

OCD-ARTESIA

SECRETARY'S POTASH

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED  
JUL 20 2005  
OCD-ARTESIA

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM-22080
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator FOREST OIL PERMIAN CORPORATION 33016		7. If Unit or CA Agreement, Name and No. N/A 301035
3a. Address 1600 BROADWAY, SUITE 2200 DENVER, CO 80202	3b. Phone No. (include area code) (303) 812-1400 96149	8. Lease Name and Well No. BARCLAY FEDERAL 38
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 660 FNL & 1980 FEL At proposed prod. zone SAME		9. API Well No. 30-015-34228
10. Field and Pool, or Exploratory LIVINGSTON RIDGE; DEL., S.		11. Sec., T. R. M. or Blk. and Survey or Area 1-23S-31E NMPM
12. County or Parish EDDY		13. State NM
14. Distance in miles and direction from nearest town or post office* 22 AIR MILES EAST OF LOVING	15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'	16. No. of acres in lease 1,280
17. Spacing Unit dedicated to this well LOT 2 (= NWNE)	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,320' (#29)	19. Proposed Depth 8,400'
20. BLM/BIA Bond No. on file BLM NATION WIDE WYB000195	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,479' GL	22. Approximate date work will start* 04/01/2005
23. Estimated duration 6 WEEKS	24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Brian Wood</i>	Name (Printed/Typed) BRIAN WOOD	Date 01/20/2005
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Title CONSULTANT PHONE: (505) 466-8120 FAX: (505) 466-9682

Approved by (Signature) /s/ Linda S. C. Rundell	Name (Printed/Typed) /s/ Linda S. C. Rundell	Date JUL 11 2005
Title STATE DIRECTOR	Office NM STATE OFFICE	

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, are attached.

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

Controlled Controlled Water Basin

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

PREVIOUSLY APPROVED (API #30-015-31105)  
FOR ARCO PERMIAN AS BARCLAY FEDERAL 30  
NEVER BUILT NOR DRILLED

Witness Surface &  
Intermediate Casing

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
May 27, 2004

District II  
N. French Dr., Hobbs, NM 88240  
District III  
1301 W. Grand Ave., Artesia, NM 88210  
District IV  
1000 Rio Brazos Rd., Aztec, NM 87410  
1220 S. St. Francis Dr., Santa Fe, NM  
87505

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO.	30-015- <b>34228</b>
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. <del>State</del> Oil & Gas Lease No.	NMNM-022080
7. Lease Name or Unit Agreement Name	BARCLAY FEDERAL
8. Well Number	38
9. OGRID Number	33016
10. Pool name or Wildcat	LIVINGSTON RIDGE; DELAWARE, SOUTH

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>
2. Name of Operator FOREST OIL PERMIAN CORPORATION
3. Address of Operator 1600 BROADWAY, SUITE 2200 DENVER, CO 80202
4. Well Location Unit Letter <u>Lot 2</u> : <u>660</u> feet from the <u>NORTH</u> line and <u>1980</u> feet from the <u>EAST</u> line Section <u>1</u> Township <u>23 S</u> Range <u>31 E</u> NMPM County <u>EDDY</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <u>3,479' GL</u>

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type Reserve Depth to Groundwater ~210' Distance from nearest fresh water well >1 mi Distance from nearest surface water >1,000'  
Pit Liner Thickness: 12 mil Below-Grade Tank: Volume \_\_\_\_\_ bbls Construction Material \_\_\_\_\_

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <u>RESERVE PIT</u> <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒ a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Brian Wood TITLE CONSULTANT DATE 1-20-05

Type or print name BRIAN WOOD E-mail address: brian@permitswest.com Telephone No. 466-8120

For State Use Only

APPROVED BY: [Signature] TITLE Field Supervisor DATE JUL 25 2005

Conditions of Approval (if any):

# State of New Mexico

Energy, Minerals and Natural Resources Department

DISTRICT I  
1625 N. FRENCH DR., BOBBS, NM 88240

DISTRICT II  
1301 W. GRAND AVENUE, ARTESIA, NM 88210

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

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

## OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

Form C-102  
Revised JUNE 10, 2003  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

### WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number .	Pool Code <b>96149</b>	Pool Name <b>LIVINGSTON RIDGE; DELAWARE, SOUTH</b>
Property Code .	Property Name <b>BARCLAY FEDERAL</b>	Well Number * 38
OGRID No. <b>33016</b>	Operator Name <b>. FOREST OIL PERMIAN CORPORATION</b>	Elevation 3479'

#### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	1	23-S	31-E	.	660	NORTH.	1980.	EAST	EDDY

#### 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 <b>40.00</b>	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

LOT 4 40.00 AC	LOT 3 40.00 AC	LOT 2 40.00 AC 	LOT 1 40.00 AC
<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=487490.7 N X=686687.3 E</p> <p>LAT.=32°20'19.61" N LONG.=103°43'43.96" W</p>			

#### OPERATOR CERTIFICATION

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

Signature **BRIAN WOOD**

Printed Name **CONSULTANT**

Title **JAN. 20, 2005**

Date

#### 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 belief.

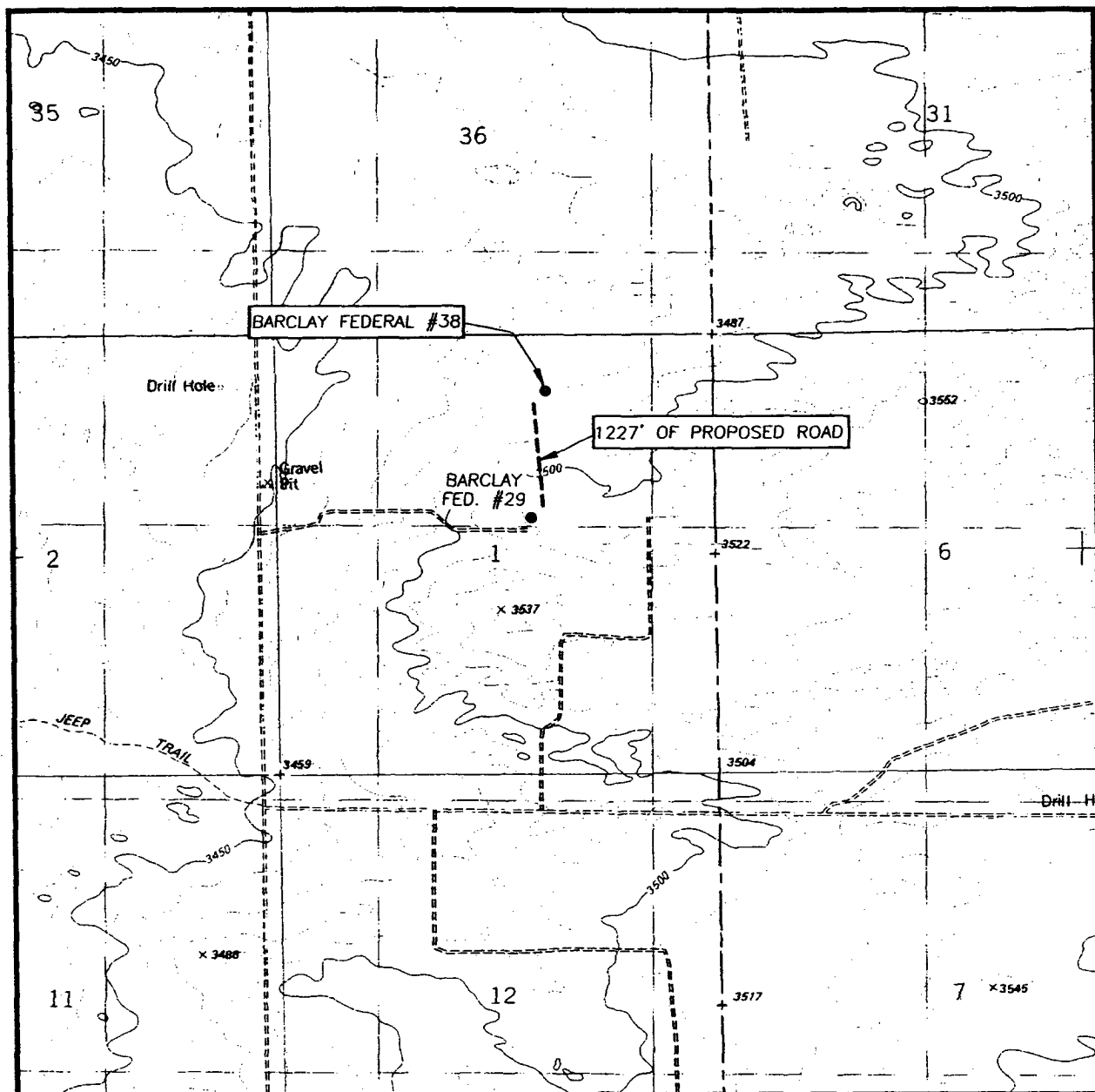
DECEMBER 20, 2004

Date Surveyed **JR**

Signature & Seal of Professional Surveyor  
  
04.11.1702

Certificate No. **GARY EIDSON** 12841

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
BOOTLEG RIDGE, N.M. - 10'

SEC. 1 TWP. 23-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 660' FNL & 1980' FEL

ELEVATION 3479'

OPERATOR FOREST OIL PERMIAN CORPORATION

LEASE BARCLAY FEDERAL

U.S.G.S. TOPOGRAPHIC. MAP  
BOOTLEG RIDGE, N.M.



