

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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 4289, Farmington, NM 87499

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

At surface
1830'S, 1450'W

At proposed prod. zone

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

20 miles south of Bloomfield, NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT. 1450'
(Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

Unit

17. NO. OF ACRES ASSIGNED
TO THIS WELL

W/ 320.00

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETION
OR APPLIED FOR, ON THIS LEASE, FT. 2640'

19. PROPOSED DEPTH

6825'

20. ROTARY OR CABLE TOOLS

Rotary

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

6595' GL

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

22. APPROX. DATE WORK WILL START*

23. PROPOSED CASING AND CEMENTING PROGRAM

This section is subject to administrative
review and approval by the Bureau of Land Management.
QUANTITY OF CEMENT

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24.0#	200'	130 cu.ft.circulated
7 7/8"	4 1/2"	10.5#&11.6#	6860'	1454 cu.ft.circulated

1st stage - 369 cu.ft. to cover Gallup
2nd stage - 567 cu.ft. to cover Mesa Verde
3rd stage - 518 cu.ft. to cover Ojo Alamo

Selectively perforate and sand water 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 24 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. Drilling Clerk

SIGNED

TITLE

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

12-19-84

APPROVED

AS AMENDED

MAR 07 1985

/s/ J. Stan McKee

MANAGEMENT AREA

NMOC

*See Instructions On Reverse Side

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

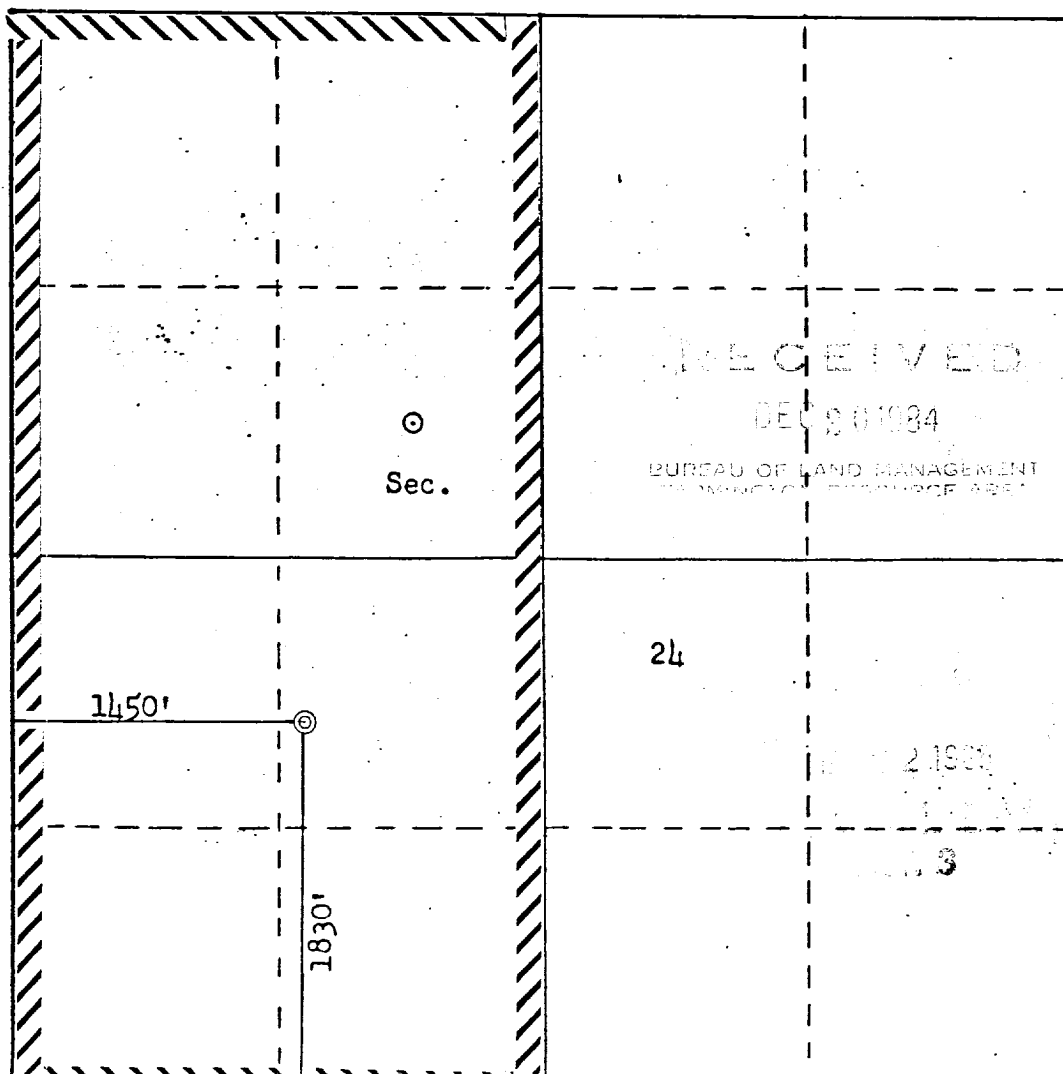
Operator EL PASO NATURAL GAS COMPANY			Lease HUERFANO UNIT (SF 076578)		Well No. 4E
Unit Letter K	Section 24	Township 26N	Range 10W	County San Juan	
Actual Footage Location of Well: 1830 feet from the South line and 1450 feet from the West line					
Ground Level Elev: 6595	Producing Formation Dakota		Pool Basin		Dedicated Acreage: 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?

