

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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

At surface

2130' FSL & 660' FEL

At proposed prod. zone:

2130' FSL & 660' FEL

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

29 miles west of Jal, NM

15. DISTANCE FROM PROPOSED*

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

660

510

16. NO. OF ACRES IN LEASE

640

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.

2640' to #4

19. PROPOSED DEPTH

12,600'

20. ROTARY OR CABLE TOOLS

Rotary

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

3335' GR

22. APPROX. DATE WORK WILL START*

August 30, 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	650	250 sx CIRCULATED
11 J-55 ST&C	8-5/8	32	5200	1100 sx CIRCULATED
7-7/8 P-110 LT&C	5-1/2	17	6500	1200 sx
S-95 LT&C		17	12600	TOC est at 4500'

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

NM 24490

Sec 18-25S-34E

Bone Spring Formation

Federal Bone # is MT 0748 with endorsement to New Mexico

OPER. OGRID NO. 7377

PROPERTY NO. 15397

FOOL CODE 51020

EFF. DATE 8/30/95

API NO. 30-D25-33078

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.

SIGNED Betty Gildon Betty Gildon TITLE Regulatory Analyst DATE 7/17/95

(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:

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

APPROVED BY _____

TITLE _____

DATE 8-25-95

*See Instructions On Reverse Side

District I
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994

District II

PO Drawer DD, Artesia, NM 88211-0719

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

Submit to Appropriate District Office

District III
1000 Rio Brazos Rd., Aztec, NM 87410

State Lease - 4 Copies
Fee Lease - 3 Copies

District IV
PO Box 2088, Santa Fe, NM 87504-2088

☐ AMENDED REPORT

Instructions on back

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-33078	² Pool Code 51020	³ Pool Name Red Hills Bone Spring
⁴ Property Code 15397	⁵ Property Name DIAMOND "18" FEDERAL	⁶ Well Number 5
⁷ OGRID No. 7377	⁸ Operator Name ENRON OIL AND GAS COMPANY	⁹ Elevation 3335

¹⁰Surface Location

UL or lot no. 1	Section 18	Township 25-S	Range 34-E	Lot Idn	Feet from the 2130	North/South line SOUTH	Feet from the 660	East/West line EAST	County LEA
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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
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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					660'	2130'	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature Betty Gildon Printed Name Regulatory Analyst Title 7/14/95 Date
							¹⁸ SURVEYOR CERTIFICATION 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. JUNE 9, 1995 Date of Survey Signature and Seal of Professional Surveyor: 8278 Certificate Number 8278

DRILLING PROGRAM

Enron Oil & Gas Company
Diamond "18" Federal, Well No. 5
2130' FSL & 660' FEL
Sec. 18, 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	12400'
TD	12600'

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

Upper Permian Sands	100'	Fresh Water
3rd Bone Spring Sand	12400'	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.

Enron Oil & Gas Company
Diamond "18" Federal, Well No. 5
2130' FSL & 660' FEL
Sec. 18, 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
7-7/8	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'.

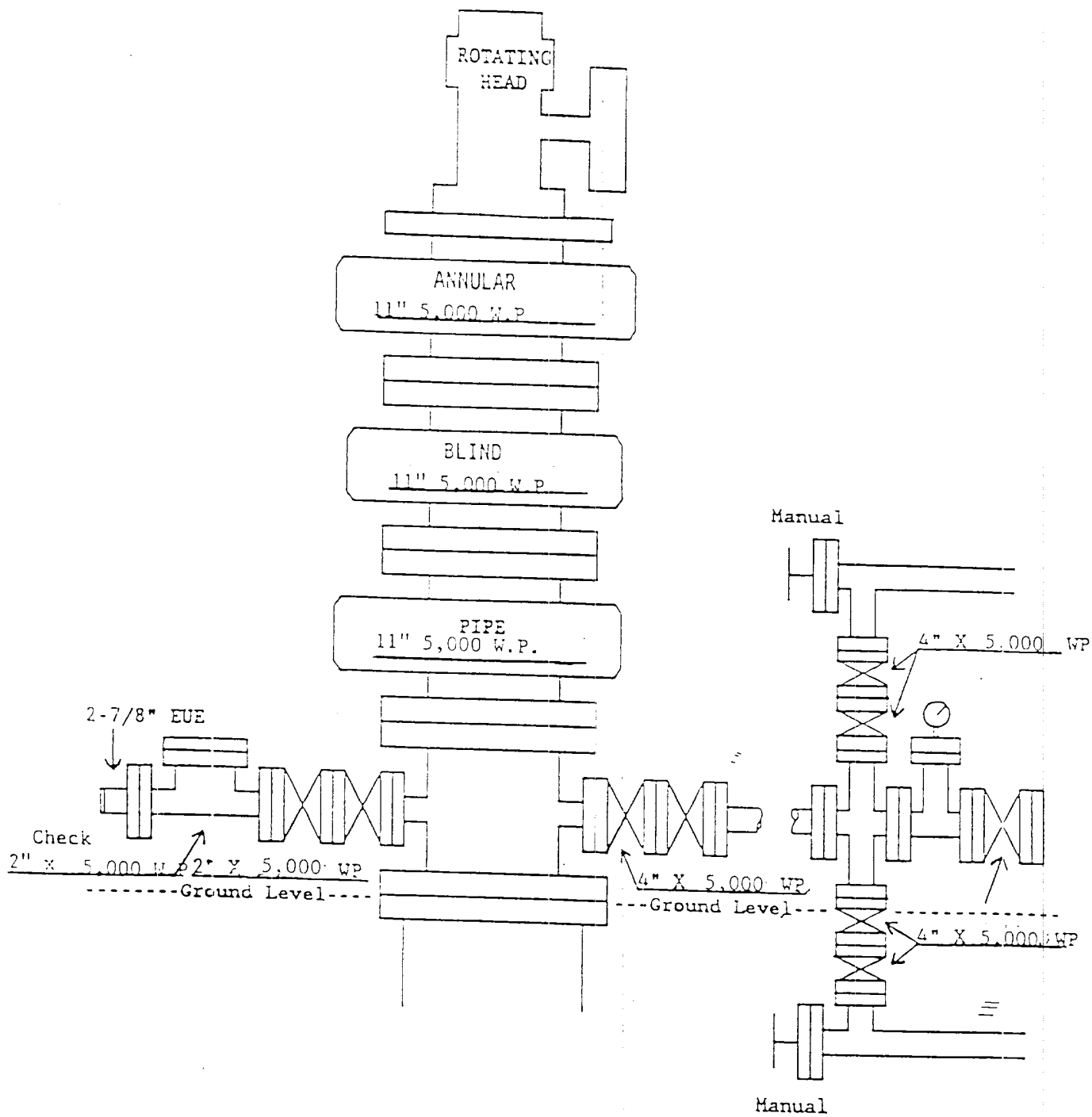
5. Minimum Specifications for Pressure Control:

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.

ENRON OIL & GAS COMPANY

Diamond 18 Federal #5



Enron Oil & Gas Company
Diamond "18" Federal, Well No. 5
2130' FSL & 660' FEL
Sec. 18, 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 4500' to TD.