

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY30-046-22611  
Tribal 1-22  
LEASE DESIGNATION AND SERIAL NO.

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 #21

10. FIELD AND POOL, OR WILDCAT

Barker Creek Dakota

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

12. COUNTY OR PARISH 13. STATE

San Juan

NM

## 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

Gas Storage

SINGLE  
ZONE ☒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

2268'N, 75'W

At proposed prod. zone

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 drilg. unit line, if any)18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.16. NO. OF ACRES IN LEASE  
Total project  
acres-14,72819. PROPOSED DEPTH  
2375'17. NO. OF ACRES ASSIGNED  
TO THIS WELL

N/A

20. ROTARY OR CABLE TOOLS

Rotary

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

6178'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	430'	269 cu.ft. to circulate
8 3/4"	7"	20.0# K-55	2277'	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 2375'.

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.

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 location, if any.

24.  Drilling Clerk June 10, 1977

SIGNED

TITLE

DATE

(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.

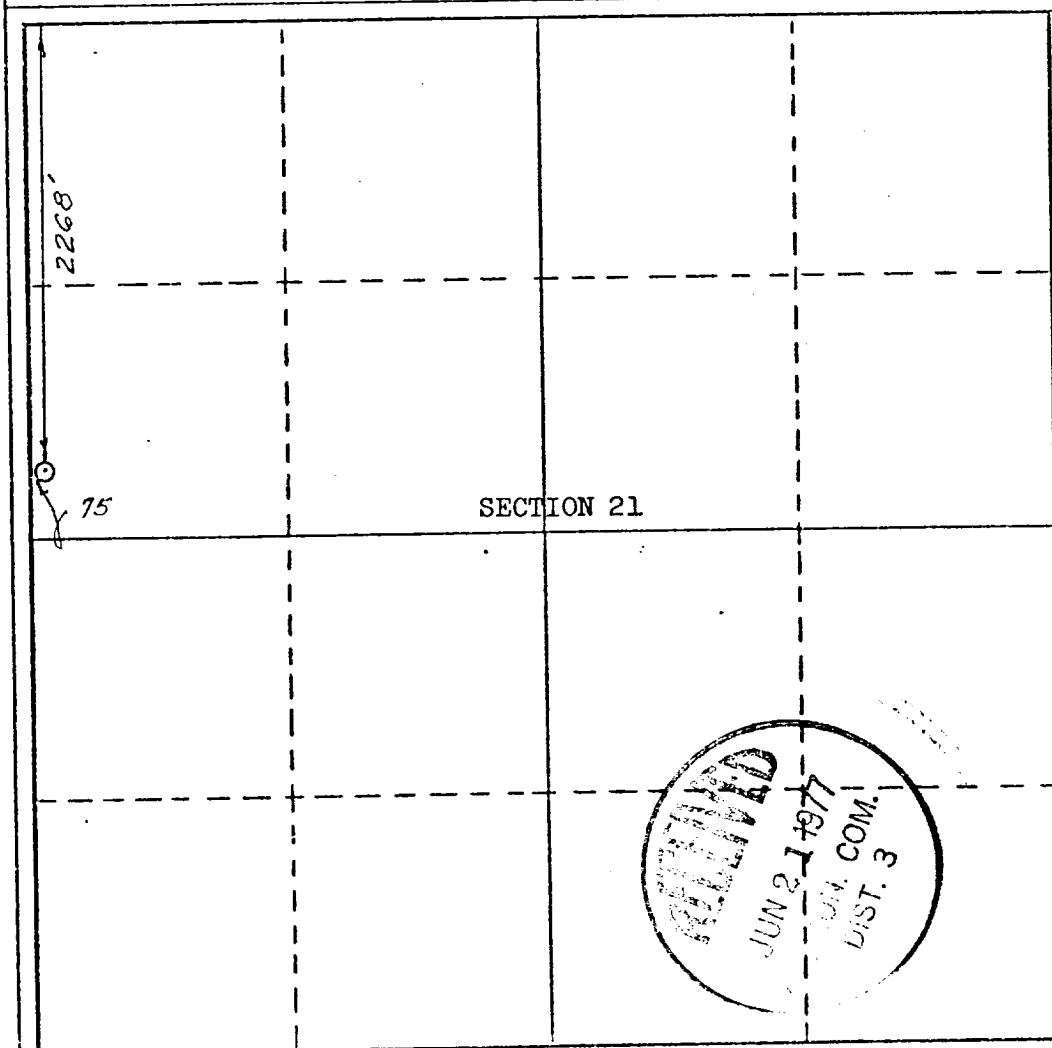
Operator <b>EL PASO NATURAL GAS COMPANY</b>		Lease <b>UTE MTN. TRIBAL I-22-IND-2772</b> <b>BARKER CREEK DOME GAS STORAGE PROJECT</b>		Well No. <b>WI-21</b>
Unit Letter <b>E</b>	Section <b>21</b>	Township <b>32-N</b>	Range <b>14-W</b>	County <b>SAN JUAN</b>
Actual Footage Location of Well: <b>2268</b> feet from the <b>NORTH</b> line and <b>75</b> feet from the <b>WEST</b> line				
Ground Level Elev. <b>6178</b>	Producing Formation <b>DAKOTA</b>	Pool <b>N/A</b>	Dedicated Acreage: <b>N/A</b> <input checked="" type="checkbox"/> 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 21, 1977**

