

RECEIVED

DIST. 3
FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AUG 26 2008

APPLICATION FOR PERMIT TO DRILL OR REENTER

Bureau of Land Management
Bloomfield Field Office

Lease Serial No.
NMNM 003153
If Indian, Allottee or Tribe Name
N/A

| | | | |
|--|---|--|-----------------|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 7. If Unit or CA Agreement, Name and No. N/A | |
| 1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone | | 8. Lease Name and Well No. O H RADEL 5 E | |
| 2. Name of Operator XTO ENERGY INC. | | 9. API Well No. 30-045-34781 | |
| 3a. Address 382 ROAD 3100 AZTEC, NM 87410 | 3b. Phone No. (include area code) (505) 333-3159 | 10. Field and Pool, or Exploratory Basin Mancos C & BAS. DK. | |
| 4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 1970' FNL & 1790' FEL At proposed prod. zone SAME | | 11. Sec., T. R. M. or Blk. and Survey or Area 6 10-26N-11W NMPM | |
| 14. Distance in miles and direction from nearest town or post office* 14 AIR MILES SOUTH OF BLOOMFIELD | | 12. County or Parish SAN JUAN | 13. State NM |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest diag. unit line, if any) 1,790' | 16. No. of acres in lease 1,920 | 17. Spacing Unit dedicated to this well Basin Mancos & DAKOTA: N2 320 | |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,610' (2 E) | 19. Proposed Depth 6,700' | 20. BLM/BIA Bond No. on file BLM NATIONWIDE UTB-000138 | |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,379' GL This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 | 22. Approximate date work will start* 12/01/2008 | 23. Estimated duration 4 WEEKS | |
| 24. Attachments | | DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS". | |

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- 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 08/21/2008 |
| Title CONSULTANT | | |
| PHONE: (505) 466-8120 FAX: (505) 466-9682 | | |
| Approved by (Signature) <i>D. Manke</i> | Name (Printed/Typed) | Date 8/27/09 |
| Title AFM | Office FFO | |

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. **Test BOPE minimum: 1200 psi**

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)



H₂S POTENTIAL EXIST

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

NMOCD

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

MAY 05 2009

[Signature]

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---|---|--|
| ¹ API Number 30-045-34781 | ² Pool Code 97232 | ³ Pool Name Basin Mancos |
| ⁴ Property Code 22857 | ⁵ Property Name OH RANDEL | ⁶ Well Number 5E |
| ⁷ OCRD No. 5380 | ⁸ Operator Name XTO ENERGY INC. | ⁹ Elevation 6379' |

¹⁰Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| G | 10 | 26-N | 11-W | | 1970 | NORTH | 1790 | EAST | SAN JUAN |

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 |
|--|---------|----------|------------------------------|---------|----------------------------------|------------------|-------------------------|----------------|--------|
| | | | | | | | | | |
| ¹² Dedicated Acres N/2 - 320 | | | ¹³ John or Infill | | ¹⁴ Consolidation Code | | ¹⁵ 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

| | |
|---|---|
| <p>16</p> <p>FD. 2 1/2" BC. 1930 GLO</p> <p>S 84-11-53 W 2636.50' (M)</p> <p>1970'</p> <p>1790'</p> <p>S 00-51-17 W 2647.60' (M)</p> <p>LAT: 36.50405° N. (NAD 83) LONG: 107.98822° W. (NAD 83) LAT: 36°30'14.6" N. (NAD 27) LONG: 107°59'15.3" W. (NAD 27)</p> <p>10</p> | <p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>J. Hembry</i> 5/4/09 Signature Date Jennifer M. Hembry Printed Name</p> |
| <p>18</p> <p>FD. 2 1/2" BC. 1930 GLO</p> | <p>18 SURVEYOR CERTIFICATION</p> <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 the best of my belief.</p> <p>MAY 10, 2007 Date of Survey</p> <p><i>ROY A. RILEY</i> Signature of Surveyor</p> <p>NEW MEXICO REGISTERED PROFESSIONAL LAND SURVEYOR 8894 23-07</p> <p>Certificate Number</p> |

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Form C-102

Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---|---|---|
| ¹ API Number 30-045- | ² Pool Code 71599 | ³ Pool Name BASIN DAKOTA |
| ⁴ Property Code . | ⁵ Property Name OH RANDEL | ⁶ Well Number 5E |
| ⁷ GRID No. 167067 | ⁸ Operator Name XTO ENERGY INC. | ⁹ Elevation 6379' |

