

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

2006 FEB 3 PM
RECEIVED
C/O FARMINGTON

5. Lease Serial No.
NMSE 0784634

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.
NMNM - 073637

8. Lease Name and Well No.
VALANCE FEDERAL 33 #16

9. API Well No.
30-045-33571

10. Field and Pool, or Exploratory
Blanco MV/Basin DK/Basin FC

11. Sec., T. R. M. or Blk. and Survey or Area
P SEC 33-T31N-R13W

12. County or Parish
SAN JUAN

13. State
NM

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator
PATINA OIL AND GAS

3a. Address **5802 US HIGHWAY 64
FARMINGTON, NEW MEXICO 87401**

3b. Phone No. (include area code)
505-632-8056

4. Location of Well (Report location clearly and in accordance with any State requirements.)
At surface **1200' FSL and 660' FEL**
At proposed prod. zone **SAME**

14. Distance in miles and direction from nearest town or post office*
6 miles north of Farmington, NM

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
320.0 ACRES

17. Spacing Unit dedicated to this well
E/2 320.0 ACRES

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
> 1000'

19. Proposed Depth
6500'

20. BLM/BIA Bond No. on file
LMP0720503-- C01291

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
5718' GR

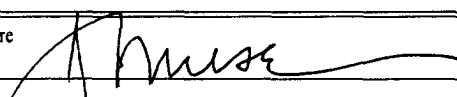
22. Approximate date work will start*
02/28/2006

23. Estimated duration
16 DAYS

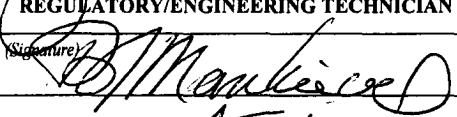
24. Attachments

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  Name (Printed/Typed) **JEAN M. MUSE** Date **01/24/2006**

Title **REGULATORY/ENGINEERING TECHNICIAN**

Approved by (Signature)  Name (Printed/Typed) **A. Mankie** Date **3/22/06**

Title **AT-M** Office **FEO**

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)



NMOC

District I
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994

District II
PO Drawer 00, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION

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

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

PO Box 2088
Santa Fe, NM 87504-2088

District IV
PO Box 2088, Santa Fe, NM 87504-2088

RECEIVED ☐ AMENDED REPORT

OTC FIELD DIVISION

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-3357 / 7239 / 71599 / 71629		*Pool Code BLANCO / MESA VERDE	*Pool Name BASIN DAKOTA / BASIN FRUITLAND COAL
*Property Code 35345	*Property Name VALANCE FEDERAL 33		*Well Number 16
*OGAID No. 173252	*Operator Name PATINA SAN JUAN, INC.		*Elevation 5718'