Registered Professional Engineer  
and/or Land Surveyor

Certificate No. **1760**

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600

Multi-Point Surface Use Plan  
Barker Creek Dome Gas Storage Project  
WI #21

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 terrain is shale ridges with cedar, pinon trees. Deer and cattle inhabit 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 #21

I. Location: 2268'N, 75'W, Section 21, T-32-N, R-14-W, San Juan County, NM

Field: Barker Creek Dakota

Elevation: 6178'GL

II. Geology:

A. Formation Tops:	Mesa Verde	----	Greenhorn	2145'
	Menefee	surface	Graneros	2205'
	Point Lookout	30'	Dakota	2275'
	Mancos	390'	Total Depth	2375'

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

C. Coring Program: 420' of core will be cut beginning at 1945'

D. Natural Gauges: gauge well every connection past 2235' 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:	<u>Hole Size</u>	<u>Depth</u>	<u>Csg. Size</u>	<u>Wt. &amp; Grade</u>
	12 1/4"	430'	9 5/8"	32.3# H-40
	8 3/4"	2277'	7"	20.0# K-55
	6 1/4"	2277-2375'		

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: 2360' of 2 3/8", 4.7#, J-55 8rd EUE tubing.

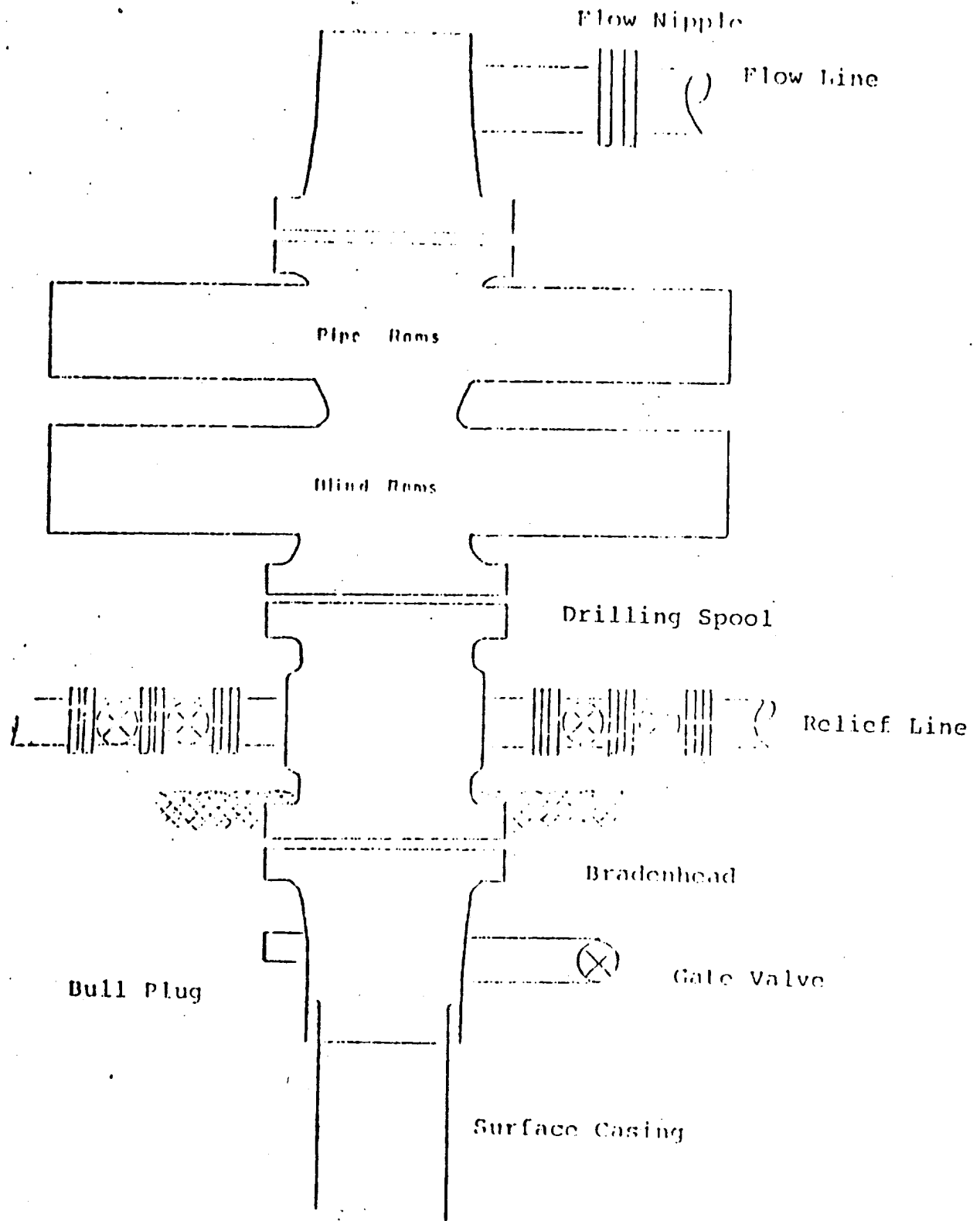
D. Wellhead Equipment: 10" - 2000 psi x 9 5/8" Type R Brewster casing head. 10" - 2000 psi x 6" 2000 psi Type 2-082-77 Brewster xmas tree assembly.

