

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

30-039-22276

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

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. SF 078424	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR El Paso Natural Gas Company		7. UNIT AGREEMENT NAME San Juan 29-7 Unit	
3. ADDRESS OF OPERATOR PO Box 289, Farmington, NM 87401		8. FARM OR LEASE NAME San Juan 29-7 Unit	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 1570'N, 930'W At proposed prod. zone same		9. WELL NO. 51A (MD)	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 2.5 miles west of Navajo City, NM		10. FIELD AND POOL, OR WILDCAT Blanco Mesa Verde Basin Dakota	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 930'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 21, T-29-N, R-7-W NMPM	
16. NO. OF ACRES IN LEASE unit		12. COUNTY OR PARISH 13. STATE Rio Arriba NM	
17. NO. OF ACRES ASSIGNED TO THIS WELL w/ 320.0		18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2000'	
19. PROPOSED DEPTH 7915'		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6638'GL		22. APPROX. DATE WORK WILL START*	

PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48.0#	200'	278 cu.ft. circ. to surface
12 1/4"	9 5/8"	40.0#	3750'	571 cu.ft. to cover Ojo Alamo
8 3/4"	7"	23.0#	3600-6190'	667 cu.ft. to circ. liner
6 1/4"	4 1/2"	11.6#	6040-7915'	336 cu.ft. to circ. liner

Selectively perforate and sandwater fracture the Mesa Verde and 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 W/2 of Section 21 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 A. G. Lucio TITLE Drilling Clerk DATE 12-3-79  
(This space for Federal or State office use)

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

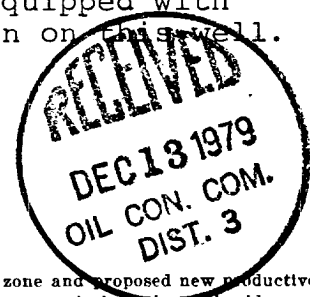
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

ck Smith

\*See Instructions On Reverse Side

DEC 10 1979

G. GEOLOGICAL SURVEY  
SANGRE DE CRISTO, COLO.



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

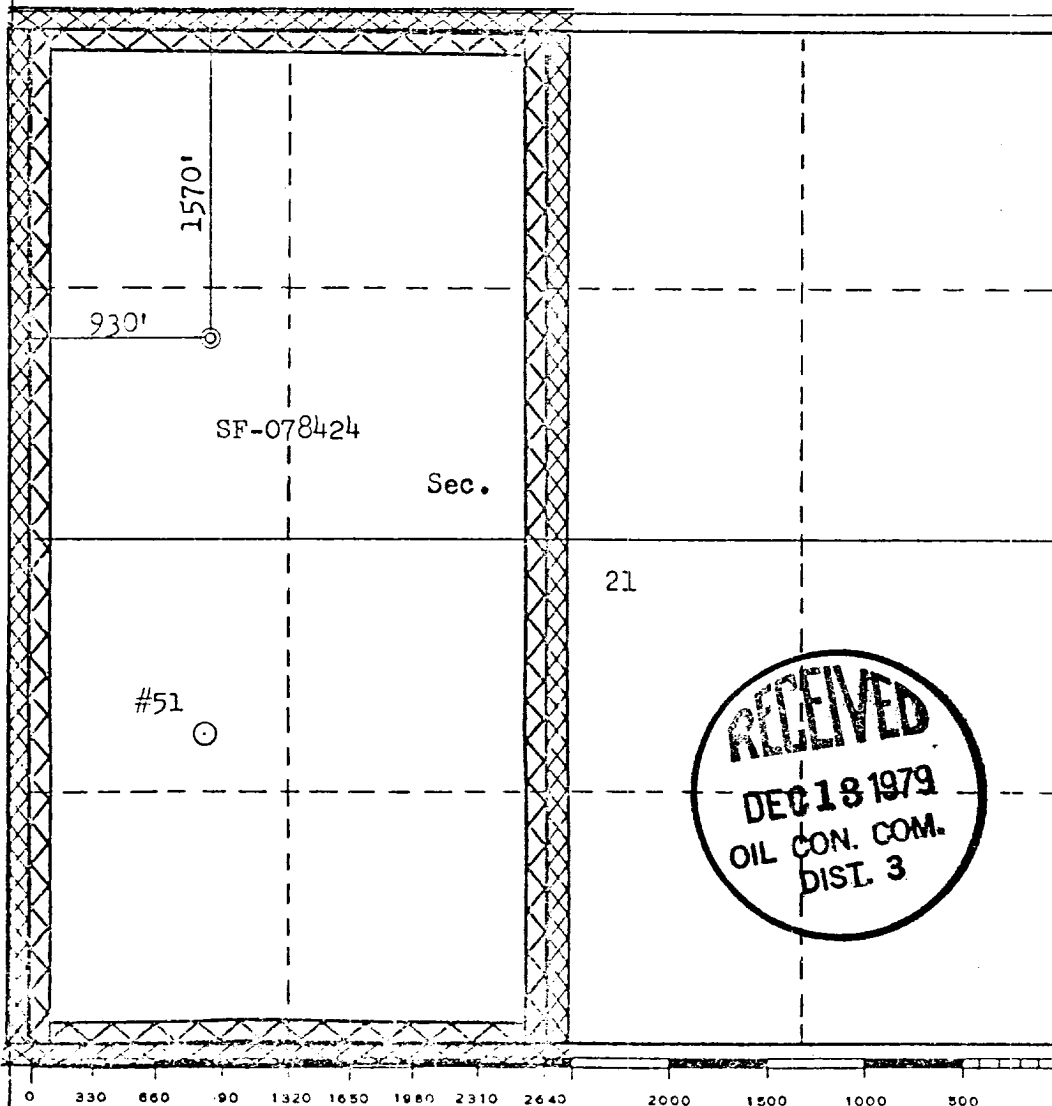
Operator <b>EL PASO NATURAL GAS COMPANY</b>			Lease <b>SAN JUAN 29-7 UNIT (SF-078424)</b>		Well No. <b>51A</b>
Unit Letter <b>E</b>	Section <b>21</b>	Township <b>29N</b>	Range <b>7W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well:					
<b>1570</b> feet from the <b>North</b> line and		<b>930</b> feet from the <b>West</b> line			
Ground Level Elev. <b>6638</b>	Producing Formation <b>Mesa Verde - Dakota</b>	Pool <b>Blanco Mesa Verde Basin Dakota</b>	Dedicated Acreage: <b>320.0 &amp; 320.0</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.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*A. G. Sisco*

