2) No production facilities
  - (3) No oil gathering lines
  - (4) No gas gathering lines
  - (5) No injection liens
  - (6) No disposal lines
- B. Proposed facilities in the event of a producing well are shown on Exhibit "H".
  - (1), (2) - As shown on Exhibit "H"
  - (3) Area to be used will be levelled. Native material will be used in the construction of the location.
  - (4) The pit will be fenced and flagged to discourage the entry of live-stock, wildlife, and waterfowl.
- C. All disturbed areas not needed for operations will be rehabilitated in the manner described in Item 10.

5. Location and Type of Water Supply:

- A. Water will be obtained from the San Juan River or purchased from private sources.
- B. Water will be hauled by truck.
- C. No water well will be drilled on the lease.

-Over-

Exhibit "D"

- (1) The topography of the area generally slopes toward Gallegos Canyon approximately four miles in a southwesterly direction. The surface soils contain sand and shale of the Wasatch formation. Vegetation is comprised of grass, sagebrush, and rabbit brush.
- (2) The area is occasionally used for cattle grazing. The surface owner of record is: Navajo Tribe in Trust - U.S.A.  
Drawer "E"  
Window Rock, Arizona 86515
- The Bureau of Indian Affairs has included this area within the Navajo Indian Irrigation Project. In order to avoid interference with sprinkler operation, the wellhead and adjacent facilities will conform to N.I.P. requirements.
- (3) The nearest known water source is the San Juan River north of this location. No known occupied dwellings, archaeological, historical, or cultural sites exist in the immediate area.

11. Other Information:

- (1) All topsoil that is stripped and stockpiled will be replaced and the site will be backfilled, levelled, and contoured. Waste will be buried or hauled away upon completion of drilling.
- (2) Rehabilitation will consist of respraying and contouring stockpiled topsoil. Revegetation will consist of seeding with mixture as specified by BLM or landowner. If the well is dry, a dry hole marker will be erected, and the access road will be plowed, ripped, and reseeded as requested.
- (3) Prior to rig release, the reserve pit will be fenced and so maintained until the pit is dry enough to backfill.
- (4) If oil is in the reserve pit, it will be removed or the pit will be flagged to discourage livestock, wildlife, and waterfowl from entering the area.
- (5) Rehabilitation will begin immediately after drilling operations are finished. It is expected that all rehabilitation will be completed during the fall of 1981.

10. Plans For Restoration of Surface:

- (1) See Exhibit "G"  
(2) See Exhibit "H"  
(3) See Exhibit "H"  
(4) The reserve pit will be unfilled

9. Well Site Layout:

No camps or airstrips are planned.

8. Ancillary Facilities:

- (1) Drill cuttings will be buried in the reserve pit.
- (2) Drilling fluids will be placed in the reserve pit and allowed to evaporate.
- (3) Produced fluids such as oil and formation water will be collected in a test tank.
- (4) Sewage will be contained and a suitable chemical will be used to decompose waste.
- (5) Garbage and other waste material will be placed in a trash pit and burned and later buried.
- (6) Upon completion of drilling, all trash and litter will be buried in the trash pit. The reserve pit will be fenced until dry at which time it will be backfilled.

7. Methods for Handling Waste Disposal:

A, B, C, and D - No construction material is needed except as previously noted. Any materials required will be purchased from private sources.

6. Source of Construction Materials:


12. Lessee's or Operators Representative:

- (1) Mr. Fred Crum  
Box 400  
Aztec, New Mexico 87410  
(505) 334-6003
- (2) Mr. W. F. Schwenn  
DEPCO, Inc.  
1000 Petroleum Building  
Denver, Colorado 80202  
(303) 292-0980

13. Certification:

I hereby certify that I, or persons under my direct supervision have inspected the proposed drillsite 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 DEPCO, Inc. and its' contractors in conformity with this plan and the terms and conditions under which it is approved.

