

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

Box 990, Farmington, New Mexico

4. LOCATION OF WELL (Report location clearly and in accordance with any special instructions.)

At surface 800' S, 800' W

At proposed prod. zone

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

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

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

5833' GL

16. NO. OF LINES IN LEASE

19. PROPOSED DEPTH

5045'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320

20. ROTARY OR CABLE TOOLS

Rotary

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"	32.30#	180'	160 sks. to circulate
8 3/4"	7"	20#	2865'	205 sks. to cover P.O.
6 1/4"	4 1/2" inner	10.5#	2715-5045'	265 sks. to circ. liner

Selective zones in the Mesa Verde formation will be
perforated and sand-water fractured.

The W/2 of Section 22 is dedicated to this well.

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 Original Signed F. H. WOOD TITLE Petroleum Engineer DATE 8-15-67

(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

Instructions

General: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plat, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

Items 15 and 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

Item 22: Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

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**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACERAGE DEDICATION PLAT**

All distances must be from the outer boundaries of the Section

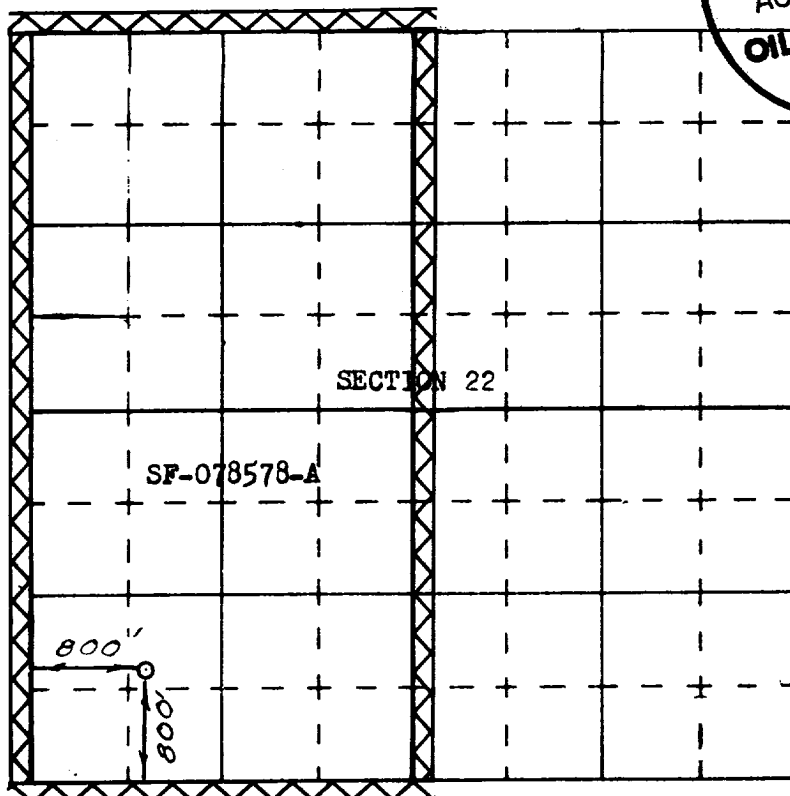
Operator EL PASO NATURAL GAS COMPANY		Lease HOWELL K		Well No. 2-Y	
Unit Letter M	Section 22	Township 30-N	Range 8-W	County SAN JUAN	
Actual Footage Location of Well: 800 feet from the SOUTH line and 800 feet from the WEST line					
Ground Level Elev. 5833	Producing Formation MESA VERDE		Pool BLANCO 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

If answer is "no," list the owners and tract descriptions which have actually 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 Original Signed F. H. WOOD

Position
Petroleum Engineer
Company

El Paso Natural Gas Company
Date

August 15, 1967

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

JULY 5, 1967

Registered Professional Engineer
and/or Land Surveyor

[Signature]
Certificate No. **1760**

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATA

CORRECTED COPY

DATE September 18, 1967

Operator El Paso Natural Gas Company		Lease Howell K No. 2-Y	
Location 800'S, 800'W, Sec. 22, T-30-N, R-8-W		County San Juan	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 4.500	Set At: Feet 5045	Tubing: Diameter 2.375	Set At: Feet 4874
Pay Zone: From 4384	To 4892	Total Depth: 5045	Shut In 9-11-67
Stimulation Method Sand Water Frac		Flow Through Casing	Flow Through Tubing X

Choke Size, Inches .750		Choke Constant: C 12.365			
Shut-In Pressure, Casing, PSIG 841	+ 12 = PSIA 853	Days Shut-In 7	Shut-In Pressure, Tubing PSIG 888	+ 12 = PSIA 900	
Flowing Pressure: P PSIG 302	+ 12 = PSIA 314		Working Pressure: P _w PSIG 733	+ 12 = PSIA 745	
Temperature: T = 70 °F	F _t = .9905	n = .75	F _{pv} (From Tables) 1.041	Gravity .750	F _g = .8944

$$\text{CHOKE VOLUME} = Q = C \times P_s \times F_t \times F_g \times F_{pv}$$

$$Q = (12.365)(314)(.9905)(.8944)(1.041) = 3581 \text{ MCF/D}$$

$$\text{OPEN FLOW} = Aof = Q \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$$

$$Aof = \left(\frac{810000}{254975} \right)^n = (3581)(3.1767)^{.75} = (3581)(2.3795)$$

NOTE: The well produced a heavy fog of dis. and water throughout the test.

$$Aof = 8521 \text{ MCF/D}$$

TESTED BY Jesse B. Goodwin

CHECKED
WITNESSED BY H. E. McAnallyOIL COMPANY
DIST. 3

H. L. Kendrick
H. L. Kendrick

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE September 18, 1967

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Location 800'S, 800'W, Sec. 22, T-30-N, R-8-W		County San Juan	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 4.500	Set At: Feet 5054	Tubing: Diameter 2.375	Set At: Feet 4984
Pay Zone: From 4384	To 4892	Total Depth: 5054	Shut In 9-11-67
Stimulation Method Sand Water Frac		Flow Through Casing	Flow Through Tubing X

Choke Size, Inches .750		Choke Constant: C 12.365			
Shut-In Pressure, Casing, PSIG 841	+ 12 = PSIA 853	Days Shut-In 7	Shut-In Pressure, Tubing PSIG 888	+ 12 = PSIA 900	
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