Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM 011808

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Marshall

2. NAME OF OPERATOR: El Paso Natural Gas Company

9. WELL NO.: 1E

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

10. FIELD AND POOL, OR WILDCAT: Basin Dakota

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 960'S, 1070'E
At proposed prod. zone: same

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec.14,T-27-N,R-9-W NMPM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 10 miles southeast of Bloomfield, NM

12. COUNTY OR PARISH: San Juan | 13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
960'	160	S/ 320.00
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
500'	6720'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6044'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
12 1/4"	8 5/8"	24.0#	200'	165 cu.ft. circ.to surface
7 7/8"	4 1/2"	10.5#&11.6#	6720'	1318cu.ft. - 3 stages

1st stage - 417 cu.ft. to cover Gallup
2nd stage - 476 cu.ft. to cover Mesa Verde
3rd stage - 425 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 S/2 of Section 14 is dedicated to this well.

RECEIVED
OCT 04 1979
U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

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: D. G. Busco TITLE: Drilling Clerk DATE: 10-1-79

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

1980

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

SION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-102
Revised 10-1-78

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
EL PASO NATURAL GAS COMPANY	MARSHALL (NM-011803)	1-E

Unit Letter	Section	Township	Range	County
P	14	27N	9W	San Juan

Actual Footage Location of Well:
960 feet from the South line and 1070 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6044	Dakota	Basin Dakota	320.00 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

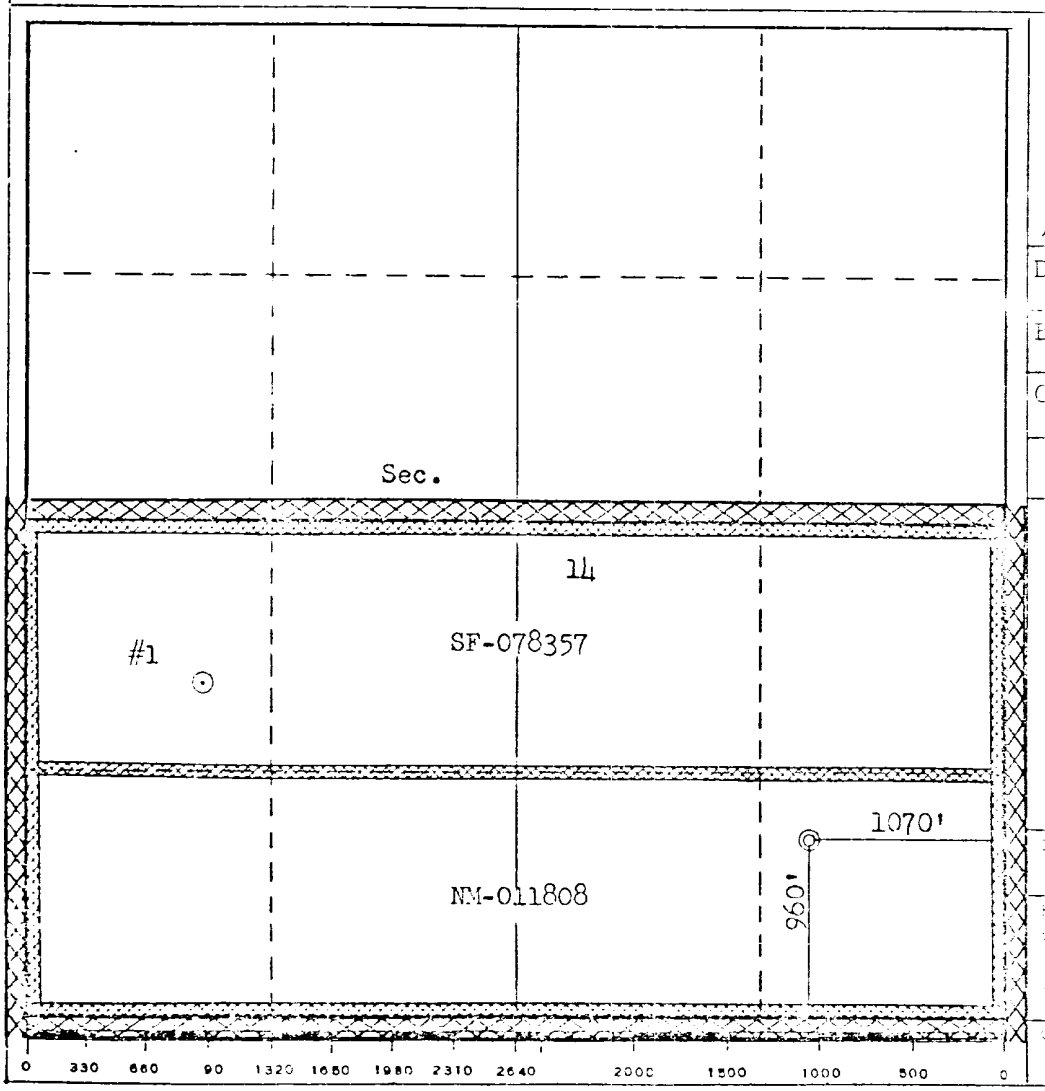
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] 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.