12-16-80  
Date

  
W. F. Schwenn

P L A T A C O U N T Y L A E

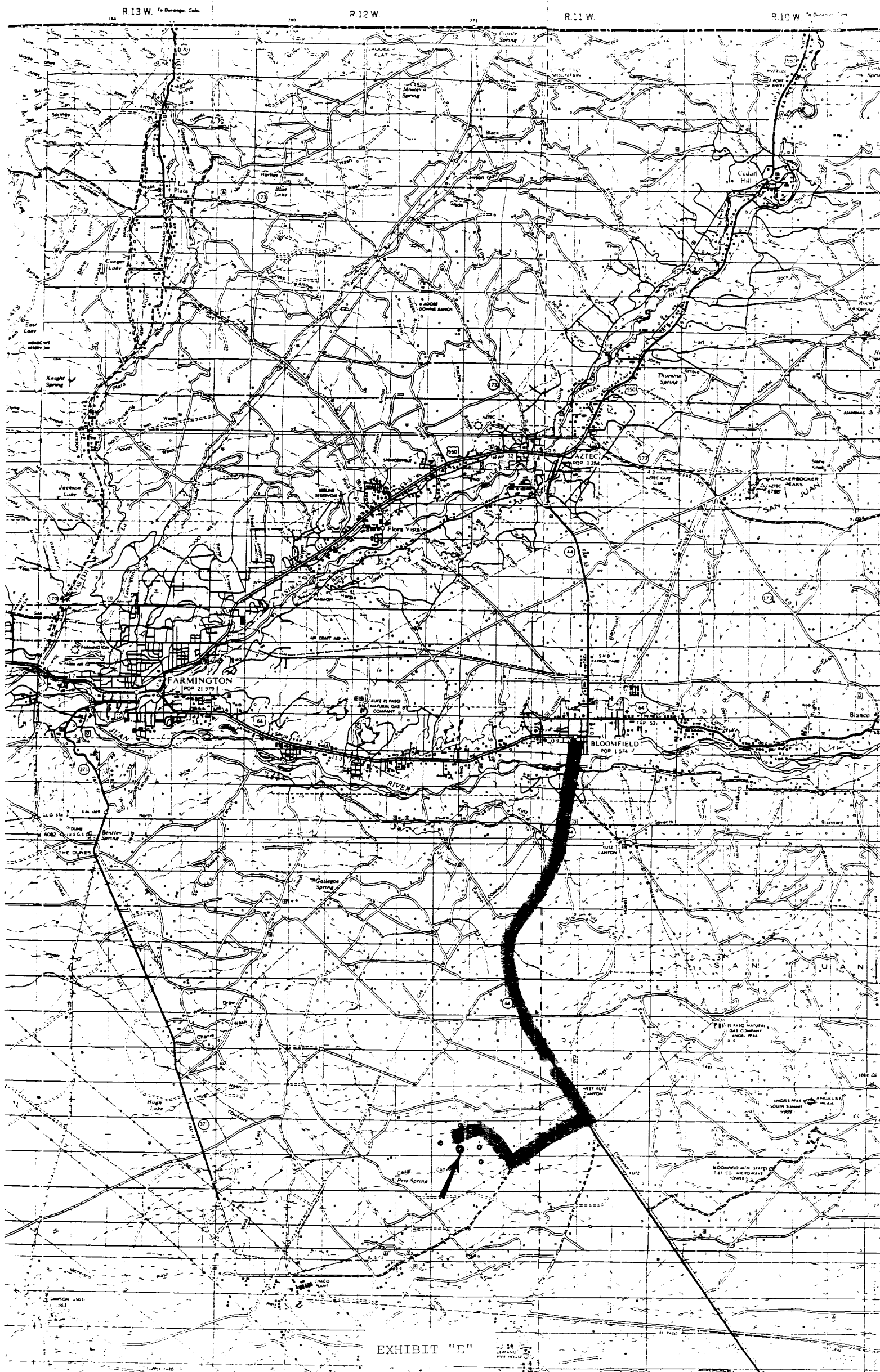


EXHIBIT "B"



