

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

30-045-23926

5. LEASE DESIGNATION AND SERIAL NO.
NM 013860

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Hardie E

9. WELL NO.
3A

10. FIELD AND POOL, OR WILDCAT
Blanco Mesa Verde

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA
Sec. 23, T-28-N, R-8-W
NMPM

12. COUNTY OR PARISH
San Juan

13. STATE
NM

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 1800'S, 830'E
At proposed prod. zone same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
9.75 miles east of Blanco, NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
830'

16. NO. OF ACRES IN LEASE
160

17. NO. OF ACRES ASSIGNED TO THIS WELL
E / 320.00

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
1000'

19. PROPOSED DEPTH
5440'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6253' 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"	20.0#	3130'	706 cu.ft. to cover Ojo Alam
6 1/4"	4 1/2" liner	10.5#	2980-5440'	429 cu.ft. to circ. liner

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 E/2 of Section 23 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 [Signature] TITLE Drilling Clerk DATE 10-29-79

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ok Frank

NMOCC

*See Instructions On Reverse Side

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

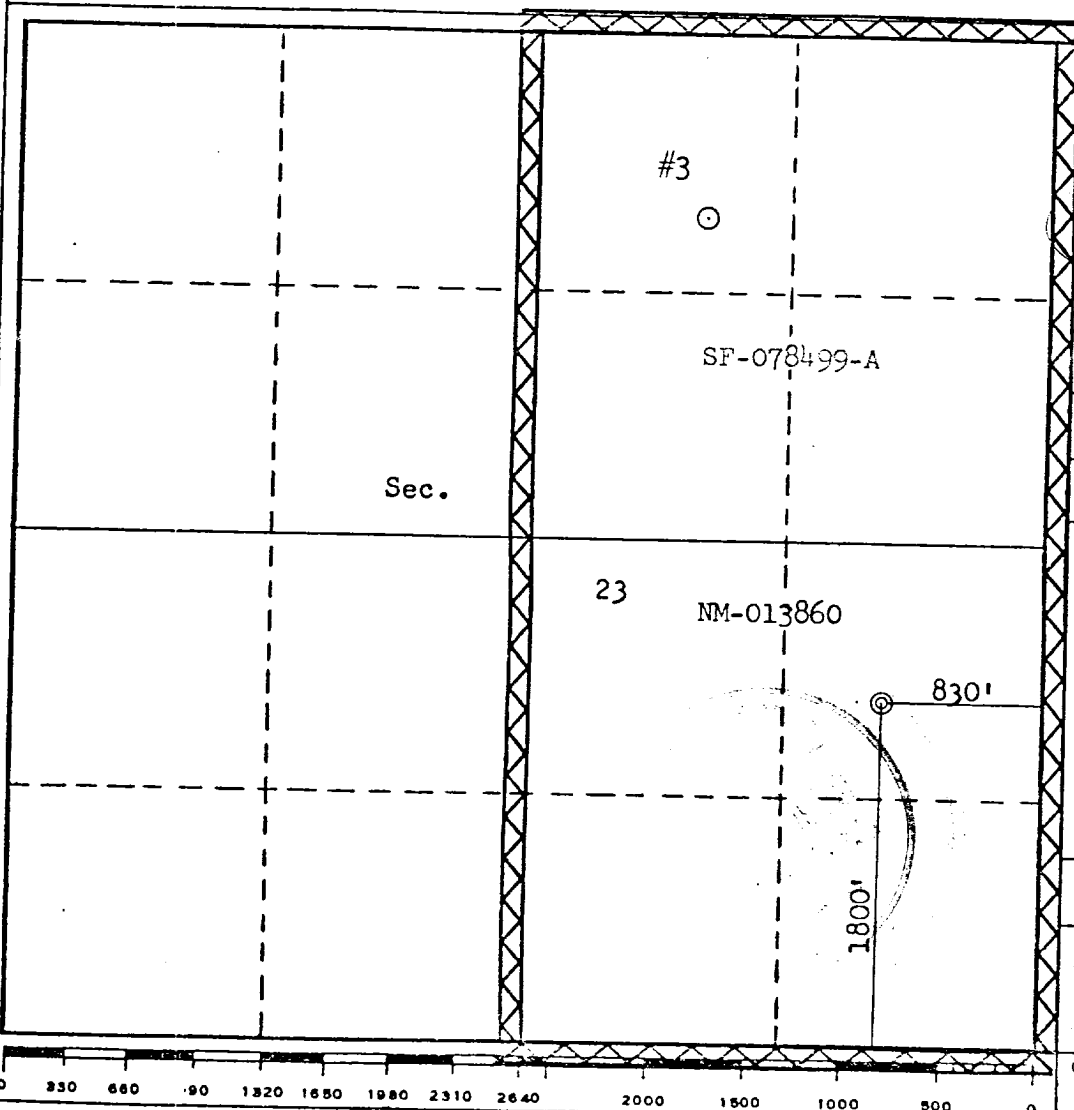
Operator EL PASO NATURAL GAS COMPANY			Lease HARDIE "E" (NM-013860)		Well No. 3-A
Unit Letter I	Section 23	Township 28N	Range 8W	County San Juan	
Actual Footage Location of Well: 1800 feet from the South line and 830 feet from the East line					
Ground Level Elev. 6253	Producing Formation MESA VERDE		Pool BLANCO MESA VERDE	Dedicated Acreage: 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?

