Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-045-22612

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] OTHER Gas Storage SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: El Paso Natural Gas Company

3. ADDRESS OF OPERATOR: PO Box 990, Farmington, NM 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2485'N, 1995'W
At proposed prod. zone:

5. LEASE DESIGNATION AND SERIAL NO.: Tribal 1-22 Ind-2772

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Mountain

7. UNIT AGREEMENT NAME: Barker Creek Dome Gas Storage Project

8. FARM OR LEASE NAME: Barker Creek Dome Gas Storage Project

9. WELL NO.: WI #13

10. FIELD AND POOL, OR WILDCAT: Barker Creek Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec.21,T-32-N,R-14-W NMPM

12. COUNTY OR PARISH: San Juan

13. STATE: NM

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)

16. NO. OF ACRES IN LEASE: Total project acres-14,728

17. NO. OF ACRES ASSIGNED TO THIS WELL: N/A

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

19. PROPOSED DEPTH: 2387'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6220'GL

22. APPROX. DATE WORK WILL START*: July 15, 1977

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" | 32.3# H-40 | 442' | 277 cu.ft.to circulate |
| 8 3/4" | 7" | 20.0# K-55 | 2289' | 90 cu.ft.to fill 400' above casing shoe |

It is intended to drill a 6 1/4" hole from 7" casing depth into the Dakota formation. The well will be completed open hole from the 7" casing seat to the total depth of 2387'.

This well will be used for natural gas storage in the Barker Creek Dome Gas Storage Project. The storage gas will be dedicated to customers east of California.

RECEIVED
JUN 21 1977
OIL CON. COM.
DIST. 3

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 Peggy Bradfield TITLE Drilling Clerk DATE June 10, 1977

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION

# WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
*Supersedes C-128*
Effective 1-1-65

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

| Operator | Lease | Well No. |
|---|---|---|
| EL PASO NATURAL GAS COMPANY | UTE MTN. TRIBAL I-22-IND-2772 BARKER CREEK DOME GAS STORAGE PROJECT | WI-13 |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| F | 21 | 32-N | 14-W | SAN JUAN |

Actual Footage Location of Well: 2485 feet from the NORTH line and 1995 feet from the WEST line

| Ground Level Elev. | Producing Formation | Pool | Dedicated Acreage: |
|---|---|---|---|
| 6220 | DAKOTA | N/A | N/A Acres |