☒ 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.

Dean Bradfield
Name

Drilling Clerk
Position

El Paso Natural Gas Co
Company

October 17, 1984
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 **October 12, 1984**

Registered Professional Engineer and Land Surveyor

Fred B. Kern, Jr.
Fred B. Kern, Jr.

Operations Plan
EPNG Huerfano Unit #4E

I. Location: 1830'S, 1450'W. Sec.24, T-26-N, R-10-W, San Juan Co.,NM

Field: Basin Dakota

Elevation: 6595'GL

II. Geology:

A. Formation Tops:	Surface	Nacimiento	Menefee	3715'
	Ojo Alamo	1170'	Point Lookout	4525'
	Kirtland	1335'	Gallup	5670'
	Fruitland	1835'	Greenhorn	6480'
	Pic.Cliffs	2085'	Graneros	6540'
	Lewis	2200'	Dakota	6640'
	Chacra	2965'	Total Depth	6825'
	Mesa Verde	3695'		

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

C. Coring Program: 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>
	12 1/4"	200'	8 5/8"	24.0#K-55
	7 7/8"	6825'	4 1/2"	10.5#K-55

B. Float Equipment: 8 5/8" surface casing - Texas pattern 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 5125' and tool for third stage at 2300'. 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: 6825' 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 110 sks. Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (130 cu.ft. of slurry, 100% excess to circulate). WOC 12 hrs. Test to 600#/30 minutes.

Operations Plan -Huerfano Unit #4E

V. Cementing, cont'd.

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

First stage - use 150 sks. 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. (369 cu.ft. of slurry, 40% excess to cover the Gallup).

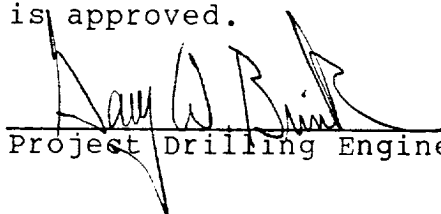
Second stage - circulate mud for 2 hours, then cement with 350 sks. 65/35 Class "B" Pozmix with 6% gel and 2% calcium chloride, and 8.3 gallons water per sack (567 cu.ft. of slurry, 70% excess to cover the Mesa Verde).

Third stage - circulate mud for 2.5 hours, then cement using 320 sks. 65/35 Class "B" Pozmix with 6% gel and 2% calcium chloride mixed with 8.3 gallons water per sack (518 cu.ft. of slurry, 100% excess to cover Ojo Alamo). Run temperature survey on top stage only at 8 hours. WOC 18 hours.