☒ 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
Drilling Clerk
Position
El Paso Natural Gas Co.
Company
October 29, 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
8-3-1979
Registered Professional Engineer and/or Land Surveyor
Fred B. Kerr Jr.
Certificate No.
3950

October 29, 1979

Operations Plan
Hardie E #3A

I. Location: 1800'S, 830'E, Section 23, T-28-N, R-8-W, San Juan County, NM

Field: Blanco Mesa Verde

Elevation: 6253'GL

II. Geology:

A. Formation Tops:	Surface	San Jose	Lewis	2930'
	Ojo Alamo	1904'	Mesa Verde	4400'
	Kirtland	1952'	Menefee	4518'
	Fruitland	2500'	Point Lookout	4988'
	Pic.Cliffs	2780'	Total Depth	5440'

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

C. Coring Program: none

D. Natural Gauges: 4390', 4505', 4975' 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 3130'. Gas from intermediate casing to Total Depth.

IV. Materials:

A. Casing Program:	<u>Hole Size</u>	<u>Depth</u>	<u>Casing Size</u>	<u>Wt.&Grade</u>
	13 3/4"	200'	9 5/8"	36.0# H-40
	8 3/4"	3130'	7"	20.0# K-55
	6 1/4"	2980-5440'	4 1/2"	10.5# K-55

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

7" intermediate casing - cement guide shoe and self-fill insert float valve, 5 stabilizers every other joint above shoe. Run float two joints above shoe.

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

C. Tubing: 5400' of 2 3/8", 4.7#, J-55 8rd EUE tubing with a common pump seating nipple one joint above bottom. Tubing will be open ended.

D. Wellhead Equipment: 10" 2000 x 9 5/8" casing head. 10" 2000 x 6" 2000 xmas tree.

Multi-Point Surface Use Plan
Hardie E #3A

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 Ten Mile Crossing Water Hole North.
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,