10 Surface Location

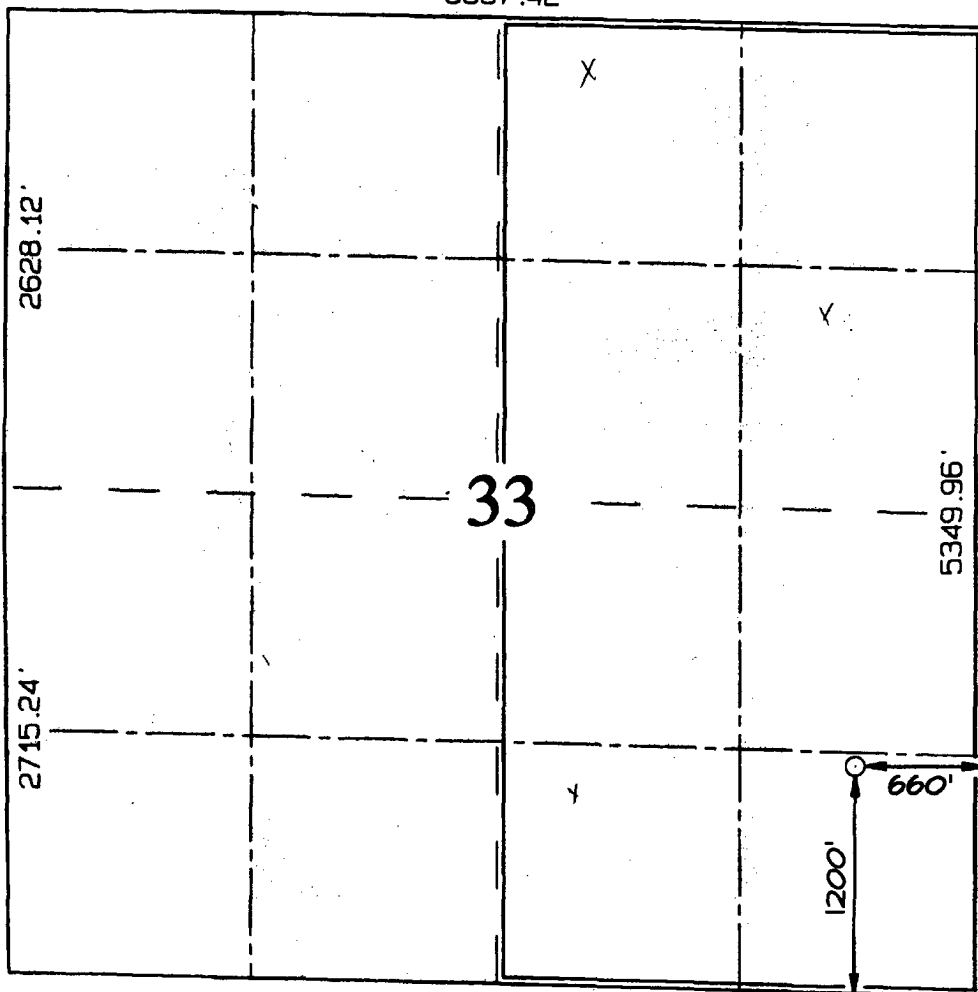
UL or lot no. P	Section 33	Township 31N	Range 13W	Lot Idn.	Feet from the 1200	North/South line SOUTH	Feet from the 660	East/West line EAST	County SAN JUAN
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11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320.0 Acres - (E/2)					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

5337.42'



5327.52'

17 OPERATOR CERTIFICATION

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

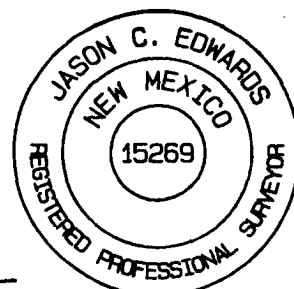
Signature: MUSE
Printed Name: JEAN MUSE
Title: Regulatory/Eng'g Tech
Date: JANUARY 14, 2006

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.