Multi-Point Surface Use Plan
Huerfano Unit #4E

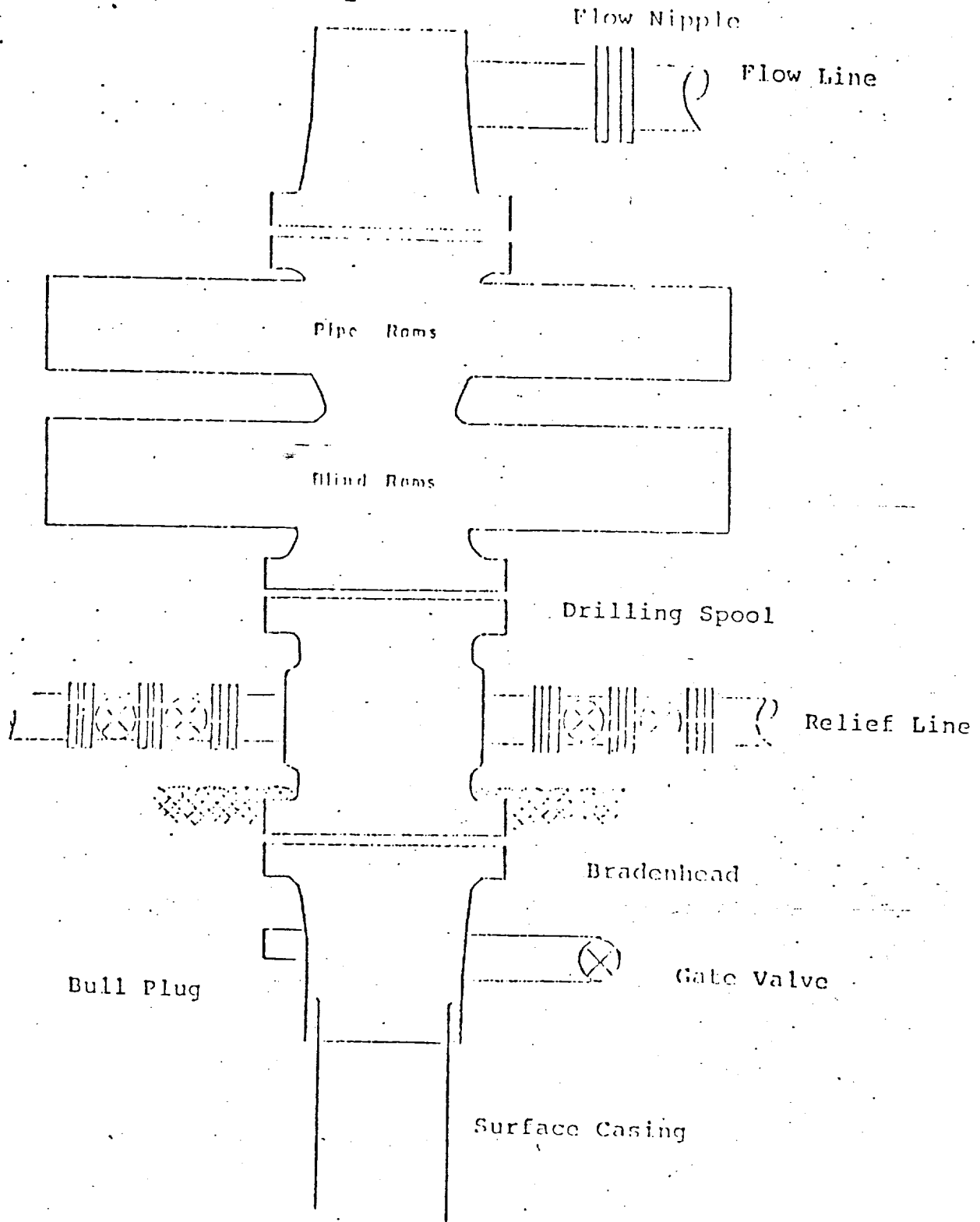
1. Existing Roads - Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map. All existing and new roads will be properly maintained during the duration of this project.
2. Planned Access Roads - Please refer to Map No. 1. The grade of the 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 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, will be provided for human waste.

7. cont'd. 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 drainage; all earthen pits will be so constructed as to prevent leakage from occurring.
8. Ancillary Facilities - No camps or air strips 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 reseedling operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseedling operations 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- Terrain is sage flats with sage and rabbitbrush growing. Cattle, sheep, rabbits and deer are occasionally seen on the proposed project site.
12. Operators Representative - D. C. Walker, Post Office Box 4289, Farmington, NM 87499.
13. Certification - I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site 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 subcontractors in conformity with this plan and the terms and conditions under which it is approved.



