

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

30-045-23075

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  
 El Paso Natural Gas Company

3. ADDRESS OF OPERATOR  
 PO Box 289, Farmington, NM 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface 1560'S, 800'W  
 At proposed prod. zone. same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 12 miles North of Aztec, NM

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 800'

16. NO. OF ACRES IN LEASE Unit

17. NO. OF ACRES ASSIGNED TO THIS WELL 136.40 ✓

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 400'

19. PROPOSED DEPTH 3345'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6354'GL

22. APPROX. DATE WORK WILL START\*

5. LEASE DESIGNATION AND SERIAL NO.  
 SF 078389A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
 San Juan 32-9 Unit

8. FARM OR LEASE NAME  
 San Juan 32-9 Unit ✓

9. WELL NO.  
 100

10. FIELD AND POOL, OR WILDCAT  
 Blanco Pic.Cliffs Ex

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec.12, T-31-N, R-10-W NMPM

12. COUNTY OR PARISH San Juan

13. STATE NM

23. PROPOSED CASING AND CEMENTING PROGRAM

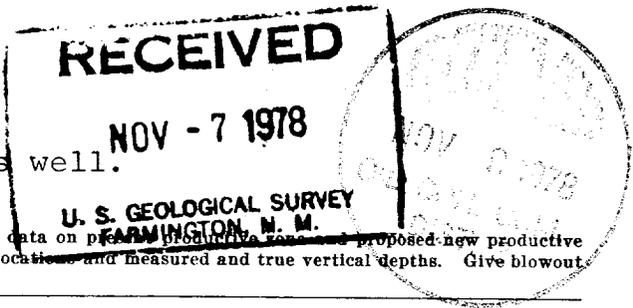
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24.0#	120'	106 cu.ft. to circulate
6 3/4"	2 7/8"	6.4#	3345'	552 cu.ft. to cover Ojo Alam

Selectively perforate and sandwater fracture the Pictured Cliffs formation.

A 3000 psi WP and 6000 psi test double gate preventer equipped with blind and pipe rams will be used for blow out prevention on this well.

This gas is dedicated.

The SW/4 of Section 12 is dedicated to this well.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on 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 A. G. Sisco TITLE Drilling Clerk DATE Nov. 6, 1978

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY :

at End

Write

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.

