

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 289, Farmington, NM 87401

## 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*

At surface

910'S, 1640'E

At proposed prod. zone

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

4.5 miles southwest of Gobernador, NM

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

910'

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

2300'

## 16. NO. OF ACRES IN LEASE

unit

## 19. PROPOSED DEPTH

6165'

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

160 E 320.00

## 20. ROTARY OR CABLE TOOLS

Rotary

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

6539'GL

## 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"	36.0#	200'	224 cu.ft. to circulate
8 3/4"	7"	20.0#	3920'	209 cu.ft. to cover Ojo Alamo
6 1/4"	4 1/2" liner	10.5#	3770-6165'	418 cu.ft. to circ. liner

Selectively perforate and sandwater fracture the Pictured Cliffs and Mesa Verde 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.

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The E/2 of Section 15 is dedicated to this well.

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IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and 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

*D. G. Buice*

TITLE

Drilling Clerk

DATE

10-18-79

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*ok Frank*

\*See Instructions On Reverse Side

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

Operator EL PASO NATURAL GAS COMPANY			Lease SAN JUAN 28-6 UNIT (SF-079192)		Well No. 46A
Unit Letter 0	Section 15	Township 28N	Range 6W	County Rio Arriba	
Actual Footage Location of Well: 960 feet from the South line and 1640 feet from the East line					
Ground Level Elev. 6684	Producing Formation MESA VERDE PICTURED CLIFFS		Pool BLANCO MESA VERDE SO. BLANCO PICTURED CLIFFS EXT.	Dedicated Acreage: 160.0 & 320.0 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?  
X

☐ 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"><b>CERTIFICATION</b></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>D. H. Brisco</i></p>	
		<p>Name _____</p> <p>Drilling Clerk _____</p> <p>Position _____</p> <p>El Paso Natural Gas Co. _____</p> <p>Company _____</p> <p>October 18, 1979 _____</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 _____</p> <p>August 3, 1979 _____</p>	
		<p>Registered Professional Engineer and/or Land Surveyor _____</p> <p><i>Fred B. Kerr Jr.</i></p> <p>Certificate No. _____</p>	

Multi-Point Surface Use Plan

San Juan 28-6 Unit #46A

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 28-6 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,

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October 18, 1979

Operations Plan  
San Juan 28-6 Unit #46A

I. Location: 960'S, 1640'E, Section 15, T-28-N, R-6-W, Rio Arriba County, NM

Field: So. Blanco PC Ext. & Blanco MV

Elevation: 6684'

II. Geology:

A. Formation Tops:	Surface	San Jose	Lewis	3920'
	Ojo Alamo	2695'	Mesa Verde	5215'
	Kirtland	2865'	Menefee	5345'
	Fruitland	3200'	Point Lookout	5715'
	Pic. Cliffs	3540'	Total Depth	6165'

B. Logging Program: I-ES and GR-Density at 3920'.  
GR-Ind. and GR-Density at Total Depth.

C. Coring Program: none

D. Natural Gauges: 5205', 5335', 5705' 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 3920'. Gas from intermediate casing to Total Depth.

IV. Materials:

A. Casing Program:	Hole Size	Depth	Casing Size	Wt. & Grade
	13 3/4"	200'	9 5/8"	36.0# K-55
	8 3/4"	3920'	7"	20.0# K-55
	6 1/4"	3770-6165'	4 1/2"	10.5# K-55

B. Float Equipment: 9 5/8" surface casing - cement guide shoe.

7" intermediate casing - cement guide shoe and self-fill insert float valve, 5 stabilizers every other joint above shoe. Run float two joints above shoe.

4 1/2" liner - 4 1/2" liner hanger with neoprene packoff w/PBR. Geyser shoe and flapper type float collar

C. Tubing: 6165' of 2 3/8", 4.7#, J-55 8rd EUE tubing with a common pump seating nipple one joint above bottom. Tubing will be open ended.  
3720' of 1 1/4", 2.33#, J-55 IJ tubing with a common pump seating nipple above a perforated joint plugged on bottom. Isolate producing formations with a packer.

D. Wellhead Equipment: 10' 900 x 9 5/8" casing head. 10" x 7" casing hanger, 10" 2000 x 6" 2000 dual tubing head.

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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.