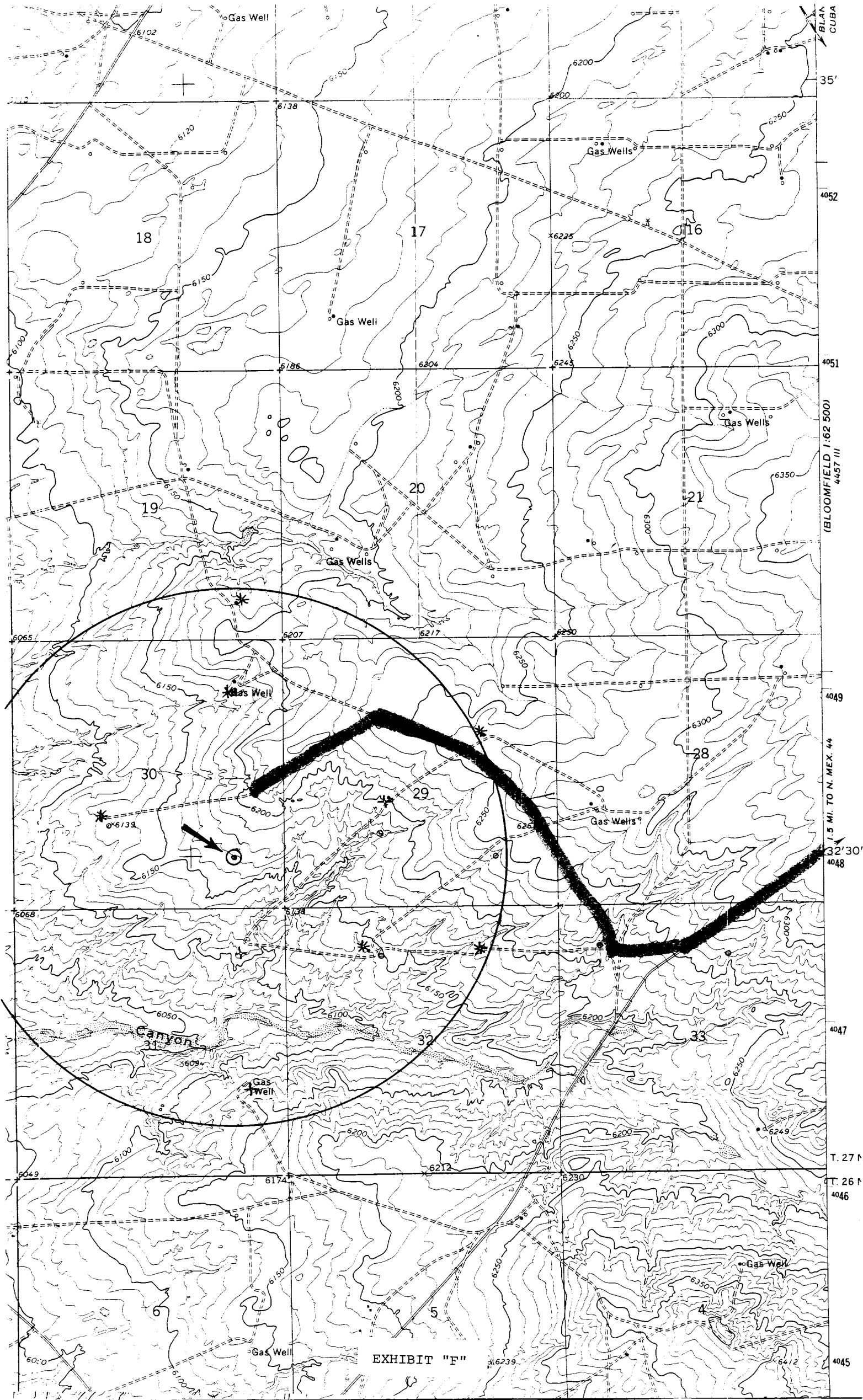