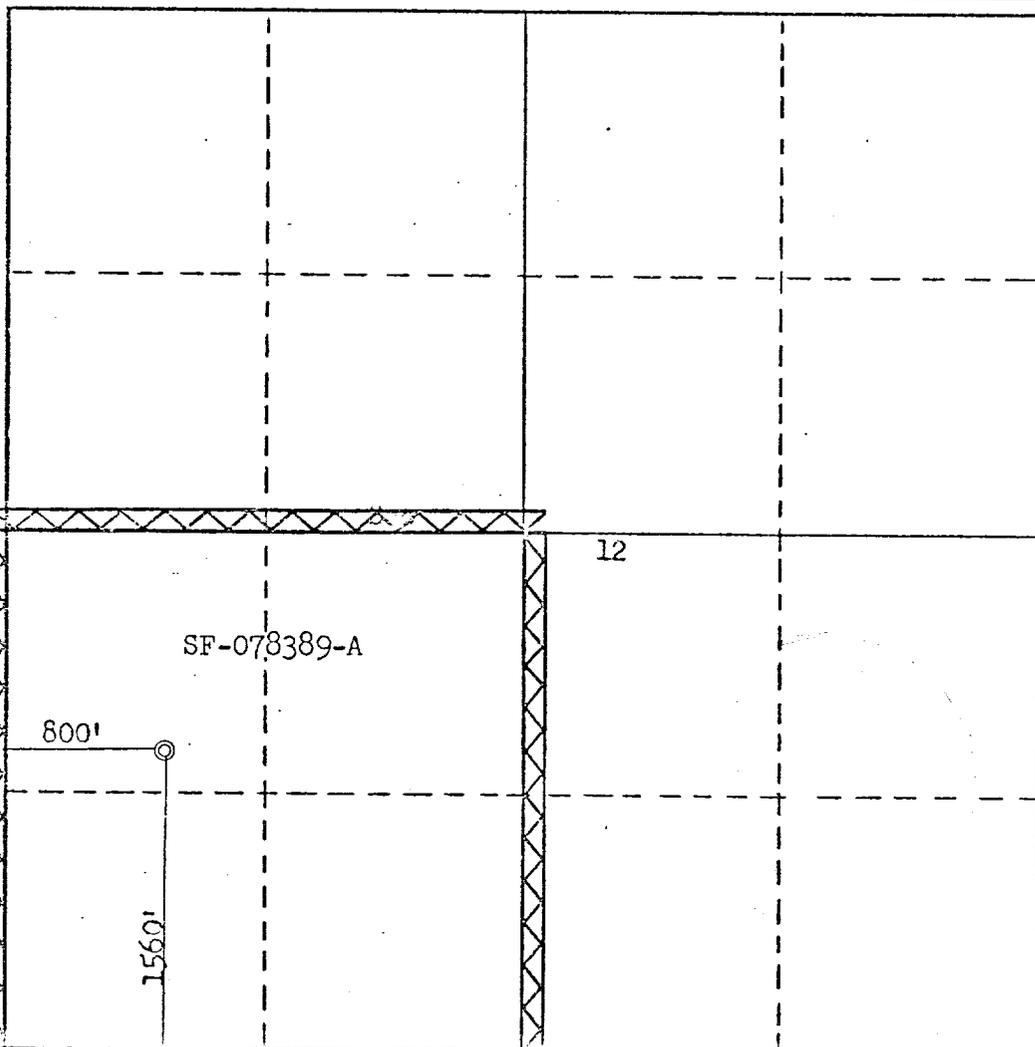
Operator <b>EL PASO NATURAL GAS COMPANY</b>		Lease <b>SAN JUAN 32-9 UNIT (SF-078389-A)</b>		Well No. <b>100</b>
Unit Letter <b>L</b>	Section <b>12</b>	Township <b>31N</b>	Range <b>10W</b>	County <b>San Juan</b>
Actual Footage Location of Well: <b>1560</b> feet from the <b>South</b> line and <b>800</b> feet from the <b>West</b> line				
Ground Level Elev. <b>6354</b>	Producing Formation <b>PICTURED CLIFFS</b>	Pool <b>BLANCO PICTURED CLIFFS EXT.</b>	Dedicated Acreage: <b>136.40</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 Unitization

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.

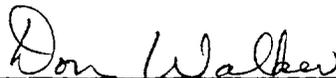


<b>CERTIFICATION</b>	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
<i>A. J. Lucas</i>	
Name	Drilling Clerk
Position	El Paso Natural Gas Co.
Company	November 6, 1978
Date	
I hereby certify that the well location shown on this plat 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	September 12, 1978
Registered Professional Engineer and/or Land Surveyor	
<i>Fred B. Kerr Jr.</i>	
<b>Fred B. Kerr Jr.</b>	
Certificate No.	3950

Multi-Point Surface Use Plan  
San Juan 32-9 Unit #100

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 Map 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 Hart Canyon Water Well.
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,

7. cont'd. 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 as designated by the responsible government agency 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 as designated by the responsible government agency.
11. Other Information - The terrain is sandstone ledges and rolling hills with pinon and cedar growing. Deer are occasionally seen on the proposed project site.
12. Operator's Representative - W.D. Dawson, PO Box 990, Farmington, NM
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.



