

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

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

890'N, 800'E

At proposed prod. zone

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

23 miles SE of Bloomfield, NM

15. DISTANCE FROM PROPOSED*

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

800'

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

200'

16. NO. OF ACRES IN LEASE

Unit

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320.00

19. PROPOSED DEPTH

7602'

20. ROTARY OR CABLE TOOLS

Rotary

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

6606'GR

22. APPROX. DATE WORK WILL START*

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13 3/4"	9 5/8"	32.3#	200'	224 cu.ft. circulated
8 3/4"	7"	20.0#	3352'	264 cu.ft. to cover Ojo Alam
6 1/4"	4 1/2"	10.5#&11.6#	7602'	664 cu.ft. to fill to intermediate

Selectively perforate and sandwater fracture the Dakota 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 E/2 of Section 18 is dedicated to this well.



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

Drilling Clerk

DATE

March 1, 1978

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

SF

*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 EL PASO NATURAL GAS COMPANY		Lease SAN JUAN 28-7 UNIT (SF-078840)		Well No. 113
Unit Letter A	Section 18	Township 27-N	Range 7-W	County RIO ARriba
Actual Footage Location of Well: 890 feet from the NORTH line and 800 feet from the EAST line				
Ground Level Elev. 6606	Producing Formation DAKOTA	Pool BASIN DAKOTA	Dedicated Acreage: 320.00 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.

	<p align="center">CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>M. G. Lewis</i></p> <p>Name Drilling Clerk</p> <p>Position El Paso Natural Gas Co.</p> <p>Company March 1, 1978</p> <p>Date</p>
	<p>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.</p> <p>Date Surveyed AUGUST 11, 1974</p> <p>Registered Professional Engineer and/or Land Surveyor <i>David M. Lewis</i></p> <p>Certificate No. 1760</p>

Multi-Point Surface Use Plan
San Juan 28-7 Unit #113

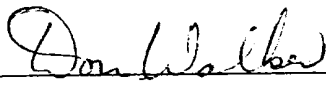
1. Existing Road - Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map. All existing and new roads will be properly maintained during the duration of this project.
 2. Planned Access Roads - Please refer to Map No. 1. The grade of the 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 a water hole located Gould Pass 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 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 #1 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 sage gray (Federal Standard #595-36357)
 11. Other Information - The terrain is rolling hills and sagebrush flats. Cattle graze the proposed project site.
-

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.

March 1, 1978



D. C. Walker
Project Drilling Engineer

DCW:pb

March 1, 1978

Operations Plan
San Juan 28-7 Unit #113

I. Location: 890'N, 800'E, Section 18, T-27-N, R-7-W, Rio Arriba County, NM

Field: Basin Dakota

Elevation: 6606'GL

II. Geology:

A. Formation Tops:	Surface	San Jose	Menefee	4782'
	Ojo Alamo	2185'	Point Lookout	5270'
	Kirtland	2295'	Gallup	6440'
	Fruitland	2771'	Greenhorn	7212'
	Pic.Cliffs	3030'	Graneros	7276'
	Lewis	3152'	Dakota	7397'
	Mesa Verde	4687'	Total Depth	7602'

B. Logging Program: GR-Ind. and GR-Density at Total Depth.

C. Coring Program: none

D. Natural Gauges: 5270', 6440', 7276', 7397' and at Total Depth.
Also gauge any noticeable increase in gas. Record all gauges in daily drilling report and on morning report.

III. Drilling:

A. Mud Program: mud from surface to 3352'. Gas from intermediate casing to Total Depth.

IV. Materials:

A. Casing Program:	<u>Hole Size</u>	<u>Depth</u>	<u>Casing Size</u>	<u>Wt.&Grade</u>
	13 3/4"	200'	9 5/8"	32.3# H-40
	8 3/4"	3352'	7"	20.0# K-55
	6 1/4"	6500'	4 1/2"	10.5# K-55
	6 1/4"	7602'	4 1/2"	11.6# K-55

B. Float Equipment: 9 5/8" surface casing - Pathfinder guide shoe (Part No. 2006-1-012).

7" intermediate casing - Pathfinder guide shoe (Part No. 1003-1-007) and Pathfinder self-fill insert float valve (Part No. 2010-6-007), 5 Pathfinder stabilizers (Part No. 107-10) every other joint above shoe. Run float two joints above shoe.

