

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT -

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM 14497	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Enron Oil & Gas Company		7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. P. O. Box 2267, Midland, Texas 79702 (915) 686-3714		8. FARM OR LEASE NAME, WELL NO. Diamond 8 Federal #2	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1980' FNL & 510' FWL At proposed prod. zone 1980' FNL & 510' FWL		9. AM WELL NO.	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 30 miles west from Jal, NM		10. FIELD AND POOL, OR WILDCAT Red Hills (Bone Spring)	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 510		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 8-25S-34E	
16. NO. OF ACRES IN LEASE 560		12. COUNTY OR PARISH Lea	
17. NO. OF ACRES ASSIGNED TO THIS WELL 40 80		13. STATE NM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2791' to #1		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3370' GR		22. APPROX. DATE WORK WILL START* April 24, 1995	

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 42# 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#	12600	1200 sx. Est TOC at 7500'

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

NM 14497  
Sec 8, T25S, R34E  
Bone Spring Formation  
Federal Bond # is MT 0748 with  
endorsement to New Mexico

Approved subject to  
**General Requirements and  
Special Stipulations  
Attached**

OPER. OGRID NO. 7377  
PROPERTY NO. 4049  
POOL CODE 51020  
EFF. DATE 6/2/95  
API NO. 30-025-32979

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 TITLE Regulatory Analyst DATE 3/21/95  
(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:

APPROVED BY John L. Blackley TITLE Acting DATE MAY 26 1995

\*See Instructions On Reverse Side

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

*API Number 30-025-32979		*Pool Code 51020	*Pool Name Red Hills Bone Spring
*Property Code 4049	*Property Name DIAMOND "8" FEDERAL		*Well Number 2
*GRID No. 7377	*Operator Name ENRON OIL & GAS COMPANY		*Elevation 3370'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	8	25-S	34-E		1980	NORTH	510	WEST	LEA

<sup>11</sup> Bottom 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
*Dedicated Acres 80.40		*Joint or Infill		*Consolidation Code		*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>18</div> <div>1980'</div> <div>510'</div>					<div>17 OPERATOR CERTIFICATION</div> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <div>Betty Gildon</div> <p>Signature</p> <p>Betty Gildon</p> <p>Printed Name</p> <p>Regulatory Analyst</p> <p>Title</p> <p>3/21/95</p> <p>Date</p>
					<div>18 SURVEYOR CERTIFICATION</div> <p>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.</p> <p>MARCH 1995</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>8278</p> <p>Certificate Number</p> <p>8278</p>

RECEIVED

1980

OFFICE

## DRILLING PROGRAM

Enron Oil & Gas Company  
Diamond "8" Federal, Well No. 2  
1980' FNL & 510' FWL  
Sec. 8, 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	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.

**RECEIVED**

**1980**  
**U.S. HOUSE**  
**OFFICE**

Enron Oil & Gas Company  
Diamond "8" Federal, Well No. 2  
1980' FNL & 510' FWL  
Sec. 8, T25S, R34E  
Lea County, New Mexico

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OD csq</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	0-12600'	5-1/2	17# P-110 LT&C

Cementing Program:

11-3/4" Surface casing: Cement to surface with 250 sx of Class C + 2% CaCl<sub>2</sub> + 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% CaCl<sub>2</sub>

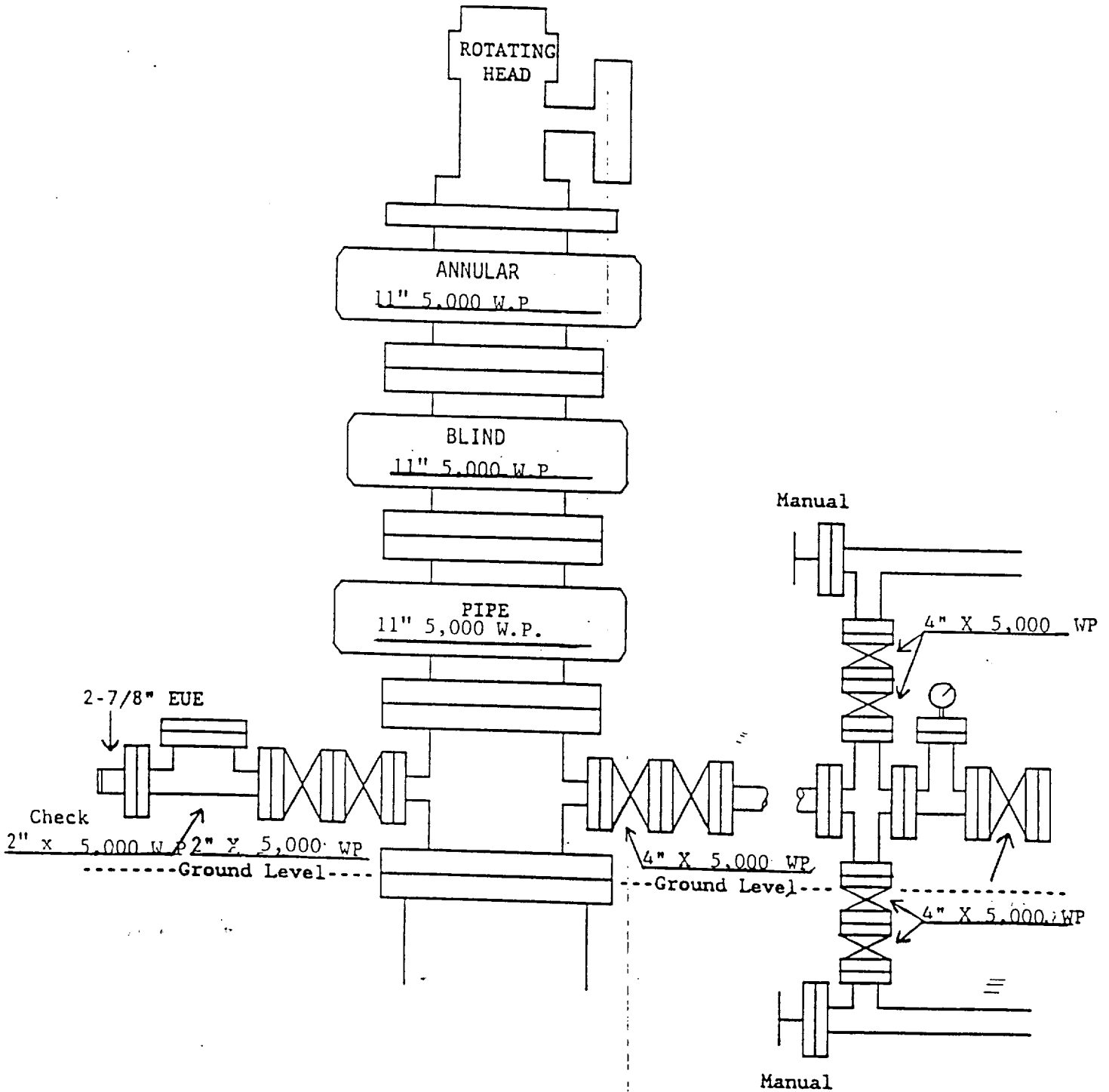
5-1/2" Prod casing: Cement with 1200 sx 50/50 Cl H/Poz + 2% gel + .4% CF-14, .1% Diacel LWL. This cement slurry is designed to bring TOC to 7500'.

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.

ENRON OIL & GAS COMPANY  
Diamond 8 Federal #2



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ADJUTANT  
GENERAL  
OFFICE



Enron Oil & Gas Company  
Diamond "8" Federal, Well No. 2  
1980' FNL & 510' FWL  
Sec. 8, 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.

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