

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

790' FSL, 900' FWL (SW $\frac{1}{4}$ -SW $\frac{1}{4}$) Sec. 31

At proposed prod. zone

Same

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

18 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)

790

16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED
TO THIS WELL

158.79

160

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

3850'

19. PROPOSED DEPTH

1810'

20. ROTARY OR CABLE TOOLS

Rotary

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

6062' GR; 6074' KB (Est)

22. APPROX. DATE WORK WILL START*

May 1, 1980

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 Reg. CIRCULATE |
| 7-7/8" | 4-1/2" | 10.5# K55 | 1810' | 125 sx Reg |

1. Drill 12 $\frac{1}{4}$ " surface hole & set surface casing as above.
2. Drill 7-7/8" hole to 1810'.
3. Run DIL & CNL-FDC GR logs.
4. Set 4 $\frac{1}{2}$ " 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 & 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 Rig and Production Facilities Plan; "I" - Treatment Program Plan; "J" - Archeology Report.

gas not identified

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 depth. Give blowout preventer program, if any.

24.

SIGNED

W. F. Schwenn

TITLE District Superintendent

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

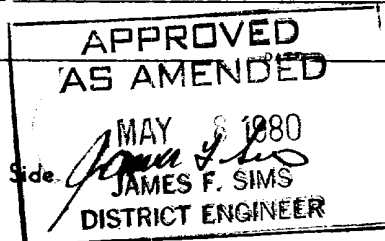
APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

and Smith

*See Instructions On Reverse Side.



All distances must be from the outer boundaries of the Section

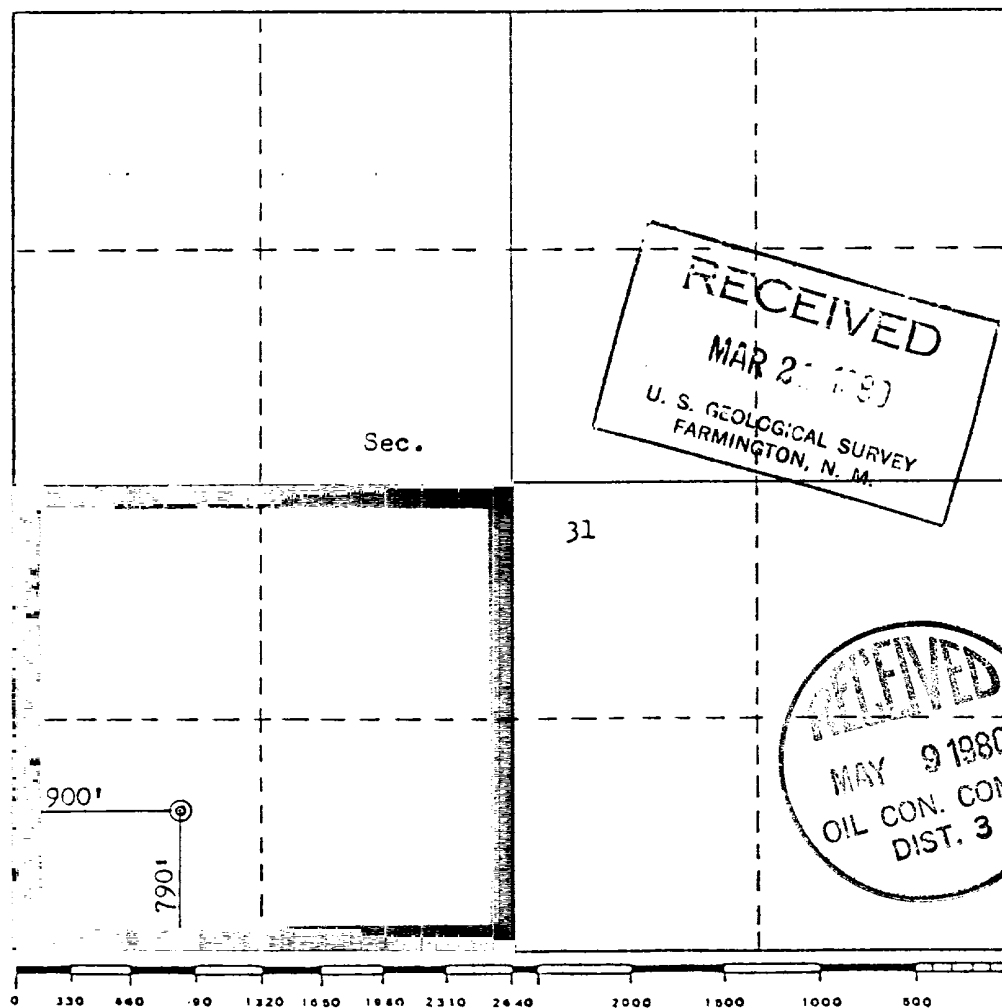
| | | | | | |
|--|---|------------------------|----------------------------|---|-----------------------|
| Operator DEPCO INCORPORATED | | | Lease FEDERAL 31 | | Well No. 11 |
| Unit Letter M | Section 31 | Township 27N | Range 11W | County San Juan | |
| Actual Footage Location of Well: 790 feet from the South line and 900 feet from the West line | | | | | |
| Ground Level Elev. 6062 | Producing Formation Pictured Cliffs | | Pool | Dedicated Acreage: 158.79 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.

