

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

2004 DEC 15 PM 4:39

5 Lease Serial No.
NM-SF 078467 NMNM-048376

APPLICATION FOR PERMIT TO DRILL OR REENTER

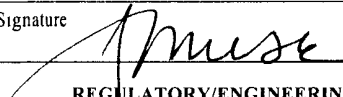

RECEIVED
070 FARMINGTON NM

1a. Type of work. <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		6. If Indian, Allottee or Tribe Name	
1b. Type of Well. <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No	
2. Name of Operator PATINA OIL AND GAS		8. Lease Name and Well No CHISOLM 24#04 Federal 24#04	
3a. Address 5802 US HIGHWAY 64 FARMINGTON, NEW MEXICO 87401		9. API Well No. 36-045-32771	
3b. Phone No. (include area code) 505-632-8056		10. Field and Pool, or Exploratory BASIN FRUITLAND COAL	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 775' FNL and 745' FWL At proposed prod. zone SAME		11. Sec, T R M or Blk and Survey or Area D SEC 24-T31N-R13W	
14. Distance in miles and direction from nearest town or post office* 5 miles north of Farmington, NM		12. County or Parish SAN JUAN	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) 745'	16. No. of acres in lease 320+ ACRES	17. Spacing Unit dedicated to this well W/2 320 ACRES	
18. Distance from proposed* location to nearest well, drilling, completed, applied for, on this lease, ft 1335'	19. Proposed Depth 2300'	20. BLM/BIA Bond No. on file	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5902' GR	22. Approximate date work will start* 04/01/2005	23. Estimated duration 5 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 | 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) JEAN M. MUSE	Date 12/13/2004
Title REGULATORY/ENGINEERING TECH		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 6/2/07
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.

Title 18 USC Section 1001 and Title 43 USC 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)

Submil application for pit permit on NM OGD Form C-103 prior to constructing location
RCVD JUN 14 07
NOTIFY AZTEC OGD 24#04 DIV.
PRIORITY TO CASING & CEMENT

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

NMOCD

6-28-07
BH

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

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

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO 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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-32771		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 36564	*Property Name CHISOLM FEDERAL 24		*Well Number 04
*OGRIID No 173252	*Operator Name PATINA SAN JUAN, INC.		*Elevation 5806'

10 Surface Location


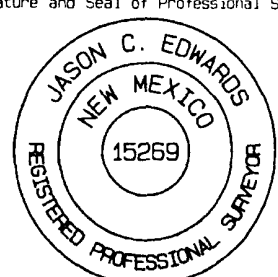
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	24	31N	13W		775	NORTH	745	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

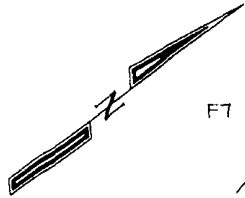
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

*Dedicated Acres 320.0 Acres - (W/2)	*Joint or Infill	*Consolidation Code	*Order No
---	------------------	---------------------	-----------