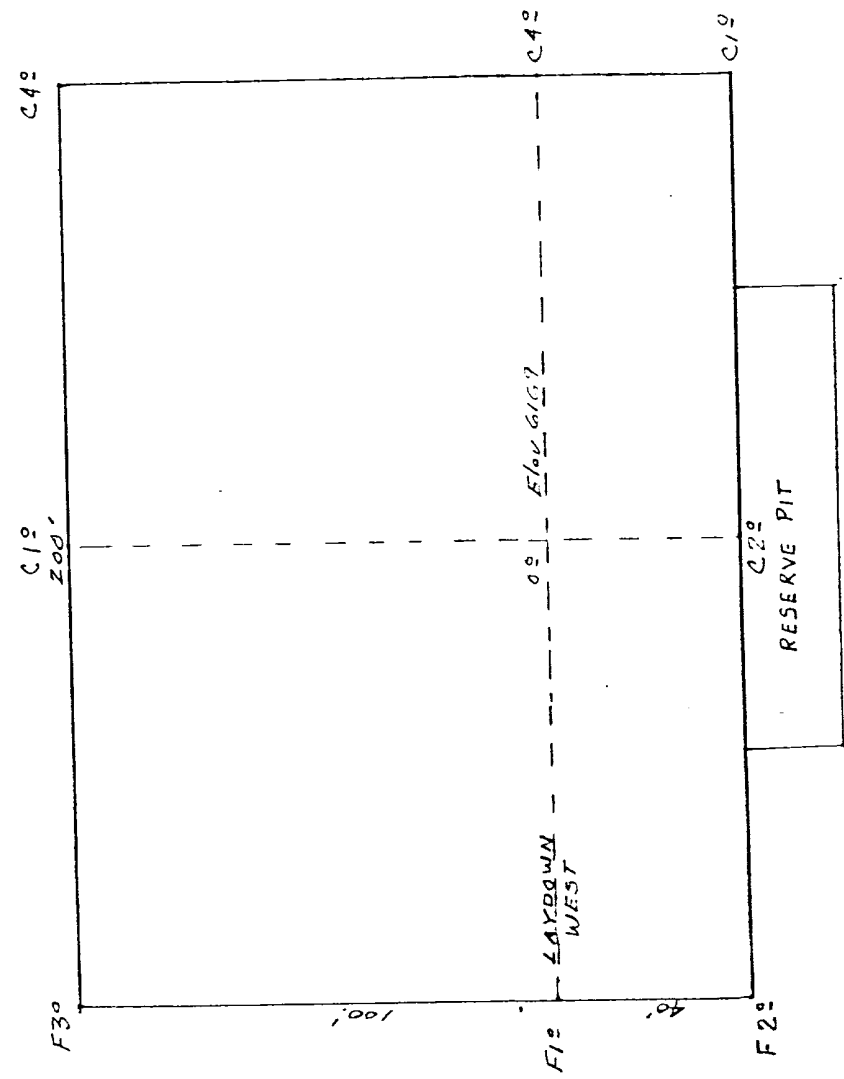


