

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY30-045-22386  
5. LEASE DESIGNATION AND SERIAL NO.  
SF 078128

## 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"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		7. UNIT AGREEMENT NAME
2. NAME OF OPERATOR El Paso Natural Gas Company		8. FARM OR LEASE NAME Delhi Turner
3. ADDRESS OF OPERATOR PO Box 990, Farmington, NM 87401		9. WELL NO. 1A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1190'N, 790'W  At proposed prod. zone		10. FIELD AND POOL, OR WILDCAT Blanco Mesa Verde
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 18, T-30-N, R-9-W NMPM
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 304.39
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	19. PROPOSED DEPTH 5650'	20. ROTARY OR CABLE TOOLS Rotary
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6282'GR		22. APPROX. DATE WORK WILL START*

## 23. PROPOSED CASING AND CEMENTING PROGRAM

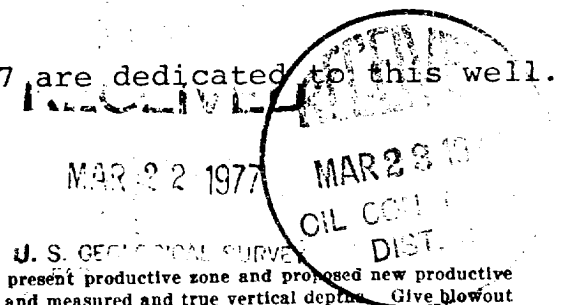
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13 3/4"	9 5/8"	32.3#	200'	224 cu.ft. to circulate
8 3/4"	7"	20.0#	3340'	383 cu.ft. to cover Ojo Alamo
6 1/4"	4 1/2"	10.5#	3190-5650'	429 cu.ft. to fill to 3190'

Selectively perforate and sandwater fracture the 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.

The W/2 of Section 18 and the SW/4 of Section 7 are dedicated to this well.



R-120  
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 M. G. Suess TITLE Drilling Clerk DATE March 22, 1977  
(This space for Federal or State office use)

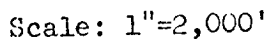
PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

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

Supersedes C-123  
Effective 1-1-65

Operator EL PASO NATURAL GAS COMPANY		Lease DELHI-TURNER (SF-078128)		Well No. 1A	
Unit Letter C	Section 18	Township 30-N	Range 9-W	County SAN JUAN	
Actual Footage Location of Well: 1190 feet from the NORTH line and 790 feet from the WEST line					
Ground Level Elev. 6282	Producing Formation MESA VERDE	Pool BLANCO MESA VERDE		Dedicated Acreage: 304.39 Acres	

- 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.



Certificate No. 1760

Multi-Point Surface Use Plan  
Delhi Turner #1A


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 thirty feet (30') 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 Section 23, T-30-N, R-10-W (Knickerbocker 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 #2 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 green (Federal Standard #595-34127)
11. Other Information - The terrain consists of rolling hills and sandstone ledges and is covered with pinon, cedar and sage brush. Cattle and deer graze the proposed drilling 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 22, 1977

  
\_\_\_\_\_  
D. R. Read  
Division Drilling Engineer

Operations Plan  
Delhi Turner #1A

I. Location: 1190'N, 790'W, Section 18, T-30-N, R-9-W, San Juan County, NM

Field: Blanco Mesa Verde

Elevation: 6282'GR

II. Geology:

A. Formation Tops:	Surface	Nacimiento	Lewis	3140'
	Ojo Alamo	1640'	Mesa Verde	4545'
	Kirtland	1800'	Menefee	4790'
	Fruitland	2590'	Point Lookout	5200'
	Pic.Cliffs	2985'	Total Depth	5650'

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

C. Coring Program: none

D. Natural Gauges: 4535', 4780', 5190' 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 3340'. 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"	32.3# H-40
	8 3/4"	3340'	7"	20.0# K-55
	6 1/4"	3190-5650'	4 1/2"	10.5# K-55

B. Float Equipment: 9 5/8" surface casing - Larkin guide shoe (fig. 102)  
7" intermediate casing - Dowell guide shoe (fig. 50101) and Dowell self-fill insert float valve (fig. 53003), 5 B&W stabilizers (Prod. No. 637085) every other joint above shoe. Run float two joints above shoe.