¹⁰Surface Location

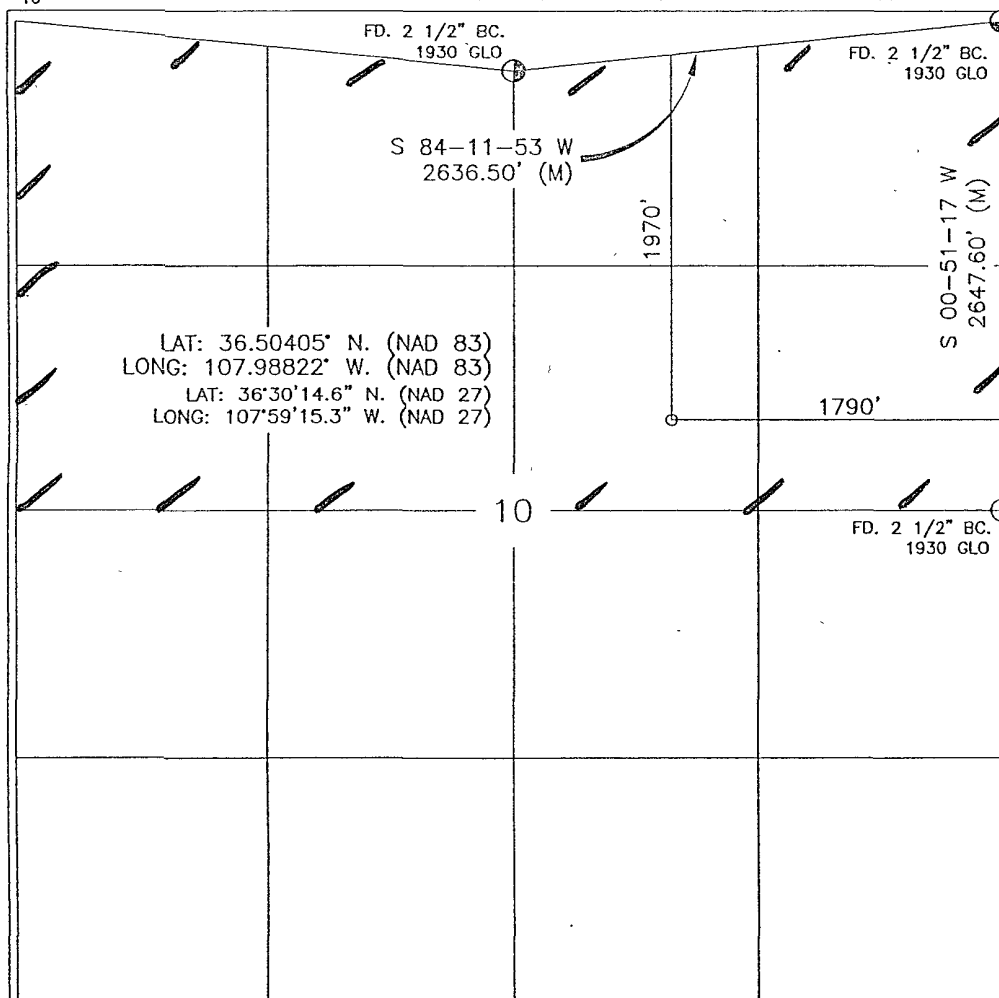
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
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|---|---------|----------|-------------------------------|---------|----------------------------------|------------------|-------------------------|----------------|--------|
| | | | | | | | | | |
| ¹² Dedicated Acres 320 | | | ¹³ Joint or Infill | | ¹⁴ Consolidation Code | | ¹⁵ 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

16



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Brian Wood 8-21-08
Signature Date
BRIAN WOOD
Printed Name

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 the best of my belief.

MAY 10, 2007

Date of Survey

Signature and Seal of Professional Surveyor:

ROY A. RUIZ
NEW MEXICO
8894
5-23-07
REGISTERED PROFESSIONAL LAND SURVEYOR
Certificate Number