R. A. Lucas

Drilling Clerk

El Paso Natural Gas Co.

October 1, 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
September 10, 1979

Registered Professional Engineer and/or Land Surveyor
Fred B. Kerr Jr.

Certificate No.
3950

El Paso NATURAL GAS COMPANY

P.O. BOX 990
FARMINGTON, NEW MEXICO 87401
PHONE: 505-325-2841

Multi-Point Surface Use Plan

Marshall #1E

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 #1

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 sagebrush flats with sagebrush and rabbitbrush growing. Cattle, horses and sheep 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

L. A. Aimes
Project Drilling Engineer

October 1, 1979

Operations Plan - Marshall #1E

I. Location: 960'S, 1070'W, Section 14, T-27-N, R-9-W, San Juan County, NM

Field: Basin Dakota Elevation: 6054'GL

II. Geology:

A. Formation Tops:

Surface	Nacimiento	Menefee	---
Ojo Alamo	1145'	Point Lookout	4315'
Kirtland	1256'	Gallup	5500'
Fruitland	1856'	Greenhorn	6305'
Pic.Cliffs	2042'	Graneros	6354'
Lewis	2110'	Dakota	6464'
Mesa Verde	3610'	Total Depth	6720'

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:

Hole Size	Depth	Csg.Size	Wt.&Grade
12 1/4"	200'	8 5/8"	24.0# K-55
7 7/8"	6720'	4 1/2"	10.5# K-55

B. Float Equipment: 8 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 4915' and tool for third stage at 2310'. 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: 6720' 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: 8" 2000 x 8 5/8" casing head with 8" x 4 1/2" casing hanger, 8" 2000 x 6" 2000 xmas tree.

V. Cementing:

Surface casing (12 1/4" x 8 5/8") - use 140 sks. of Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (165 cu.ft. of slurry, 100% excess to circulate). WOC 12 hours. Test to 600#/30 min.