Date Revised: DECEMBER 16, 2005
Survey Date: DECEMBER 9, 2004

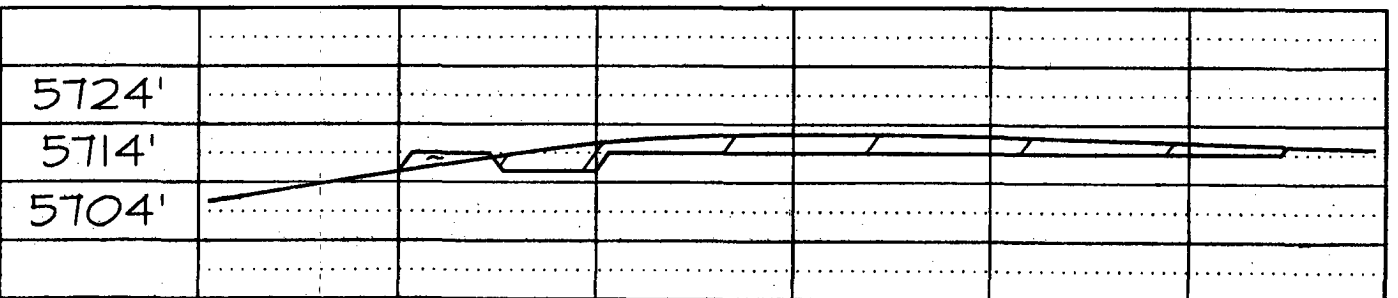
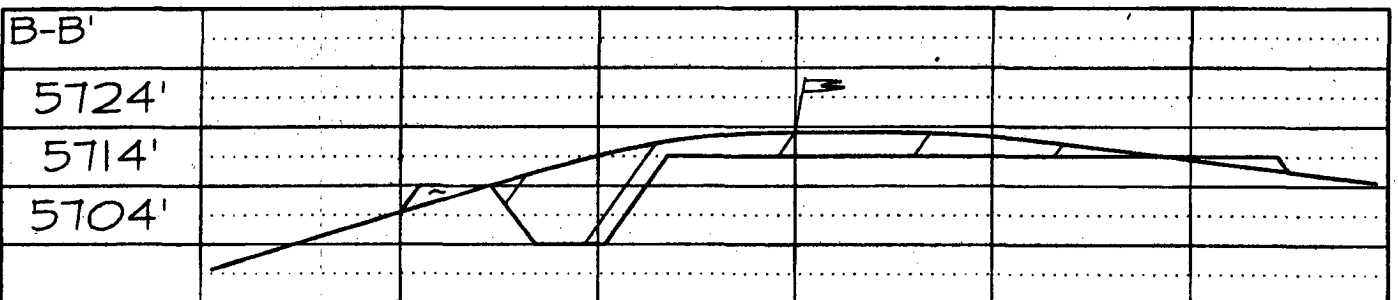
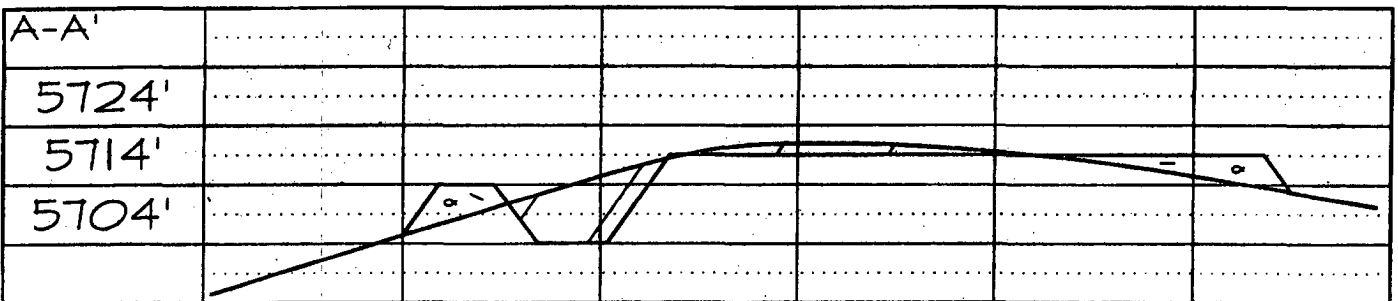
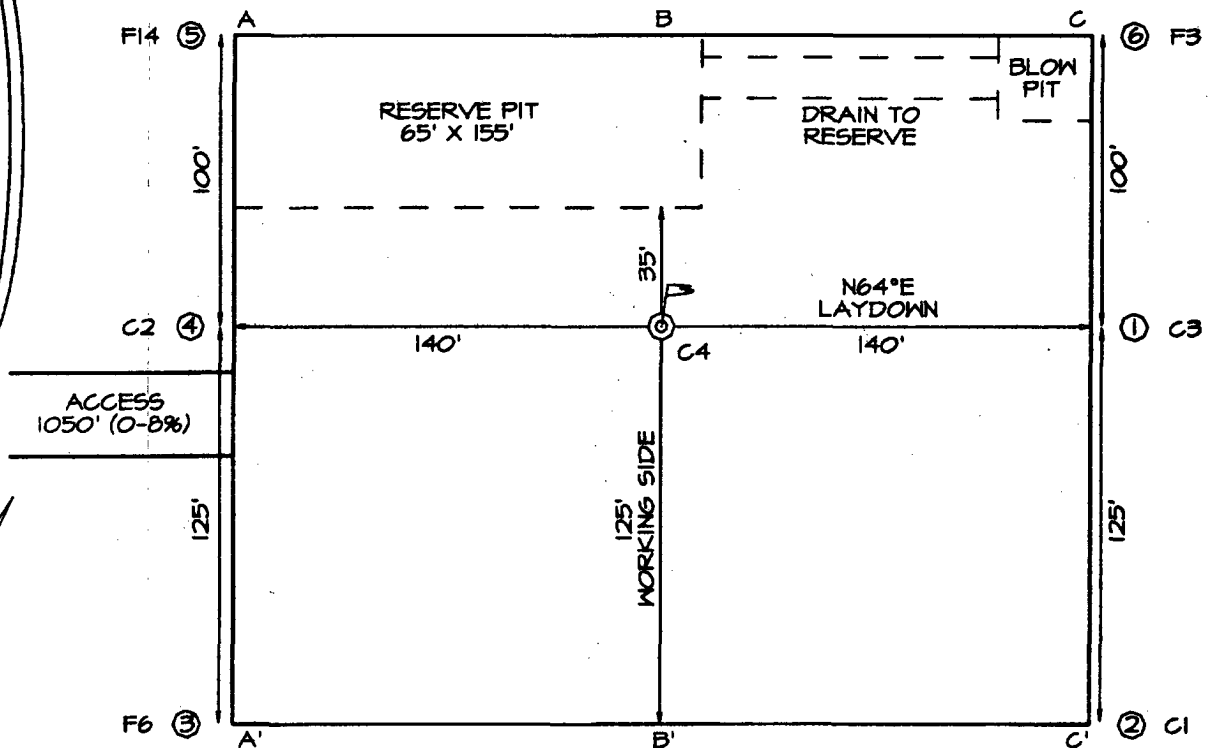
Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