PROVIDING SURVEYING SERVICES  
SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
412 N. DAL PASO  
HOBBBS, N.M. 88240  
(505) 383-3117

Forest Oil Permian Corporation  
Barclay Federal 38  
660' FNL & 1980' FEL  
Sec. 1, T. 23 S., R. 31 E.  
Eddy County, New Mexico

PAGE 1

## Drilling Program

### 1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Red Beds	000'	20'	+3,479'
Rustler	779'	799'	+2,700'
Castile Anhydrite Salt	1,154'	1,174'	+2,325'
Delaware Lamar Shale	4,479'	4,499'	-1,000'
Delaware Bell Canyon	4,529'	4,549'	-1,050'
Delaware Cherry Canyon	5,529'	5,549'	-2,050'
Delaware Brushy Canyon	6,979'	6,999'	-3,500'
Delaware Lower Brushy Canyon	8,079'	8,099'	-4,600'
Total Depth (TD)*	8,400'	8,420'	-4,921'

### 2. NOTABLE ZONES

<u>Gas or Oil Zones</u>	<u>Water Zone</u>	<u>Mineral Zone</u>
Delaware - Bone Spring	Red Beds	Potash

Water zones will be protected with casing, cement, and weighted mud. Fresh water found while drilling will be recorded.

### 3. PRESSURE CONTROL

The drilling contract has not been awarded. Thus, the exact BOP model to be used is not yet known. A typical 2,000 psi model is on PAGE 3.

BOP and choke manifold will be installed and pressure tested before drilling out of the surface casing. Subsequent pressure tests will be performed

Forest Oil Permian Corporation  
Barclay Federal 38  
660' FNL & 1980' FEL  
Sec. 1, T. 23 S., R. 31 E.  
Eddy County, New Mexico

PAGE 2

whenever pressure seals are broken. BOP and manifold mechanical operating conditions will be checked daily. BOP will be tested at least once every 30 days. Ram type preventers and related pressure control equipment will be pressure tested to related working pressure of the stack if a test plug is used. If a plug is not used, then the stack will be tested to the rated working pressure of the stack or 70% of the minimum internal yield of the casing, whichever is less. Annular type preventers will be pressure tested to 50% of their working pressure. All casing strings will be pressure tested to 0.22 psi/foot or 1,500 psi, whichever is greater, not to exceed 70% of the internal yield. The casing shoe will be tested by drilling 5'-20' out from under the shoe and pressure tested to a maximum expected mud weight equivalent as shown in the mud program.

A manual locking device (i. e., hand wheels) or automatic locking devices will be installed on the BOP stack. Remote controls capable of both opening and closing all preventers will be readily accessible to the driller.