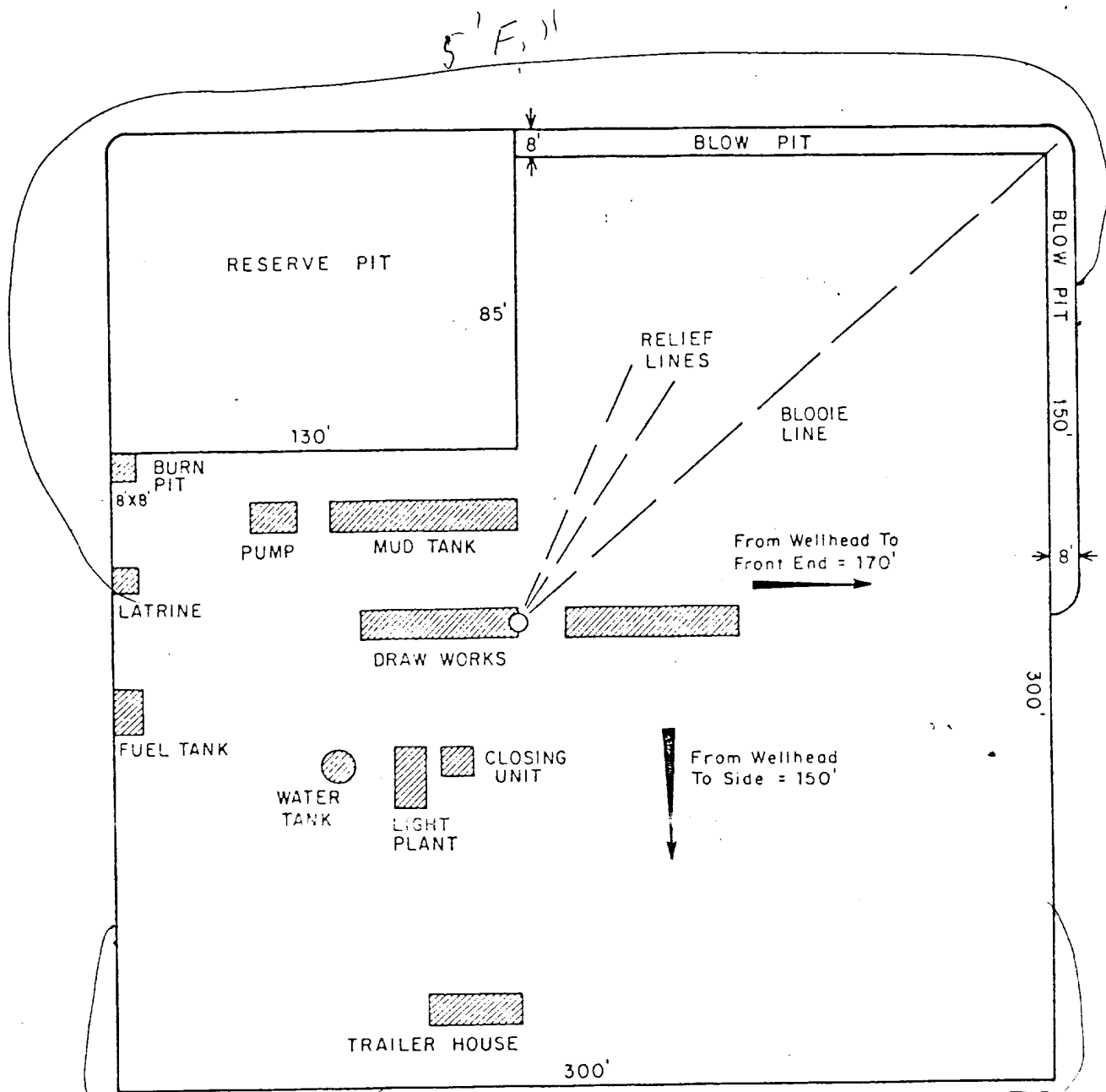
7" intermediate casing - use 56 sks. of 65/35 Class "B" Poz with 6% gel and 2% calcium chloride (8.3 gallons of water per sack) followed by 100 sks. of Class "B" with 2% calcium chloride (209 cu.ft. of slurry, 50% excess to cover Ojo Alamo). Run temperature survey at 8 hours. WOC 12 hours. Test casing to 1200#/30 minutes.