EXHIBIT "F"

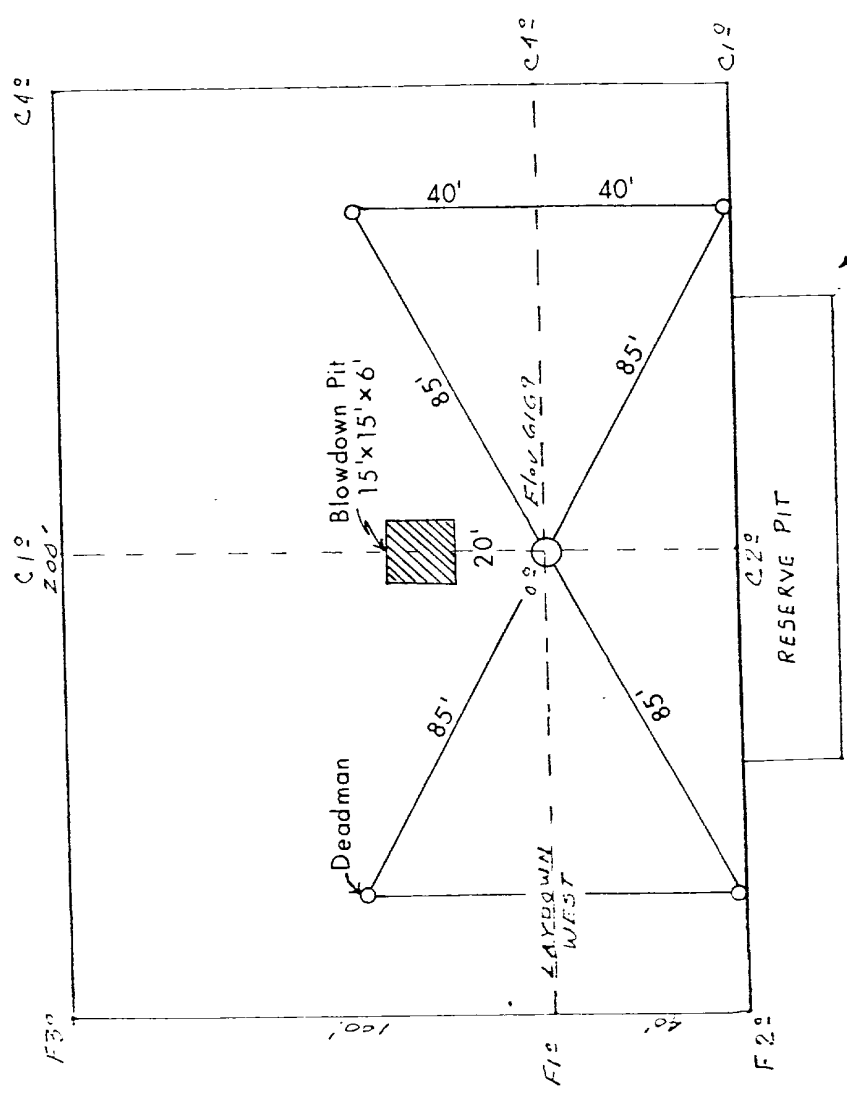
Profile for  
 DEPCO, INCORPORATED # 44 FEDERAL 30  
 990' FSL 990' FEL Sec. 30-T27N-R11W  
 SAN JUAN COUNTY, NEW MEXICO



Scale: 1"=40'