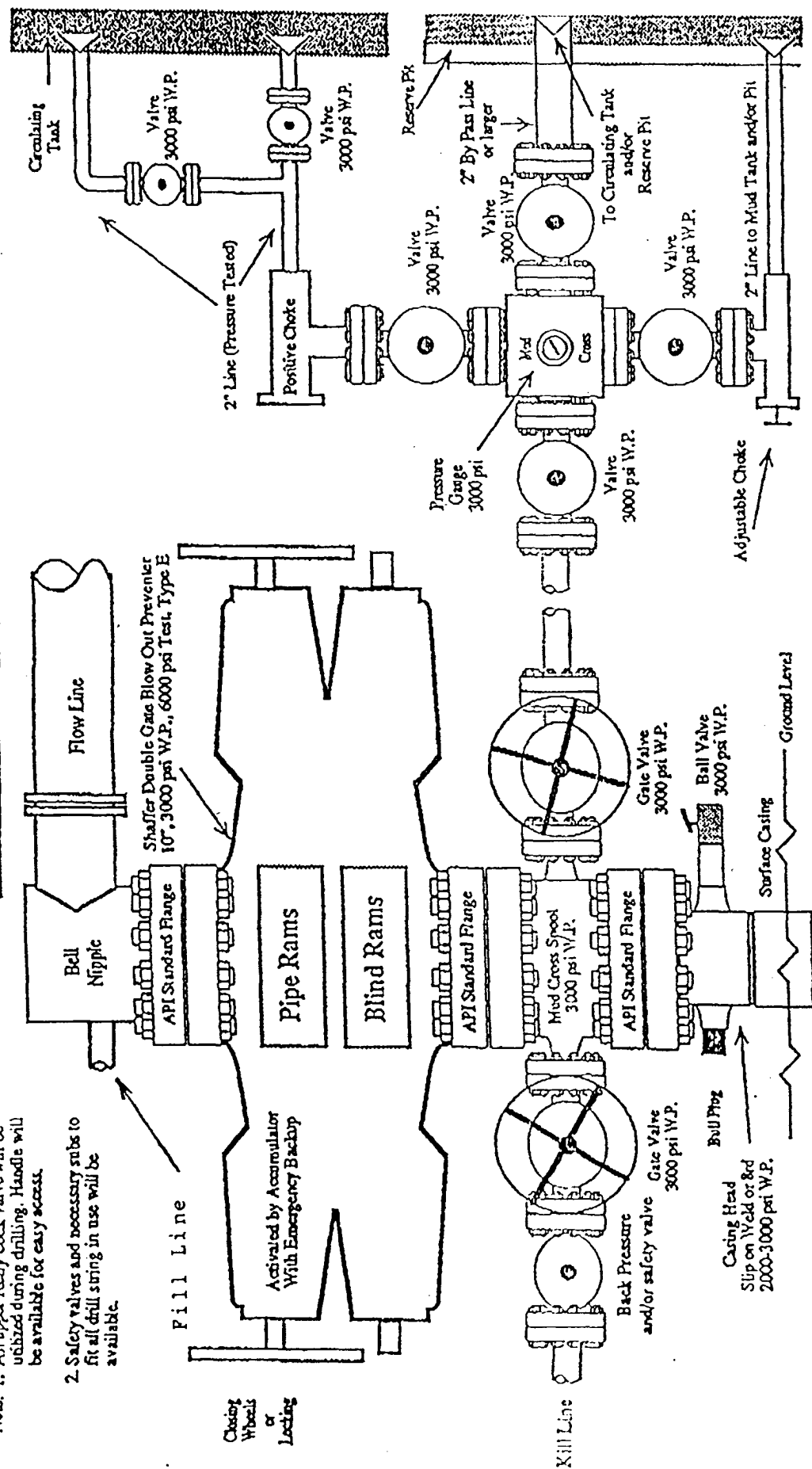
Choke manifold and accumulator will meet or exceed OCD standards. BOP equipment will be tested after any repairs. Pipe & blind rams and annular preventer will be activated on each trip. Weekly BOP drills will be conducted with each crew. All tests, maintenance, and BOP drills will be recorded on the rig tower sheets.

Manual and/or hydraulic controls will comply with OCD 5,000 psi rules. A remote accumulator will be used. Pressures, capacities, and the locations of remote hydraulic and manual controls will be identified at the time of the OCD supervised BOP test. Auxiliary equipment will include:

- upper kelly cock, lower kelly cock will be installed while drilling
- inside BOP or stabbing valve with handle available on rig floor
- safety valve(s) and subs to fit all string connections in use
- electronic/mechanical mud monitor will use a Pason Unit with a minimum pit volume totalizer; stroke counter; flow sensor

# Pressure Control Equipment

- Note: 1. An upper Kelly cock valve will be utilized during drilling. Handle will be available for easy access.
2. Safety valves and necessary subs to fit all drill string in use will be available.



Minimum 2" Choke Line.  
Minimum 2" Kill Line.  
At Least One 2" Minimum Kill Line Valve.

Note: This equipment is designed to meet requirements for a 2-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be carried out per standard. 2,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.

Forest Oil Permian Corporation  
 Barclay Federal 38  
 660' FNL & 1980' FEL  
 Sec. 1, T. 23 S., R. 31 E.  
 Eddy County, New Mexico

PAGE 4

#### 4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>Connections</u>	<u>Setting Depth</u>	
17-1/2"	13-3/8"	54.5	K-55	New	Butt	900'	WITNESS
12-1/4"	8-5/8"	24	K-55	New	S T & C	4,500'	WITNESS
7-7/8"	5-1/2"	17	N-80	New	L T & C	8,400'	

Surface casing will be cemented to the surface with >80% excess. Lead with ≈470 sacks 35:65 Class C + additives (yield = 1.89 cubic feet per sack). Tail with ≈200 sacks Class C + additives (yield = 1.34 cubic feet per sack).