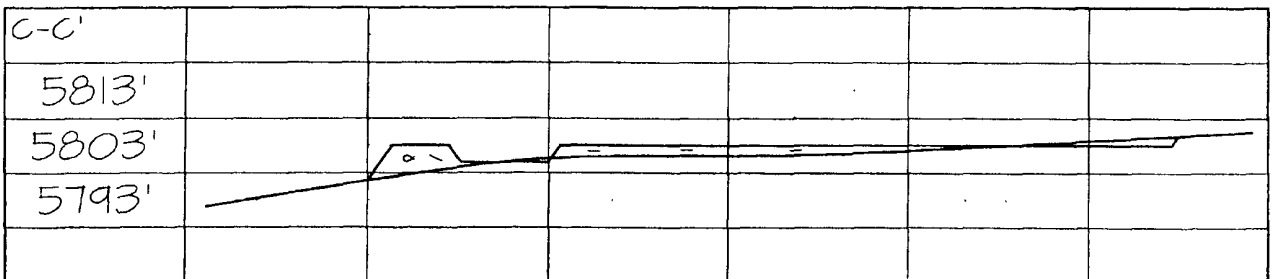
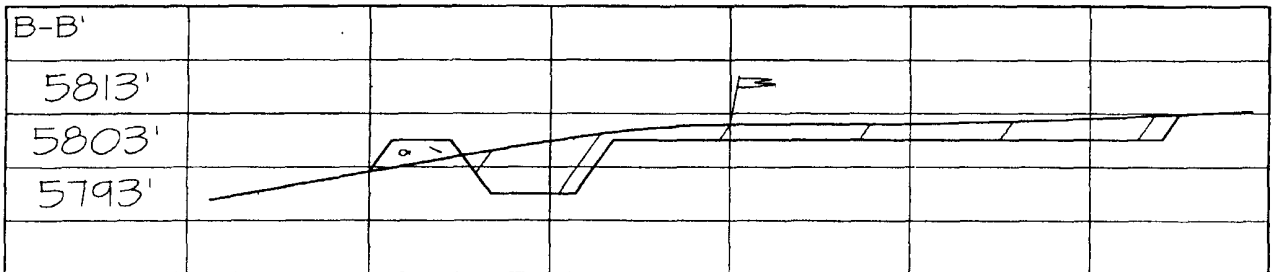
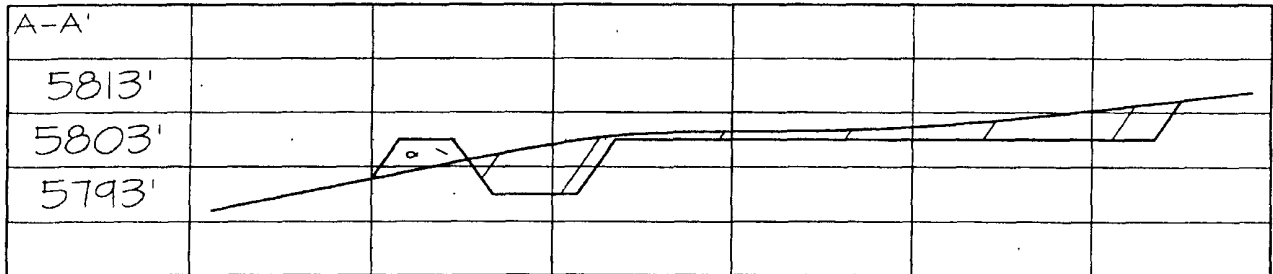
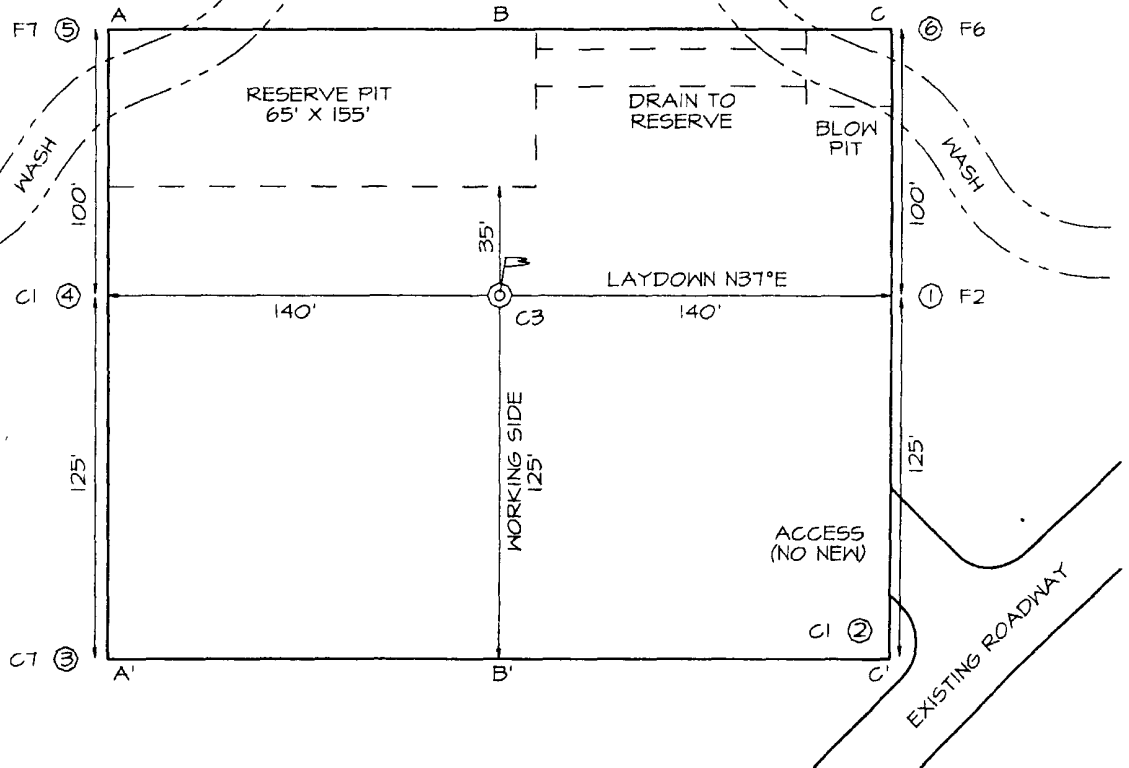
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature: <i>Jason Muse</i> Printed Name: JEAN MUSE Title: Reg/Engr. Tech Date: 9/30/04
	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. Survey Date: SEPTEMBER 24, 2004 Signature and Seal of Professional Surveyor:  JASON C. EDWARDS Certificate Number 15269