4 1/2" production casing - Larkin geyser shoe (fig. 222) and Larkin flapper type float collar (fig. 404 M&F)

C. Tubing: 7602' of 1 1/2", 2.9#, J-55 10rd EUE tubing with a common pump seating nipple above perforated pup joint with bull plugged full joint for mud anchor on bottom.

D. Wellhead Equipment: 3000 psi test tree. Wellhead representative to set all slips and cut off casing.

V. Cementing:

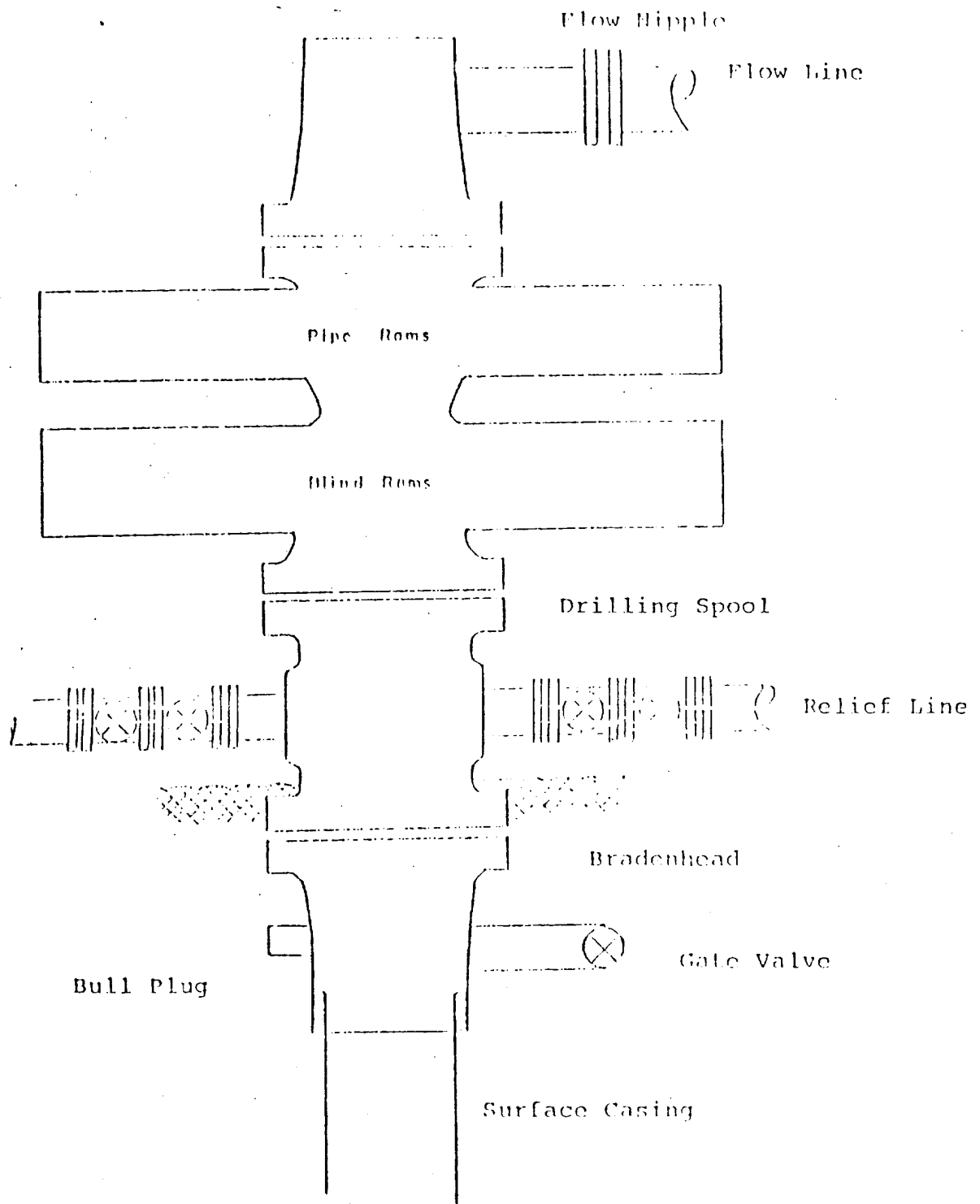
9 5/8" surface casing - use 190 sks. of Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (224 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600#/30 minutes.