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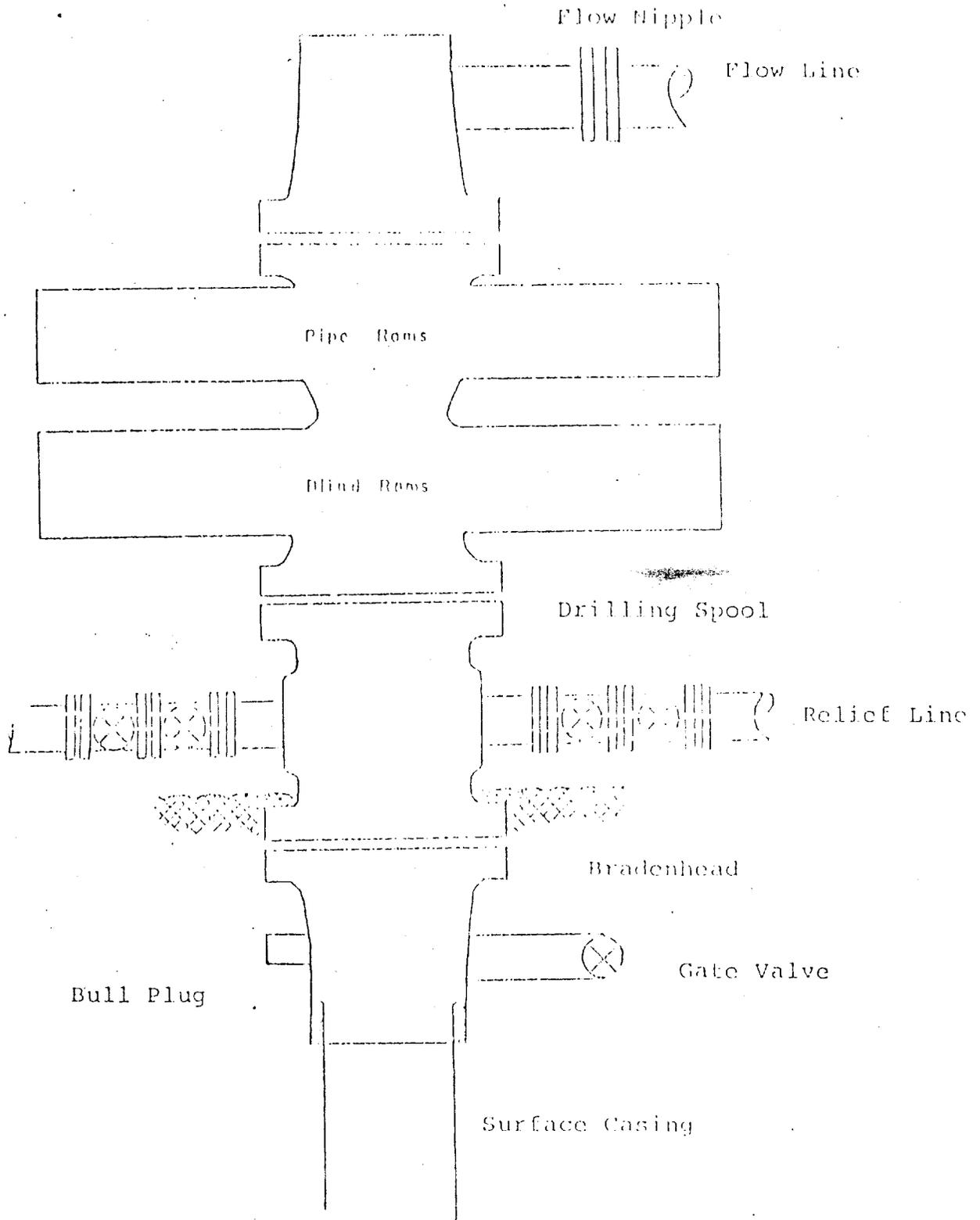
D. C. Walker