V. Cementing:

9 5/8" surface casing - use 228 sks. of Class "B" cement with 3% calcium chloride (269 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.

for Daken Well

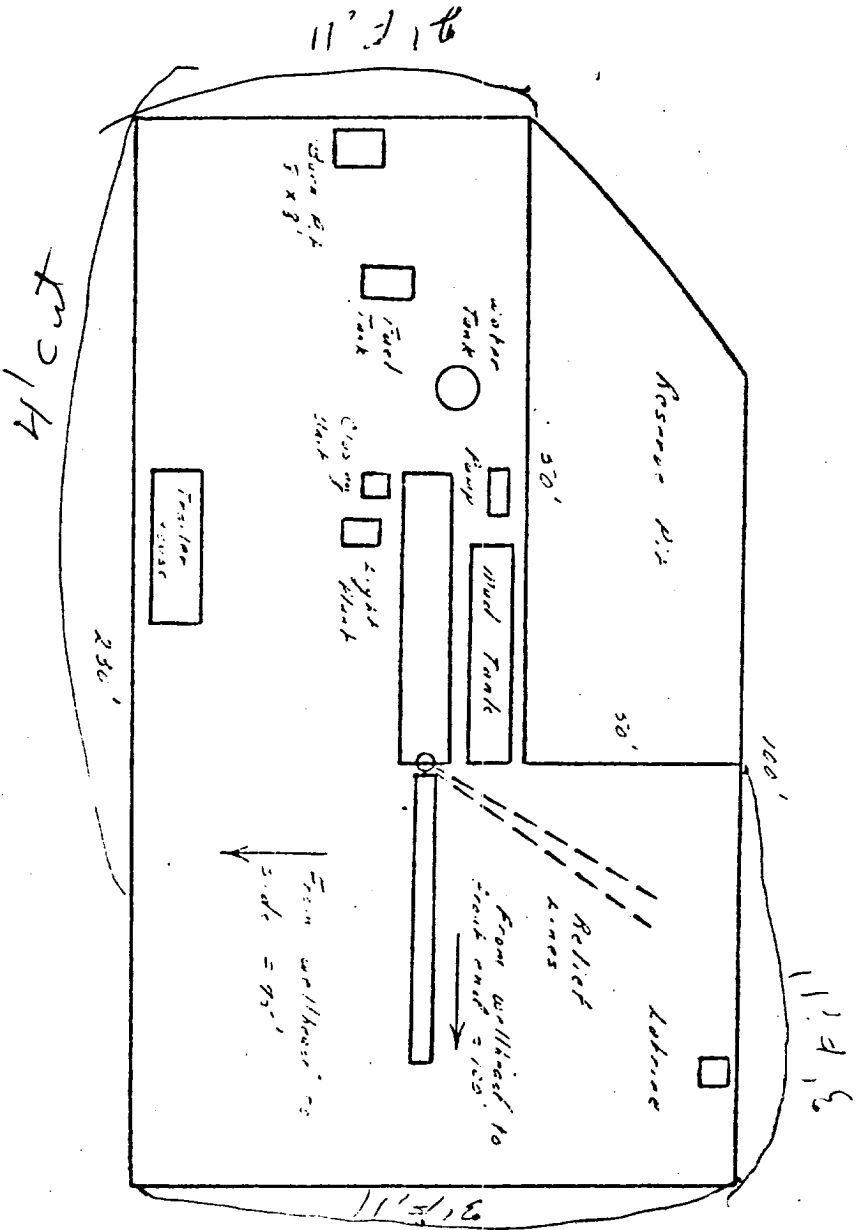


Series 900 Double Gate ROP, rated  
at 3000 psi Working Pressure

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.