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

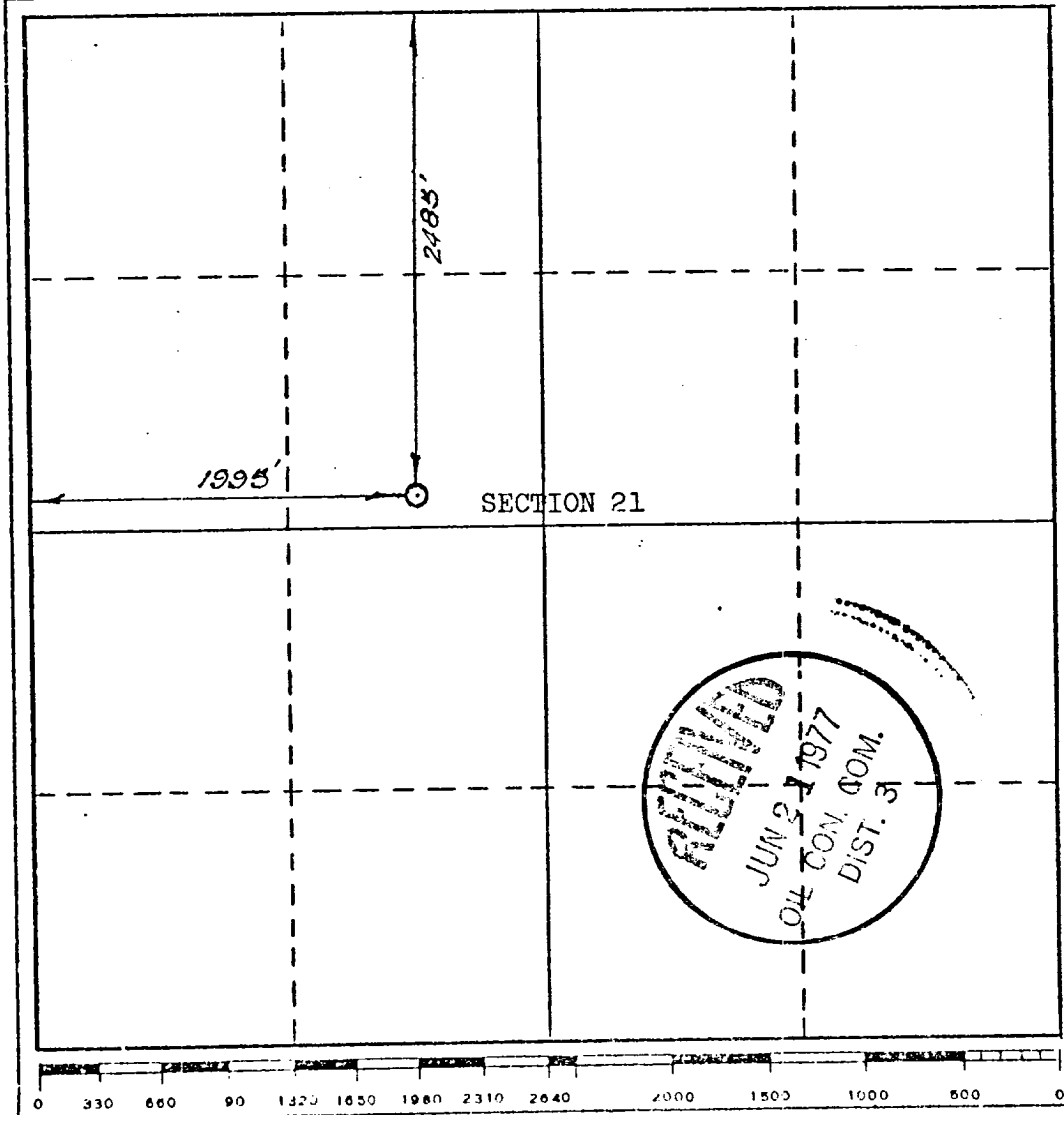
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.*

ORIGINAL SIGNED BY
LARRY A. AIMES

Name

Sr.Drilling Engineer

Position

El Paso Natural Gas

Company

June 10, 1977

Date

*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
APRIL 15, 1977

Registered Professional Engineer and/or Land Surveyor

Certificate No.

El Paso NATURAL GAS COMPANY

P. O. BOX 990
FARMINGTON, NEW MEXICO 87401
PHONE: 505-325-2841

# Multi-Point Surface Use Plan
## Barker Creek Dome Gas Storage Project
## WI #13

1. Existing Road - Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map. All existing and new roads will be properly maintained during the duration of this project.

2. Planned Access Roads - Please refer to Map No. 1. The grade of the access roads will be consistent with that of the local terrain. The road surface will not exceed twenty feet (20') in width. Upon completion of the project, the access road will be adequately drained to control soil erosion. Drainage facilities may include ditches, water bars, culverts or any other measure deemed necessary by trained Company personnel to insure proper drainage. Gates and/or cattleguards will be installed if necessary.

3. Location of Existing Wells - Please refer to Maps No. 1 and No. 2.

4. Location of Tank Batteries, Production Facilities, and Production Gathering and Service Lines - Please refer to Maps No. 1 and No. 2. Map No. 2 shows the existing gas gathering lines. Map No. 1 shows the existing roads and new proposed access roads. All known production facilities are shown on these two maps.

5. Location and Type of Water Supply - Water for the proposed project will be obtained from El Paso Natural Gas Company's San Juan River Plant.