Name **Drilling Clerk**

Position **El Paso Natural Gas Co**

Company **December 3, 1979**

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

**August 7, 1979**

Registered Professional Engineer and/or Land Surveyor

*Fred. A. Kern Jr.*

Certificate No.

**3950**



Multi-Point Surface Use Plan

San Juan 29-7 Unit #51A

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 29-7 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 rolling hills with cedar, pinon, and mormon tea 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.



---

L. A. Aimes  
Project Drilling Engineer

Operations Plan  
San Juan 29-7 Unit #51A

I. Location: 1570'N, 930'W, Section 21, T-29-N, R-7-W, Rio Arriba County, NM

Field: Blanco Mesa Verde & Basin Dakota

Elevation: 6638'GR

II. Geology:

A. Formation Tops:	Surface	San Jose	Menefee	5240'
	Ojo Alamo	2530'	Point Lookout	5590'
	Kirtland	2600'	Gallup	6834'
	Fruitland	3320'	Greenhorn	7564'
	Pic.Cliffs	3430'	Graneros	7618'
	Lewis	3540'	Dakota	7783'
	Mesa Verde	5118'	Total Depth	7915'

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

C. Coring Program: none

D. Natural Gauges: 5108', 5230', 5590', 6834', 7618', 7783' 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 3750'. Gas from intermediate casing to Total Depth.

IV. Materials:

A. Casing Program:	<u>Hole Size</u>	<u>Depth</u>	<u>Csg.Size</u>	<u>Wt.&amp;Grade</u>
	17 1/2"	200'	13 3/8"	48.0# H-40
	12 1/4"	3750'	9 5/8"	40.0# N-80
	8 3/4"	3600-6190'	7"	23.0# N-80
	6 1/4"	6040-7915'	4 1/2"	11.6# K-55

B. Float Equipment: 13 3/8" surface casing - guide shoe.

9 5/8" intermediate casing - guide shoe and differential automatic fill up float collar. Five stabilizers, one each on every other joint above shoe. Run float collar two joints above shoe.

7" liner - 7" liner hanger with neoprene packoff. Geyser shoe and flapper type float collar. Four centralizers, one each on every other joint above shoe.

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

Operations Plan - San Juan 29-7 Unit #51A

C. Tubing: 7915' of 2 3/8", 4.7#, J-55 EUE 8rd tubing open ended on bottom with common pump seating nipple and pump out plug one joint above bottom.

6190' of 1 1/2", 2.9#, J-55 EUE 10rd tubing with a perf sub and common pump seating nipple one joint above bottom. Bottom joint to be bull plugged.