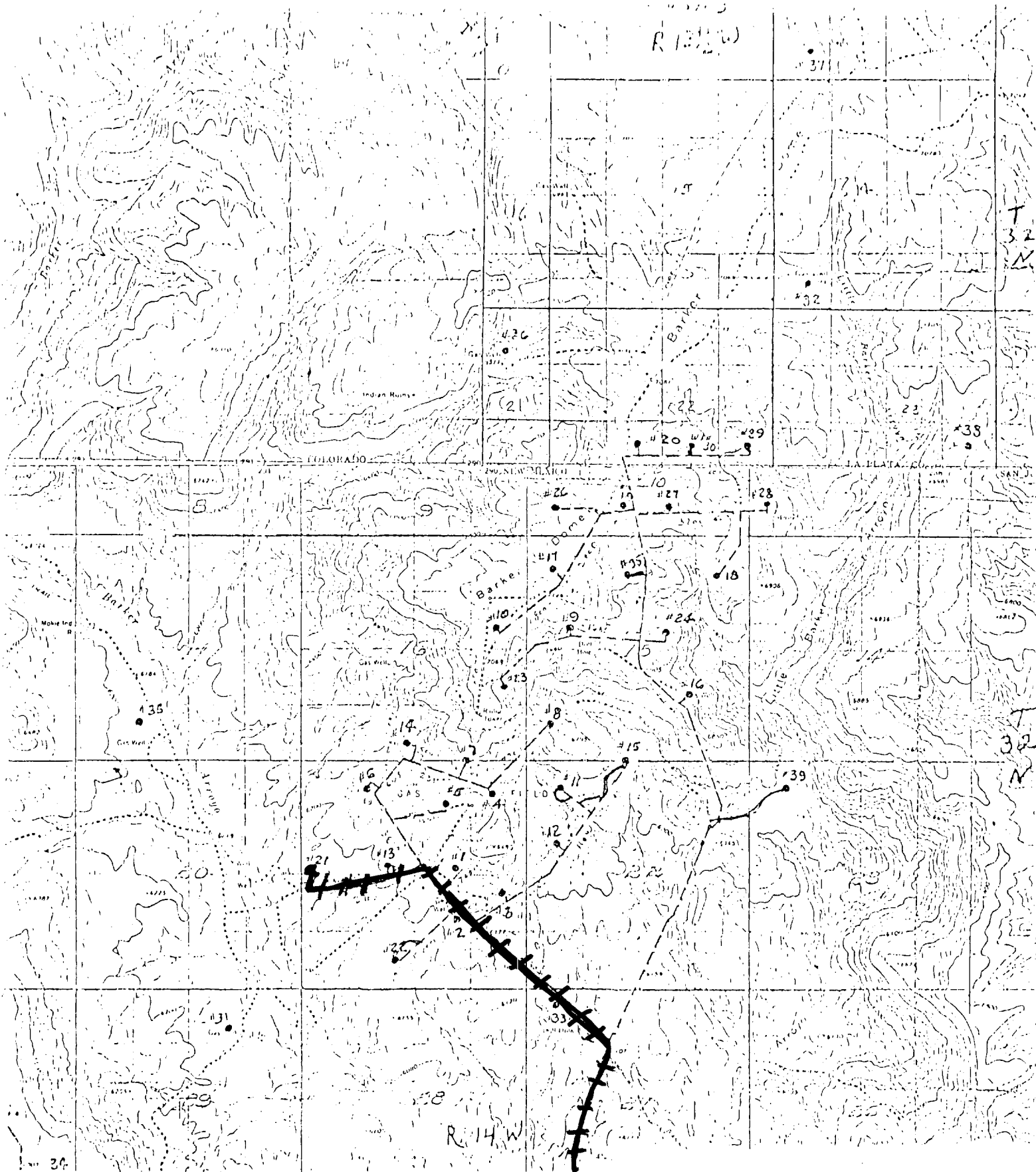
W 1 2)