PATINA SAN JUAN, INC. VALANCE FEDERAL 33 #16
1200' FSL & 660' FEL, SECTION 33, T31N, R13W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 5718'

LATITUDE: 36°51'09"
 LONGITUDE: 108°12'09"
 DATUM: NAD1927



**Valance Federal 33 #16
General Drilling Plan
Patina San Juan, Inc.
San Juan County, New Mexico**

1. LOCATION:

Est. elevation: 5718'
NESE of Section 33, T31N, R13W
San Juan, New Mexico

Field: Blanco Mesa Verde & Basin DK
Surface: BLM
Minerals: BLM

**2. SURFACE FORMATION, ESTIMATED TOPS AND WATER, OIL, GAS OR
MINERAL BEARING FORMATIONS (TVD):**

Surface formation – Nacimiento

<u>Formation</u>	<u>Estimated Formation Top (Ft)</u>
Ojo Alamo	721
Kirtland	840
Fruitland**	1377
Pictured Cliffs**	1722
Lewis	1898
Cliff House**	3346
Menefee**	3479
Point Lookout***	4136
Mancos	4476
Gallup	5667
Greenhorn	6197
Graneros	6254
Dakota ***	6307
TD	6500

Legend: * Freshwater bearing formation
 ** Possible hydrocarbon bearing formation
 *** Probable hydrocarbon bearing formation
 # Possible H2S bearing formation

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected.

3. PRESSURE CONTROL EQUIPMENT:

BOP equipment will be tested to its rated working pressure or 70-percent of the internal yield of the surface casing, but not to exceed 1,000 psi. See attachments for BOP and choke manifold diagrams.

Production Hole BOP Requirements and Test Plan

11" – 2,000 psi single ram (blind)

11" – 2,000 psi single ram (pipe)

Test as follows:

a) Pipe rams:	1,000 psi (High)	250 psi (low)
b) Choke manifold:	1,000 psi (High)	250 psi (low)
c) Choke lines:	1,000 psi (High)	250 psi (low)

All ram type preventers and related equipment will be hydraulically tested at nipple-up. They will also be retested in either of the following events:

- A pressure seal is broken.
- 30 days have elapsed since the last successful test of the equipment.

Furthermore, BOP's will be checked daily as to mechanical operating condition. All ram type preventers will have hand wheels, which will be operative and accessible at the time the preventers are installed. See attached Exhibit for details on the BOP equipment.

AUXILIARY EQUIPMENT:

- a) Manually operated kelly cock (upper and lower)
- b) Full opening manually operated safety valves in the full open position, capable of fitting all drill stem connections.

4. CASING DESIGN:

Hole Data				
Interval	Bit Size (Inches)	Casing Size (Inches)	Top (Ft)	Bottom (Ft)
Surface	13.50	9.625	0	300
Intermediate	8.75	7.0	0	4500
Production	6.25	4.5	4200	6500

Casing Data							
OD (Inches)	ID (Inches)	Weight (Lbs/Ft)	Grade	Thread	Collapse (psi)	Burst (psi)	Min. Tensile (Lbs)
9.625	8.921	36.0	J55	STC	2,020	3,520	394,000
7.000	6.366	23.0	L80	LTC	3,830	6,340	435,000
4.5	4.276	11.6	N80	LTC	6,350	7,780	223,000

MINIMUM CASING DESIGN FACTORS:

COLLAPSE: 1.125

BURST: 1.00

TENSION: 1.80

Area Fracture Gradient Range: 0.7 – 0.8 psi/foot

Maximum anticipated reservoir pressure: 2,500 psi

Maximum anticipated mud weight: 9.0 ppg

Maximum surface treating pressure: 3,750 psi

Float Equipment:

Surface Casing: Guide shoe on bottom and 3 centralizers on the bottom 3 joints.