Operations Plan - Marshall #1E

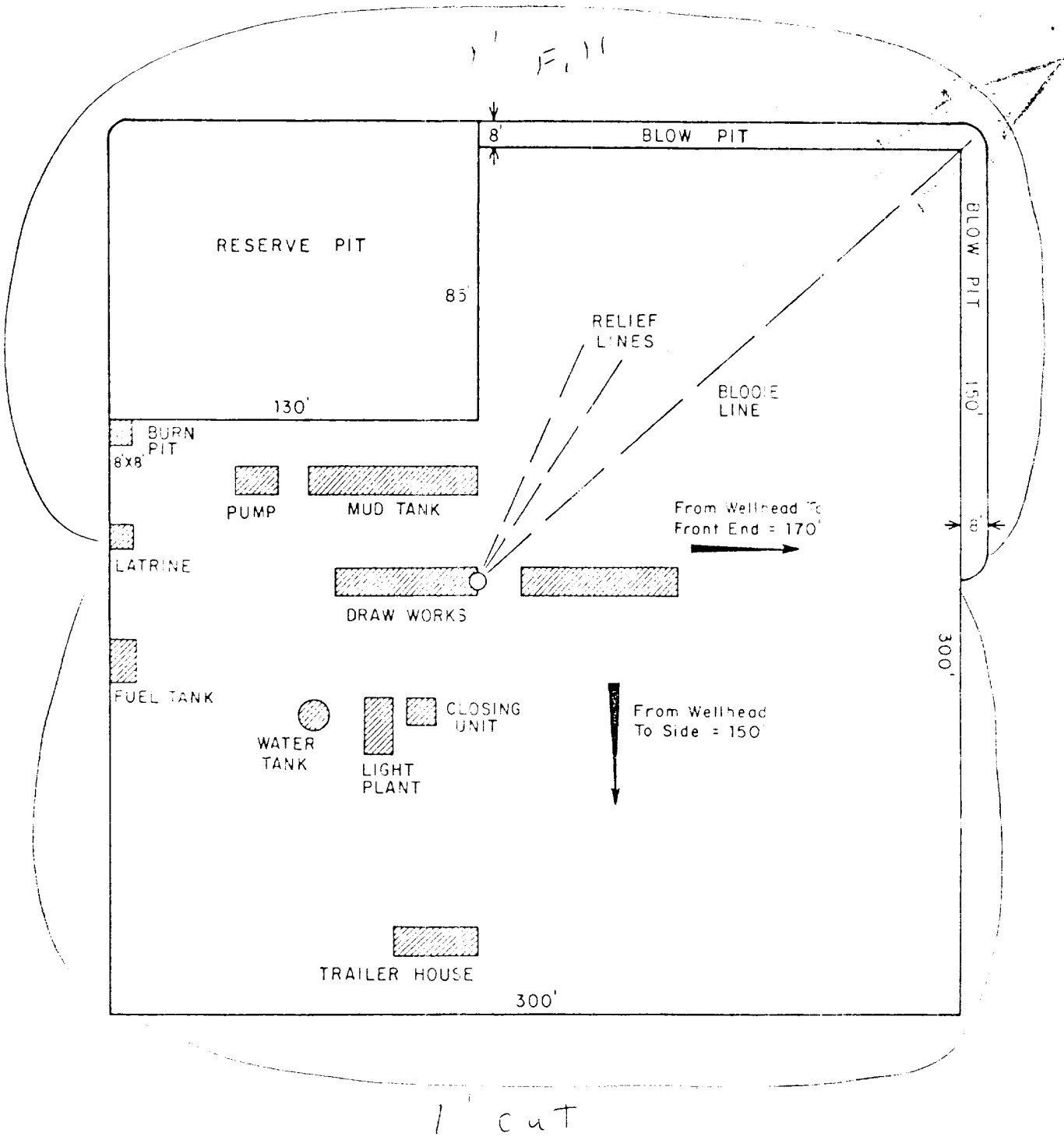
V. Cementing, cont'd.

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

First stage - use 196 sks. of 65/35 Class "B" Pozmix with 6% gel and 2% calcium chloride mixed with 8.3 gallons water per sack followed by 80 sks. 50/50 Class "B" Pozmix with 2% gel, 2% calcium chloride and 1/4# fine tuf-plug per cu.ft. (417 cu.ft. of slurry, 50% excess to cover the Gallup).

Second stage - circulate mud for 2 hours, then cement with 294 sks. of 65/35 Class "B" Pozmix with 6% gel and 2% calcium chloride and 8.3 gallons of water per sack (476 cu.ft. of slurry, 60% excess to cover the Mesa Verde).

Third stage - circulate mud for 2 hours, then cement using 262 sks. Class "B" Pozmix with 6% gel and 2% calcium chloride mixed with 8.3 gallons water per sack (425 cu.ft. of slurry, 60% excess to fill to base of Ojo Alamo). Run temperature survey on top stage only at 8 hours. WOC 18 hours.



