

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

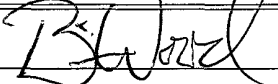
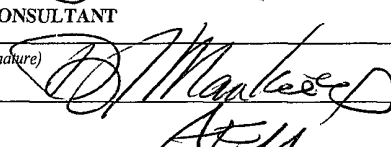
FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM-025448
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 ELM RIDGE EXPLORATION COMPANY, LLC		7. If Unit or CA Agreement, Name and No N/A
3a. Address: P. O. BOX 156 BLOOMFIELD, NM 87413		8. Lease Name and Well No. BISTI GALLUP 20 #3
3b. Phone No. (include area code) (505) 632-3476		9. API Well No. 30-045- 33983
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 435' FNL & 2185' FWL At proposed prod zone SAME		10. Field and Pool, or Exploratory BISTI LOWER-GALLUP
14. Distance in miles and direction from nearest town or post office* 25 AIR MILES SSE OF FARMINGTON, NM		11. Sec, T, R. M. or Blk. and Survey or Area C 20-25N-12W NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 485'	16. No. of acres in lease 640	17. Spacing Unit dedicated to this well N2NW4
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,128' (BG 20-2)	19. Proposed Depth 5,000'	20. BLM/BIA Bond No. on file BLM STATE WIDE 886201C Nm2858
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,298' GL	22. Approximate date work will start* 02/10/2007	23. Estimated duration 3 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.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) BRIAN WOOD	Date 09/30/2006
Title CONSULTANT		
PHONE: (505) 466-8120 FAX: (505) 466-9682		
Approved by (Signature) 	Name (Printed/Typed) D. Mantecop	Date 9/13/07
Title AFM		
Office PFO		

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.

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)

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

9-18-07  
aw

NMOCD  
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DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS".

DISTRICT I  
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II  
811 South First, Artesia, N.M. 88210

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

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P.O. 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

2006 OCT 4 AM 9 59

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number	<sup>2</sup> Pool Code 5890	<sup>3</sup> Pool Name BISTI CLOWER-GALLUP
<sup>4</sup> Property Code 36730	<sup>5</sup> Property Name BISTI GALLUP 20	<sup>6</sup> Well Number 3
<sup>7</sup> GRID No. 149052	<sup>8</sup> Operator Name ELM RIDGE EXPLORATION	<sup>9</sup> Elevation 6298

<sup>10</sup> Surface Location


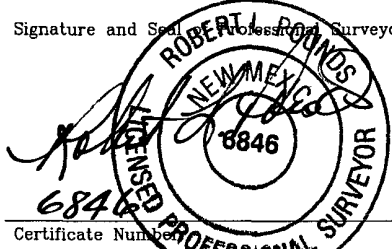
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	20	25 N	12 W		435	NORTH	2185	WEST	SAN JUAN

<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

<sup>12</sup> Dedicated Acres 80	<sup>13</sup> Joint or Infill .	<sup>14</sup> Consolidation Code .	<sup>15</sup> Order No. .
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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

<sup>16</sup> S 89°49'23" E 2634.23'	435'	S 89°21'16" E 2639.78'	<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief   Signature <b>BRIAN WOOD</b> Printed Name <b>CONSULTANT</b> Title <b>SEPT. 30, 2006</b> Date
2185'	LAT. 36.392750° LONG. 108.136269° NAD 83	2621.48'	
2640.72'		2640.19'	
N 0°09'08" E	SECTION 20	S 0°06'52" W	
2640.72'			<sup>18</sup> 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  3/03/06 Date of Survey Signature and Seal of Professional Surveyor.  Certificate Number <b>6846</b>
N 0°09'08" E		S 0°12'56" W	
N 89°48'12" W		5272.70'	

District I  
1625 N French Dr, Hobbs, NM 88240  
District II  
1301 W Grand Ave, 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, NM 87505

