

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

1805'N, 1820'W

At proposed prod. zone

same

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

6 miles from Huerfano, NM

15. DISTANCE FROM PROPOSED*

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

820'

16. NO. OF ACRES IN LEASE

159.63

17. NO. OF ACRES ASSIGNED
TO THIS WELL

319.28

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

2640'

19. PROPOSED DEPTH

6585'

20. ROTARY OR CABLE TOOLS

Rotary

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

6410'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"	10.5#	4883'	
7 7/8"	4 1/2"	10.5#	6585'	3 stages - 1791 cu.ft.

1st stage - 388 cu.ft. to cover Gallup
2nd stage - 680 cu.ft. to cover Mesa Verde
3rd stage - 727 cu.ft. to cover Ojo Alamo

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 W/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 7, 1980

(This space for Federal or State office use)

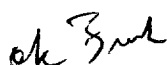
PERMIT NO.

APPROVAL DATE

APPROVED BY

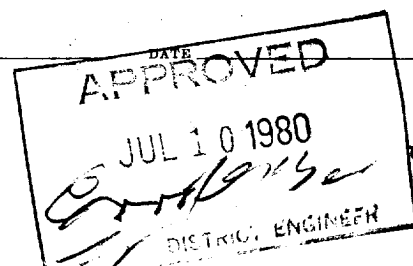
TITLE

CONDITIONS OF APPROVAL, IF ANY:



*See Instructions On Reverse Side

NMOCC



All distances must be from the outer boundaries of the Section

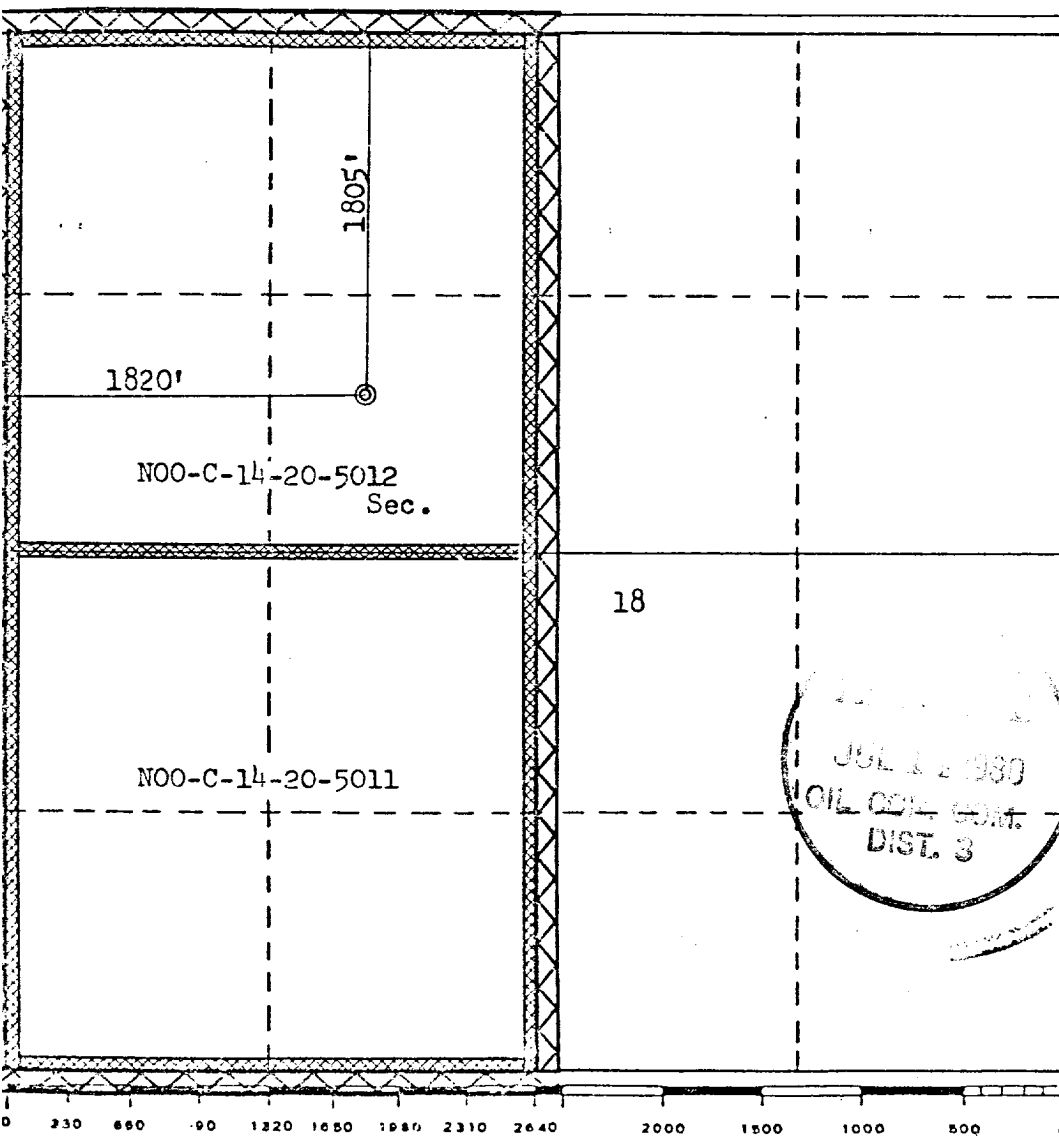
Operator EL PASO NATURAL GAS COMPANY		Lease SOSE (NOO-C-14-20-5012)		Well No. 1
Unit Letter F	Section 18	Township 25N	Range 8W	County San Juan
Actual Footage Location of Well: 1805 feet from the North line and 1820 feet from the West line				
Ground Level Elev. 6410	Producing Formation Dakota	Pool Basin Dakota	Dedicated Acreage: 319.28 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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 Communitization

