

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

**SUBMIT IN DUPLICATE\***  
 (Other instructions on reverse side)

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

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

<b>1a. TYPE OF WORK</b> DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>			<b>5. LEASE DESIGNATION AND SERIAL NO.</b> NM-77061	
<b>b. TYPE OF WELL</b> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>			<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME</b>  	
<b>2. NAME OF OPERATOR</b> Yates Petroleum Corporation			<b>7. UNIT AGREEMENT NAME</b>  	
<b>3. ADDRESS AND TELEPHONE NO.</b> 105 South Fourth Street, Artesia, New Mexico 88210			<b>8. FARM OR LEASE NAME, WELL NO.</b> Freida "AFR" Federal #1	
<b>4. LOCATION OF WELL</b> (Report location clearly and in accordance with any State requirements.*) At surface 660' FNL and 860' FEL At proposed prod. zone Same			<b>9. API WELL NO.</b> 30-D25-32197	
<b>14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*</b> 41 miles Northwest of Jal, New Mexico			<b>10. FIELD AND POOL, OR WILDCAT</b> Diamondtail Delaware	
<b>15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)</b>			<b>11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA</b> Sec. 3-T23S-R32E	
<b>18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.</b>			<b>12. COUNTY OR PARISH</b> Lea	
<b>21. ELEVATIONS (Show whether DF, RT, GR, etc.)</b> 3724' GR			<b>13. STATE</b> NM	
<b>16. NO. OF ACRES IN LEASE</b>			<b>17. NO. OF ACRES ASSIGNED TO THIS WELL</b> 40	
<b>19. PROPOSED DEPTH</b> 9200'			<b>20. ROTARY OR CABLE TOOLS</b> Rotary	
<b>22. APPROX. DATE WORK WILL START*</b> ASAP				

**23. PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	54.5# J-55	1200'	950 sacks circulated
11"	8 5/8"	32# J-55 & HC-80	4630'	1450 sacks (tie back)
7 7/8"	5 1/2"	15.5# J-55 & 17# J-55	TD	700 sacks (tie back)

Yates Petroleum Corporation proposes to drill and test the Delaware and intermediate formations. Approximately 1200' of surface casing will be set and cement circulated. Approximately 4630' of intermediate casing will be set and cement circulated. If commercial, production casing will be run and cemented with adequate cover, perforated and stimulated as needed for production.

MUD PROGRAM: FW/GEL to 1200'; Brine to 4630', cut Brine to TD.

BOPE PROGRAM: BOPE will be installed on the 13 3/8" casing and tested daily for operational.

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 Clifton R. May TITLE Permit Agent DATE 7/20/93  
 (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 (ORIG. SGD.) RICHARD L. MANUS TITLE AREA MANAGER DATE AUG 19 1993