4 1/2" liner - T.I.W. liner hanger with neoprene packoff. Larkin geyser shoe (fig. 222) and Larkin flapper type float collar (fig. 404 M&F).

C. Tubing: 5650' of 2 3/8", 4.7#, J-55 8rd 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: 10" 900 x 9 5/8" casing head. 10" 900 x 6" 900 xmas tree.

## Operations Plan - Delhi Turner #1A

### V. Cementing:

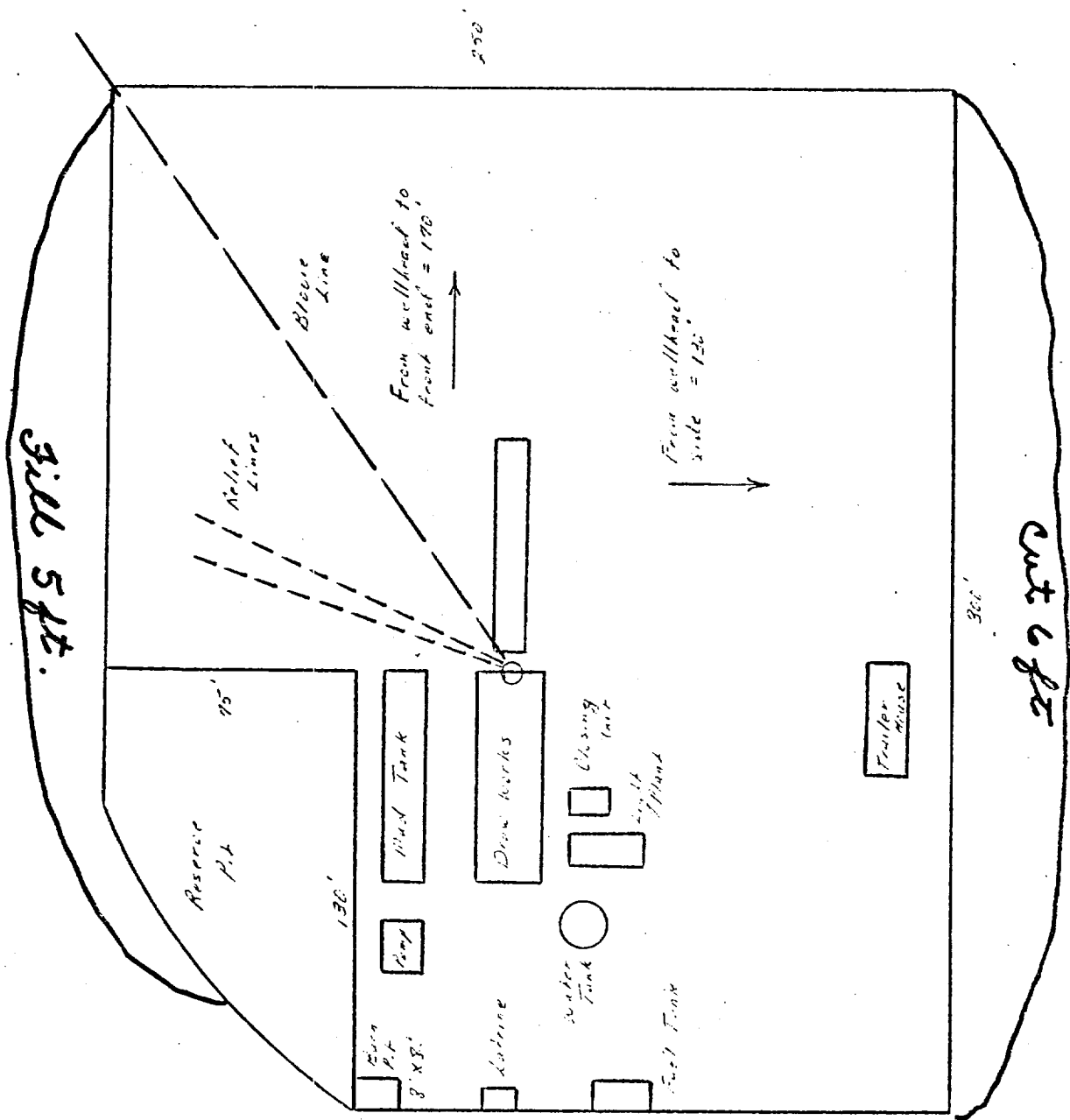
9 5/8" surface casing -- use 190 sks. of Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (224 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600#/30 minutes.