7" intermediate casing - use 90 sks. of 65/35 Class "B" Poz with 6% gel and 2% calcium chloride (8.3 gallons of water per sack) followed by 100 sks. of Class "B" with 2% calcium chloride (264 cu.ft. of slurry, 50% excess to cover Ojo Alamo). Run temperature survey at 8 hours. WOC 12 hours. Test casing to 1200#/30 minutes.

4 1/2" production casing - precede cement with 40 bbls. of gel water (4 sks. gel) cement with 260 sks. of Class "B" with 8% gel, 1/4 cu.ft. fine gilsonite per sack and 0.4% HR-7, followed by 100 sks. of Class "B" with 1/4# fine tuf-plug per sack and 0.4% HR-7 (664 cu.ft. of slurry, 50% excess to fill to intermediate casing). Run temperature survey at 8 hours. WOC 18 hours.

DCW:pb

Typical B.O.P. Installation
for Dakota Well



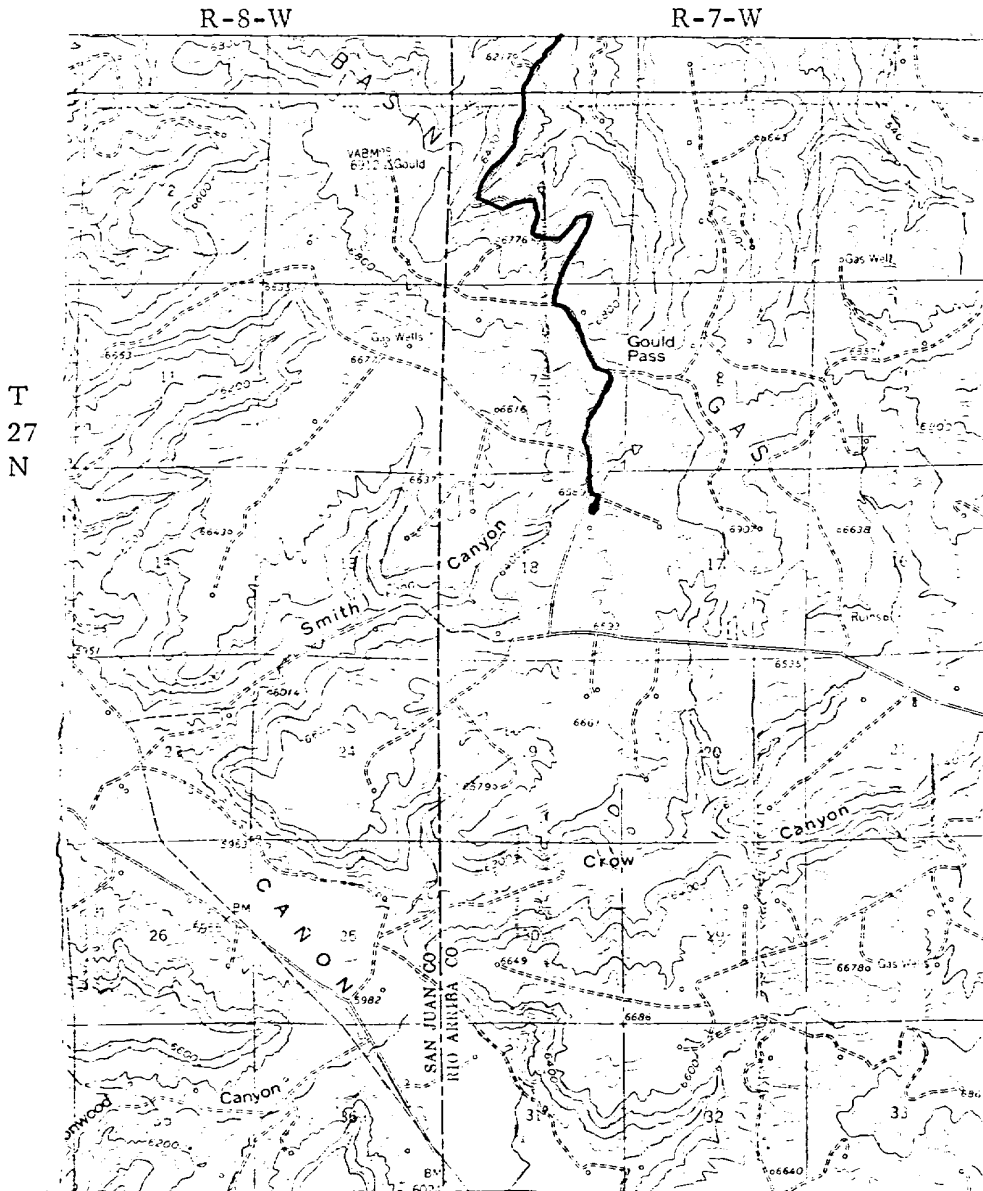
Series 900 Double Gate BOP, rated
at 3000 psi Working Pressure