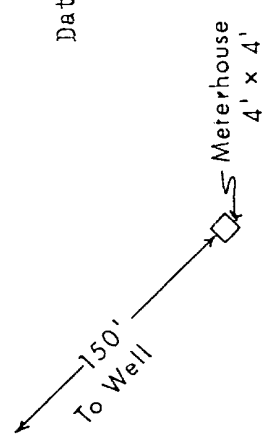
Date: 12-9-80

Profile for  
 DEPCO, INCORPORATED # 44 FEDERAL 30  
 990' FSL 990' FEL Sec. 30-T27N-R11W  
 SAN JUAN COUNTY, NEW MEXICO

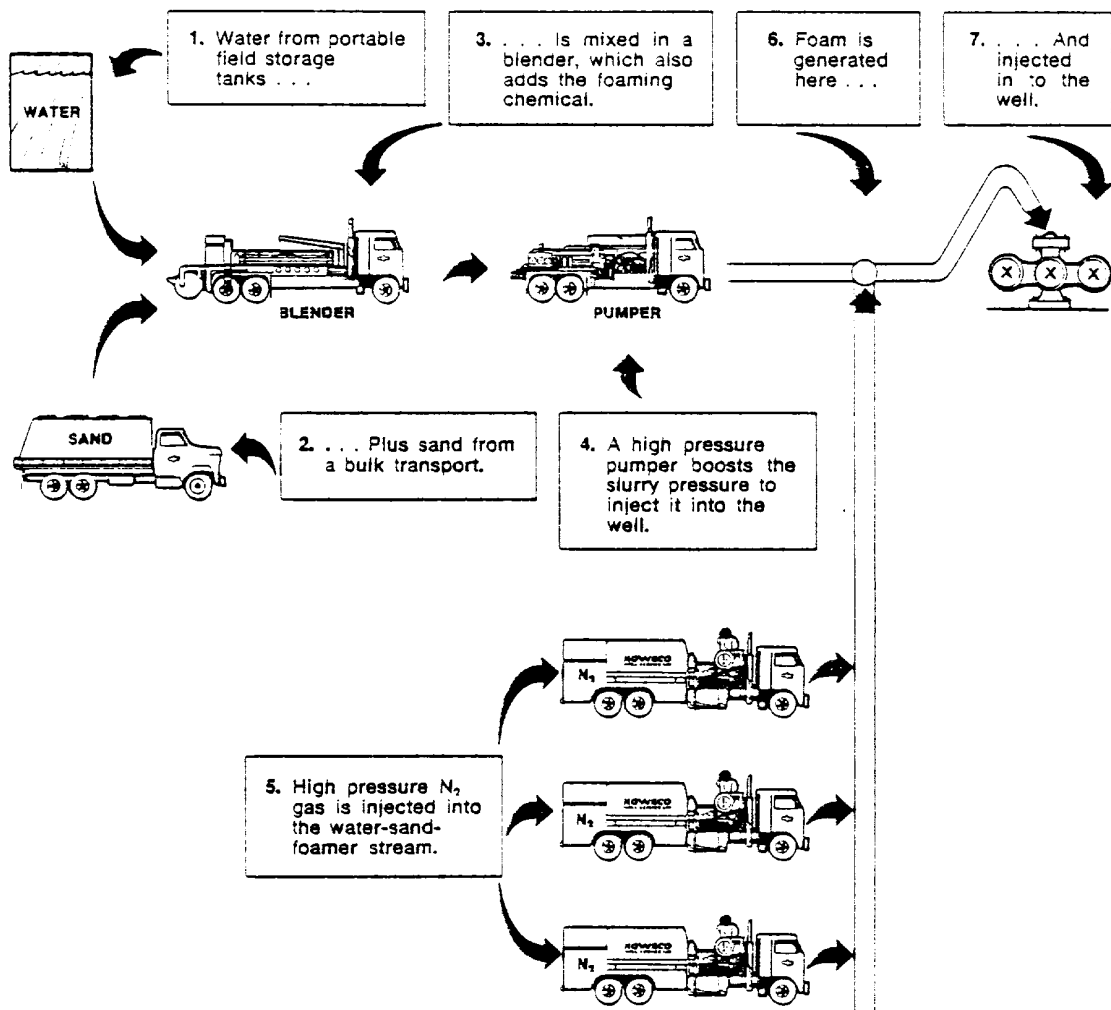


Scale: 1"=40'

Date: 12-9-80



SCHEMATIC FOAM FRAC OPERATION





An Archaeological Clearance Survey of  
Four Proposed Well Locations & One Access Road  
Conducted for DEPCO, Inc.

Randy Moorehead

Federal 30 #23  
Federal 30 #44  
Federal 33 #11  
Federal 33 #31

Report 80-SJC-416  
of the  
Cultural Resource Management Program  
San Juan Campus  
New Mexico State University

15 December 1980

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An Archaeological Clearance Survey of  
Four Proposed Well Locations & One Access Road  
Conducted for DEPCO, Inc.

On 9 December 1980, Randy Moorehead from the Cultural Resource Management Program, New Mexico State University, San Juan Campus, conducted an archaeological clearance survey of four proposed well locations and one access road for DEPCO, Inc. at the request of Mr. Fred Crum.

Present during the survey were Mr. Crum, Mr. Gale Krause from the Bureau of Indian Affairs - N.I.I.P., and Mr. Fred Kerr from Kerr Land Surveying.

The proposed well locations and access road are on land administered by the Navajo Tribe, and were surveyed under Federal Antiquities permit 79-NM-123 with Navajo Tribal Consent to Issuance #52.

#### METHODOLOGY

The proposed well locations were surveyed by walking parallel transects, fifty feet apart, over the 300 by 300 foot easements. The proposed access road was surveyed by walking in a zigzag pattern over the flagged route.

#### GENERAL RECOMMENDATIONS

There were no cultural resources found during the course of the survey, therefore archaeological clearance is recommended for the inspected areas.

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Proposed Well: DEPCO, INC. - FEDERAL 30 #44

Land Status: Navajo Tribe - N.I.I.P.

Location: The proposed well location is in the NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 30, Township 27 North, Range 11 West, N.M.P.M., San Juan County, New Mexico. The well will be 990 feet from the south line and 990 feet from the east line of Section 30. (Figure 1)

U.T.M.: Center - 12; 7,65,085 mE; 40,47,910 mN.

Access: Existing.

Terrain: Gentle slope.