7" intermediate casing - use 102 sks. of 65/35 Class "B" Poz with 12% gel (15.52 gallons of water per sack) followed by 100 sks. of Class "B" with 2% calcium chloride (383 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 238 sks. of Class "B" cement with 4% gel, 1/4 cu.ft. of fine gilsonite per sack and 0.6% Halad-9 (429 cu.ft. of slurry, 70% excess to circulate liner).

DCW:pb

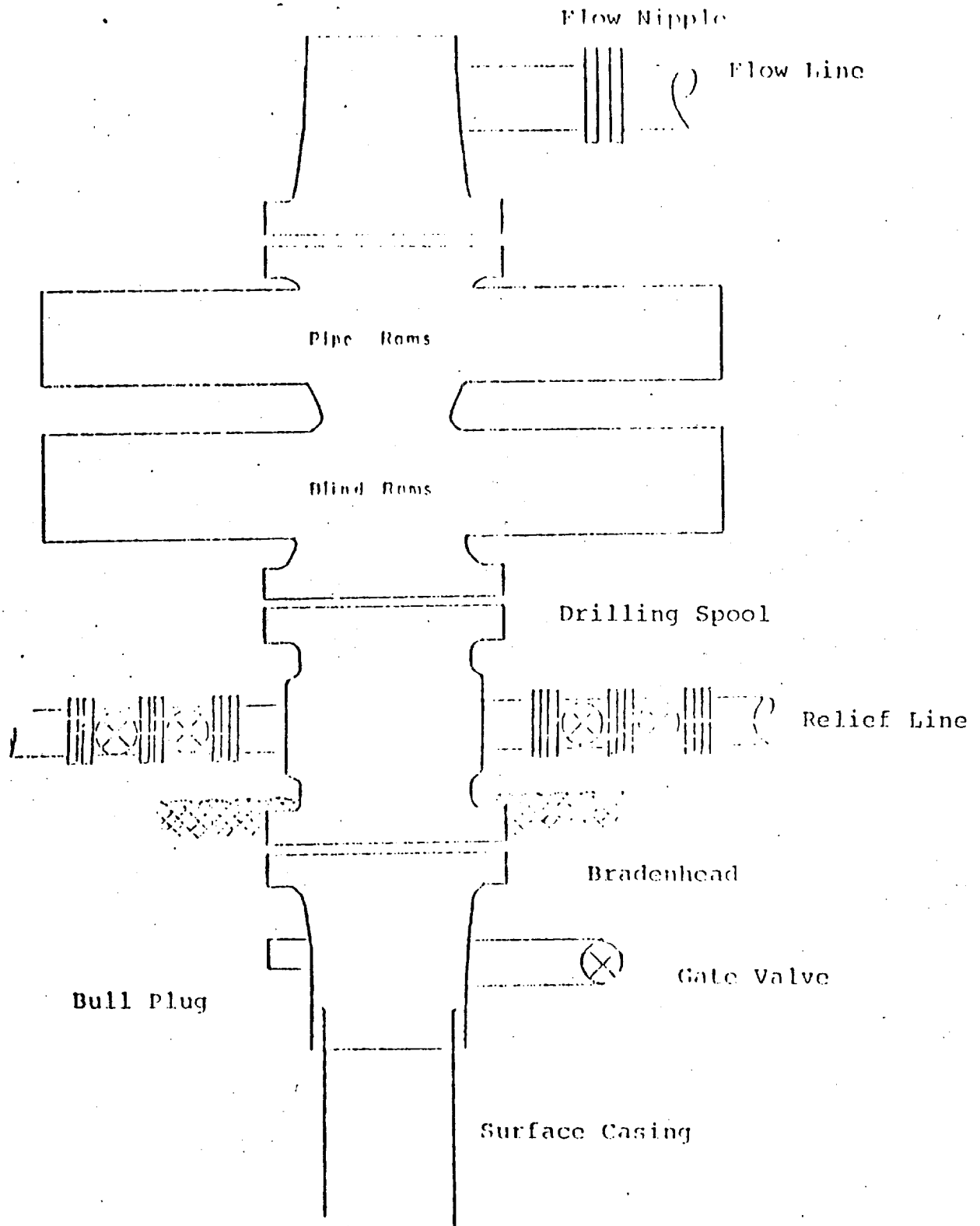
F-1 Paso Natural Gas Company  
Typical location plot for Mesa Verde and Dakota wells