When gas drilling 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.

EL PASO NATURAL GAS COMPANY

San Juan 28-7 Unit #113

NENE 18-27-7



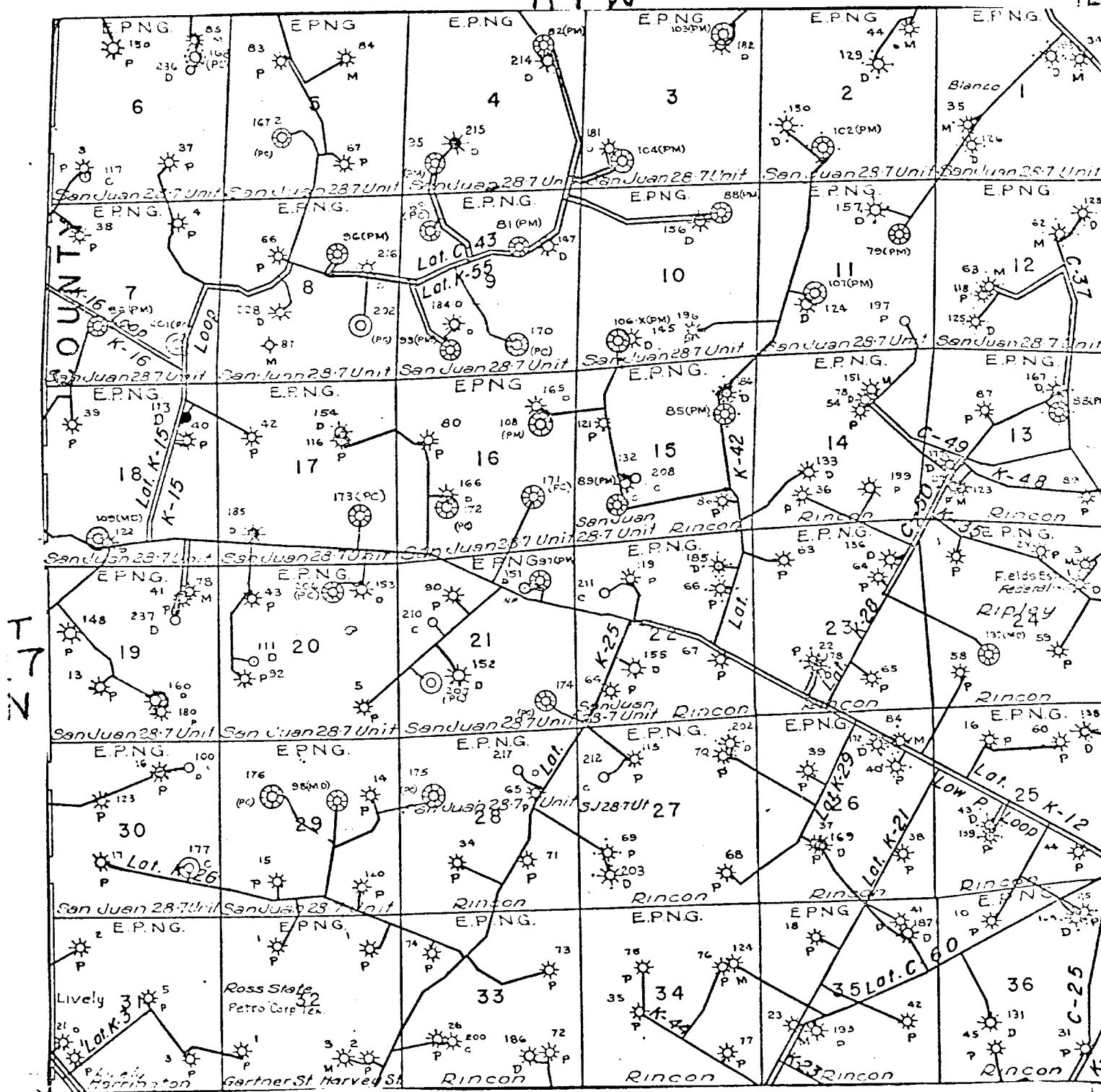
MAP #1

LEGEND OF RIGHT-OF-WAYS

EXISTING ROADS	—————
EXISTING PIPELINES	+ + +
EXISTING ROAD & PIPELINE	+ + +
PROPOSED ROADS	—————
PROPOSED PIPELINES	+ + +
PROPOSED ROAD & PIPELINE	+ + +

NENE 18-27-7

R 7 W



MAP #2
Proposed Location

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)Form approved.
Budget Bureau No. 42-R4424.
5. LEASE DESIGNATION AND SERIAL NO.

SF 078840

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. WELL TYPE OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	7. UNIT AGREEMENT NAME San Juan 28-7 Unit
2. NAME OF OPERATOR El Paso Natural Gas Company	8. FARM OR LEASE NAME San Juan 28-7 Unit
3. ADDRESS OF OPERATOR Box 990, Farmington, New Mexico 87401	9. WELL NO. 113
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 890'N, 800'E	10. FIELD AND POOL, OR WILDCAT Basin Dakota
14. PERMIT NO.	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 18, T-27-N, R-7-W N. M. P. M.
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 6606' GL	12. COUNTY OR PARISH Rio Arriba
	13. STATE New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input checked="" type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) <input type="checkbox"/>	

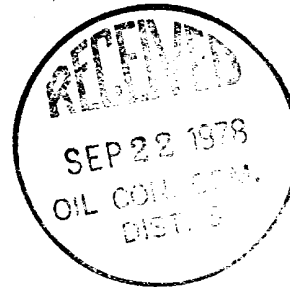
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

This well will be mud drilled from surface to Total Depth.

Hole Size	Casing Size	Wt. /Ft.	Setting Depth	Cement Quantity
13 3/4"	7 5/8"	32.3#	200'	224 Cu. ft. to circulate
8 3/4 & 7 7/8"	4 1/2"	10.5 & 11.6#	7602'	1399 Cu. ft. - 3 Stages

1st Stage - 331 Cu. ft. to cover Gallup
2nd Stage - 545 Cu. ft. to cover Mesa Verde.
3rd Stage - 523 Cu. ft. to cover Ojo Alamo.