WELL API NO. 30-045-
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. NMNM-025448
7. Lease Name or Unit Agreement Name BISTI GALLUP 20
8. Well Number 3
9. OGRID Number 149052
10. Pool name or Wildcat BISTI LOWER-GALLUP

**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 ☐ Gas Well ☐ Other ☐

2. Name of Operator  
ELM RIDGE EXPLORATION COMPANY, LLC

3. Address of Operator  
P. O. BOX 156, BLOOMFIELD, NM 87413

4. Well Location  
Unit Letter: C 435' FNL & 2185' FWL  
Section 20 Township 25 North Range 12 West NMPM SAN JUAN County

11. Elevation (Show whether DR, RKB, RT, GR, etc)  
6,298' GL

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type: DRILLING Depth to Groundwater: >100' Distance from nearest fresh water well: >5,000' Distance from nearest surface water: >100'

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

<b>NOTICE OF INTENTION TO:</b>		<b>SUBSEQUENT REPORT OF:</b>	
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: DRILLING PIT <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 [Signature] TITLE: CONSULTANT DATE: SEPT. 30, 2006

Type or print name: BRIAN WOOD E-mail address: brian@permitswest.com Telephone No.: (505) 466-8120

**For State Use Only**

APPROVED BY: [Signature] TITLE: Deputy Oil & Gas Inspector, District #3 DATE: **SEP 18 2007**

Conditions of Approval (if any):

Elm Ridge Exploration Company, LLC  
Bisti Gallup 20 #3  
435' FNL & 2185' FWL  
Sec. 20, T. 25 N., R. 12 W.  
San Juan County, New Mexico

PAGE 1

## Drilling Program

### 1. ESTIMATED FORMATION TOPS

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Nacimiento	0'	12'	+6,298'
Fruitland	948'	960'	+5,350'
Pictured Cliffs	1,198'	1,210'	+5,100'
Lewis Shale	1,298'	1,310'	+5,000'
Cliff House	1,948'	1,960'	+4,350'
Menefee Shale	2,548'	2,560'	+3,750'
Point Lookout	3,623'	3,635'	+2,675'
Mancos Shale	3,823'	3,835'	+2,475'
Gallup Sandstone	4,798'	4,810'	+1,500'
Total Depth	5,000'	5,012'	+1,298'

### 2. NOTABLE ZONES

<u>Oil &amp;/or Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zone</u>
Fruitland	Nacimiento	Fruitland
Pictured Cliffs	Fruitland	
Gallup	Pictured Cliffs	

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

### 3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be

Elm Ridge Exploration Company, LLC  
Bisti Gallup 20 #3  
435' FNL & 2185' FWL  
Sec. 20, T. 25 N., R. 12 W.  
San Juan County, New Mexico

PAGE 2

used is not yet known. A typical 2,000 psi model is on PAGE 3.

A  $\geq 2,000$  psi BOP and choke manifold system will be installed and tested to 2,000 psi before drilling surface casing plug. It will remain in use until the well is completed or abandoned. A safety valve and sub with a 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.

All BOP mechanical and pressure tests will be recorded on the driller's log. BOPs will be inspected and opened and closed at least daily to assure good mechanical working order. Inspections will be recorded on the daily drilling report. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place.

#### 4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Pounds/Foot</u>	<u>Grade</u>	<u>Type</u>	<u>Age</u>	<u>Depth Set</u>
12-1/4"	8-5/8"	24	J-55 or K-55	S T & C	New	350'
7-7/8"	5-1/2"	<del>10.5</del> 15.5	J-55	L T & C	New	5,000'

Surface casing will be cemented to the surface with  $\approx 290$  cubic feet ( $\approx 245$  sacks) Class B with 1/4 pound per sack cellophane + 2%  $\text{CaCl}_2$ . Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 100% excess. Centralizers will be installed on the middle of the shoe joint and every other centralizer thereafter.

Production casing will be cemented to the surface in 2 stages with a stage tool set @  $\approx 3,500'$ . Centralizers will be installed on the middle of the shoe joint and on every joint thereafter ( $\approx 2$  dozen centralizers). Thread lock the guide shoe, bottom of float collar, and bottom of stage tool only. Use API casing dope.