D. Wellhead Equipment: 12" 3000 x 13 3/8" casing head. 12" 3000 x 10" 3000 dual xmas tree.

V. Cementing:

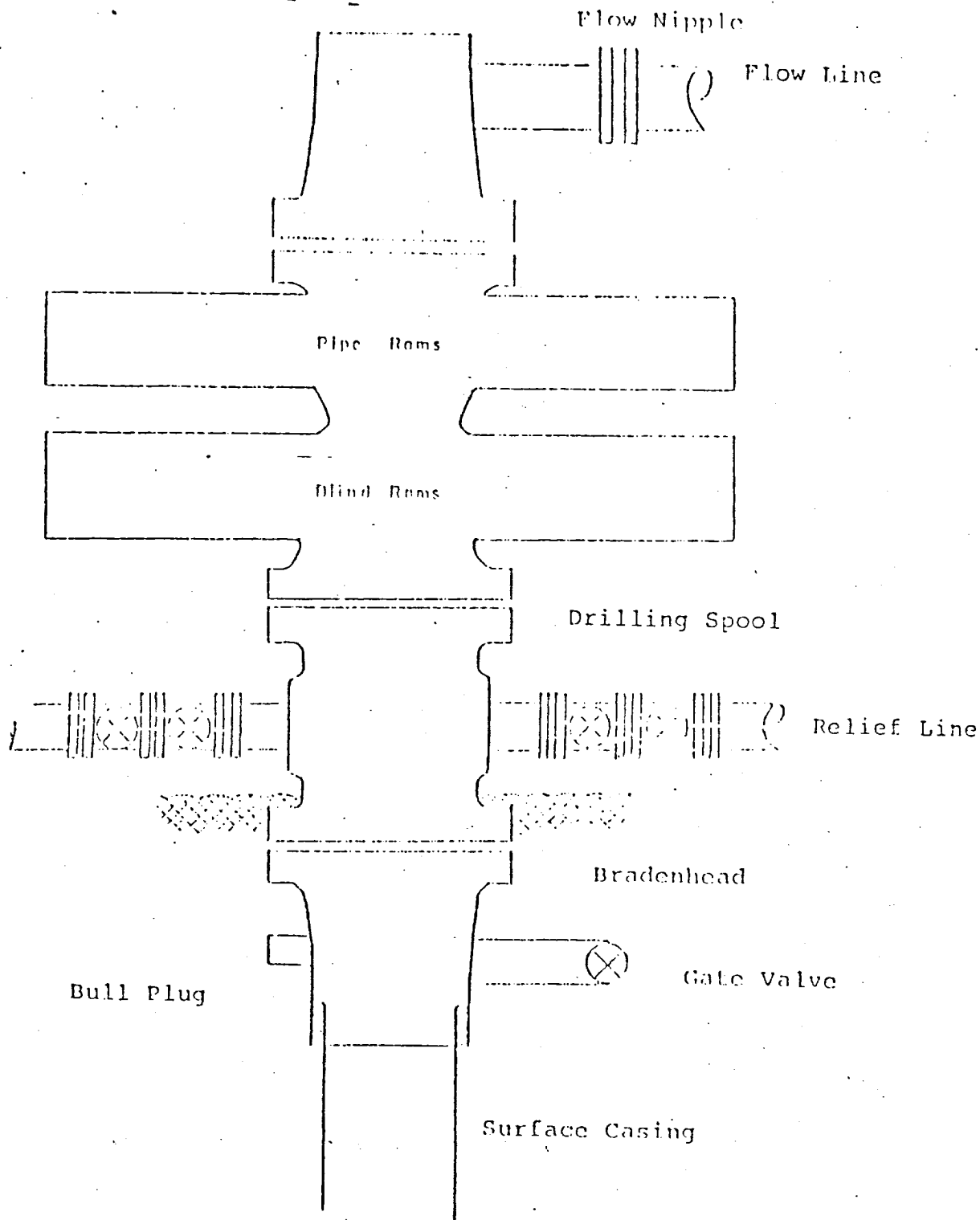
13 3/8" surface casing - use 236 sks. of Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (278 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600#/30 minutes.

9 5/8" intermediate casing - use 280 sks. 65/35 Class "B" Poz with 6% gel, 2% calcium chloride and 8.3 gallons water per sack followed by 100 sks. Class "B" neat with 2% calcium chloride (571 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.

7" liner - precede cement with 30 bbls. gel water (3 sks. gel). Cement with 480 sks. 50/50 Class "B" Poz with 2% gel, 6.15# gilsonite, 1/4# flocele and 0.6% Halad-9 (or equivalent fluid loss additive) (667 cu.ft. of slurry, 70% excess to circulate liner). WOC 12 hours. Test casing to 1200#/30 minutes.