Project Drilling Engineer

## Operations Plan - San Juan 32-9 Unit #100

- I. Location: 1560'S, 800'W, Section 12, T-31-N, R-10-W, San Juan County, NM  
Field: Blanco Pictured Cliffs Ext.                      Elevation: 6354'GR
- II. Geology:
- A. Surface Formation: San Jose
- Sub-surface Formation Tops:
- |           |       |                 |       |
|-----------|-------|-----------------|-------|
| Ojo Alamo | 1535' | Pictured Cliffs | 3160' |
| Kirtland  | 1630' | Lewis           | 3305' |
| Fruitland | 2775' | Total Depth     | 3345' |
- B. Logging Program: Induction Electric and Gamma Ray Density at TD.
- C. Coring: none
- D. Testing: none
- III. Drilling:
- A. Anticipated Starting Date and Duration of the Project:  
1979 Drilling Program - approximately 4 days to complete.
- B. Circulating Medium: Treated water and a low solids gel base mud will be used from surface to TD.
- IV. Materials:
- A. Casing Program:
- |  | <u>Hole Size</u> | <u>Depth</u> | <u>Csg.Size</u> | <u>Wt.&amp;Grade</u> |
|--|------------------|--------------|-----------------|----------------------|
|  | 12 1/4"          | 120'         | 8 5/8"          | 24.0# J-55           |
|  | 6 3/4"           | 3345'        | 2 7/8"          | 6.4# J-55            |
- B. Float Equipment: 8 5/8" surface casing - cement guide shoe.  
2 7/8" production casing - 10' shoe joint with notched collar for guide shoe and 2 7/8" latch down baffle on top. Two 3 1/16" balls and one 2 7/8" latch down plug.
- C. Tubing: none
- D. Wellhead Equipment: Larkin wellhead (fig. 75)
- V. Cementing:
- 8 5/8" surface casing - 90 sks. of Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (106 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing wellhead and BOP to 600#/30 minutes.
- 2 7/8" production - 290sks. 65/35 Class "B" Poz with 6% gel, 2% CaCl<sub>2</sub>, and 8.3 gallons water per sack followed by 70 sks. Class "B" neat cement (552cu.ft. slurry, 50% excess to cover Ojo Alamo). Run temperature survey after 12 hrs.

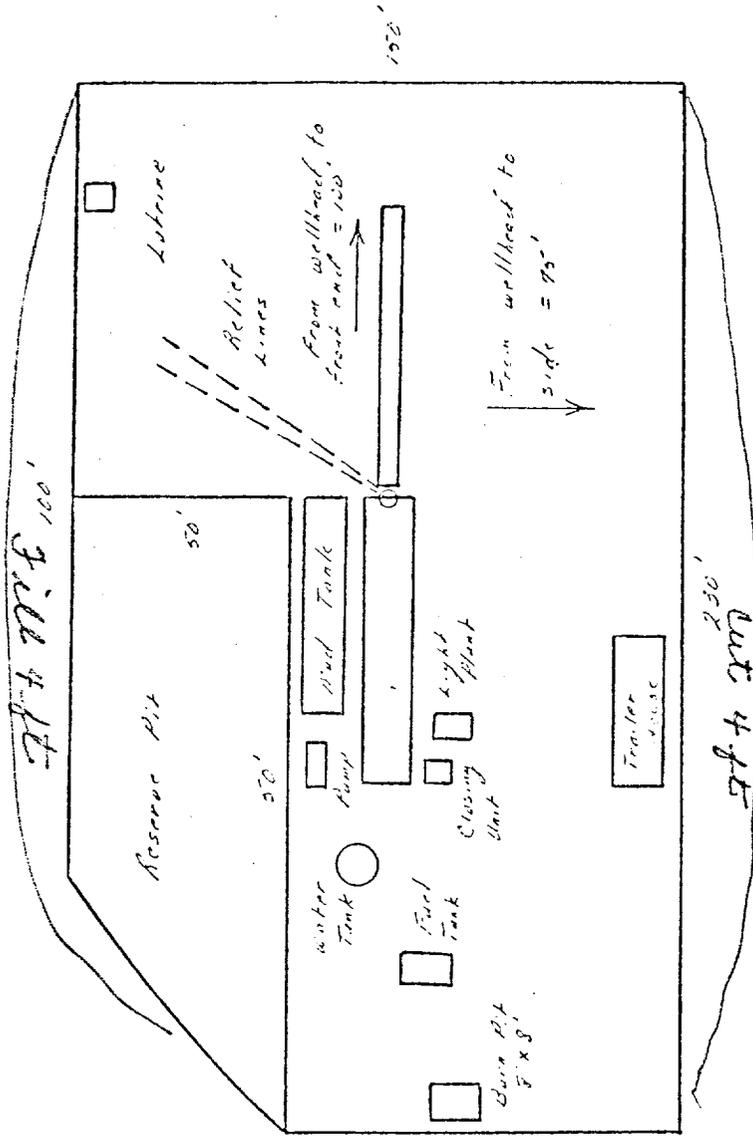
Typical Mud Drilled B.O.P. Installation  
for Pictured Cliffs Well