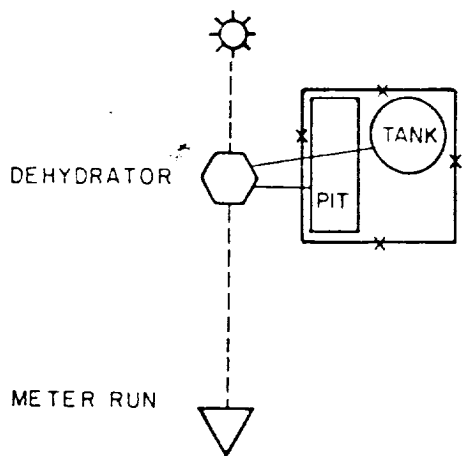
Project Drilling Engineer

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.

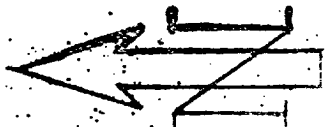


					ENG. REC.	DATE
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PRT.	SEP.	DATE	TO	W.O.	DESIGN	

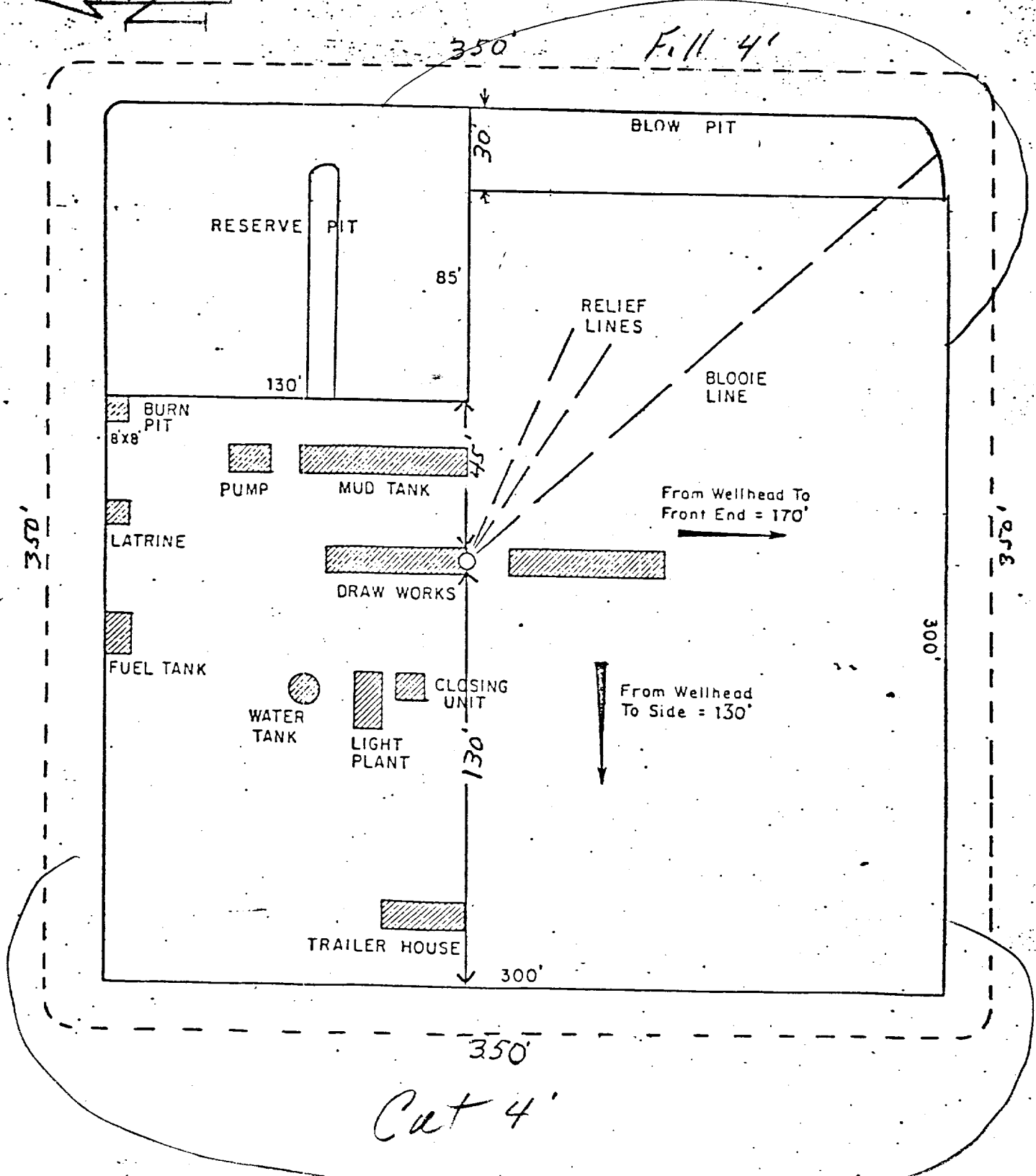


Anticipated Production Facilities For Mesaverde or Dakota Well

HUERFANO #4 E



Fill 4'