W. F. Schwenn

Name
W. F. Schwenn
Position
Petroleum Engineer
Company
DEPCO, Inc.
Date
March 13, 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
March 7, 1980
Registered Professional Engineer and/or Land Surveyor
Fred B. Kerr Jr.
Certificate No.
3950

Exhibit "B"

DEPCO, Inc.
Federal No. 14-31
SW $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 31-T27N-R11W
San Juan County, New Mexico

Lease No. NM-03523

1. Surface formation - Wasatch of Tertiary Age
2. Estimated geologic tops: Pictured Cliffs - 1582' KB.
3. Anticipated depth of oil, gas, water or other mineral-bearing formations:
Coal - 1558' KB
Gas - 1582' KB
4. Proposed casing program:
Surface - 8-5/8" 24# K55 STC 0' - 120'
Production - 4-1/2" 10.5# K55 STC 0' - 1810'
5. Operators minimum specification for pressure control equipment requires a 10" - 3000 psi single hydraulic blowout preventor. 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 preventor 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:

| DEPTH | TYPE MUD | WT. | VISC. | W.L. |
|---------------|---|-----|-------|------|
| 0' - 1700' | Inhibited water to control heaving shales | | | |
| 1700' - 1810' | 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 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 late summer or early fall 1980 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 "D"

Multipoint Surface Use and Operations Plan

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 State Highway 44, then 5 miles southwest, then 1½ miles northwest, ½ mile northeast to the location.
- C. Final access roads into the site are coded green.
- D. This well is classified as development and roads are shown on Exhibits "E" and "F".
- E. The existing gravel roads will be maintained during the drilling phase of this well. No improvements are planned.

2. Planned Access Roads:

- (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 - none
- (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 with a one-mile radius of this location.

(1), (2), (3), (4), (5), and (6) There are no tank batteries, production, oil, gas, injection, disposal, or other producing facilities owned or controlled by DEPCO, Inc. within one mile of the location.

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 livestock, 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.

6. Source of Construction Materials:

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

7. Methods for Handling Waste Disposal:

- (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.

8. Ancillary Facilities:

No camps or airstrips are planned.

9. Well Site Layout:

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

10. Plans For Restoration of Surface:

- (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 respreading 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 re-seeded 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.