6. Source of Construction Materials - No additional materials will be required to build either the access road or the proposed location.

7. Methods of Handling Waste Materials - All garbage and trash materials will be put into a burn pit shown on the attached Location Plat No. 1. When clean-up operations are begun on the proposed project, the burn pit with its refuse will be buried to a depth of at least three feet (3'). A latrine, the location of which is also shown on Plat No. 1 will be provided for human waste. If large amounts of liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying any of these materials into the watershed. No earthen pit will be located on natural drainages; all earthen pits will be so constructed as to prevent leakage from occurring.

8. Ancillary Facilities - No camps or airstrips will be associated with this project.

9. Wellsite Layout - Please refer to the attached Plat No. 1.

10. Plans for Restoration of the Surface - After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed Mixture #2 will be used. The reseeding operation will be performed during the time period set forth by the regulatory body. The location production equipment will be painted Forest Green.

11. Other Information - The immediate area is shale ridges with cedar and pinon trees. Cattle and deer graze the area.

12. Operator's Representative - W. D. Dawson, Post Office Box 990, Farmington, New Mexico 87401

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 El Paso Natural Gas Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

June 10, 1977

L. A. Aimes
Sr. Drilling Engineer

LAA:pb

June 10. 1977

# Operations Plan
# Barker Creek Dome Gas Storage Project
# WI #13

I. Location: 2485'N, 1995'W, Section 21, T-32-N, R-14-W, San Juan County, NM

Field: Barker Creek Dakota Elevation: 6220'GL

II. Geology:

A. Formation Tops:

| | | | |
|---|---|---|---|
| Mesa Verde | ----- | Greenhorn | 2157' |
| Menefee | surface | Graneros | 2217' |
| Point Lookout | 42' | Dakota | 2287' |
| Mancos | 402' | Total Depth | 2387' |

B. Logging Program: GR-I, FDC, SNP at 7" casing seat
GR-I, FDC, SNP and GR-N at TD.

C. Coring Program: none

D. Natural Gauges: gauge well every connection past 2247' and at TD. Record all gauges in daily drilling report and on morning report.

III. Drilling:

A. Mud Program: mud on surface hole. Air from surface casing depth to Total Depth.

IV. Materials:

A. Casing Program:

| Hole Size | Depth | Csg.Size | Wt.&Grade |
|---|---|---|---|
| 12 1/4" | 442' | 9 5/8" | 32.3# H-40 |
| 8 3/4" | 2289' | 7" | 20.0# K-55 |
| 6 1/4" | 2289-2387' | | |

B. Float Equipment: 9 5/8" surface casing - notched collar for guide shoe.

7" intermediate casing - cement guide shoe and self-fill insert float valve. Run float two joints above shoe.