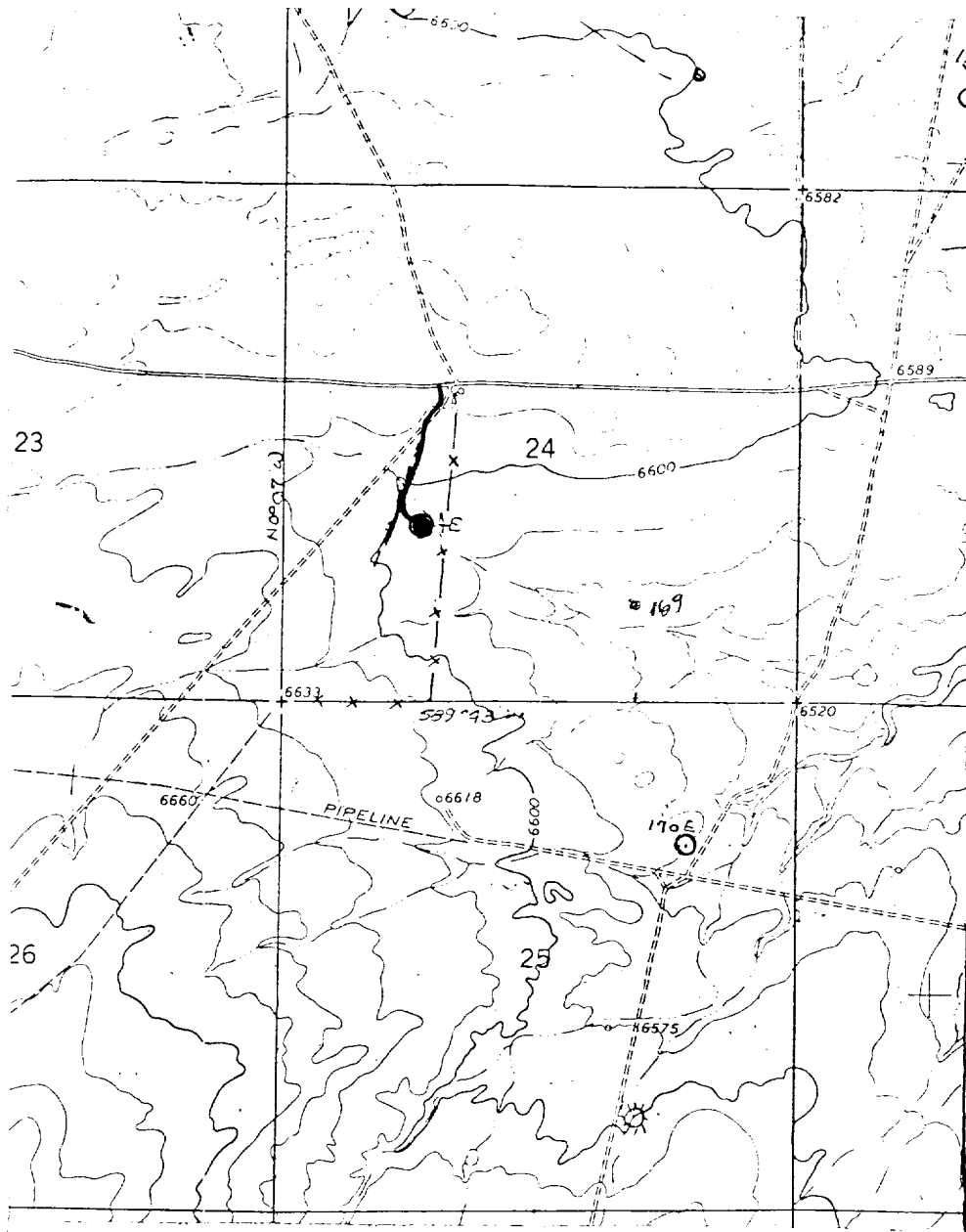


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El Paso Natural Gas Company

TYPICAL LOCATION PLAT FOR
MESAVERDE OR DAKOTA DRILL SITE