**\*See Instructions On Reverse Side**

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

# OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

## DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

## DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

## DISTRICT III

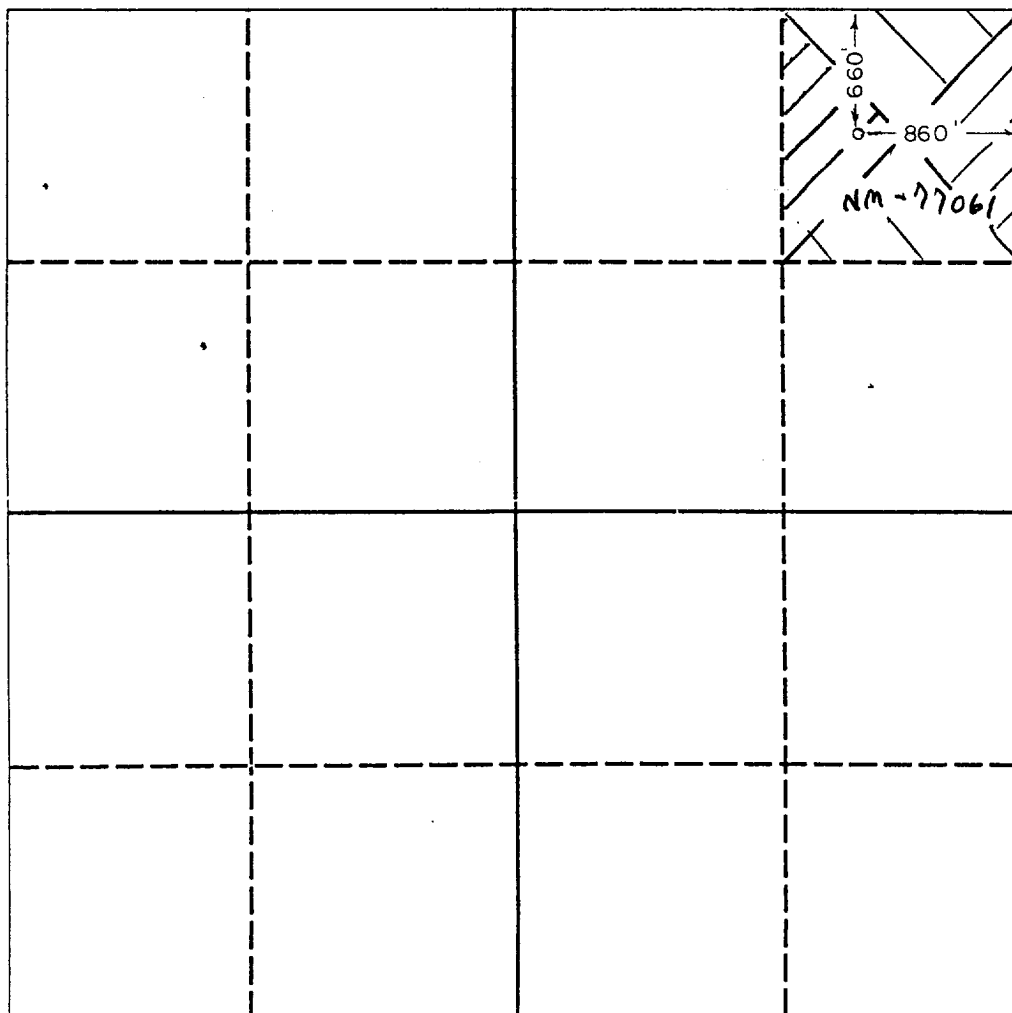
1000 Rio Brazos Rd., Aztec, NM 87410

## WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator <b>YATES PETROLEUM CORPORATION</b>			Lease <b>FREIDA "AFR" FEDERAL</b>		Well No. <b>1</b>
Unit Letter <b>A</b>	Section <b>3</b>	Township <b>23 SOUTH</b>	Range <b>32 EAST</b>	County <b>NMPM LEA</b>	
Actual Footage Location of Well: <b>660</b> feet from the <b>NORTH</b> line and <b>860</b> feet from the <b>EAST</b> line					
Ground level Elev. <b>3724</b>	Producing Formation <b>DELAWARE</b>		Pool <b>DIAMONDTAIL DELAWARE</b>		Dedicated Acreage: <b>40</b> 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 interest 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 been 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 interest, has been approved by the Division.



### OPERATOR CERTIFICATION

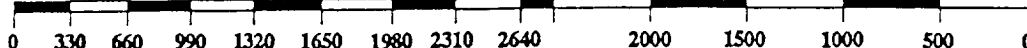
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature Clifton R. May  
Printed Name **Clifton R. May**  
Position **Permit Agent**  
Company **Yates Petroleum Corporation**  
Date **7/20/93**

### 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 the best of my knowledge and belief.

Date Surveyed **7/19/93**  
Signature & Seal of Professional Surveyor  
  
Certificate No. **RED 3640**



**YATES PETROLEUM CORPORATION  
FREIDA "AFR" FEDERAL #1  
660' FNL AND 860' FEL  
SECTION 3-T23S-R32E  
LEA COUNTY, NEW MEXICO**

1. The estimated tops of geologic markers are as follows:

Rustler	1150'	Bone Spring	8850'
Bottom of Salt	4610'	TD	9200'
Bell Canyon	4870'		
Cherry Canyon	5900'		
Brushy Canyon	7680'		

2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water: 250-750  
Oil or Gas: 7680' and 8850'

3. Pressure Control Equipment: BOPE will be installed on the 13 3/8" casing and rated for 3M BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout Preventor controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventors will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.

