

N.M. OIL CONS. COMMISSION
P.O. BOX 1980 UNITED STATES
HOBBS, NEW MEXICO 88240
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☐

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Enron Oil & Gas Company

3. ADDRESS AND TELEPHONE NO.

P. O. Box 2267, Midland, Tx 79702

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

At surface

810' FSL & 660' FEL

At proposed prod. zone

810' FSL & 660' FEL

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

25 miles west of Jal, NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.

660

660

(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.

2657' to #2

16. NO. OF ACRES IN LEASE

640

19. PROPOSED DEPTH

12600

17. NO. OF ACRES ASSIGNED
TO THIS WELL

80

20. ROTARY OR CABLE TOOLS

Rotary

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

3415' GR

22. APPROX. DATE WORK WILL START*

January 1995

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14-3/4	11-3/4 H-40 A ST&C	42#	650	250 sx Circulated
11	8-5/8 J-55 ST&C	32#	5200	1100 sx Circulated
7-7/8	5-1/2 P-110 LT&C	17#	6500	1200 sx
	5-1/2 S-95 LT&C	17#	12600	TOC est at 4500'

The undersigned accepts all applicable temrs, conditions, stipulations, and restrictions concerning operations on the leased land or portions thereof as shown below:

NM 18640-A

Sec 6, T25S, R34E

Bone Spring Form.

Federal Bond is MT 0748 with
endorsement to New Mexico

OPER. GRANT NO. 73177

PROPERTY NO. 15412

POOL CODE 51020

EFF. DATE 1-10-95

API NO. 30-D25-32811

Approval Subject to
General Requirements and
Special Stipulations
Attached

Acreage is dedicated to a pipeline.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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

Betty Gildon
Betty Gildon

TITLE Regulatory Analyst

DATE 12/6/94

(This space for Federal or State office use)

PERMIT NO. _____

APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

Timothy P. O'Brien
Timothy P. O'Brien

TITLE

Acting
AREA MANAGER

DATE

12-21-94

*See Instructions On Reverse Side

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JAN 06 1935

C C D HOBBS
OFFICE

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-32B11	² Pool Code 51020	³ Pool Name Red Hills Bone Spring
⁴ Property Code 15412	⁵ Property Name HALF "6" FEDERAL	⁶ Well Number 4
⁷ OGRID No. 7377	⁸ Operator Name ENRON OIL AND GAS COMPANY	⁹ Elevation 3415

¹⁰Surface Location



UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	6	25-S	34-E		810	SOUTH	660	EAST	LEA

¹¹Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres 80	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

¹⁶					<div><p>¹⁷ OPERATOR CERTIFICATION</p><p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i></p><p> Signature Betty Gildon Printed Name Regulatory Analyst Title 11/21/94 Date</p></div>
					<div><p>¹⁸ SURVEYOR CERTIFICATION</p><p><i>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 best of my belief.</i></p><p>11-1-94 Date of Survey Signature and Seal of Professional Surveyor  Certificate Number 8278</p></div>

660'

810'

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DRILLING PROGRAM

Enron Oil & Gas Company
Half 6 Federal, Well No. 4
810' FSL & 660' FEL
Sec. 6, T25S, R34E
Lea County, New Mexico

1. Geologic Name of Surface Formation:

Permian

2. Estimated Tops of Important Geologic Markers:

Rustler	850'
Delaware Mt. Group	5175'
Bone Spring Lime	9275'
Bone Spring Pay	12300'
TD	12600'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Upper Permian Sands	100'	Fresh Water
3rd Bone Spring Sand	12300'	Oil

No other formations are expected to give up oil, gas or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 11-3/4" casing at 650' and circulating cement back to surface, and 8-5/8" casing will be set at 5200' with cement circulated back to surface.

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810' FSL & 660' FEL
Sec. 6, T25S, R34E
Lea County, New Mexico

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OD csg</u>	<u>Weight Grade Jt. Cond. Type</u>
14-3/4	0- 650'	11-3/4	42# H-40 A ST&C
11	0- 5200'	8-5/8	32# J-55 ST&C
7-7/8	0- 6500'	5-1/2	17# P-110 LT&C
	6500'-12600'	5-1/2	17# S-95 LT&C

Cementing Program:

11-3/4" Surface casing: Cement to surface with 250 sx of Class C + 2% CaCl₂ + 1/4#/sx flocele.

8-5/8" Intermediate: Cement to surface with 800 sx of Premium Plus lite + 15#/sx salt + 1/4#/sx Flocele and 300 sx Cl C + 2% CaCl₂

5-1/2" Prod casing: Cement with 1200 sx 50/50 Cl H/Poz + 2% gel + .4% CF-14, .1% Diacel LWL. This cement slurry is designed to bring TOC to 4500'.

5. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (5000 psi WP) preventer and an annular preventer (5000 psi WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on top and drill pipe rams on bottom. All will be installed on the 11-3/4" surface casing and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 600 psi before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000 psi and the annular to 70% of rated working pressure (3500 psi).

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and 4" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 5000 psi WP rating.