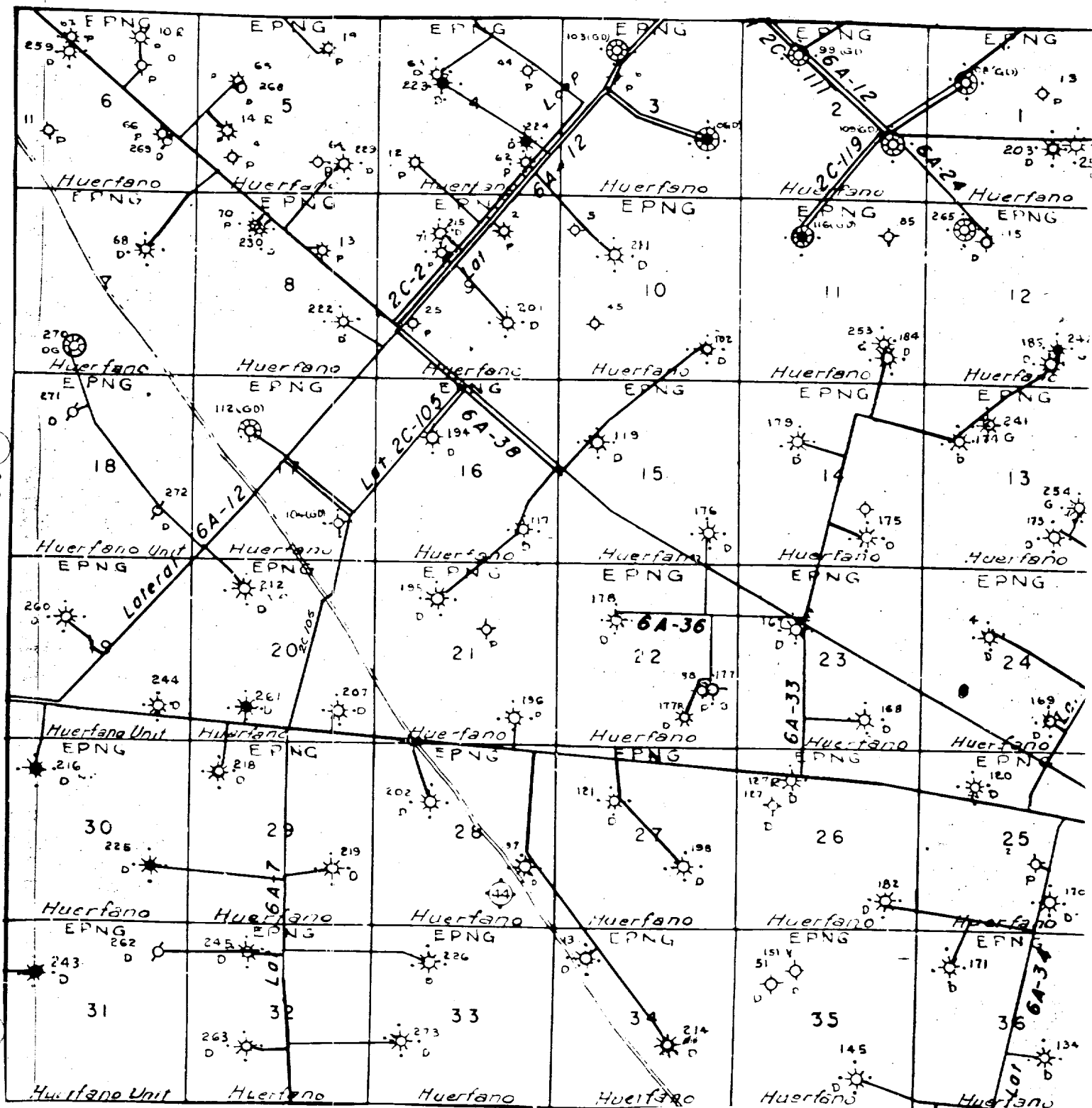
El Paso Natural Gas Co.
 Huerfano Unit-#4E (Dk)
 SW 24-26-10, San Juan Co.



LEGEND OF RIGHT-OF-WAYS

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

T
26
N



R-10-W