PRT.	SEP.	DATE	TO	W.O.
PRINT RECORD				

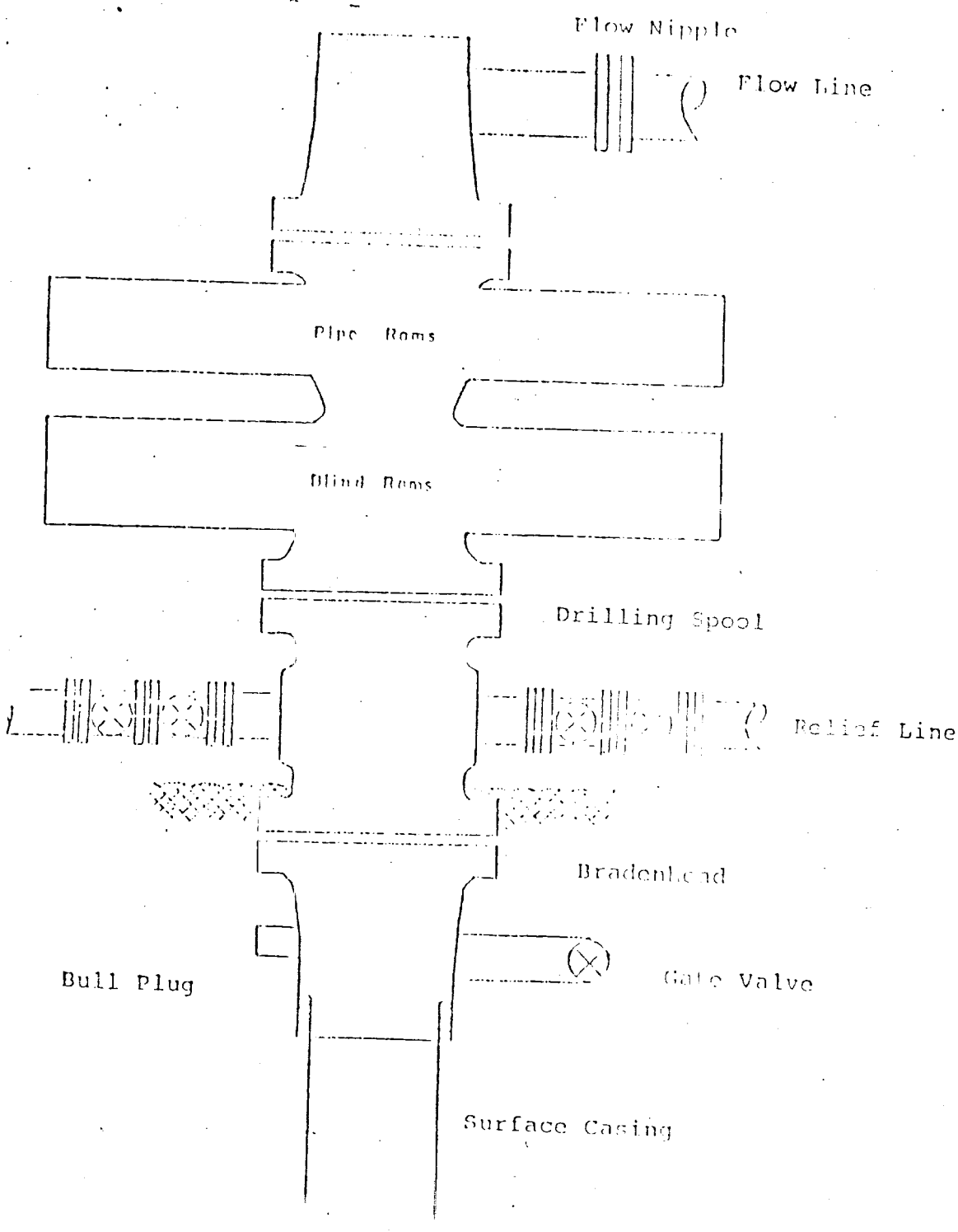
ENG. REC.	DATE
DRAWN	J. L. H. 8-16-78
CHECKED	
CHECKED	
PROJ. APP.	
DESIGN	
W.O.	