Intermediate casing will be cemented to the surface with 50% excess. Lead with ≈1,040 sacks 50:50 Poz + additives (yield = 2.45 cubic feet per sack). Tail with ≈200 sacks Class C + additives (yield = 1.34 cubic feet per sack).

Production casing will be cemented to the surface with ≈20% excess. Lead with ≈380 sacks 35:65 Class C + additives (yield = 1.92 cubic feet per sack). Tail with ≈600 sacks Class H + additives (yield = 1.79 cubic feet per sack).

A string of 2-3/8", 4.7 pound, N-80, EUE 8 round tubing will be run for production.

#### 5. MUD PROGRAM

<u>RANGE</u>	<u>MUD TYPE</u>	<u>WEIGHT</u>	<u>VISCOSITY</u>	<u>WATER LOSS</u>
0' - 900'	Fresh Water	8.5		
900' - 4,500'	Brine	10		
4,500' - TD	Fresh water polymer	8.6-9.0	35	≤20 cc

Enough mud material will be on site to maintain mud properties and control lost circulation or a kick.



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Barclay Federal 38  
660' FNL & 1980' FEL  
Sec. 1, T. 23 S., R. 31 E.  
Eddy County, New Mexico

PAGE 5

6. CORES, TESTS, & LOGS

No cores are planned. Drill stem tests may be run on shows of interest. DIL-GR-SP-CAL and ND-GR-CAL logs will be run from TD to  $\approx 4,400'$ .

7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum expected bottom hole pressure will be  $\approx 3,612$  psi.

8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take  $\approx 16$  days to drill and one month to complete the well.

Forest Oil Permian Corporation  
Barclay Federal 38  
660' FNL & 1980' FEL  
Sec. 1, T. 23 S., R. 31 E.  
Eddy County, New Mexico

PAGE 6

### Surface Use Plan

#### 1. DIRECTIONS & EXISTING ROADS (See PAGES 10 & 11)

From the junction of US 285 & NM 31 between Carlsbad & Loving ...  
Go Northeast 9 miles on NM 31  
Then turn right and go East 17.4 miles NM 128 to Mile post  $\approx$ 17.4  
Then turn left onto County Road 798 (Red Road) and go North 5.8 miles  
Then turn right before a caliche pit and go East 0.6 miles to the #29 well  
Then go North cross country  $\approx$ 1,227' to the proposed pad

Roads will be maintained to a standard at least equal to their present condition.

#### 2. ROAD TO BE BUILT OR UPGRADED (See PAGES 11 & 12)

The last  $\approx$ 1,227' of road will be crowned and caliche surfaced with a  $\approx$ 15' wide running surface and 1 vehicle turnout. Maximum disturbed width = 20'. Maximum grade = 1%. Maximum cut or fill = 3'. No upgrade, culvert, cattle guard is needed.