El Paso Natural Gas Company  
Typical Location Plot for Richard Phillips Well




Scale: 1/2" = 25'





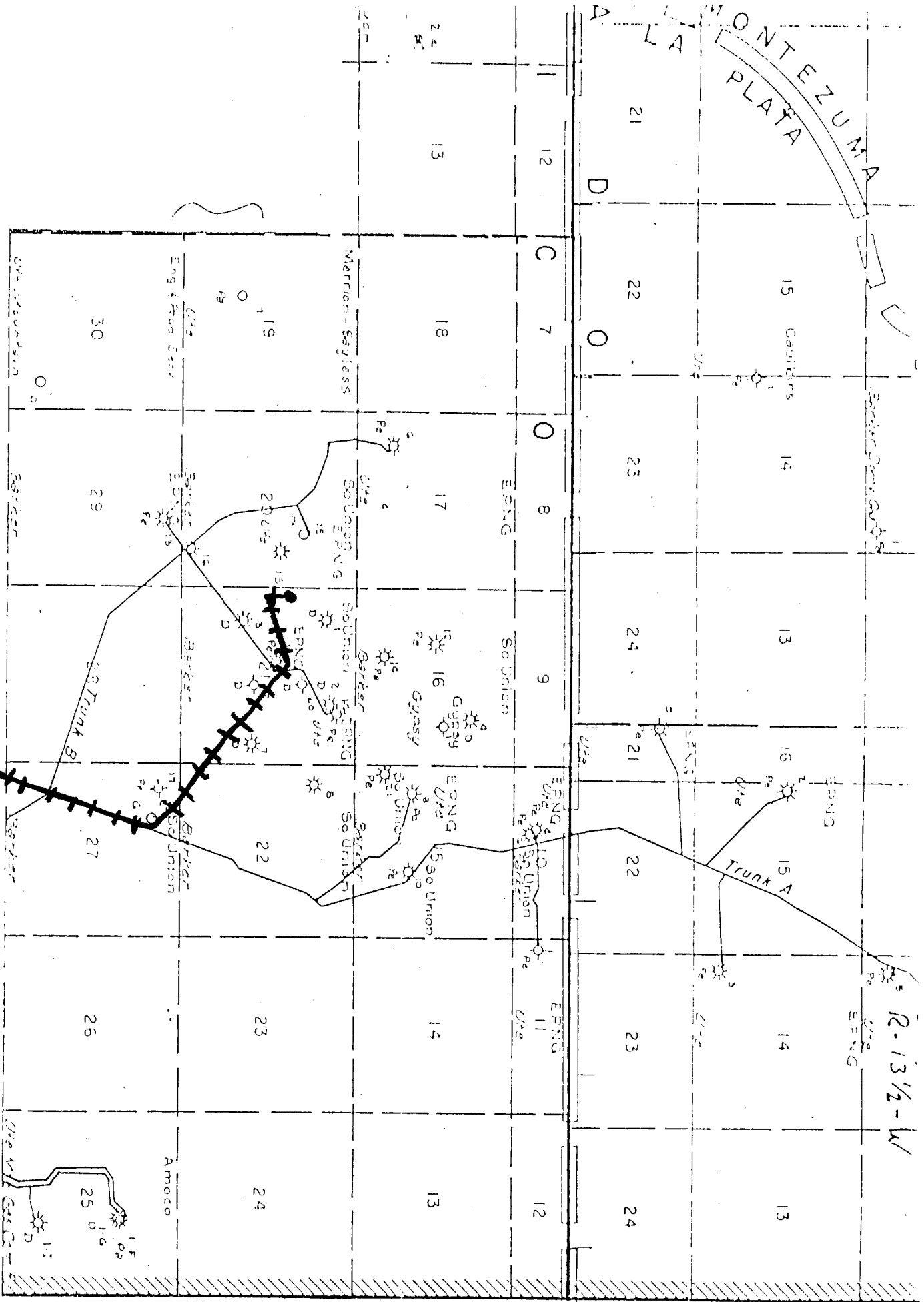
El Paso Natural Gas Company  
 Well Name: WI #21  
 Location: 2268'N, 75'W, Section 21  
 T-32-N, R-14-W, San Juan County, NM

Map #1

Proposed pipeline & road 

T  
32  
N

32  
N



EL PASO NATURAL GAS COMPANY  
Well Name WI #21  
Location 2268'N, 75'W, Section 21, T-32-N,  
R-14-W, San Juan County, NM

MAP #2  
PROPOSED LOCATION  
Proposed pipeline