4 1/2" liner - precede cement with 40 bbls. gel water (4 sks. gel). Cement with 100 sks. Class "B" cement with 8% gel, 1/4 cu.ft. fine gilsonite per sack and 0.4% HR-7 followed by 100 sks. Class "B" cement with 1/4# fine tuf-plug per sack and 0.4% HR-7 (336 cu.ft. of slurry, 70% excess to fill to circulate liner). WOC 18 hours.

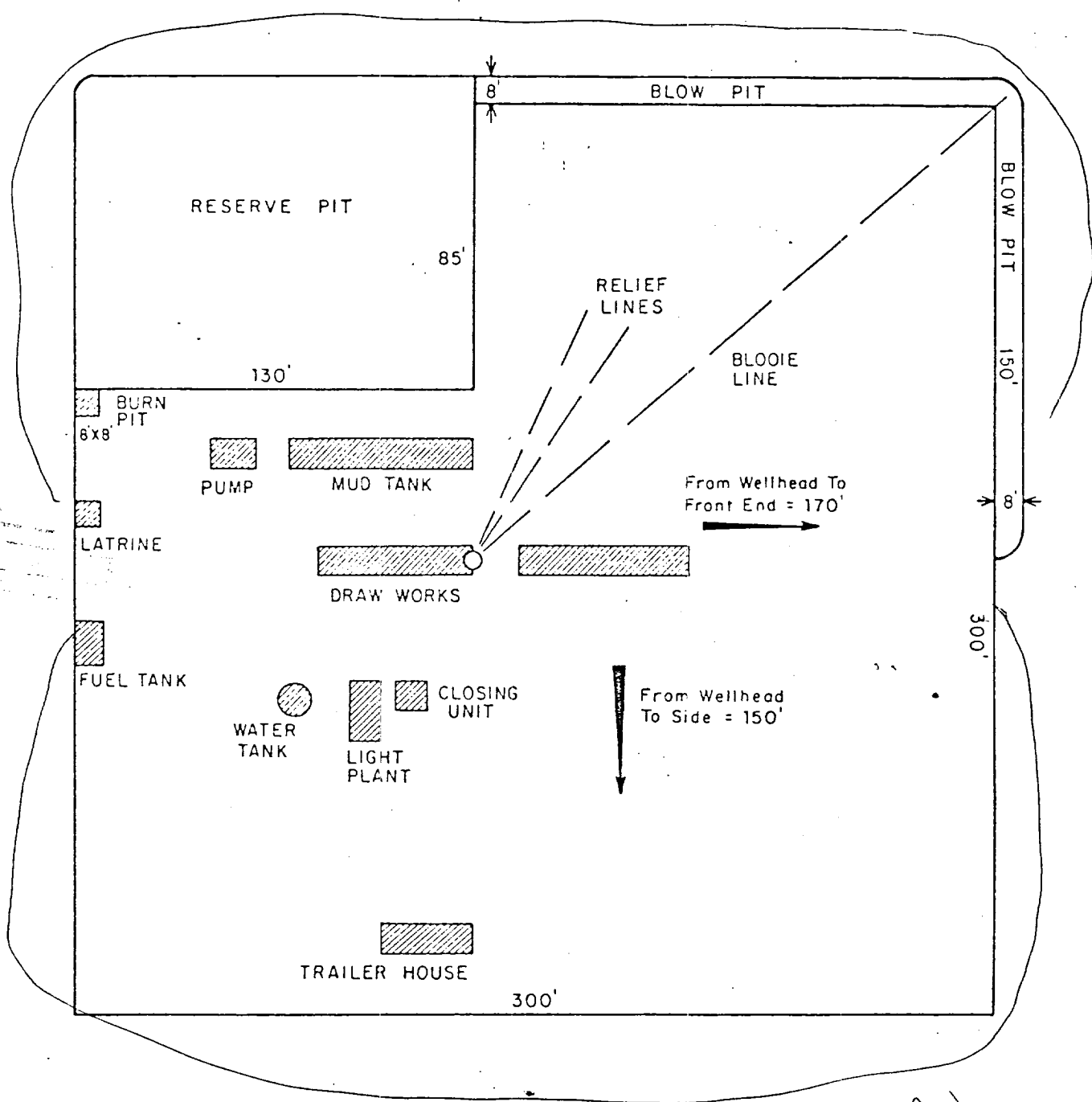
Typical B.O.P. Installation  
for : Dakota : Well



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.

8' Fil



6' cut

12' cut

PRT.	SEP.	DATE	TO	W.O.