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

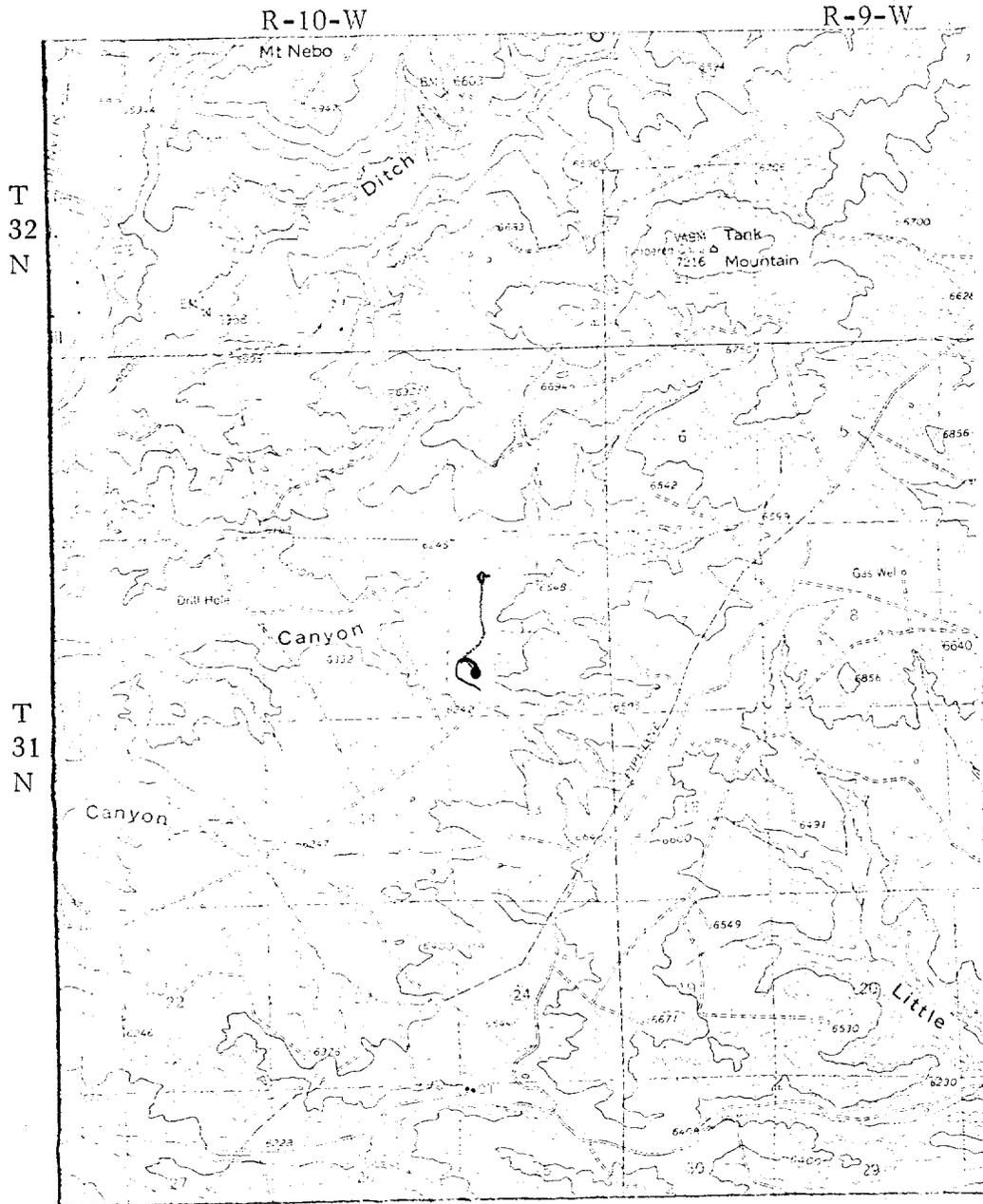
El Paso Natural Gas Company  
 Typical Location Plot for Pictured Chitts Well

Well Name:



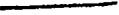
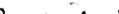
Scale: 1/4" = 20'