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.	
Name	<i>Deanna D. [Signature]</i>
Position	Drilling Clerk
Company	El Paso Natural Gas Co.
Date	March 7, 1980
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	February 6, 1980
Registered Professional Engineer and/or Land Surveyor	<i>Fred B. Kerr Jr.</i> Fred B. Kerr Jr.
Certificate No.	3950

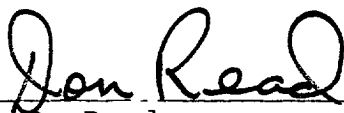
1. The first step is to identify the key components of the system. This includes understanding the hardware, software, and data involved.

C.C. to Dave Vilvin
Earl Mealer
John Ahlm

Multi-Point Surface Use Plan
Sose #1

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 Huerfano Water Well #2.
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 flat wash bottom with sage growing. Cattle, sheep and horses are seen occasionally 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.



D. R. Read
Project Drilling Engineer

Operations Plan - Sose #1

I. Location: 1805'N, 1820'W, Section 18, T-25-N, R-8-W, San Juan County, NM

Field: Basin Dakota

Elevation: 6410'GR

II. Geology:

A. Formation Tops:	Surface	Nacimiento	Menefee	3486'
	Ojo Alamo	1055'	Point Lookout	4233'
	Kirtland	1233'	Gallup	5380'
	Fruitland	1607'	Greenhorn	6186'
	Pic.Cliffs	1855'	Graneros	6235'
	Lewis	2138'	Dakota	6333'
	Mesa Verde	3530'	Total Depth	6585'

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

C. Coring: 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>Csg.Size</u>	<u>Wt.&Grade</u>
	13 3/4"	200'	9 5/8"	36.0# H-40
	8 3/4"	4883'	4 1/2"	10.5# K-55
	7 7/8"	6585'	4 1/2"	10.5# K-55

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

4 1/2" production casing - guide shoe and self-fill insert valve
Two multiple stage cementers equipped for three stage cementing.
Set tool for second stage at 4833' and tool for third stage at 2238'.
Run 20 centralizers 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: 6585' of 2 3/8", 4.7#, J-55 tubing, common pump seating nipple and Baker expendable check valve with drill type guide.

D. Wellhead Equipment: 10" 3000 x 9 5/8" casing head with 10" x 4 1/2" casing hanger, 10" 3000 x 6" 3000 xmas tree. Wellhead representative to set all slips.

V. Cementing:

Surface casing (13 3/4" x 9 5/8") - 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). WOC 12 hours. Test to 600#/30 min.