ENG. REC.	DATE
DRAWN	J.L.H. 8-16-78
CHECKED	
CHECKED	
PROJ. APP.	
DESIGN	

El Paso Natural Gas Company	
TYPICAL LOCATION PLAT FOR MESAVERDE OR DAKOTA DRILL SITE	
SCALE: 1" = 50'	DWG.
	RE



R-7-W

15 MINUTE SE



## PROPOSED ROAD & PIPELINE

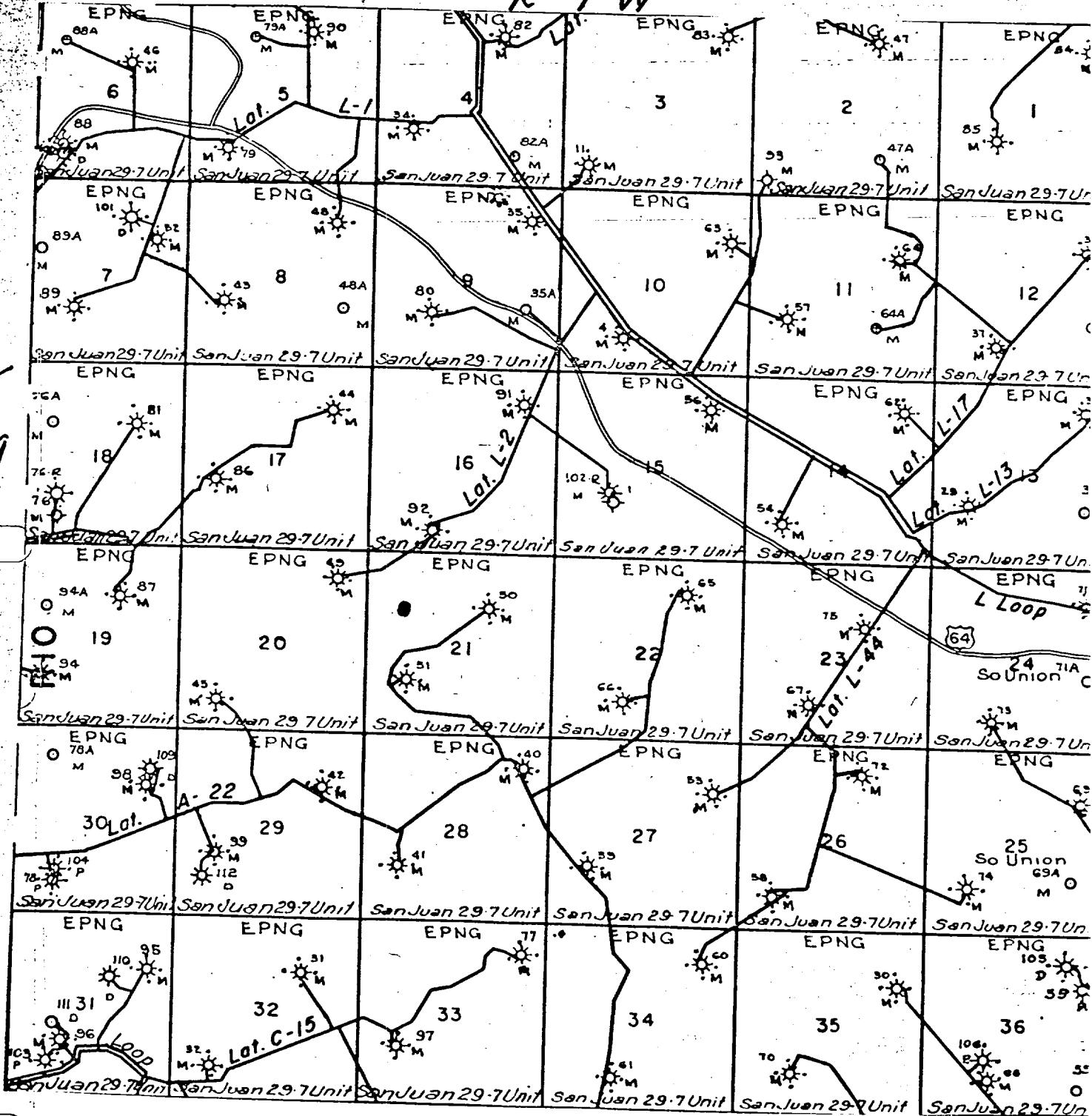
LINE

LINE

El Paso Natural Gas Company  
San Juan 29-7 Unit #51A  
NW 21-29-7

R-7-W

T  
29  
N



MAP 2

Proposed Location