Intermediate Casing: Float shoe on bottom joint and a float collar one joint up from float shoe. One centralizer 10 ft above float shoe and nine centralizers spaced every joint above the float collar. Stage tool above the Cliffhouse formation. One centralizer below stage tool and one centralizer above stage tool.

Production Casing: 4 1/2" whirler type cement nosed guide shoe and a float collar on top of bottom joint with centralizers over potential hydrocarbon bearing zones.

CEMENTING PROGRAMS:

9-5/8" Surface casing:

225 sx Type III cement with 3% CaCl₂, 1/4#/sx cellofakes. 100% excess to circulate cement to surface. WOC 12 hrs. Pressure test surface casing to 1000 psi for 30 minutes.

Slurry weight: 14.5 ppg
Slurry yield: 1.42 ft³/sack

Volume basis:	40' of 9-5/8" shoe joint	17 cu ft
	300' of 13-1/2" x 9-5/8" annulus	147 cu ft
	<u>100% excess (annulus)</u>	<u>147 cu ft</u>
	Total	311 cu ft

Note:

1. Design top of cement is the surface.
2. Have available 100 sx Type III cement with 2% CaCl₂ for top out purposes.

7" Intermediate Casing:

1st Stage:

135 sx of Type III cement plus additives

Slurry weight: 12.3 ppg
Slurry yield: 2.22 ft³/sx

2nd Stage: (Stage tool at ±3000')

Lead: 240 sx of Type III cement plus additives

Slurry weight: 12.3 ppg
Slurry yield: 2.22 ft³/sx

Tail: 50 sx of Type III cement plus additives

Slurry weight: 14.5 ppg
Slurry yield: 1.40 ft³/sx

Volume Basis:	40' of 7" shoe joint	9 cu ft
	4200' of 7" x 8 3/4" hole	631 cu ft
	300' of 7" x 9 5/8" casing	50 cu ft
	<u>30% excess (annulus)</u>	<u>204 cu ft</u>
	Total	894 cu ft

Note:

1. Design top of cement is surface.
2. Actual cement volumes to be based on caliper log plus 30%.

4 1/2" Production casing:

175 sx of Type III cement plus additives

Slurry weight: 12.5 ppg

Slurry yield: 2.06 ft³/sx

Volume basis:	40' of 4 1/2" shoe joint	5 cu ft
	2000' of 4 1/2" x 6 1/4" hole	205 cu ft
	300' of 4 1/2" x 7" casing overlap	33 cu ft
	200' above 4.5" liner (without drill pipe)	44 cu ft
	<u>30% excess (annulus)</u>	<u>72 cu ft</u>
	Total	359 cu ft

Note:

1. Design top of cement is ±4000' (200' above the top of the 4.5" liner w/out drill pipe).
2. Actual cement volumes to be based on caliper log plus 30%.

5. MUD PROGRAM:

The surface hole will be drilled with spud mud. Gel and polymer sweeps will be used from surface to 300 feet as necessary to keep hole clean.

The intermediate hole will be drilled with water until mud up at about 3100 ft. From mud up point to intermediate casing depth (±4500'), it will be drilled with a LSND mud. Anticipated mud weight ranges from 8.5 – 9.2 ppg. Mud weight will be increased as required to maintain hole stability and control gas influx.

The production hole will be drilled with air or air/mist to TD.