11. Other Information:

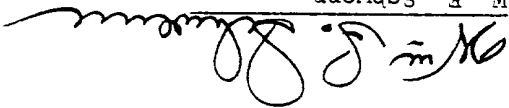
- (1) The topography of the area generally slopes toward Gallegos Canyon approximately four miles in a southwesterly direction. The surface soils contain sand and shale of the Wasatch formation. Vegetation is comprised of grass, sagebrush, and rabbit brush.
- (2) The area is occasionally used for cattle 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.I.P. requirements.
- (3) The nearest known water source is the San Juan River north of this location. The nearest occupied dwelling is a Navajo Hogan in the NE $\frac{1}{4}$, Sec. 1-T26N-R12W, approximately one-half mile to the SW of this location. No archeological, historical, or cultural sites exist in the immediate area.

12. Lessee's or Operators Representative:

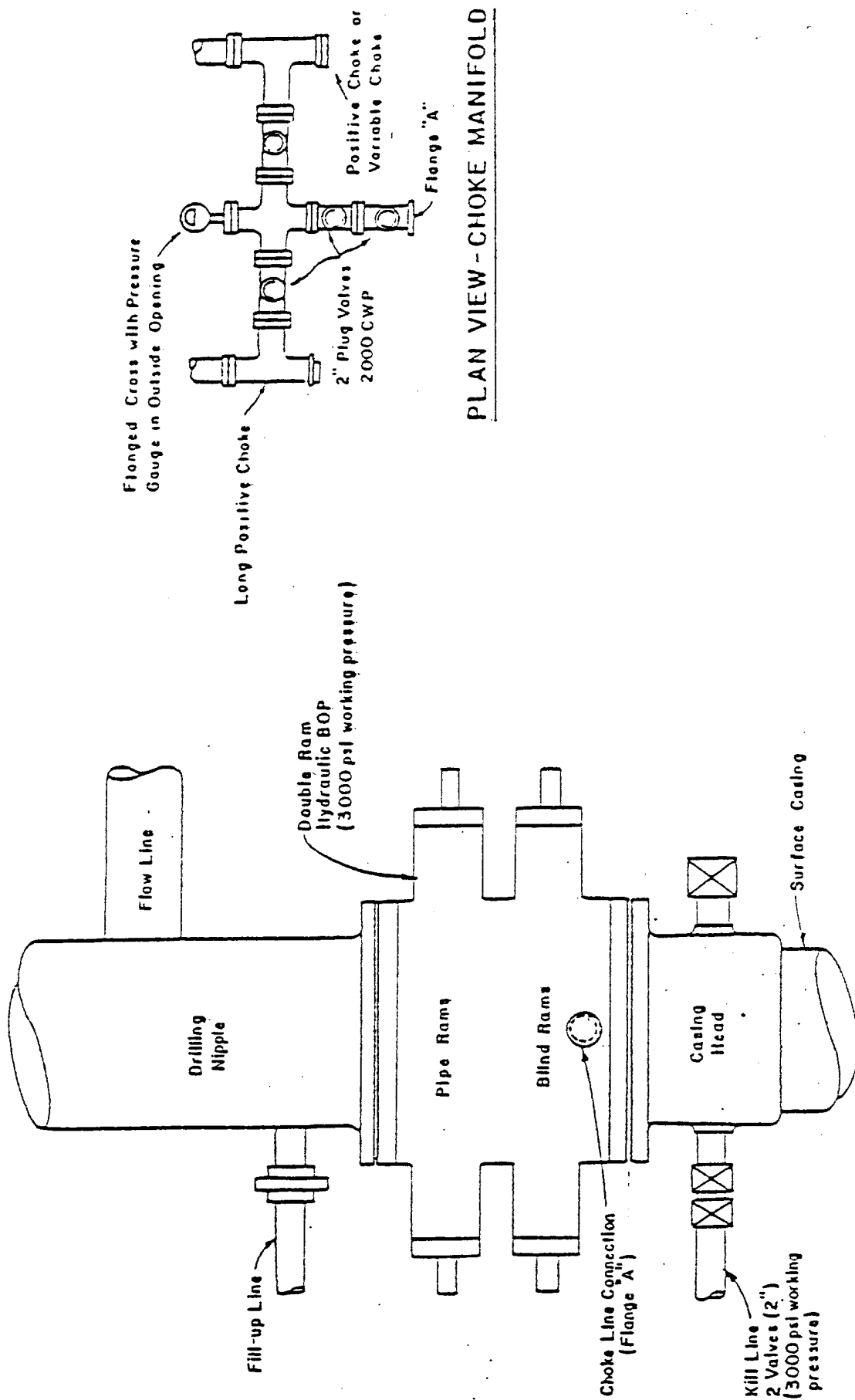
- (1) Mr. Fred Crum
Box 400
Aztec, New Mexico 87410
(505) 334-6003
- (2) Mr. W. F. Schwenn
DEPCO, Inc.
1000 Petroleum Building
Denver, Colorado 80202
(303) 292-0980