Auxiliary Equipment:

- A. Auxiliary Equipment: Kelly cock, pit level indicators, and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

4. THE PROPOSED CASING AND CEMENTING PROGRAM:

- A. Casing Program: (All New)

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Thread</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8	54.50	J55	8R	ST&C	0-1200	1200
11"	8 5/8	32	J55	8R	ST&C	0-4200	4200'
11"	8 5/8	32	HC-80	8R	LT&C	4200-4630	430'
7 7/8"	5 1/2	17#	J55	8R	LT&C	0-1500	1500'
7 7/8"	5 1/2	15.50#	J55	8R	LT&C	1500-6700	5200'
7 7/8"	5 1/2	17#	J55	8R	LT&C	6700-9200	2500'

Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, Tensile Strength 1.80

**B. CEMENTING PROGRAM:**

Surface casing: 700 sx. Pacesetter Lite "C" w/ 1/4# Cellocel & 3% CaCl<sub>2</sub> (wt. 12.7 ppg. Yield 1-84 ft<sup>3</sup>) + 250 sx. Class "C" w/ 2% CaCl<sub>2</sub>. (wt. 14.8 ppg., Yield 1.32 ft<sup>3</sup>) Cement calculated to circulate to surface.

Intermediate Casing: 1200 sx. Pacesetter Lite "C" w/ 1/4# Cellocel + 3% CaCl<sub>2</sub>. (wt. 12.7 ppg. Yield 1-84 ft<sup>3</sup>) + 250 sx. Class "C" w/2% CaCl<sub>2</sub>. (wt. 14.8 ppg. Yield 1.32 ft<sup>3</sup>) Cement calculated to circulate to surface.

Production Casing: 1st Stage: 150 sx. "H" w/8# sack CSE, + 0.6% CF-14 +5# sack Gilsonite (wt. 13.6 ppg Yield 1.76 ft<sup>3</sup>) Cement calculated to 8000' DV tool set at approx. 8000 ft.

2nd Stage: 500 sacks "C" w/5# sack Gilsonite, 1/4# sack Cellocel, + 0.5% CF-14. (wt. 12.5 ppg Yield 2.04 ft<sup>3</sup>) + 200 sacks "H" w/0.5% Cf-14 (wt. 15.6 ppg Yield 1.18 ft<sup>3</sup>). Cement calculated to tie back to intermediate csng. 100'.

**5. Mud Program and Auxiliary Equipment:**

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-1200	FWGEL	8-4 8-9	32-36	N/C
1200-4630	Brine	10-0	28	N/C
4630-9200	cut brine	8-9 9-3	28	< 15cc

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Mud will be checked hourly by rig personnel.

**6. EVALUATION PROGRAM:**

Samples: Every 10' from surface casing to TD

Logging: CNL - LTD from TD to casing with GR-CNL up to surface; DLL w/RXO from TD to casing

Coring: None anticipated

DST's: Any tests will be based on the recommendations of the well site geologist as warranted by drilling breaks and shows

**FREIDA "AFR" FEDERAL #1**  
**Page 3**

**7. Abnormal Conditions, Bottom hole pressure and potential hazards:**

Anticipated BHP:

From: 0	TO: 1200	Anticipated Max. BHP: 450	PSI
From: 1200	TO: 4630	Anticipated Max. BHP: 1685	PSI
From: 4630	TO: TD	Anticipated Max. BHP: 3300	PSI