V. Cementing, cont'd.

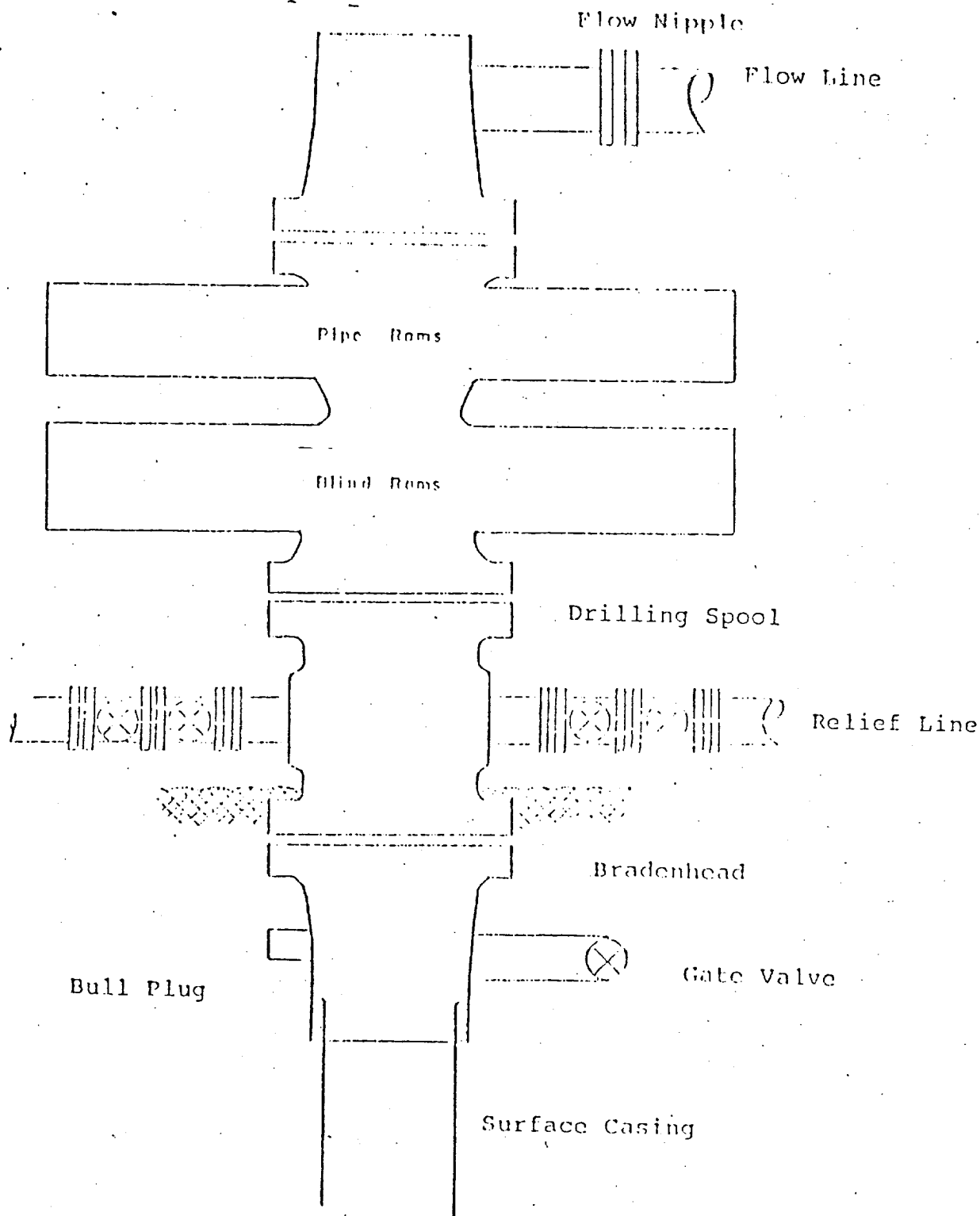
Production casing - (8 3/4" & 7 7/8" x 4 1/2")

First stage - use 151 sks. of 65/35 Class "B" Pozmix with 6% gel and 2% calcium chloride mixed with 8.3 gallons water per sack followed by 100 sks. 50/50 Class "B" Pozmix with 2% gel, 2% calcium chloride and 1/4# fine tuf-plug per cu.ft. (384 cu.ft. of slurry, 40% excess to cover the Gallup).