C. Tubing: 2372' of 2 3/8", 4.7#, J-55 8rd EUE tubing.

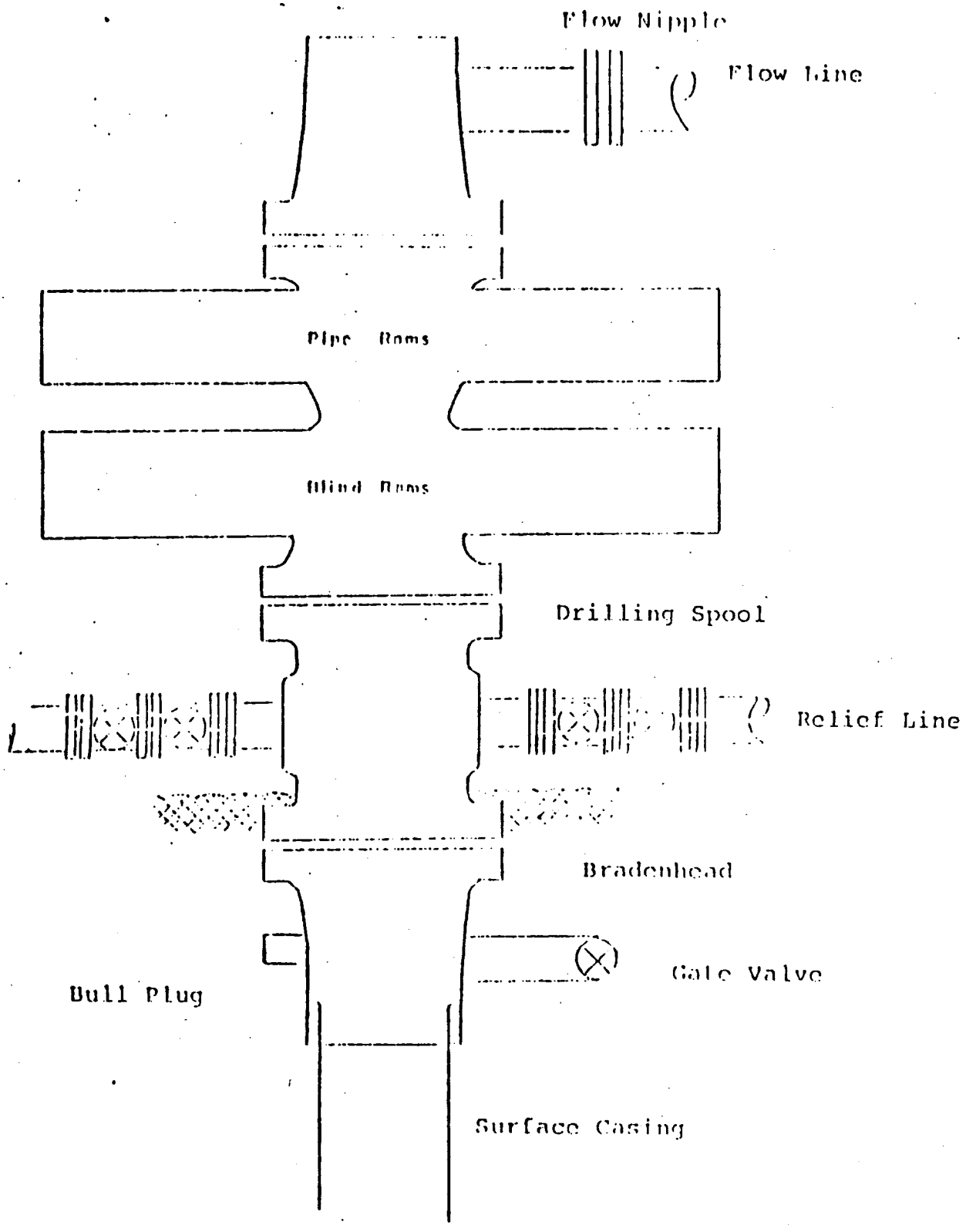
D. Wellhead Equipment: 10" - 2000 psi x 9 5/8" Type R Brewster casing head. 10" - 2000 psi x 6" 2000 psi Type 2-082-77 Brewster xmas tree assembly.

V. Cementing:

9 5/8" surface casing - use 235 sks. of Class "B" cement with 3% calcium chloride (277 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600#/30 minutes.

7" intermediate casing - use 76 sks. of Class "B" cement with 2% calcium chloride (90 cu.ft. of slurry, 50% excess to fill 400' above the casing shoe). Run temperature survey at 8 hours. WOC 12 hours. Test casing to 1200#/30 minutes.