→

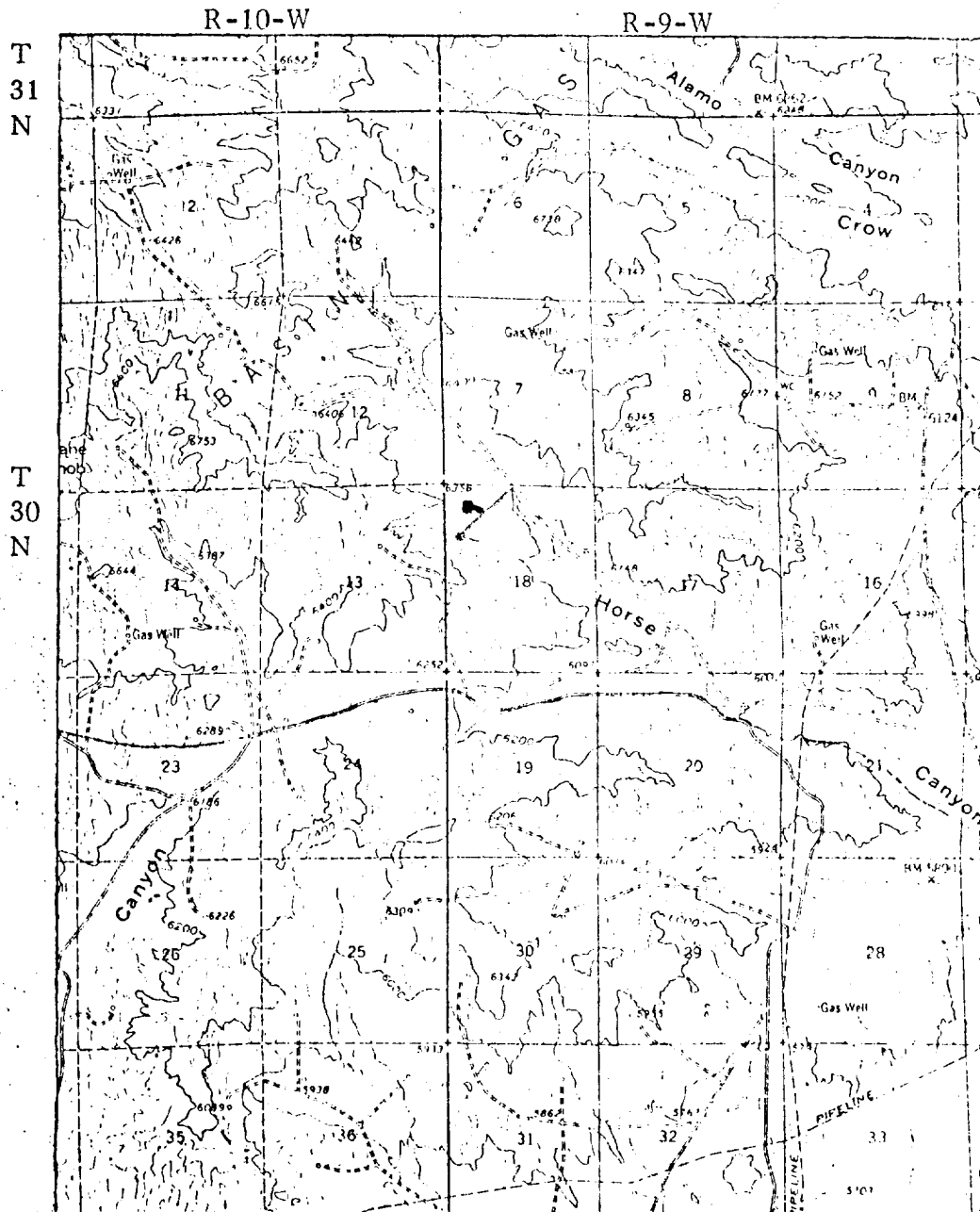


Typical B.O.P. Installation  
for Mesa Verde Well



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  
 DELHI TURNER #1A  
 NW 18-30-9