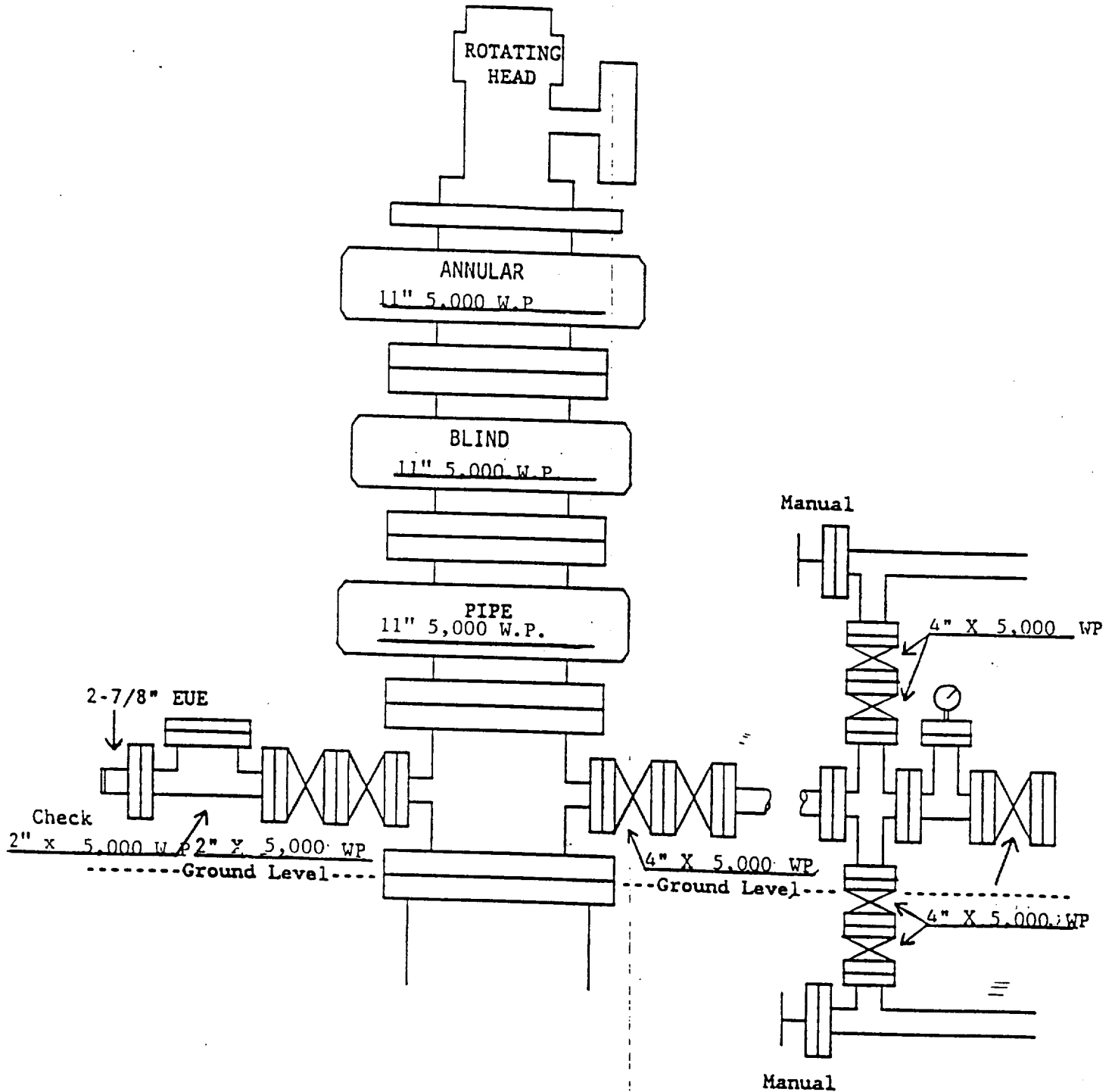
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JOJO HOBBS
OFFICE

ENRON OIL & GAS COMPANY

Half 6 Federal No. 4

EXHIBIT #1



Enron Oil & Gas Company
Half 6 Federal, Well No. 4
810' FSL & 660' FEL
Sec. 6, T25S, R34E
Lea County, New Mexico

6. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of brine, cut brine, and polymer/KCl mud system. The applicable depths and properties of this system are as follows:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity (sec)</u>	<u>Waterloss (cc)</u>
0-650'	Fresh water (spud)	8.5	40-45	N.C.
650'-5200'	Brine water	10.0	30	N.C.
5200'-TD	Cut Brine & Polymer/KCL	8.8-9.2	28	N.C.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. Auxiliary Well Control and Monitoring Equipment:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) A mud logging unit complete with H2S detector will be continuously monitoring drilling penetration rate and hydrocarbon shows from 10,000' to TD.

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Lea County, New Mexico

8. Logging, Testing and Coring Program:

- (A) The electric logging program will consist of GR-Dual Laterolog-MSFL and GR-Compensated Density-Neutron from TD to intermediate casing with a GR-Compensated Neutron ran from intermediate casing to surface.
- (B) Possible side wall cores based on shows.

9. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature (BHT) at TD is 175 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 5900 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. Anticipated spud date is unknown at the present time. Once drilling has commenced, the drilling operation should be finished in approximately 30 days. If the well is productive, an additional 30 to 45 days will be required for completion and testing before a decision is made to install permanent facilities.

512

50/2/8
173

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