4 1/2" liner - precede cement with 20 barrels of gel water (2 sks. gel) Cement with 301sks. of 50/50 Class "B" Poz with 2% gel, 0.6% Halad-9, 6.25# gilsonite plus 1/4# Flocele per sack (418 cu.ft. of slurry, 70% excess to circulate liner). WOC 18 hours.

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8' cut

6' cut

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TYPICAL LOCATION PLAT FOR  
MESAVERDE OR DAKOTA DRILL SITE

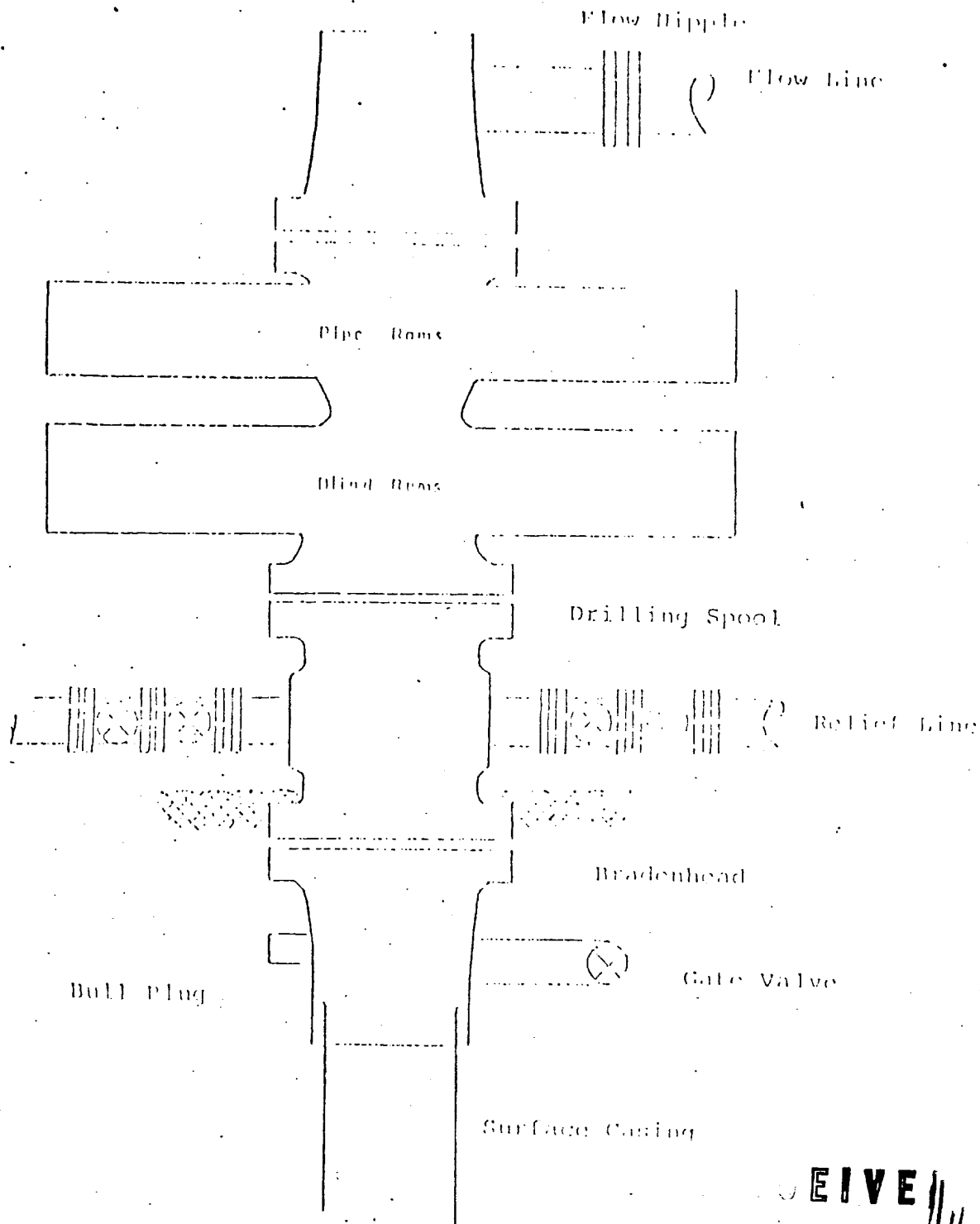
SCALE: 1" = 50'

DWG.  
NO.