MAP #2 #1

LEGEND OF RIGHT-OF-WAYS

Proposed Roads	—————	EXISTING ROADS	—————
Proposed Pipelines	+++++	EXISTING PIPELINES	+++++
		EXISTING ROAD & PIPELINE	—+—+—+—

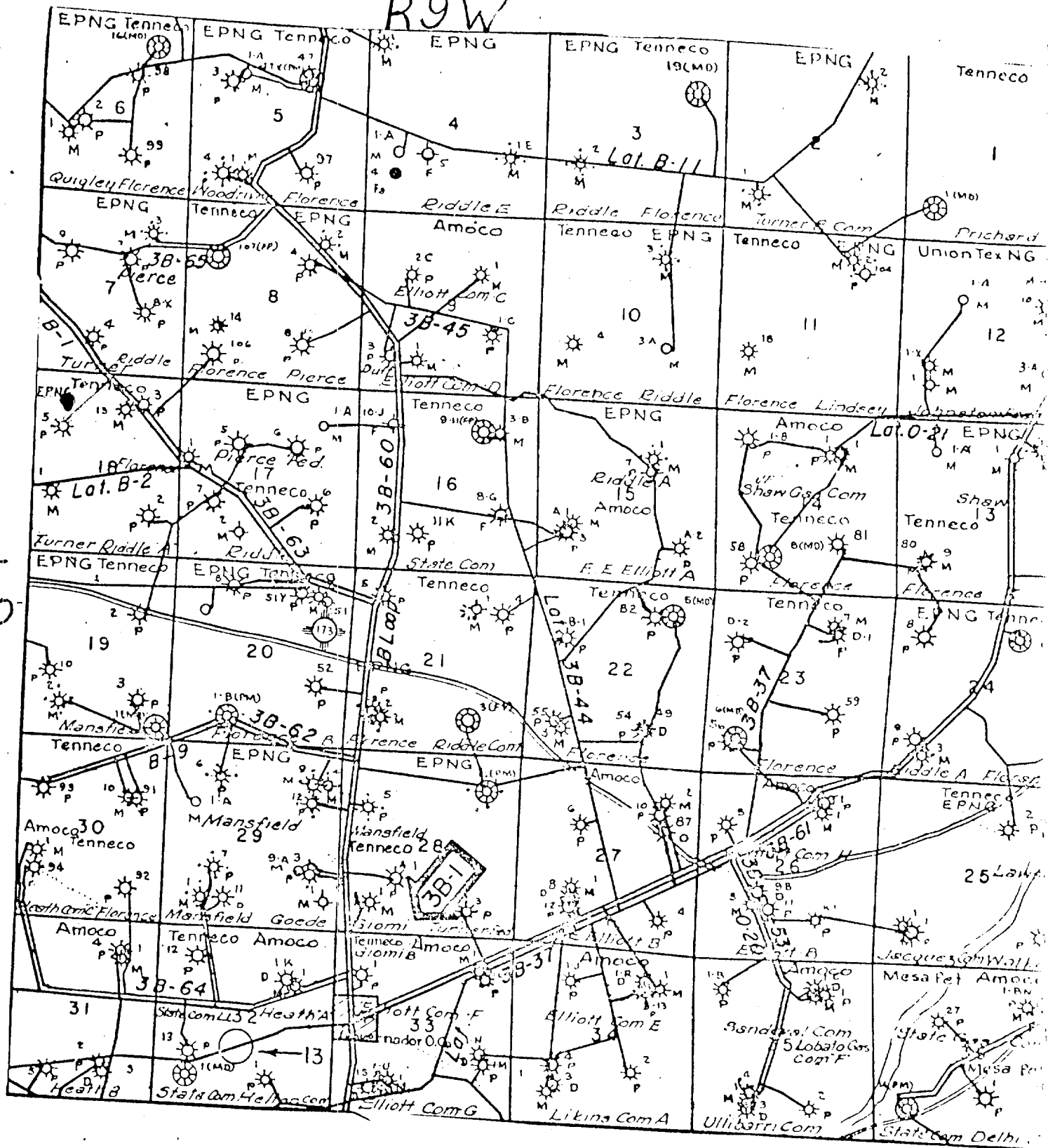
# EL PASO NATURAL GAS COMPANY

DELHI TURNER #1A

NW 19-30-9

R9W

T  
30  
N



MAP #2

Proposed Location