

**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**

1a. TYPE OF WORK  
 DRILL  DEEPEN

b. TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
 Yates Petroleum Corporation

3. ADDRESS AND TELEPHONE NO.  
 105 South Fourth Street, Artesia, New Mexico 88210

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
 At surface  
 660' FNL and 860' FEL  
 At proposed prod. zone  
 Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 41 miles Northwest of Jal, New Mexico *Unit A*

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 40

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

19. PROPOSED DEPTH  
 9200'

20. ROTARY OR CABLE TOOLS  
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 3724' GR

22. APPROX. DATE WORK WILL START\*  
 ASAP

5. LEASE DESIGNATION AND SERIAL NO.  
 NM-77061

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.  
 Freida "AFR" Federal #1

9. API WELL NO.  
 30-D25-32197  
 X

10. FIELD AND POOL, OR WILDCAT  
 Diamondtail Delaware

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 3-T23S-R32E

12. COUNTY OR PARISH  
 Lea

13. STATE  
 NM

**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. MANIUS 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

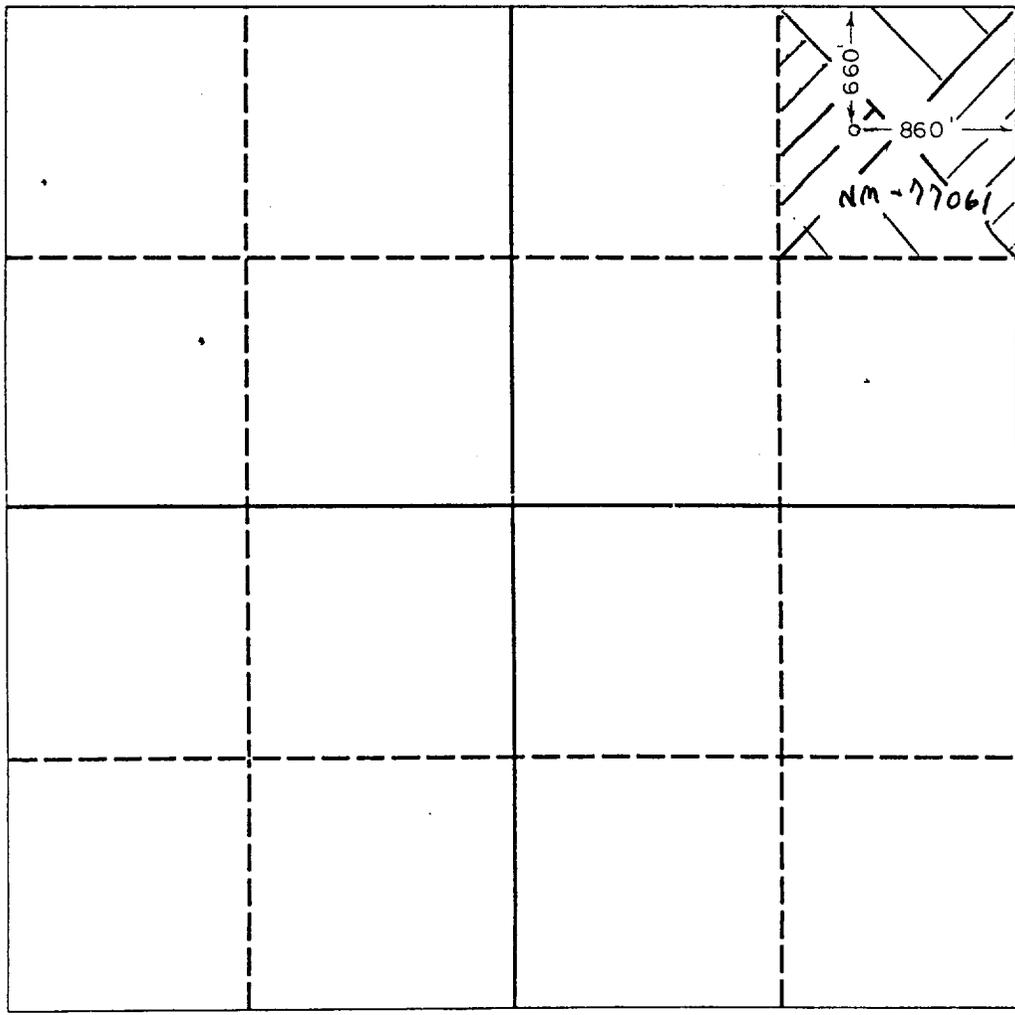
Operator YATES PETROLEUM CORPORATION			Lease FREIDA "AFR" FEDERAL		Well No. 1
Unit Letter A	Section 3	Township 23 SOUTH	Range 32 EAST	County NMPM LEA	
Actual Footage Location of Well: 660 feet from the NORTH line and 860 feet from the EAST line					
Ground level Elev. 3724	Producing Formation DELAWARE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