RE

ENG. REC.					DATE
DRAWN	J.L.H.	8-16-78			
CHECKED					
CHECKED					
PROJ. APP.					
DESIGN					
PRT.	SEP.	DATE	TO	W.O.	
PRINT RECORD					W.O.

Typical Blowout Installation  
for Mesa Verde Well



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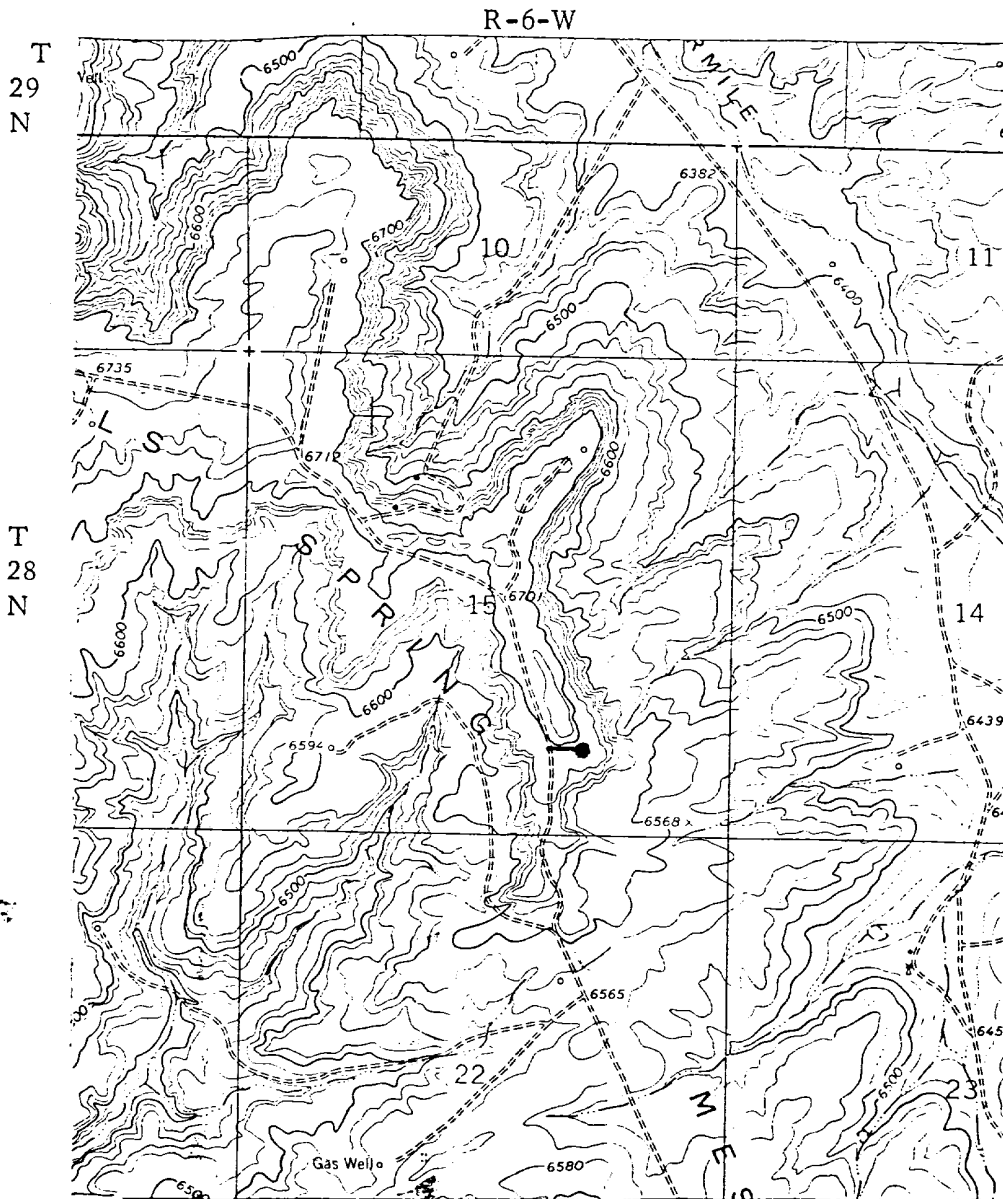
Series 900 Double Gate BOP, rated  
at 3000 psi Working Pressure

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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



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San Juan 28-6 Unit #46A  
SE 15-28-6



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DENVER, COLO.