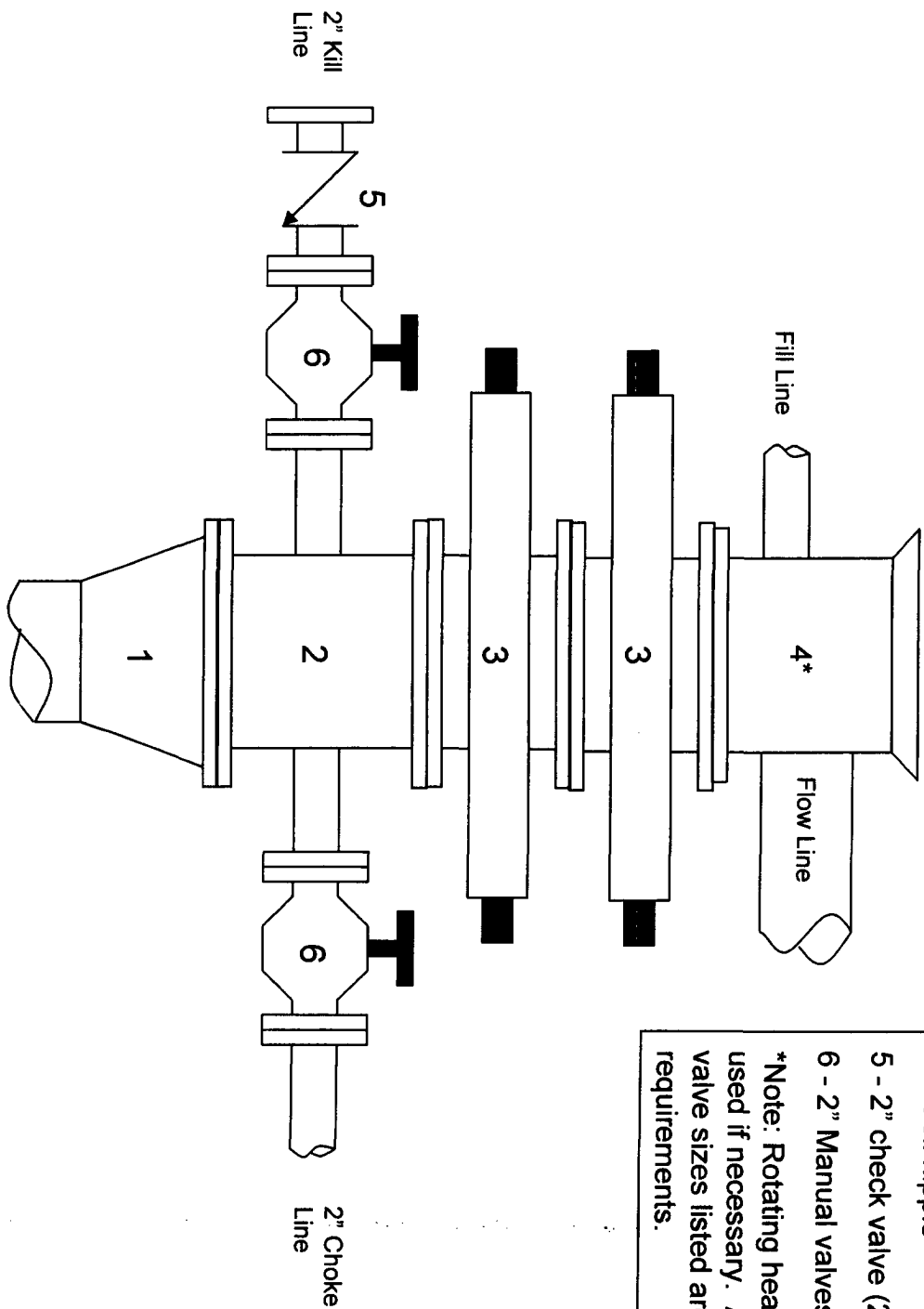
Sufficient mud materials to maintain stable wellbore conditions (for either well control or lost circulation scenarios) will be maintained at the well site.

No chrome-based additives will be used in the mud system.

Valance Federal 33 #16

2000 psi BOP stack

Minimum requirements



Components

- 1 - Wellhead 9-5/8" (2M)
- 2 - Drilling spool 11" (2M)
- 3 - A double or two single rams with blinds on bottom 11" (2M)
- 4 - Bell nipple*
- 5 - 2" check valve (2M)
- 6 - 2" Manual valves (2M)

*Note: Rotating head may also be used if necessary. Also, all line and valve sizes listed are minimum requirements.

Valance Federal 33 #16 2000 psi Choke Manifold Minimum requirements

Components
1 – 2" Valve (2M)
2 – 2" Valve (2M)
3 – Mud cross with gauge (2M) flanged below the gage.
4 – Adjustable choke (2M)
5 – Adjustable choke (2M)
Note: All line and valve sizes listed are minimum requirements.