Elm Ridge Exploration Company, LLC  
Bisti Gallup 20 #3  
435' FNL & 2185' FWL  
Sec. 20, T. 25 N., R. 12 W.  
San Juan County, New Mexico

PAGE 4

First stage volume will be  $\approx 525$  cubic feet consisting of  $\approx 125$  sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2%  $\text{CaCl}_2$  (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by  $\approx 250$  sacks Class B with 2%  $\text{CaCl}_2$  (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon). Volume = >100% excess, but caliper logs will be used to determine actual volume needed.

Second stage volume will be  $\approx 1,215$  cubic feet consisting of  $\approx 618$  sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2%  $\text{CaCl}_2$  (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by  $\approx 50$  sacks of Class B with 2%  $\text{CaCl}_2$  (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon). Volume = >100% excess, but caliper logs will be used to determine actual volume needed.

#### 5. MUD PROGRAM

<u>Depth</u>	<u>Type</u>	<u>ppg</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>pH</u>
0' - 350'	Fresh water gel chem	9.0	50	NC	9
350' - TD	Fresh water gel chem	9.0	38-50	6.0	9

Enough material to maintain mud properties, control lost circulation, and contain a blowout will be at the well site while drilling. Mud will be checked hourly by rig personnel. Material to soak up possible oil or fuel spills will be on site.

#### 6. CORES, TESTS, & LOGS

No cores or drill stem tests are planned. DIL/GR logs will be run from TD to surface. CNL/FDC logs may be run over selected segments. Samples will be collected every  $\approx 10'$  through the Gallup. Samples will be collected every  $\approx 30'$  elsewhere.

Elm Ridge Exploration Company, LLC  
Bisti Gallup 20 #3  
435' FNL & 2185' FWL  
Sec. 20, T. 25 N., R. 12 W.  
San Juan County, New Mexico

PAGE 5

7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, or hydrogen sulfide are expected. Maximum expected bottom hole pressure will be  $\leq 2,150$  psi.