18. I hereby certify that the foregoing is true and correct

SIGNED N. P. BuscoTITLE Drilling ClerkDATE 9-20-78

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

SEP 21 1978

*See Instructions on Reverse Side

U. S. GEOLOGICAL SURVEY
DURANGO, COLO.

September 20, 1978

Operations Plan
San Juan 28-7 Unit #113

I. Location: 890'N, 800'E, Section 18, T-27-N, R-7-W, Rio Arriba County, N. M.

Field: Basin Dakota

Elevation: 6606' GL

II. Geology:

A. Formation Tops:	Surface	San Jose	Menefee	4782'
	Ojo Alamo	2185'	Point Lookout	5270'
	Kirtland	2295'	Gallup	6440'
	Fruitland	2771'	Greenhorn	7212'
	Pictured Cliffs	3030'	Graneros	7226'
	Lewis	3152'	Dakota	7397'
	Mesa Verde	4687'	Total Depth	7602'

B. Logging Program: Induction Electric and Gamma Ray Density at T. D.

C. Coring: None

D. Samples: None

III. Drilling:

A. Mud Program: Mud from Surface to Total Depth.

IV. Materials

A. Casing Program:	<u>Hole Size</u>	<u>Depth</u>	<u>Casing Size</u>	<u>Wt. & Grade</u>
	13 3/4"	200'	9 5/8"	32.3# H-40
	8 3/4"	5970'	4 1/2"	10.5# J-55
	7 7/8"	6500'	4 1/2"	10.5# J-55
	7 7/8"	7602'	4 1/2"	11.6# J-55

B. Float Equipment: 9 5/8" Surface casing - Pathfinder guide shoe (Part #2006-1-010)

4 1/2" Production Casing - Howco guide shoe (Prod. No. 102-1) and self-fill insert valve (Prod. No. 177-13). Two Howco multiple stage cementers (Prod. #200-03) equipped for three stage cementing. Set tool for second stage at 5870' and tool for third stage at 3250'. Run 20 Howco centralizers (Prod. No. 200-03) spaced as follows: One on each of the bottom 8 joints, one below each stage tool and five above each stage tool spaced every other joint.

C. Tubing: 7602' of 2 3/8", 4.7#, J-55 tubing with a common pump seating nipple and an expendable check valve with drill type guide.

D. Wellhead Equipment: 10" 3000 x 9 5/8" WKM Brewster Type R casing head with 10" x 4 1/2" Type SA casing hanger, 10" 3000 x 6" 3000 Brewster Xmas tree (Drawing #1-004-78). Wellhead representative to set all slips.

V. Cementing:

Surface Casing (13 3/4" x 9 5/8") - Use 190 sacks of Class "B" cement w/1/4# gel-flake per sack and 3% calcium chloride (224 cu. ft. of slurry, 100% excess to circulate) W.O.C. 12 hours. Test to 600#/30 Min.

Production Casing -

First stage (4 1/2" x 7 7/8") - Use 126 sks. of 65/35 Class "B" Pozmix w/6% gel and 2% calcium chloride mixed with 8.3 gallons water/sk. followed by 100 sacks 50/50 Class "B" Pozmix with 2% gel, 2% calcium chloride and 1/4# fine tuf-plug per cu. ft. (331 cu. ft. of slurry, 25% excess to cover the Gallup).

Second Stage (4 1/2" x 8 3/4") = Circulate mud for 2 hours then cement with 336 sacks of 65/35 Class "B" Pozmix with 6% gel and 2% calcium chloride and 8.3 gallons of water per sack (545 cu. ft. of slurry, 50% excess to cover the Mesa Verde).

Third Stage (4 1/2" x 8 3/4") - Circulate mud for 2 hours, then cement using 323 sacks 65/35 Class "B" Pozmix with 6% gel and 2% calcium chloride mixed with 8.3 gallons water per sack (523cu. ft. of slurry, 60% excess to cover the Ojo Alamo). Run temperature survey on top stage only at 8 hours. W.O.C. 18 hours.