Operations Plan - Hardie E #3A

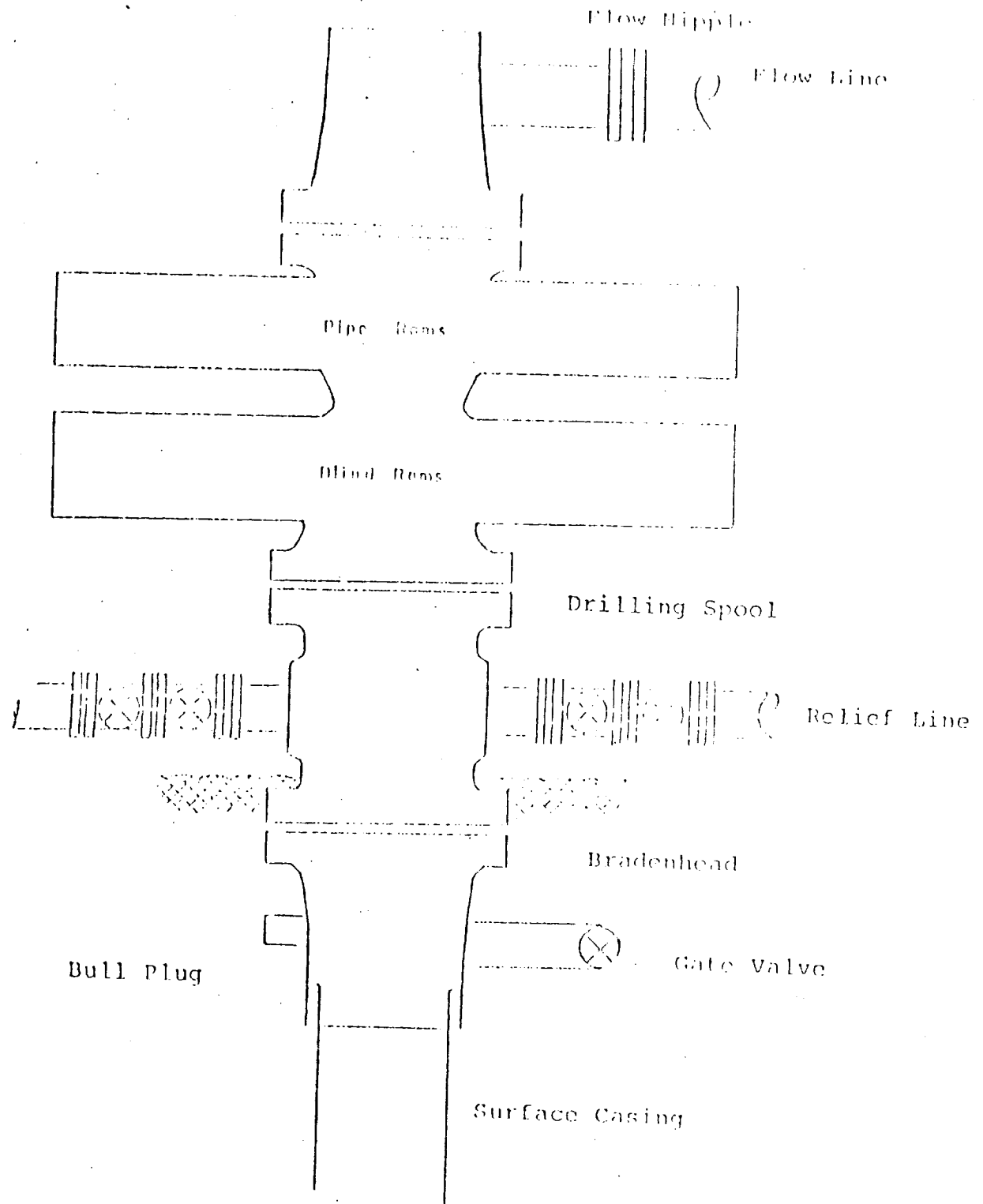
V. Cementing:

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 363 sks. of 65/35 Class "B" Poz with 6% gel and 2% calcium chloride (8.3 gallons of water per sack) followed by 100 sks. of Class "B" with 2% calcium chloride (706 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.