LEGEND OF RIGHT-OF-WAYS

EXISTING ROADS

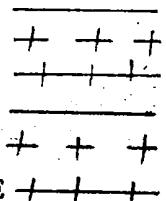
EXISTING PIPELINES

EXISTING ROAD & PIPELINE

PROPOSED ROADS

PROPOSED PIPELINES

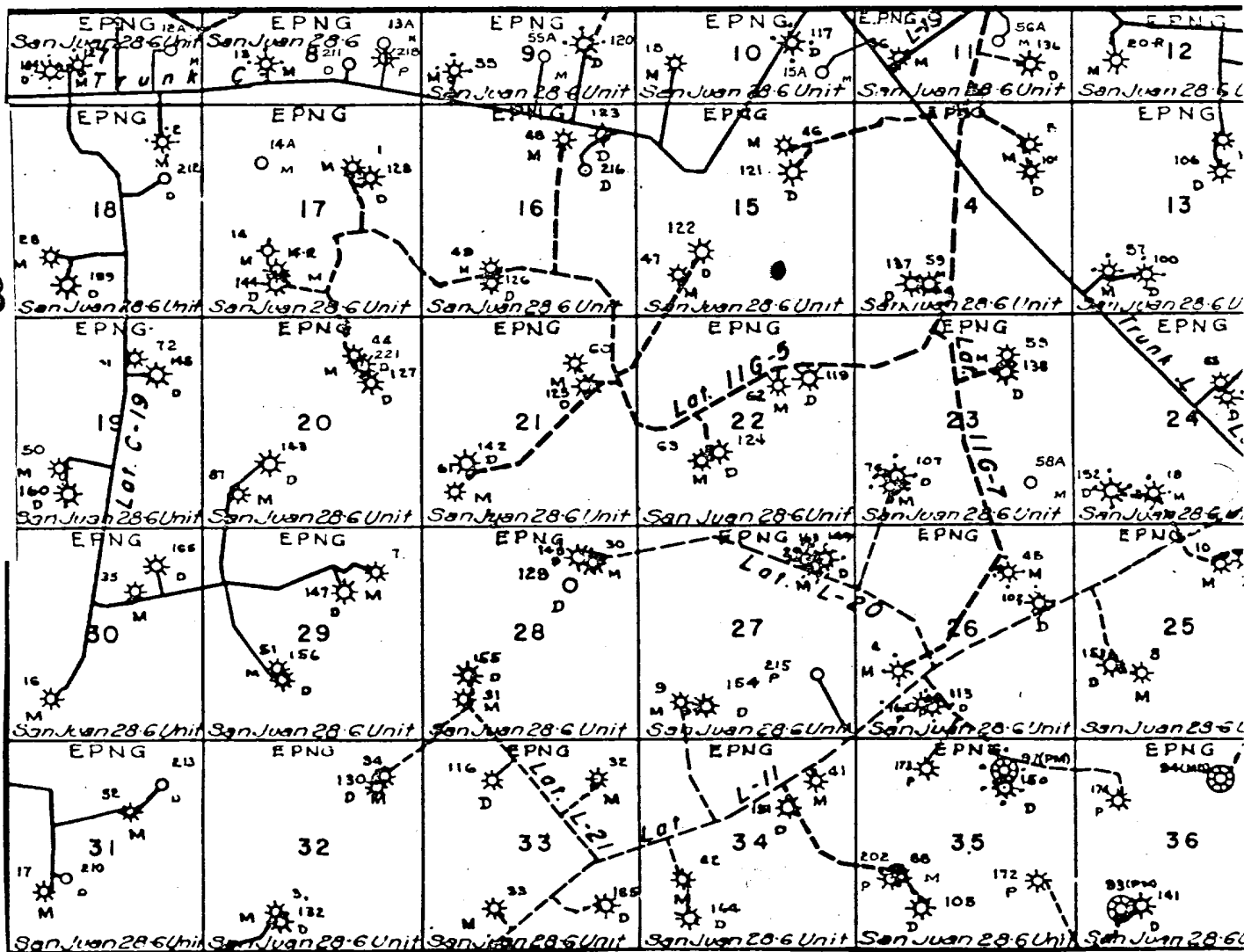
PROPOSED ROAD & PIPELINE



El Paso Natural Gas Company  
San Juan 28-6 Unit #46A  
SE 15-28-6

R-6-W

T  
28  
N



MAP 2

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Proposed Location

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