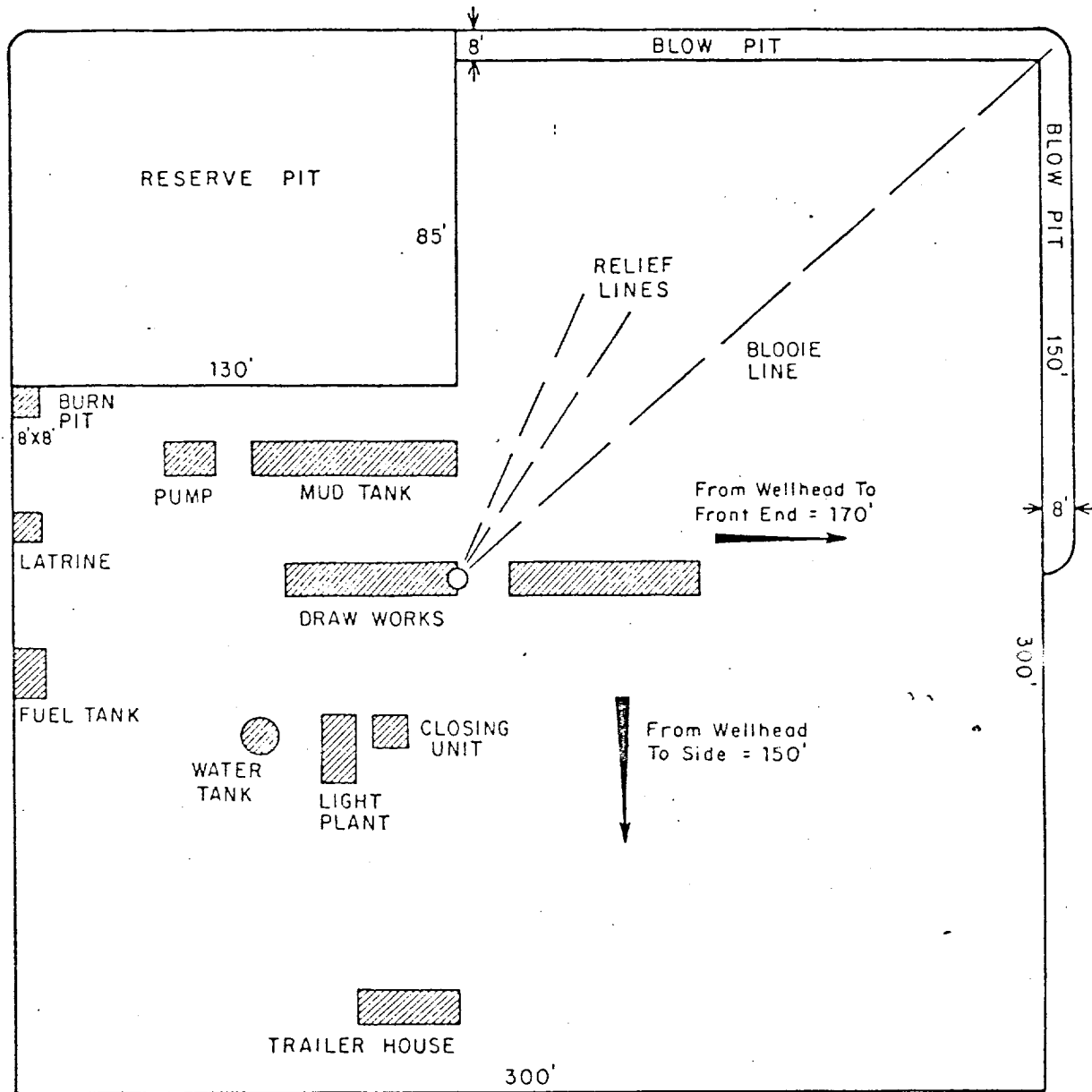
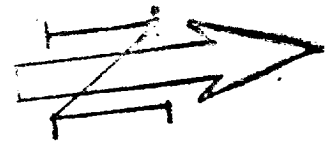
Second stage - circulate mud for 2.5 hours, then cement with 420 sks. of 65/35 Class "B" Pozmix with 6% gel and 2% calcium chloride and 8.3 gallons of water per sack (680 cu.ft. of slurry, 70% excess to cover the Mesa Verde).

Third stage - circulate mud for 2.5 hours, then cement using 449 sks. 65/35 Class "B" Pozmix with 6% gel and 2% calcium chloride mixed with 8.3 gallons water per sack (727 cu.ft. of slurry, 100% excess to fill to top of Ojo Alamo). Run temperature survey on top stage only at 8 hours. 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.