Typical B.O.P. Installation
for Dakota Well

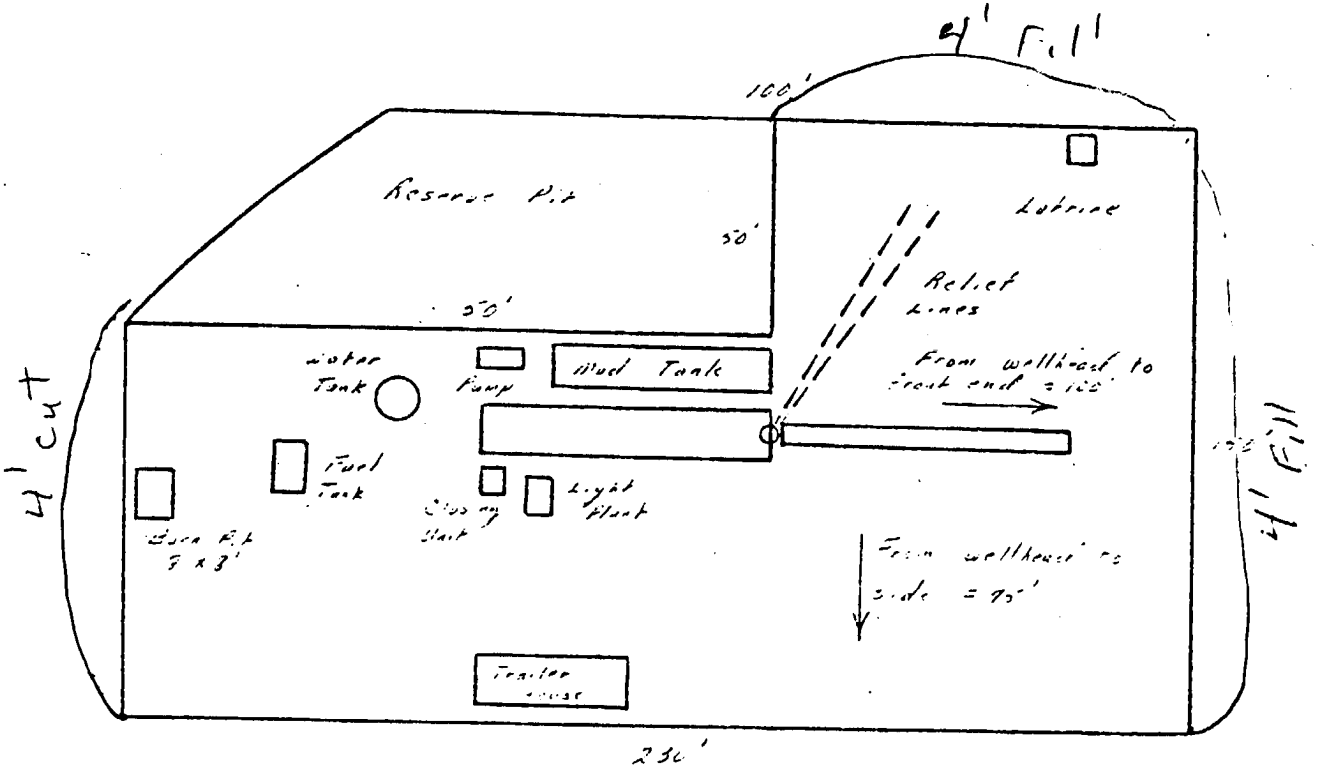



Series 900 Double Gate BOP, rated at 3000 psi Working Pressure

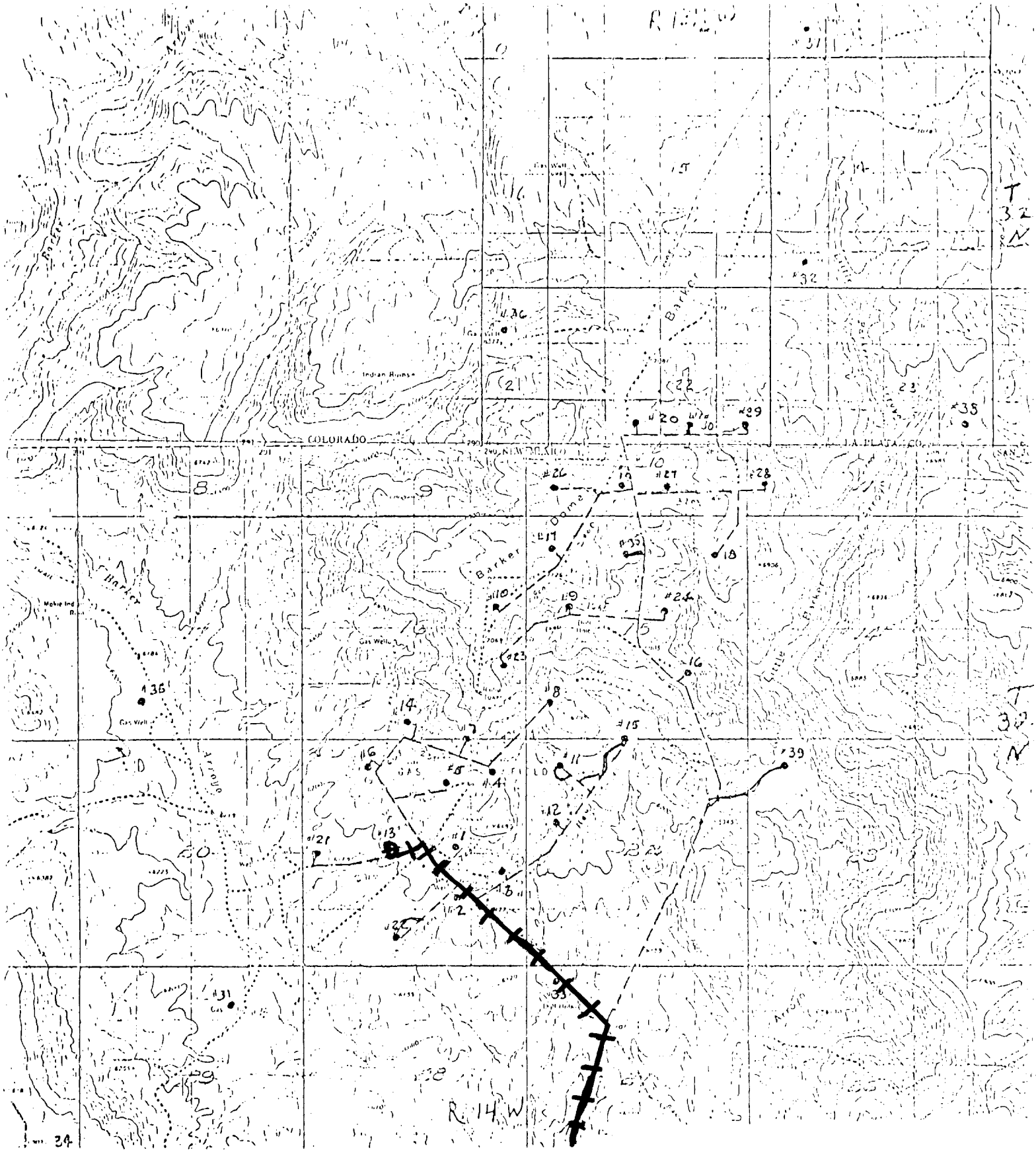
When airdrilling operations begin a Shaffer type 50 or equivalent rotating head is installed on top of the flow nipple and the flow line is converted into a blowie line.