XTO Energy Inc.
O H Randel 5 E
1970' FNL & 1790' FEL
Sec. 10, T. 26 N., R. 11 W.
San Juan 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> |
|---------------------------|-----------------|-----------------|------------------|
| Nacimiento | 0' | 12' | +6,379' |
| Ojo Alamo | 789' | 791' | +5,590' |
| Fruitland Formation | 1,449' | 1,461' | +4,930' |
| Pictured Cliffs Sandstone | 1,774' | 1,786' | +4,605' |
| Lewis Shale | 1,864' | 1,876' | +4,515' |
| Menefee Shale | 3,319' | 3,331' | +3,060' |
| Point Lookout Sandstone | 4,189' | 4,201' | +2,190' |
| Mancos Shale | 4,514' | 4,526' | +1,865' |
| Gallup Sandstone | 5,329' | 5,341' | +1,050' |
| Greenhorn Limestone | 6,189' | 6,201' | +190' |
| Graneros Shale | 6,254' | 6,266' | +125' |
| Dakota Sandstone | 6,359' | 6,371' | +20' |
| Total Depth (TD) | 6,700' | 6,712' | -321' |

2. NOTABLE ZONES

| <u>Gas & Oil Zones</u> | <u>Water Zones</u> | <u>Coal Zone</u> |
|----------------------------|--------------------|------------------|
| Fruitland | Nacimiento | Fruitland |
| Pictured Cliffs | Ojo Alamo | |
| Gallup | Fruitland | |
| Dakota | | |

Water zones will be protected with casing, cement, and weighted mud. Fresh water found while drilling will be recorded. Oil or gas shows will be tested for commercial potential based on the geologist's recommendations.

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3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. (A typical 2,000 psi model is on PAGE 3.) An 8-5/8" x 11" 2,000 pound double ram BOP system with a choke manifold and mud cross will be tested to ≈ 200 psi and then to $\approx 1,000$ psi. Upper and lower Kelly cocks with valve handle and subs to fit all drill string connections which are in use will be available on the rig floor.

Tests will be run when:

- 1) installed
- 2) anytime a pressure seal is broken (test only affected equipment)
- 3) at least every 30 days
- 4) blind & pipe rams will be activated each trip, but no more than daily

BOP systems will be consistent with API RP 53. Blowout preventers will be installed and tested before drilling surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated daily to ensure good mechanical working order and this inspection recorded on the daily drilling report. Preventers and casing will be pressure tested before drilling casing cement plugs. Maximum expected bottom hole pressure will be $\leq 2,680$ psi. BOP and mud system will control pressure.

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> |
|------------------|--------------|-----------------------|--------------|------------|--------------------|----------------------|
| 12-1/4" | 8-5/8" | 24 | J-55 | New | ST & C | 360' |
| 7-7/8" | 5-1/2" | 15.5 | J-55 | New | ST & C | 6,700' |

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Surface casing will be cemented to the surface with ≈ 375 cubic feet (≈ 270 sacks) Type V cement + $1/4$ pound per sack cello-flake + 2% CaCl_2 . Yield = 1.39 cubic feet per sack. Weight = 14.5 pounds per gallon. Excess: $>100\%$. Centralizers will be set on the bottom two joints of the surface casing and every fourth joint to the surface.

Production casing will be cemented to the surface in two stages with $\approx 100\%$ excess. DV tool will be set at $\approx 4,800'$. Total first stage volume = 1,165 cubic feet. Second stage volume = 1,725 cubic feet. Centralizers will be set on the bottom two joints, every second joint to $\approx 5,000'$, and every fourth joint from $\approx 2,000'$ to the surface.

Will cement first stage with ≈ 580 sacks ($=1,165$ cubic feet) premium light HS cement with 0.2% CD 32 + 0.5% FL 32 + $1/4$ pound per sack cello flake + 2% KCl + 2% phenoseal mixed at 12.5 pounds per gallon and 2.01 cubic feet per sack.

Will cement second stage with ≈ 610 sacks ($=1,586$ cubic feet) premium light HS cement with 8% gel + $1/4$ pound per sack cello flake + 2% phenoseal mixed at 11.9 pounds per gallon and 2.60 cubic feet per sack. Will follow with ≈ 100 sacks ($= 139$ cubic feet) Type III neat cement mixed at 14.5 pounds per gallon and 1.39 cubic feet per sack.

5. MUD PROGRAM

| <u>RANGE</u> | <u>MUD TYPE</u> | <u>WEIGHT</u> | <u>VISCOSITY</u> | <u>WATER LOSS</u> | <u>ADDITIVES</u> |
|---------------|-----------------|---------------|------------------|-------------------|--------------------|
| 0' - 360' | Fresh-Spud | 8.6-9.0 | 28-32 | NC | Gel, lime |
| 360' - 2,500' | Fresh-Poly | 8.4-8.8 | 28-32 | NC | Gel, lime sweeps |
| 2,500' - TD | Fresh Water | 8.6-9.2 | 45-60 | 8-10 cc | Gel, soda ash, LCM |

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6. CORES, TESTS, & LOGS

No cores or drill stem tests are planned. Mud logger will arrive at $\approx 3,000'$ and collect samples every $\approx 10'$ from there to TD. These open hole logs will be run:

Array Induction/SFL/GR/SP from TD to $\approx 360'$
Neutron/Lithodensity/Pe/GR/Cal from TD to $\approx 3,000'$

7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum expected bottom hole pressure will be $\leq 2,680$ psi.