EL PASO NATURAL GAS COMPANY  
 San Juan 32-9 Unit #100  
 SW 12-31-10



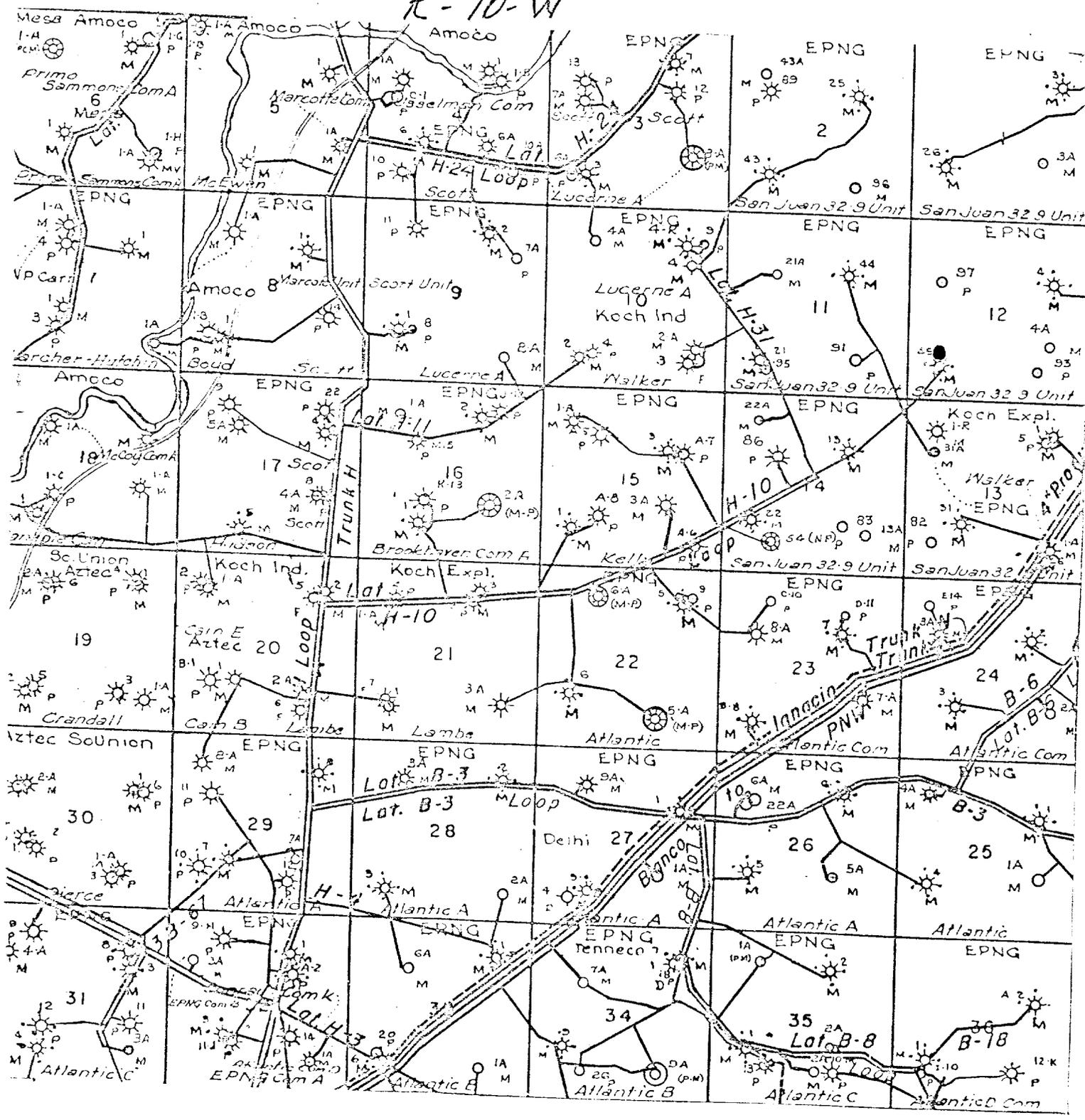
MAP #1

LEGEND OF RIGHT-OF-WAYS

- EXISTING ROADS 
- EXISTING PIPELINES 
- EXISTING ROAD & PIPELINE 
- PROPOSED ROADS 
- PROPOSED PIPELINES 
- PROPOSED ROAD & PIPELINE 

EL PASO NATURAL GAS COMPANY  
San Juan 32-9 Unit #100  
SW 12-31-10

R-10-W



Map #2

Proposed Location ●