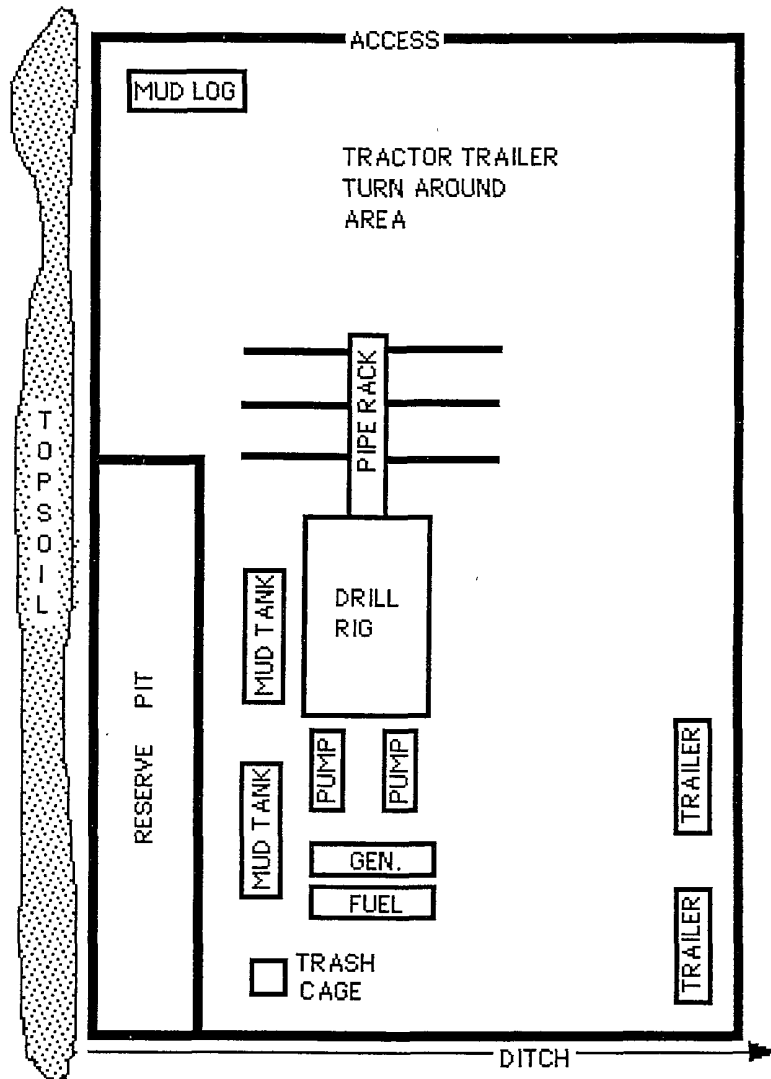
8. OTHER INFORMATION

The anticipated spud date is February 10, 2007. It is expected it will take 1 week to drill and 2 weeks to complete the well.

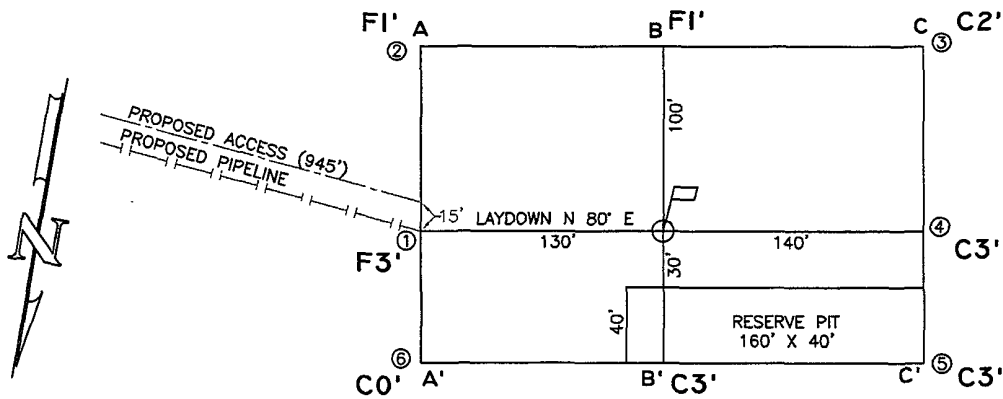
Elm Ridge Exploration Company, LLC  
Bisti Gallup 20 #3  
435' FNL & 2185' FWL  
Sec. 20, T. 25 N., R. 12 W.  
San Juan County, New Mexico

PAGE 13

NORTH  1" = 50'







ELEVATION A-A'

℄

6320	.....	.....	.....	.....
6310	.....	.....	.....	.....
6300	.....	.....	.....	.....
6290	.....	.....	.....	.....
6280	.....	.....	.....	.....

B-B'

℄

6320	.....	.....	.....	.....
6310	.....	.....	.....	.....
6300	.....	.....	.....	.....
6290	.....	.....	.....	.....
6280	.....	.....	.....	.....

C-C'

℄

6320	.....	.....	.....	.....
6310	.....	.....	.....	.....
6300	.....	.....	.....	.....
6290	.....	.....	.....	.....
6280	.....	.....	.....	.....

LEASE: BISTI GALLUP 20 #3

FOOTAGE: 435' FNL, 2185' FWL

SEC. 20 TWN. 25 N RNG. 12 W N.M.P.M.

LATITUDE: 36.392750° LONGITUDE: 108.136269°

ELEVATION: 6298

## ELM RIDGE EXPLORATION DALLAS, TEXAS

SURVEYED: 3/03/06

REV. DATE:

APP. BY R.P.

DRAWN BY: A.D.