El Paso Natural Gas Company

TYPICAL LOCATION PLAT FOR MESAVERDE OR DAKOTA DRILL SITE

SCALE: 1" = 50'	DWG NO.	REV

Typical B.O.P. Installation
for Dakota Well



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

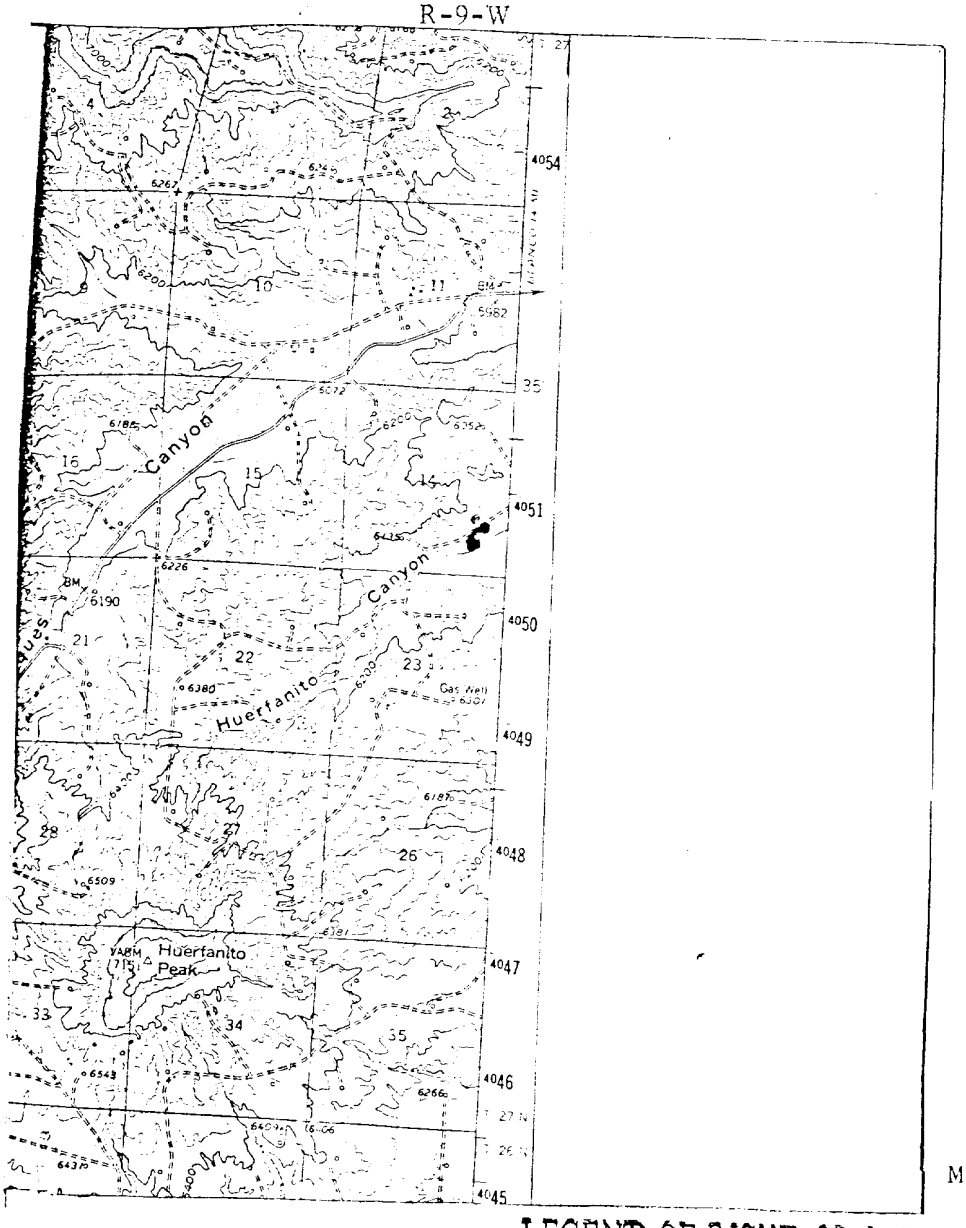
When gas drilling operations begin a Shaffer type 50 or equivalent rotating head is installed on top of the flow nipple and the flow line is converted into a blowie line.