Abnormal Pressures Anticipated: None

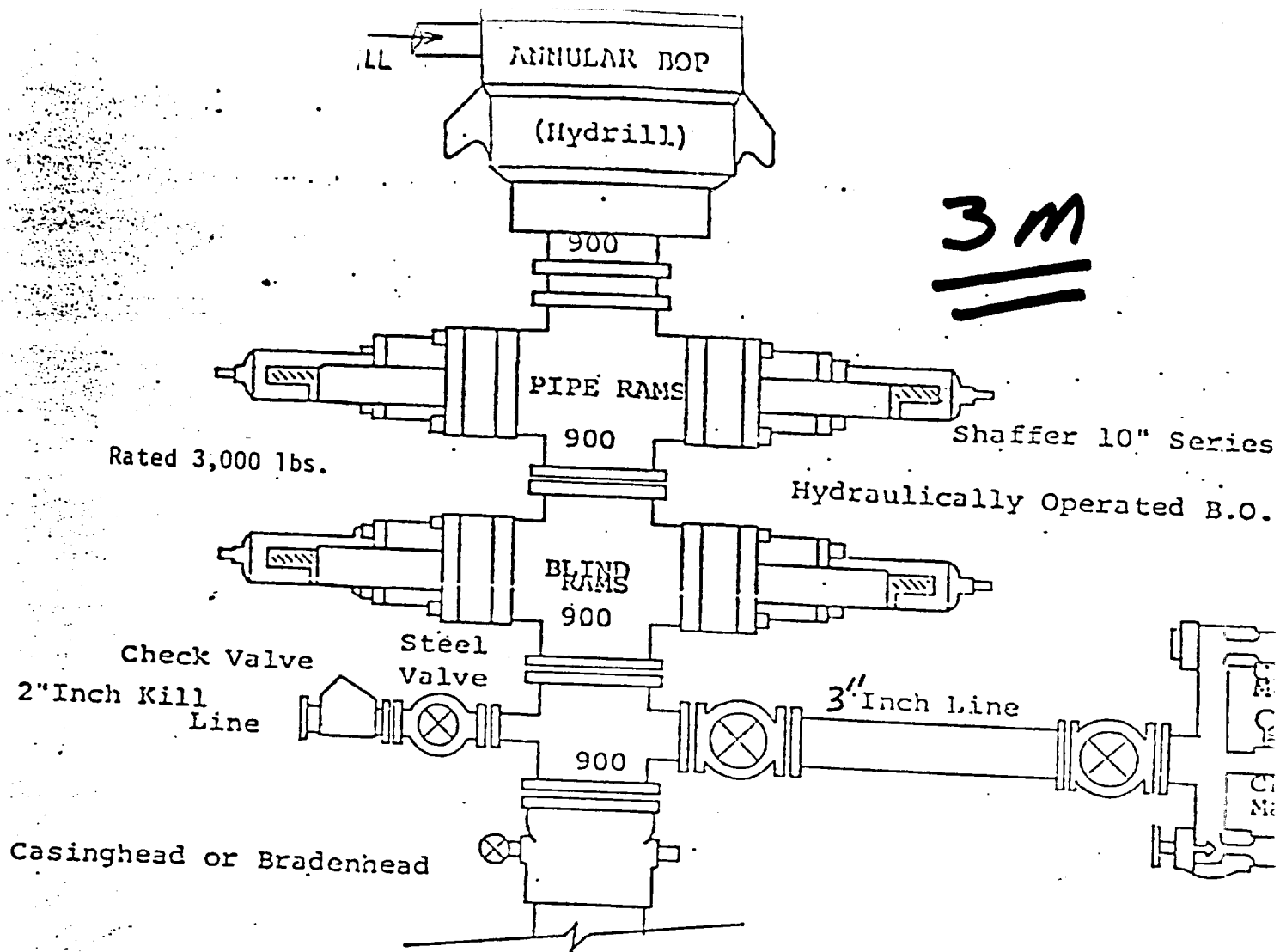
Lost Circulation zones anticipated: None

H2S Zones Anticipated: None

Maximum Bottom Hole Temperature: 140F

**8. ANTICIPATED STARTING DATE:**

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 15 days to drill the well with completion taking another 20 days.



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

1. All preventers to be hydraulically operated with secondary manual cc installed prior to drilling out from under casing.
2. Choke outlet to be a minimum of 3" diameter.
3. Kill line to be of all steel construction of 2" minimum diameter.
4. All connections from operating manifolds to preventers to be all steel hole or tube a minimum of one inch in diameter.
5. The available closing pressure shall be at least 15% in excess of the required with sufficient volume to operate the B.O.P.'s.
6. All connections to and from preventer to have a pressure rating equivalent to that of the B.O.P.'s.
7. Inside blowout preventer to be available on rig floor.
8. Operating controls located a safe distance from the rig floor.
9. Hole must be kept filled on trips below intermediate casing.

EXHIBIT  
B