

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. OIL CONS. COMMISSION
P.O. BOX 1980
HOBBS, NEW MEXICO 88240

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, Texas 79702 (915) 686-3714

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

At surface

1980' FNL & 2068' FWL

At proposed prod. zone

1980' FNL & 2068' FWL

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. 1980

572

16. NO. OF ACRES IN LEASE

598.51

17. NO. OF ACRES ASSIGNED TO THIS WELL

80

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

1565

19. PROPOSED DEPTH

12600

20. ROTARY OR CABLE TOOLS

Rotary

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

3451' GR

22. APPROX. DATE WORK WILL START*

November 15, 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 H-40 A ST&C | 11-3/4 | 42 | 600 | 250 sx CIRCULATED |
| 11 J-55 ST&C | 8-5/8 | 32 | 5200 | 1100 sx CIRCULATED |
| 7-7/8 P-110 & S-95 LT&C | 5-1/2 | 17 | 12600 | 1200 sx TOC est @ 4500' |

The Undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on leased land or portions thereof as shown below:

OPER. OGRID NO. 7377

PROPERTY NO. 4047

POOL CODE 51020

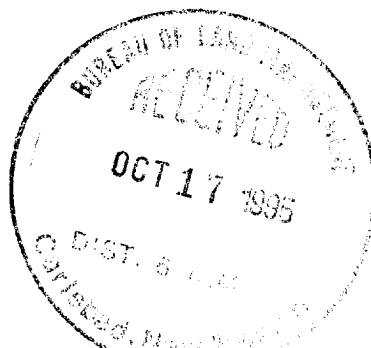
EFF. DATE 12/18/95

API NO. 30-025-3323D

NM 14497-A

Sec 6, T25S, R34E

Federal Bond # is MT 0748 with endorsement to New Mexico



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

SIGNATURE Betty Gildon

TITLE Regulatory Analyst

DATE 10/16/95

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

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

TITLE

DATE

10/16/1995

*See Instructions On Reverse Side

Handwritten text, possibly a signature or date, located at the top center of the page.



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 30-025-33230 | ² Pool Code 51020 | ³ Pool Name Red Hills Bone Spring |
| ⁴ Property Code 4047 | ⁵ Property Name DIAMOND "6" FEDERAL | ⁶ Well Number 3 |
| ⁷ GRID No. 7377 | ⁸ Operator Name ENRON OIL AND GAS COMPANY | ⁹ Elevation 3451 |

¹⁰Surface Location

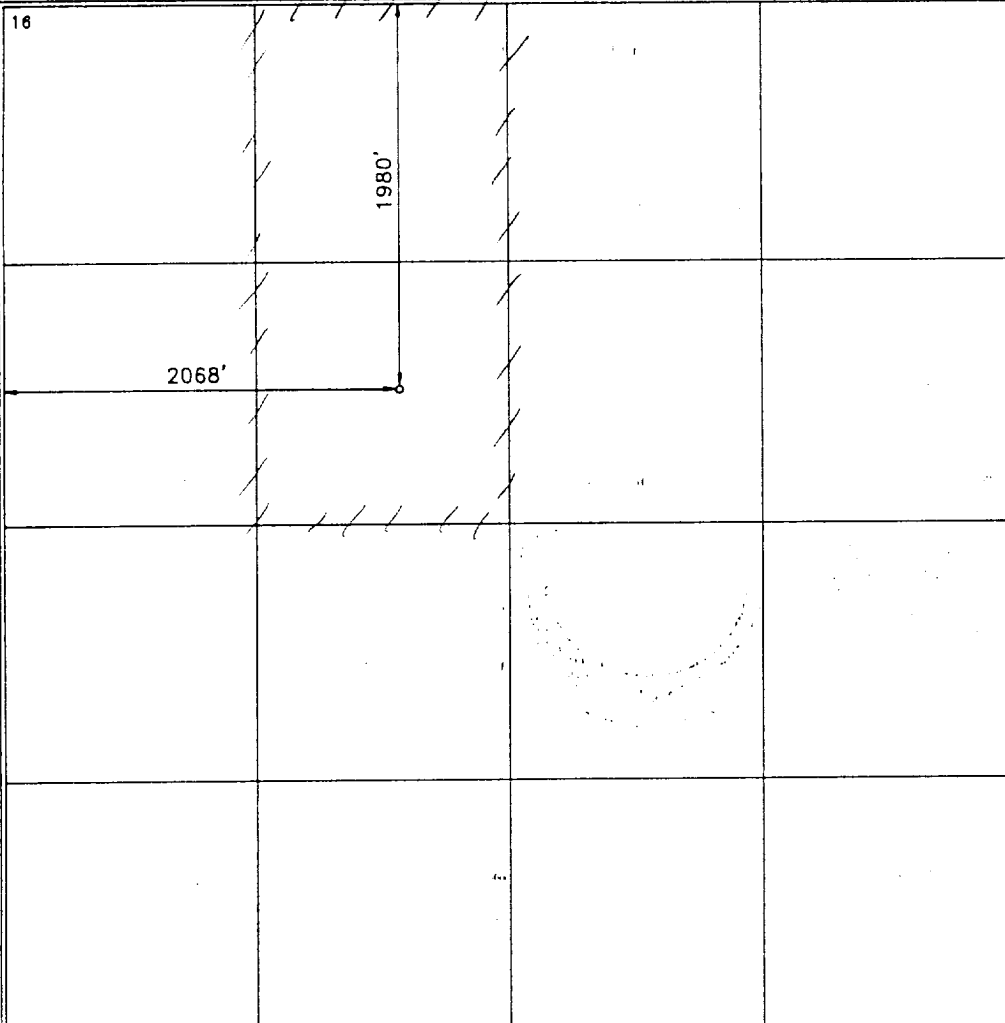
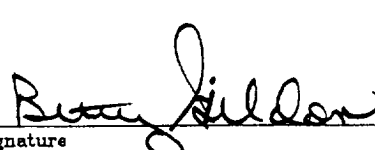

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| F | 6 | 25-S | 34-E | | 1980 | NORTH | 2068 | WEST | 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. |
|-------------------------------------|-------------------------------|----------------------------------|-------------------------|

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

| | |
|--|---|
| <div><p>¹⁶</p></div> | <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</p><p>Printed Name Regulatory Analyst</p><p>Title 10/12/95</p><p>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>OCTOBER 6, 1995 Date of Survey</p><p>Signature and Seal of Professional Surveyor:  8278</p><p>Certificate Number 8278</p></div> |
|--|---|

DRILLING PROGRAM

Enron Oil & Gas Company
Diamond "6" Federal, Well No. 3
1980' FNL & 2068' FWL
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' |
| 3rd Bone Spring Sand | 12250' |
| TD | 12600' |

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

| | | |
|----------------------|--------|-------------|
| Upper Permian Sands | 100' | Fresh Water |
| 3rd Bone Spring Sand | 12250' | 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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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 LT&C |
| 7-7/8 | 0-12600' | 5-1/2 | 17# P-110 & 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 7500'.

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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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 4500' to TD.

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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.



ENRON OIL & GAS COMPANY

Diamond 6 Federal #3