PATINA SAN JUAN, INC. CHISOLM FEDERAL 24 #04
775' FNL & 745' FWL, SECTION 24, T31N, R13W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 5806'



LATITUDE: 36°53'26"
LONGITUDE: 108°09'40"
 DATUM: NAD1927



**Chisolm Federal 24 No. 04
General Drilling Plan
Patina San Juan, Inc.
San Juan County, New Mexico**

1. LOCATION:

NWNW of Section 24, T31N, R13W
San Juan, New Mexico

Field: Fruitland Coal
Surface: BLM
Minerals: NM SF 078464


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	450
Fruitland	1510
TD	2300

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 the lesser of its rated working pressure, 70-percent of the internal yield of the surface casing or 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 and 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:

Casing Program:

Hole Size	Depth / Formation	Casing Size
12 1/4"	250'	9 5/8"
8 3/4"	2300' and through the Fruitland coal to sufficient depth to test the coal	7"

Hole Size	Casing Type	Top (MD)	Bottom (MD)	Wt. (lb./ft)	Grade	Thread	Condition
9-5/8"	Surface	0'	250'	36.0	K55/J55	STC	New
7"	Intermediate	0'	2300' +/-	23.0	K55/J55	STC / LTC	New

Casing Data				Collapse (psi)	Burst (psi)	Min. Tensile (Lbs.)
OD	Wt/Ft	Grade	Thread			
9-5/8"	36.0 lbs.	K55/J55	STC	2,020	3,520	394,000
7"	23.0 lbs.	K55/J55	STC / LTC	3,270	4,360	366,000

284,000

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: 900 psi

Maximum anticipated mud weight: 9.0 ppg

Maximum surface treating pressure: 3,500 psi

Float Equipment:

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

Production Casing: 7" 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:

165 sxs Type III cement with 2% CaCl_2 , 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: 15.2 ppg
Slurry yield: 1.27 ft³/sack

Volume basis:	40' of 9-5/8" shoe joint	17 cu ft
	300' of 12-1/4" x 9-5/8" annulus	94 cu ft
	<u>100% excess (annulus)</u>	<u>94 cu ft</u>
	Total	205 cu ft

Note:

1. Design top of cement is the surface.
2. Have available 100 sx Type III cement with 2% CaCl_2 for top out purposes.

7" Production casing:

220 sacks of Premium lite high strength 35/65 pozmix cement.

Slurry weight: 12.4 ppg
Slurry yield: 1.91 ft³/sack

Volume basis:	40' of 7" shoe joint	9 cu ft
	7 " x 8 3/4" hole	322 cu ft
	250' of 9 5/8" x 7" casing overlap	42 cu ft
	<u>15% excess (annulus)</u>	<u>48 cu ft</u>
	Total	421 cu ft

Note:

1. Design top of cement is the surface.
2. Actual cement volumes to be based on caliper log plus 15%.

5. MUD PROGRAM:

The surface hole will be drilled with spud mud. Gel and polymer sweeps will be used from surface to 250 feet as necessary to keep hole clean.

The production hole will be drilled with LSND mud from base of surface casing to TD. Anticipated mud weight ranges from 8.5 – 9.0 ppg. Mud weight will be increased as required to maintain hole stability and control gas influx.

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

6. EVALUATION PROGRAM:

Mud logger: None Planned.

Testing: No DST is planned

Coring: None Planned

Electric logs:

Intermediate Hole:

1) DIL-GR-SP: TD to base of surface casing.