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.


W. F. Schwenm

3 - 17 - 80
Date



PLAN VIEW - CHOKE MANIFOLD

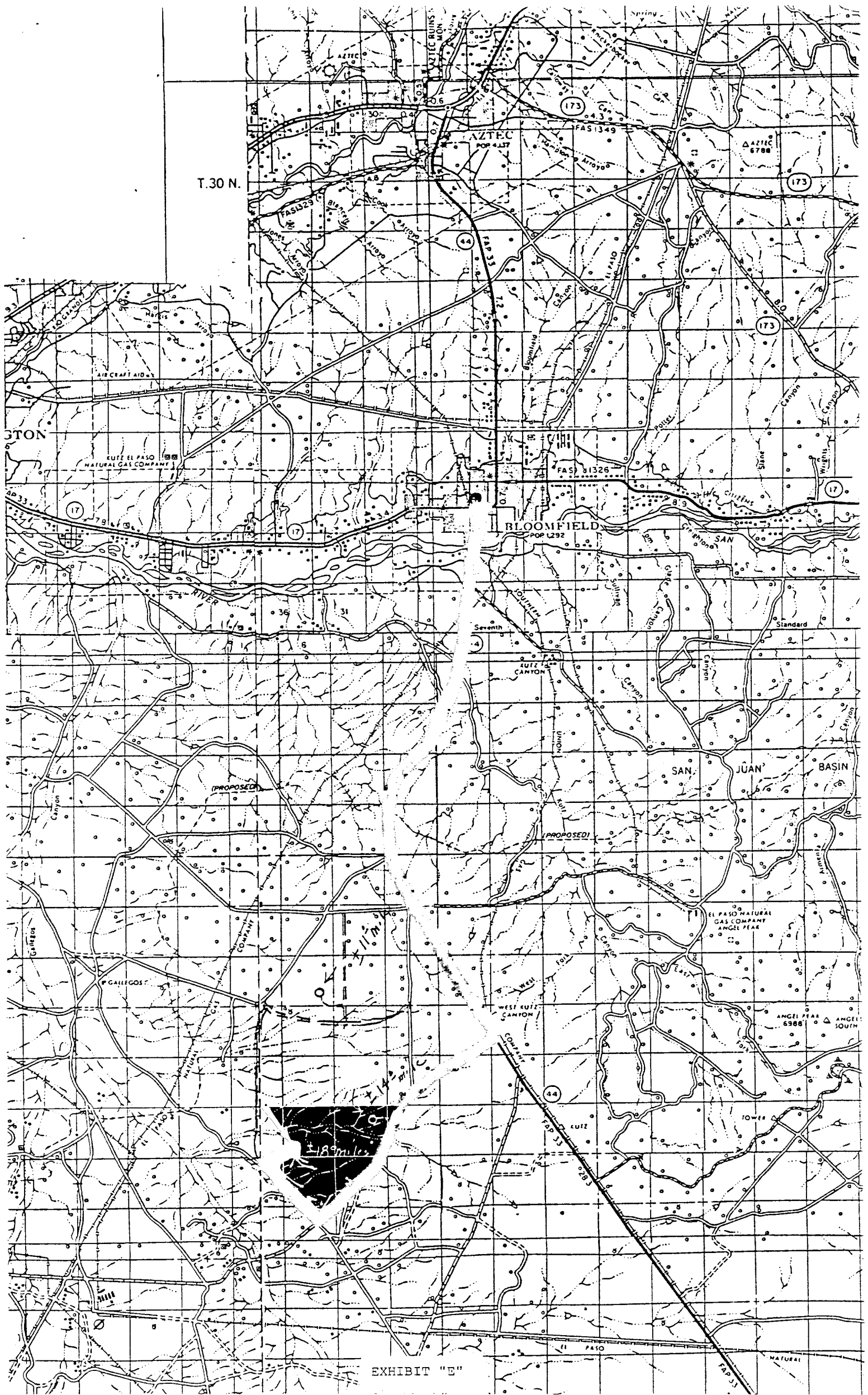


EXHIBIT "E"