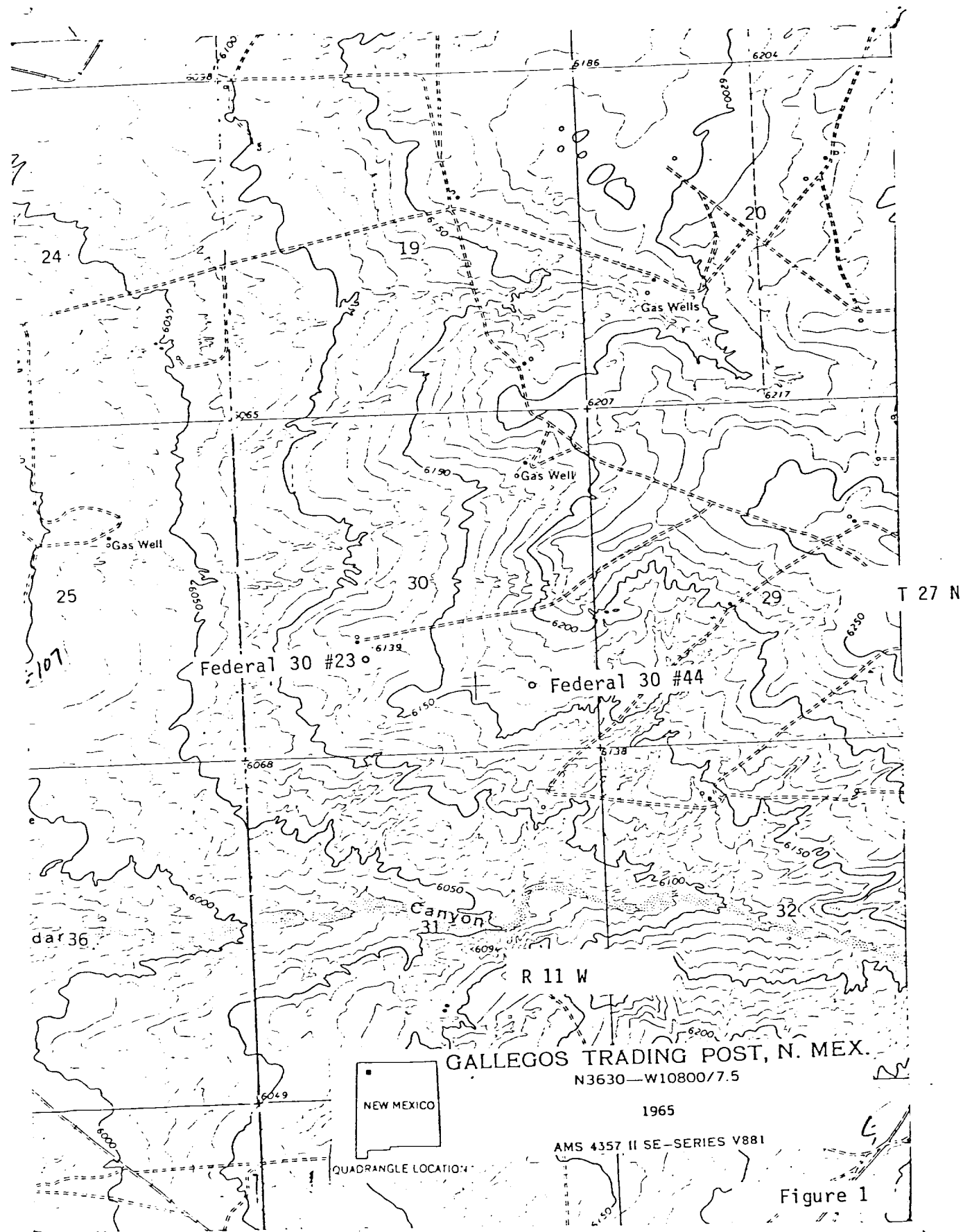
Soil: Sandy clay loam. .

Vegetation: Sagebrush, snakeweed, ephedra, prickly pear cactus, three-awn, Russian thistle, ricegrass.

Cultural Resources: None found.

Recommendations: Clearance recommended.

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GALLEGOS TRADING POST, N. MEX.  
N3630—W10800/7.5

1965

AMS 4357 II SE-SERIES V881

Figure 1