2) LDT-CNL-GR-CAL-PE: TD to base of surface casing

Production Hole:

1) DIL-GR-SP: TD to base of intermediate casing.

2) LDT-CNL-GR-CAL-PE: TD to base of intermediate casing

7. ABNORMAL PRESSURE AND TEMPERATURE:

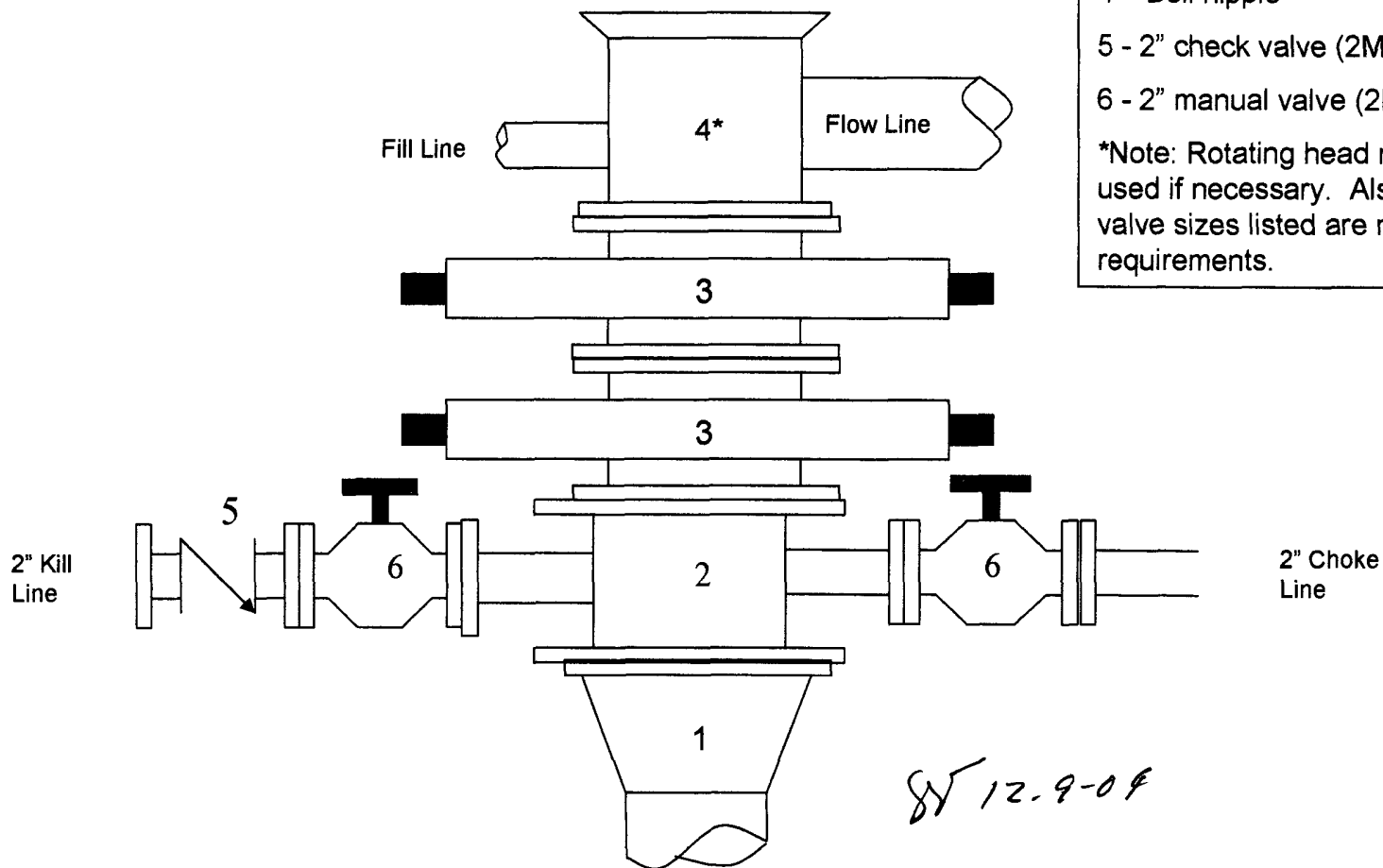
H ₂ S	None
Coal	Fruitland
Minerals	None
Water	None
Static BHT	175° F
Lost Circulation	Possible
Hole Deviation	None
Abnormal Pressures	None
Unusual Drilling Problems	None