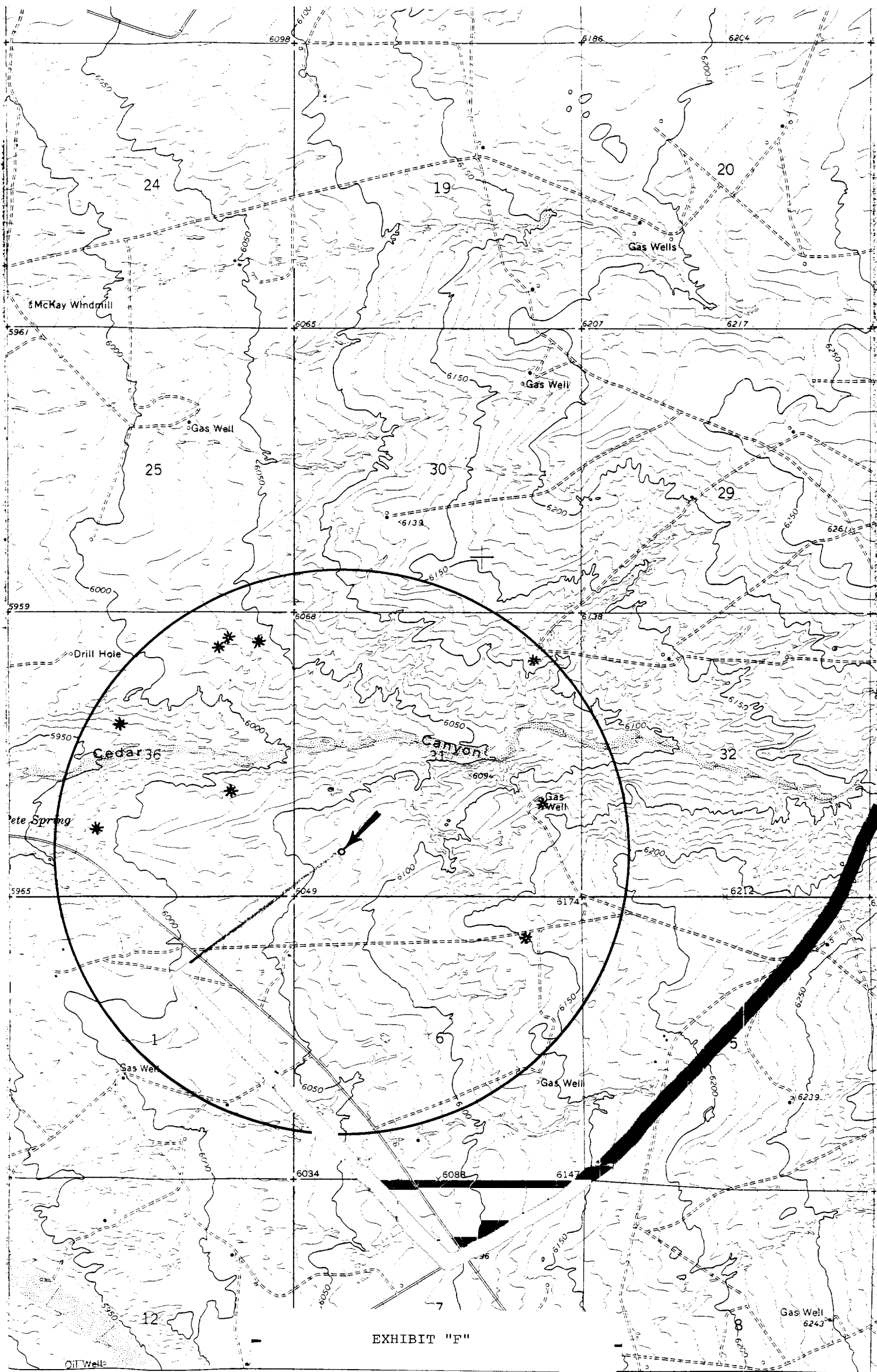


EXHIBIT "F"

(CARSON TRADING POST) 4356 1 NE

R. 12 W. R. 11 W.

2'30"