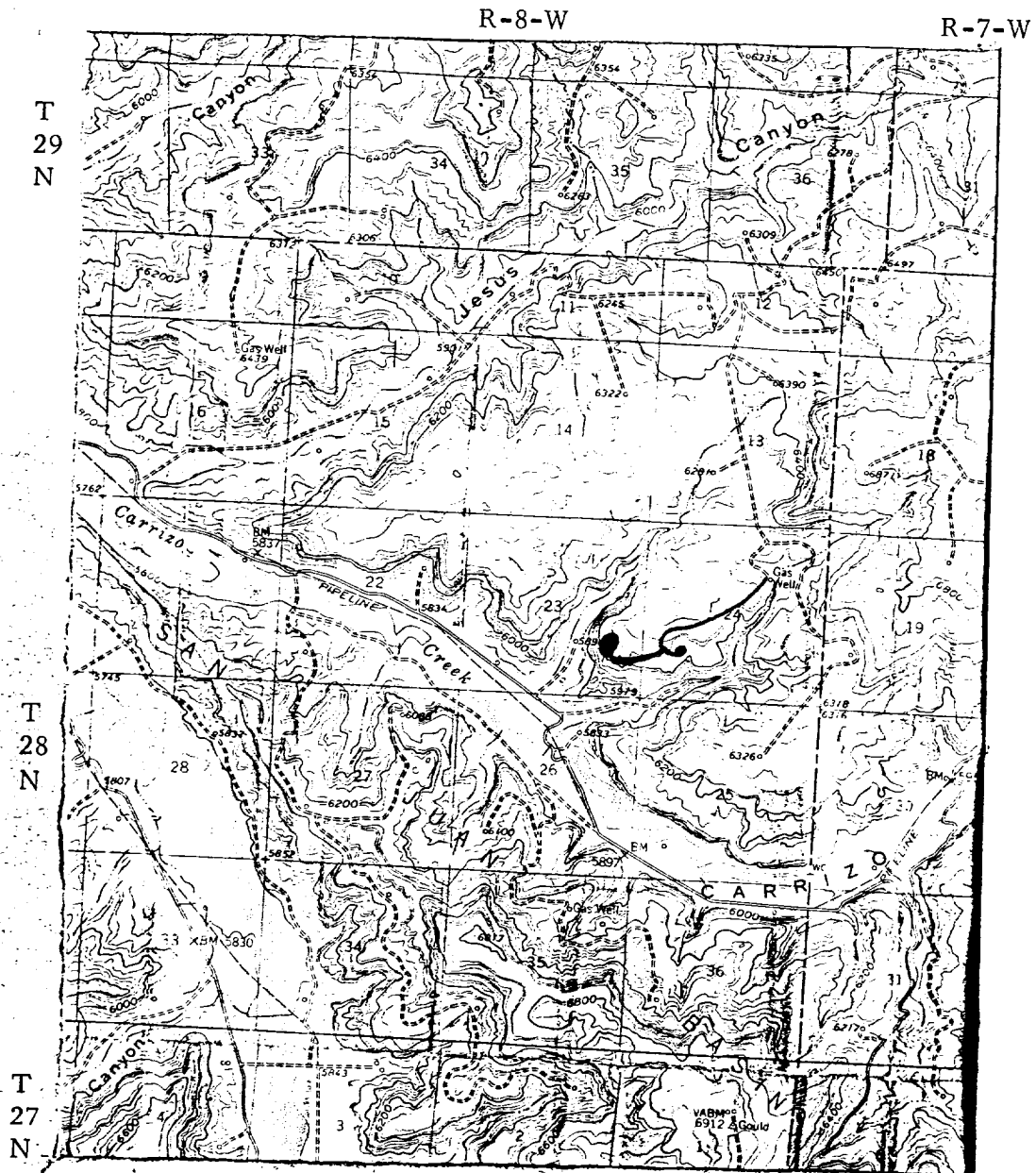
4 1/2" liner - precede cement with 20 barrels of gel water (2 sks. gel) Cement with 309sks. of 50/50 Class "B" Poz with 2% gel, 0.6% Halad-9, 6.25# gilsonite plus 1/4# Flocele per sack (429 cu.ft. of slurry, 70% excess to circulate liner). WOC 18 hours.

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
Hardie E #3A
SE 23-28-8



MAP #1

LEGEND OF RIGHT-OF-WAYS

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

24-10-5-12

EL PASO NATURAL GAS COMPANY

Hardie E #3A

SWSE 23-28-8

R8W

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