No Cut

				ENG. REC.		DATE		<div style="text-align: center;"> <p>El Paso Natural Gas Company</p> <p>TYPICAL LOCATION PLAT FOR MESAVERDE OR DAKOTA DRILL SITE</p> </div>				
				DRAWN		J L H. 8-16-78						
				CHECKED								
				CHECKED								
				PROJ. APP.								
PRT.	SEP.	DATE	TO	W.O.	DESIGN			SCALE: 1" = 50'		DWG. NO.		REV
PRINT RECORD					w o							

EL PASO NATURAL GAS COMPANY

Sose #1

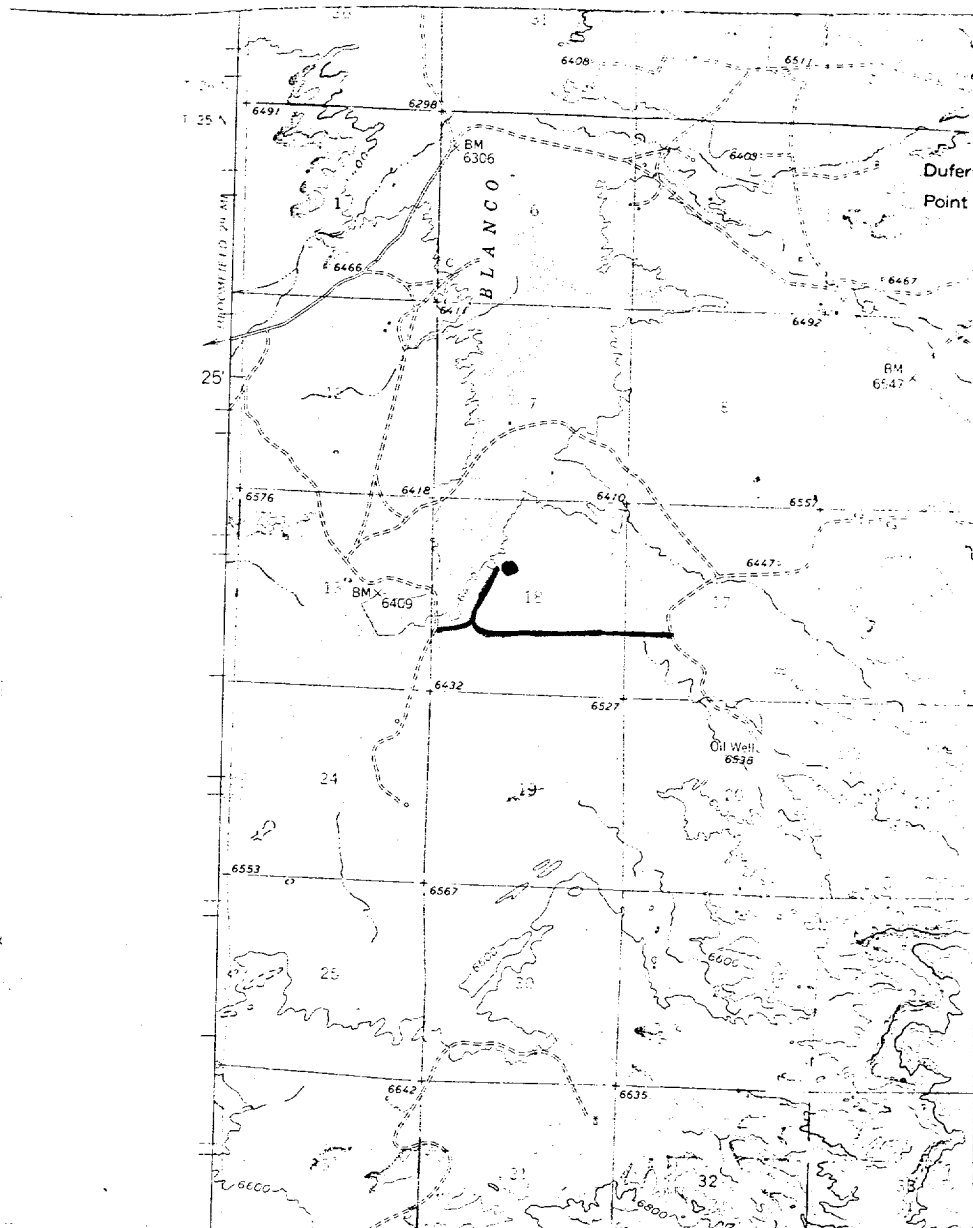
NW 18-25-8

T
26
N

R-9-W

R-8-W

T
25
N



MAP #1

Map #1

LEGEND OF RIGHT-OF-WAYS

EXISTING ROADS

EXISTING PIPELINES

EXISTING ROAD & PIPELINE

PROPOSED ROADS

PROPOSED PIPELINES

PROPOSED ROAD & PIPELINE

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R-8-W