11 MI. TO N. MEX. 44

INT

SCALE 1:24 000

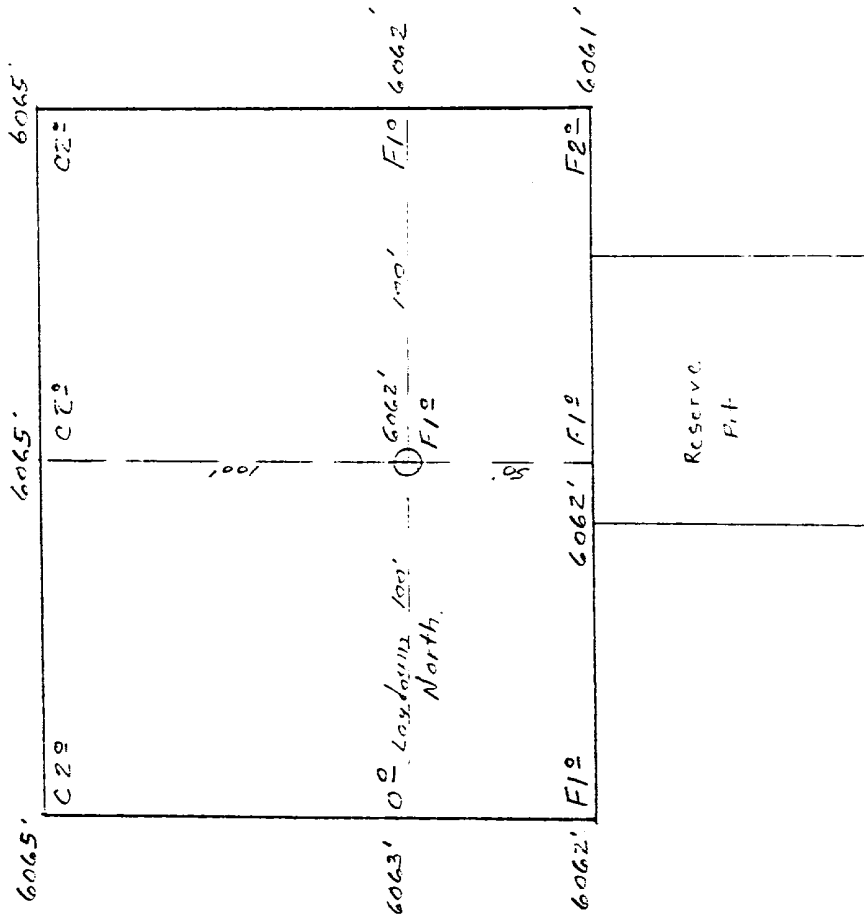
1 MILE

0 1000 2000 3000 4000 5000 6000 7000 FEET

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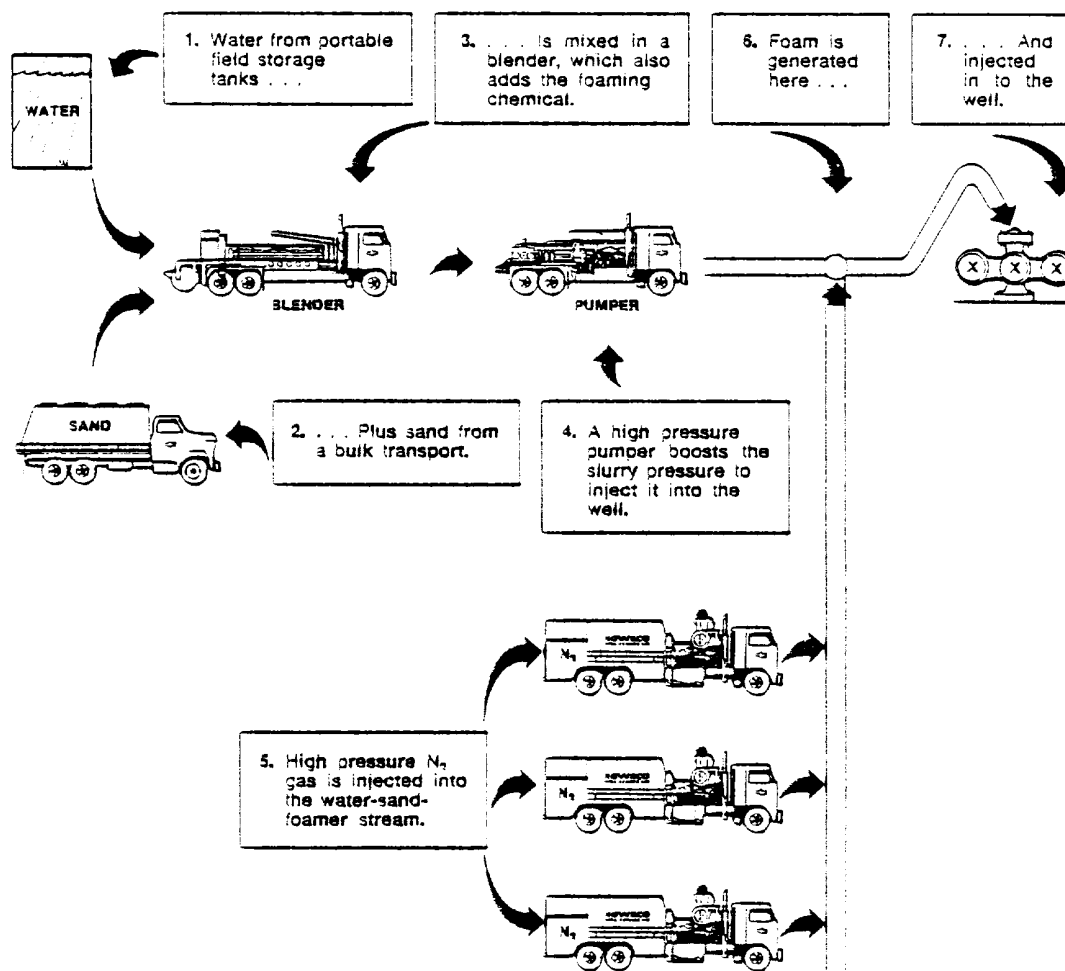
Profile for
DEPCO INCORPORATED #14-31 FEDERAL
790'FSL 900'FWL Sec. 31-T27N-R11W
SAN JUAN COUNTY, NEW MEXICO



Fred B. Kerr Jr.
Fred B. Kerr Jr.
March 7, 1980

Figure 1.