8. ANTICIPATED STARTING DATE: April 1, 2005

Anticipated duration: 5 days

Chisolm Federal 24 No. 04

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 valve (2M)

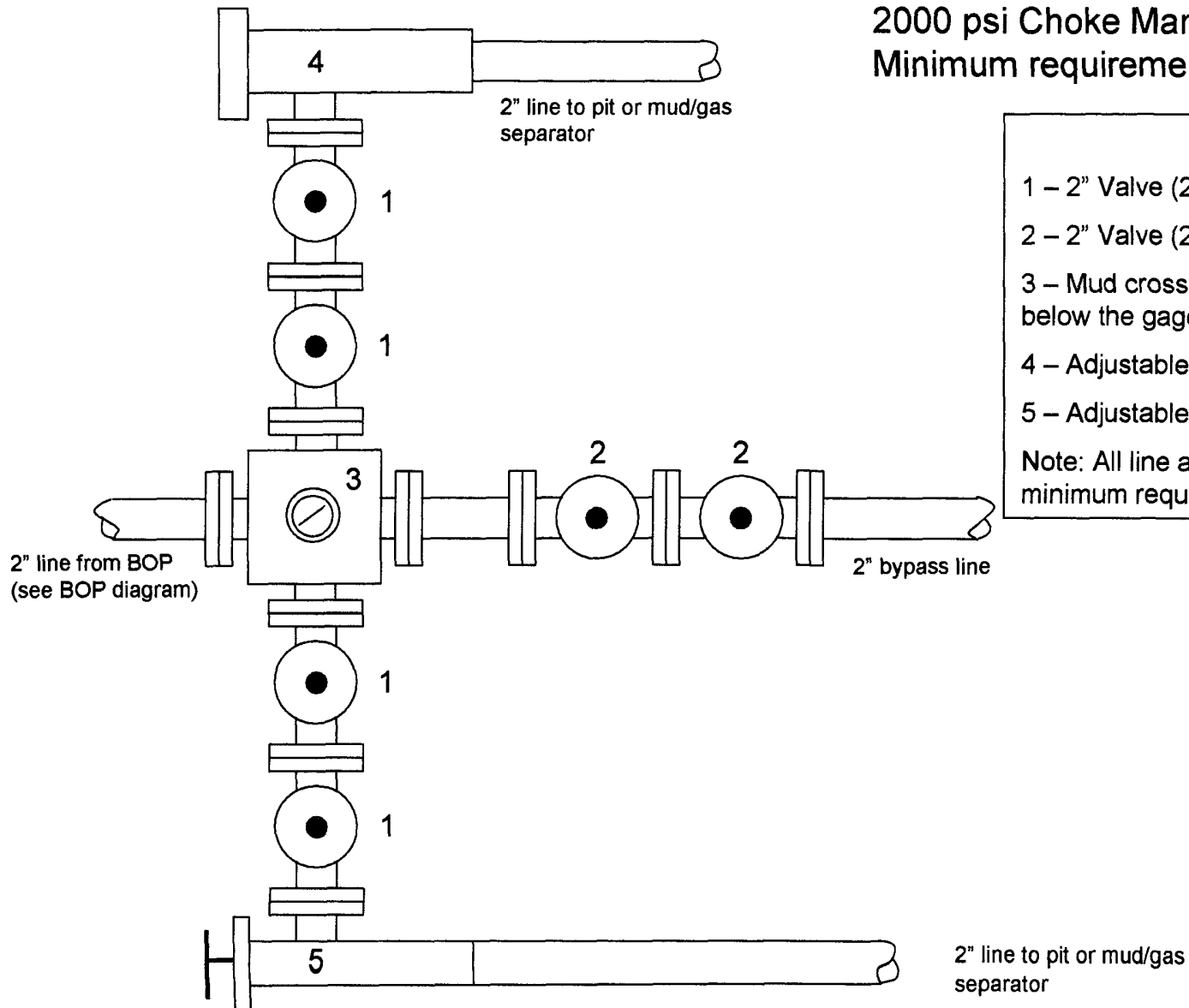
*Note: Rotating head may also be used if necessary. Also, all line and valve sizes listed are minimum requirements.

SV 12.9-09

Chisolm Federal 24 No. 04

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 beam choke (2M)

5 – Adjustable needle choke (2M)

Note: All line and valve sizes listed are minimum requirements.

8/12-9-04