El Paso Natural Gas Company
Marshall #1E

SE 14-27-9

R-9-W

T
27
N

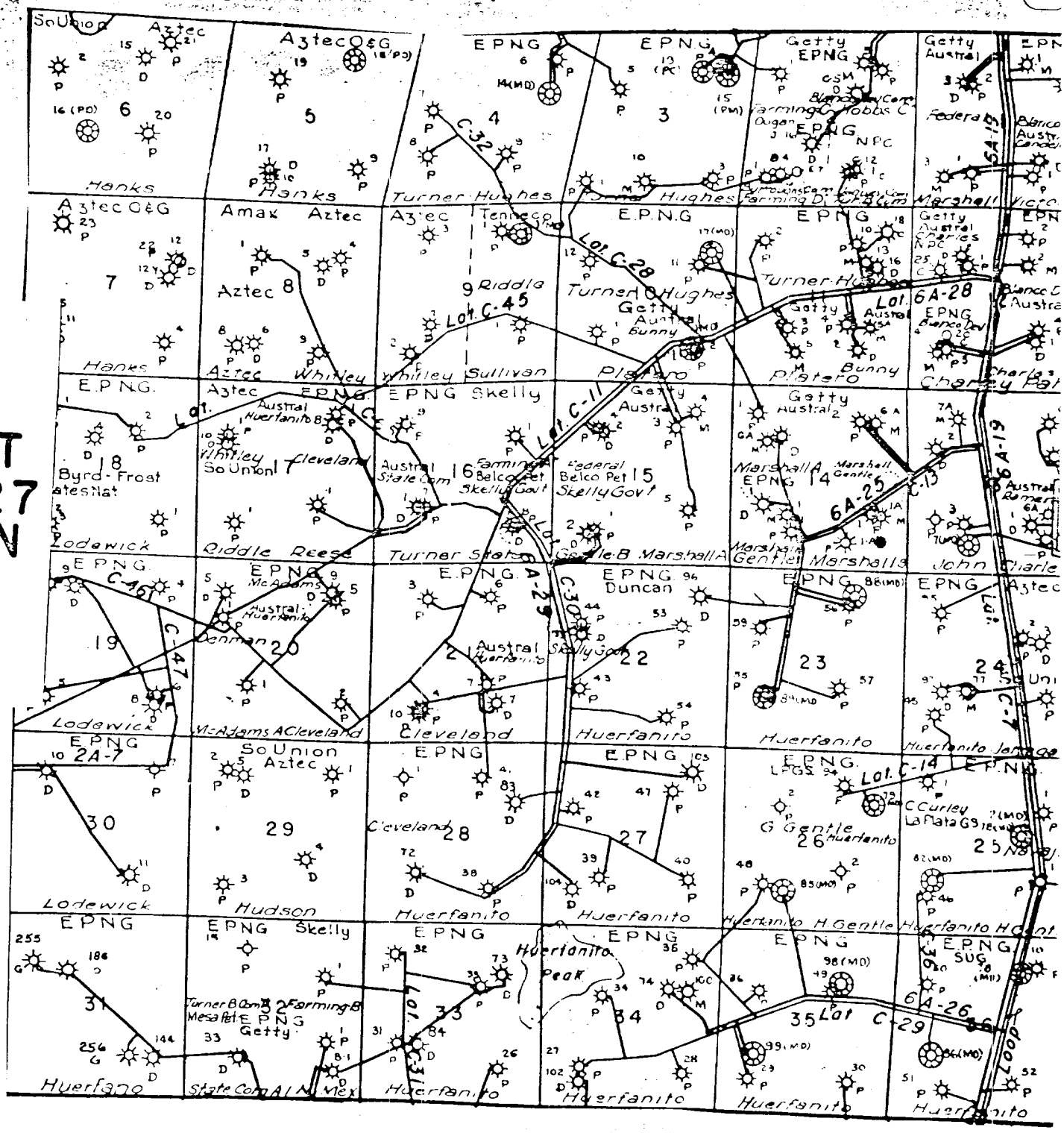


MAP 1

LEGEND OF RIGHT-OF-WAYS

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

El Paso Natural Gas Company
Marshall #1E
SE [illegible]-27-9



MAP 2