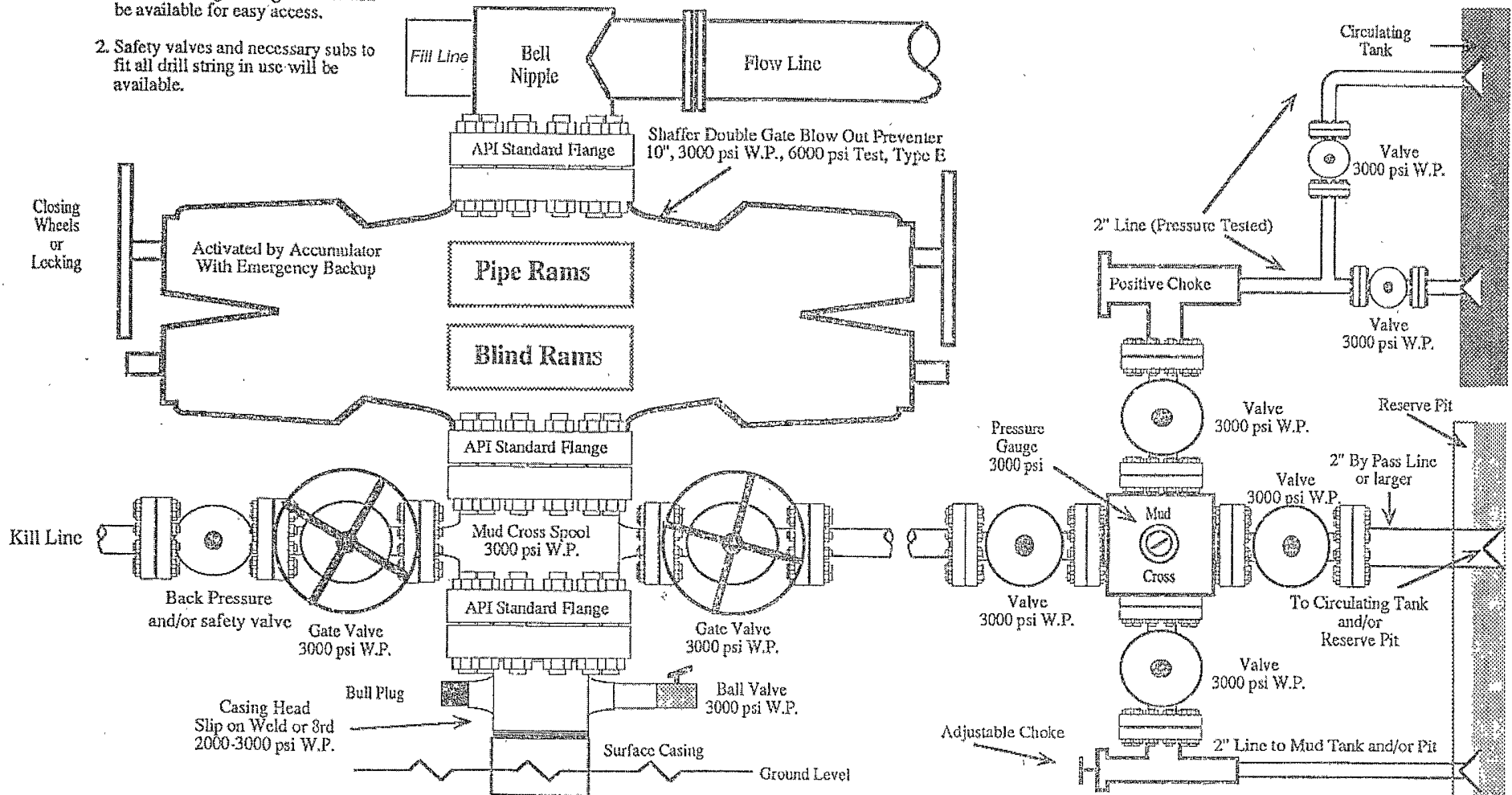
8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take about four weeks to drill and complete the well.

2,000 PSI BOP SYSTEM

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.



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.