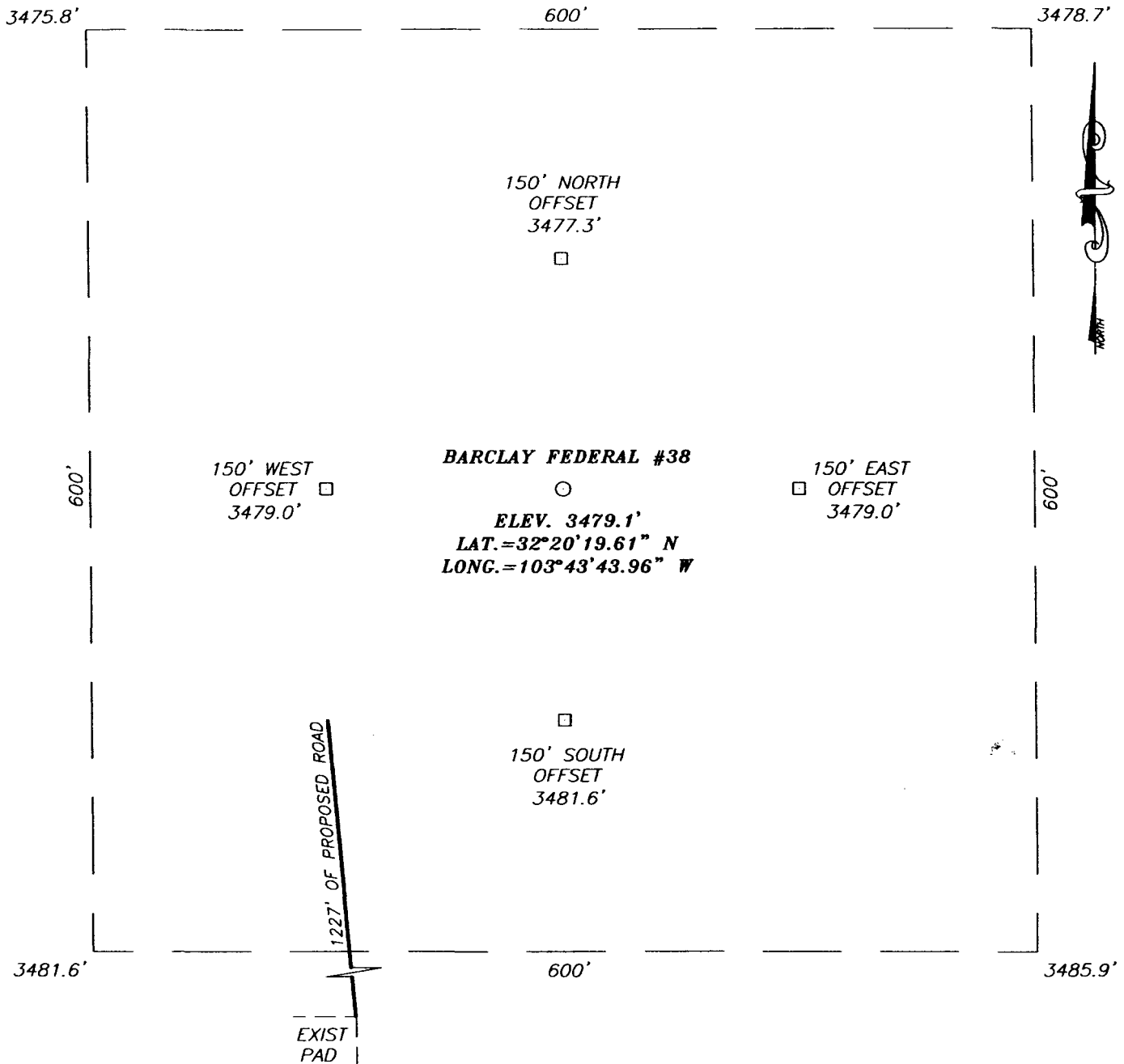
#### 3. EXISTING WELLS (See PAGE 11)

There are 22 oil or gas wells and 2 P & A wells within a 1 mile radius. There are no water, disposal, or injection wells within a mile.

#### 4. PROPOSED PRODUCTION FACILITIES

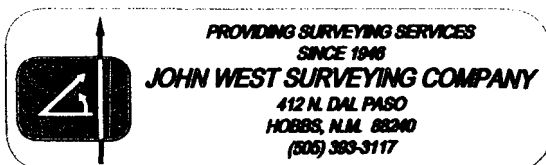
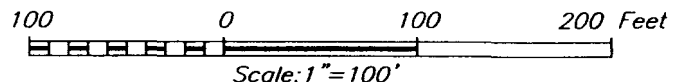
An over head raptor proof power line will be built along the new road by

**SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,**  
EDDY COUNTY, NEW MEXICO



**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF ST. HWY. #128 AND CO. RD. #798 (RED RD.) GO NORTH ON CO. RD. #798 FOR APPROX. 5.8 MILES TO A CALICHE ROAD ON THE RIGHT. TURN RIGHT (EAST) AND GO APPROX. 0.6 MILES TO A PROPOSED ROAD SURVEY AT THE NEc OF THE BARCLAY FED. #29 WELL PAD. FOLLOW PROPOSED ROAD SURVEY NORTH FOR APPROX. 1227' TO PROPOSED LOCATION.



**FOREST OIL PERMIAN CORPORATION**

BARCLAY FEDERAL #38 WELL  
LOCATED 660 FEET FROM THE NORTH LINE  
AND 1980 FEET FROM THE EAST LINE OF SECTION 1,  
TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

Survey Date: 12/20/04	Sheet 1 of 1 Sheets		
W.O. Number: 04.11.1702	Dr By: J.R.	Rev 1:N/A	
Date: 12/27/04	Disk: CD#10	04111702	Scale: 1"=100'