# WI #13

El Paso Natural Gas Company
Typical Location Plat for Pictured Cliffs Well

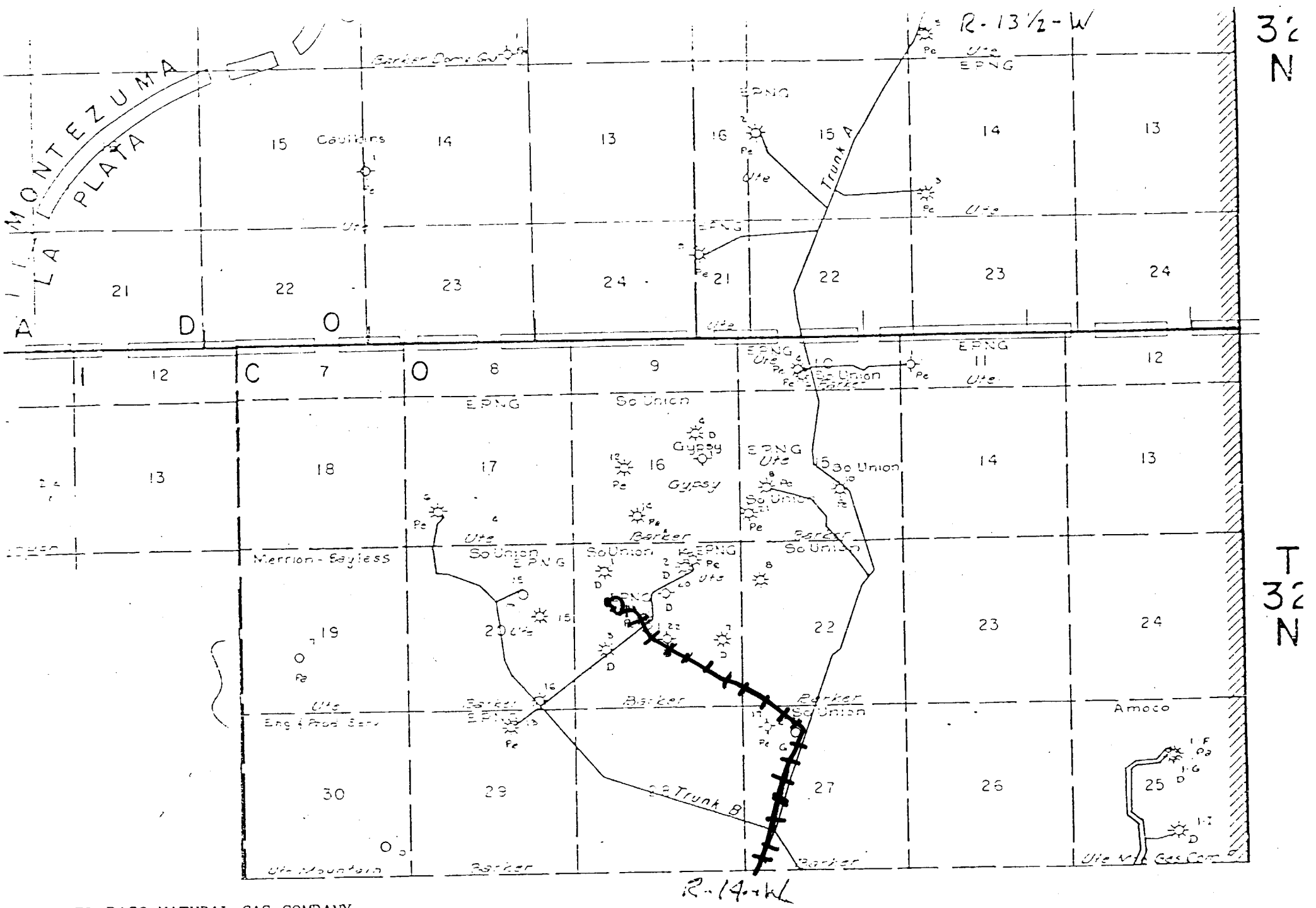



Scale: 1" = 30'




El Paso Natural Gas Company
Well Name: WI #13
Location: 2485'N, 1995'W, Section 21
T-32-N, R-14-W, San Juan County, NM

Map #1
Proposed pipeline & road
Proposed road
Proposed pipeline




EL PASO NATURAL GAS COMPANY
Well Name WI #13
Location 2485'N, 1995'W, Section 21,
T-32-N, R-14-W, San Juan County, NM

Proposed pipeline and road
Proposed road

MAP #2
PROPOSED LOCATION
Proposed pipeline