DATE DRAWN: 3/06/05

FILE NAME: 6541C01

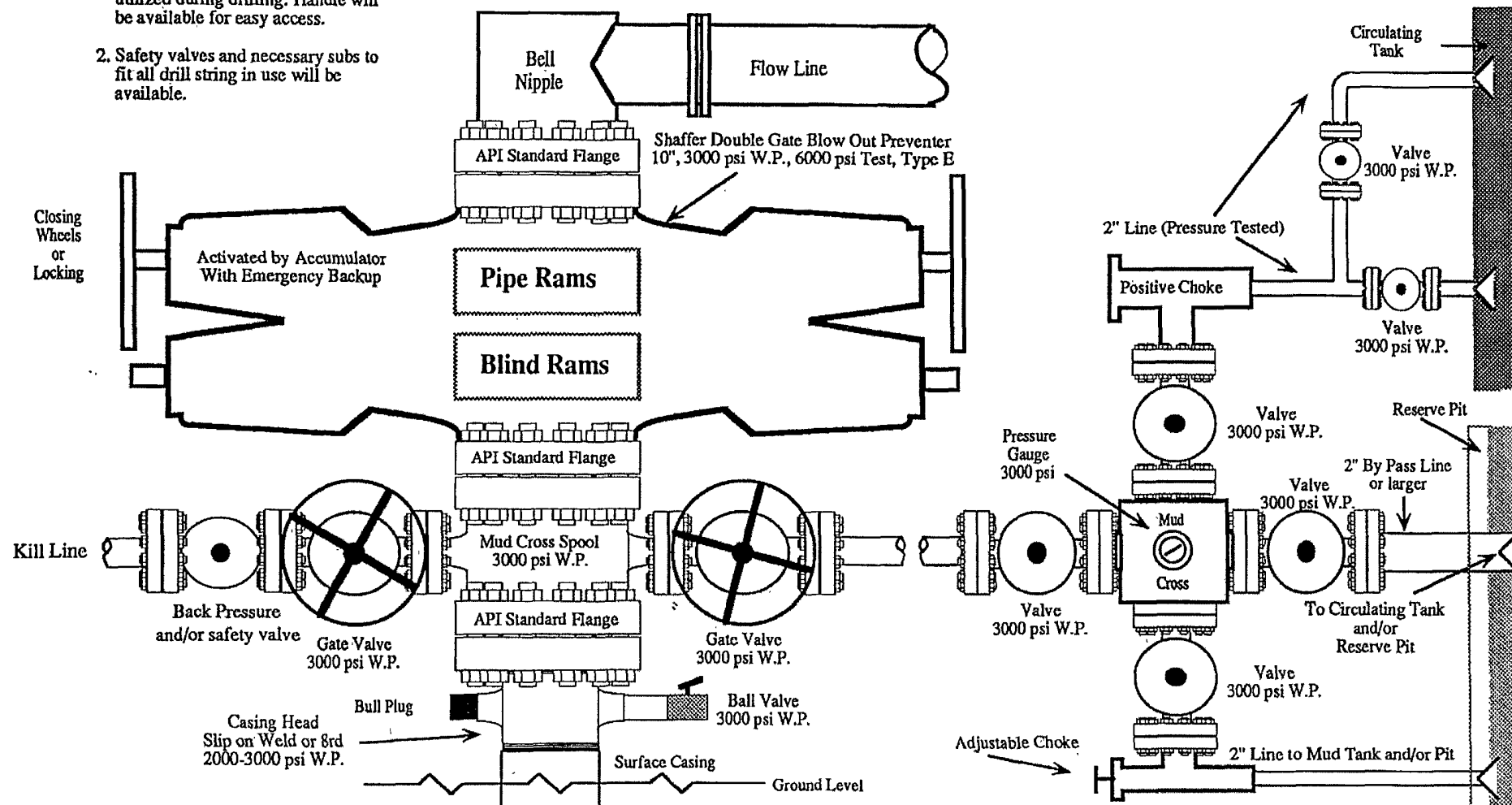


P.O. BOX 3651  
FARMINGTON, NM 87499  
OFFICE: (505) 334-0408

# 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.