SCHEMATIC FOAM FRAC OPERATION





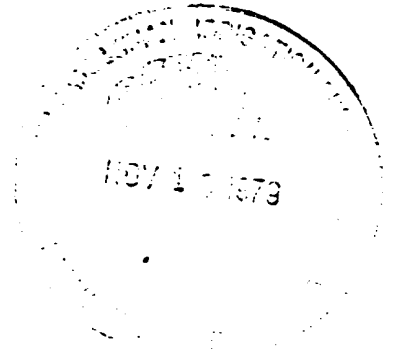
United States Department of the Interior
NATIONAL PARK SERVICE

SOUTHWEST REGION
P.O. Box 728
Santa Fe, New Mexico 87501

IN REPLY REFER TO:
H24(SWR)PF

NOV 18 1979

MAR 10 1980



Memorandum

To: Project Manager, Bureau of Indian Affairs,
N.I.I.P., Farmington, New Mexico
Attention: Al Keller

From: "ACTING"
Supervisory Archeologist, Branch of Indian
Cultural Resources, Southwest Region

Subject: Archeological Clearance Procedures for Oil and Gas
Activities within the N.I.I.P., San Juan County,
New Mexico

File 92

In order to provide expeditious approval of oil and gas activities previously cleared on portions of Blocks II-V of the N.I.I.P., separate clearance letters will not be required for individual drilling projects. However, documentation which provides the project sponsor, well name, legal description, project dimensions and a project map depicting the well site and access right-of-way will be required by this office for verification to ensure that previously uncleared project areas and cultural resources are not inadvertently impacted. Special caution should be exercised to avoid the following areas in Blocks III-V that have not yet received archeological clearance. Clearance recommendations will be made for these tracts pending completion of the respective data recovery programs for Blocks III, and IV-V. These areas are also delineated in the enclosed correspondence.

Block II: No areas reserved.

Block III: H-21-37 - - SE $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$ and NE $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$ of
Section 14, T28N, R15W

SE $\frac{1}{4}$ & SW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$ and SW, NW and
NE $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$, Section 15,
T28N, R15W

UTM Zone 12 4057880N and
731730E

Blocks VI & V:

| | | |
|---------------------|-----|---|
| LA 17483 (H-25-169) | - - | NW $\frac{1}{4}$, NE $\frac{1}{4}$ and W $\frac{1}{2}$, NW $\frac{1}{2}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, Section 33, T27N, R11W |
| LA 17584 (H-40-61) | - - | S $\frac{1}{2}$, N $\frac{1}{2}$, S $\frac{1}{4}$, NE $\frac{1}{4}$ and N $\frac{1}{4}$, S $\frac{1}{2}$, S $\frac{1}{4}$, NE $\frac{1}{4}$, Section 9, T25N, R12W |
| LA 3379 (H-25-122) | - - | SE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, and SW $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$ and NW $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$, Section 32, T28N, R11W |
| LA 5714 (H-39-7) | - - | N $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$, Section 17, T26N, R12W |
| LA 17515 (H-39-19) | - - | E $\frac{1}{2}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, Section 32, T26N, R12W |

However, Block I of the N.I.I.P. has not been previously cleared by this office due to the absence of an adequate cultural resource survey and data recovery program. Thus, any new earth-modifying activities planned for Block I are subject to the required archeological survey and clearance procedures in accordance with 36 CFR 800.

If you have any additional questions concerning these procedures, you may contact me or Steve Hallisy at (505) 982-6561.

Tejé C. Billedal

Enclosure

cc: BIA, Navajo Area Office,
Window Rock, Arizona (2)
Dr. David Doyel, NNCRMP,
Window Rock, Arizona
Mr. Thomas W. Merlan, SHPO,
Santa Fe, New Mexico