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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

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**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: *Herschel L. Jones*

Professional Surveyor: **HERSCHEL L. JONES**  
 3640  
 Certificate No. 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

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

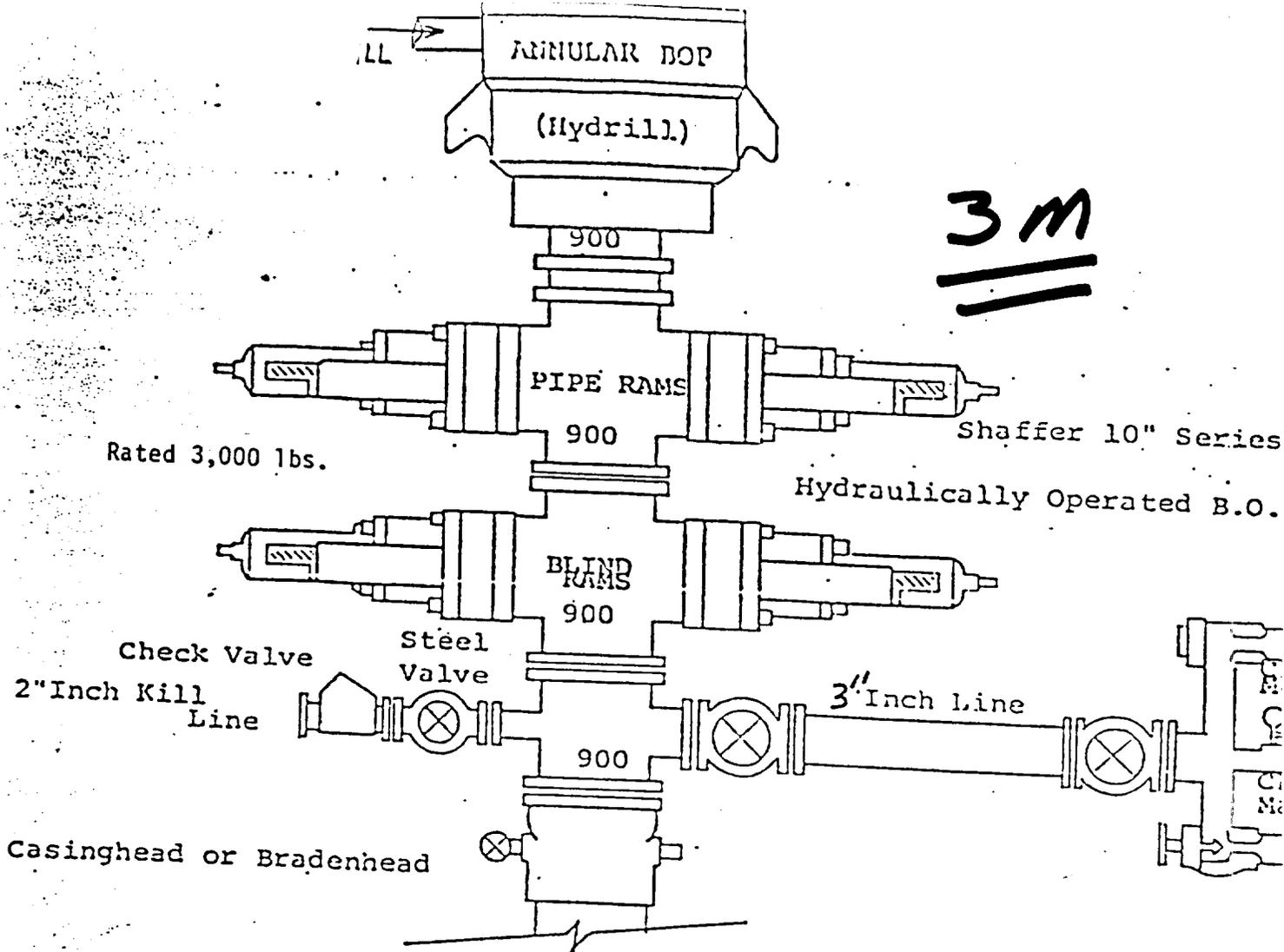
Lost Circulation zones anticipated: None

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 th required with sufficient volume to operate the B.O.P.'s.
6. All connections to and from preventer to have a pressure rating equi 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