

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

2005 DEC 16 PM 11 53

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

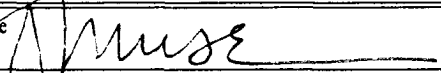
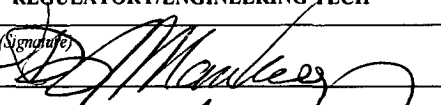
OTIS FARMINGTON NM

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No.
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		8. Lease Name and Well No. 2645 BIG JAKE FEDERAL
2. Name of Operator PATINA OIL AND GAS		9. API Well No. 30-045-33337
3a. Address 5802 US HIGHWAY 64 FARMINGTON, NEW MEXICO 87401	3b. Phone No. (include area code) 505-632-8056	10. Field and Pool, or Exploratory Blanco MV/Basin DK/Basin FC
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 2285' FNL and 1430' FWL At proposed prod. zone 1920 SAME 1265 Lot 4		11. Sec., T. R. M. or Blk. and Survey or Area E SEC 26-T31N-R13W
14. Distance in miles and direction from nearest town or post office* 4 miles north of Farmington, NM		12. County or Parish SAN JUAN
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		13. State NM
16. No. of acres in lease 331.77 ACRES		17. Spacing Unit dedicated to this well W/2 331.77 ACRES
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		20. BLM/BIA Bond No. on file LMP8720503
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5702-5709 GR	22. Approximate date work will start* 01/15/2006	23. Estimated duration 8 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 12/01/2005
Title REGULATORY/ENGINEERING TECH		
Approved by (Signature) 	Name (Printed/Typed)	Date 4/14/06
Title AFM		

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)

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

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



NMOCD

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 30-045-33337	*Pool Code 71599 / 71629	*Pool Name BASIN DAKOTA / BASIN FRUITLAND COAL
*Property Code 35479	*Property Name BIG JAKE FEDERAL 2826	*Well Number 05
*GRID No 173252	*Operator Name PATINA SAN JUAN, INC.	*Elevation 5702'

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
E	26	31N	13W		1920	NORTH	1265	WEST	SAN JUAN

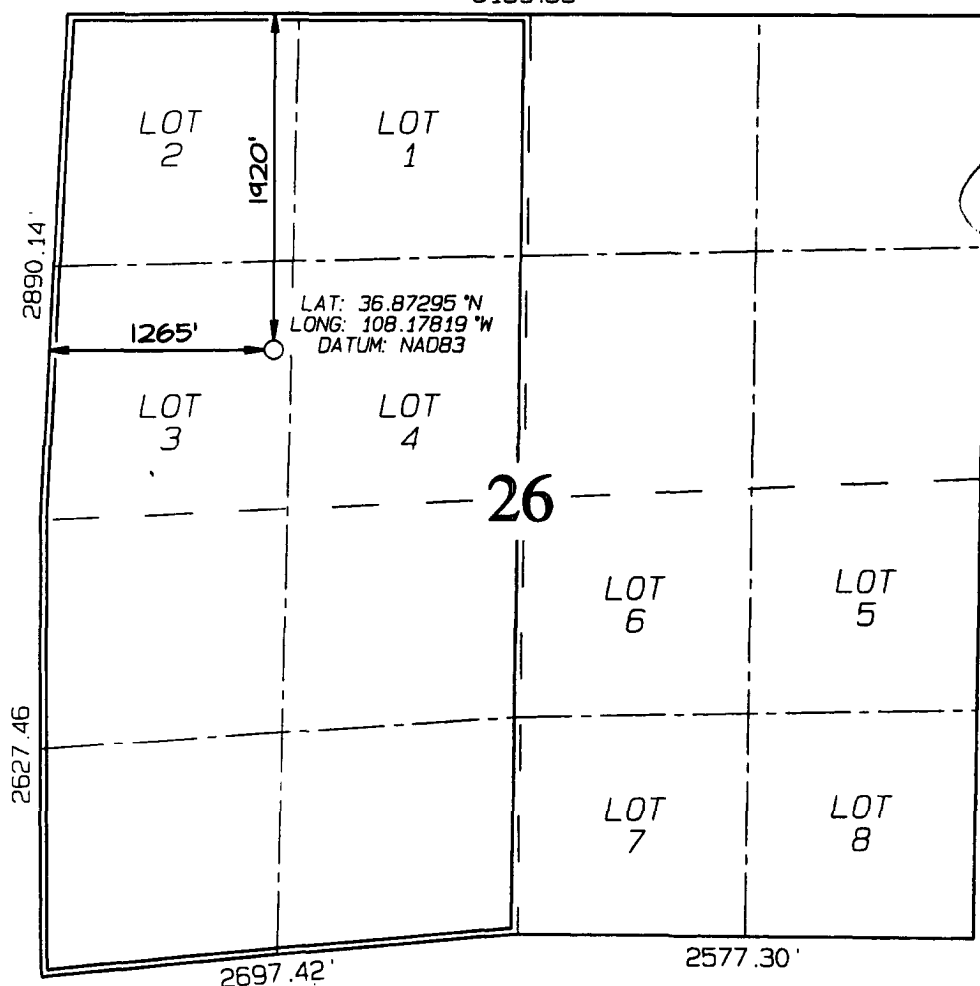
¹¹ Bottom Hole Location If Different From Surface

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

¹² Dedicated Acres 331.77 Acres - (W/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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

5189.58'



¹⁷ OPERATOR CERTIFICATION

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

Signature: *[Signature]*
Printed Name: **JEAN M. MUSE**
Title: **Regulatory/Eng'g Tech**
Date: **3/23/06**

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

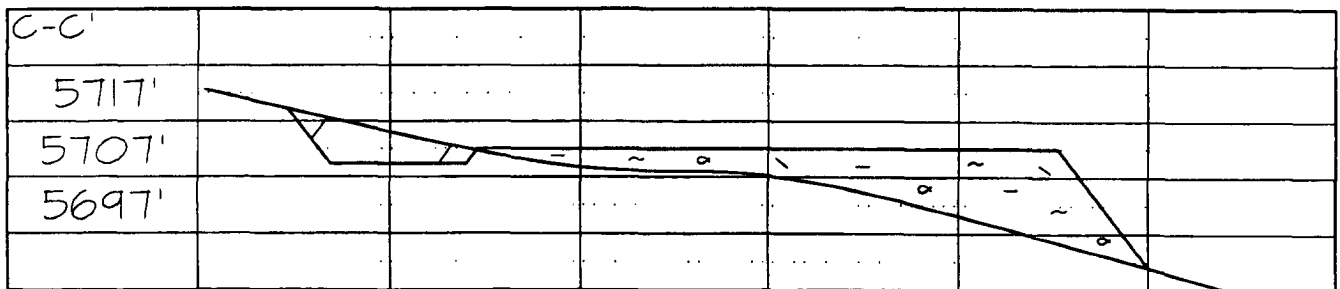
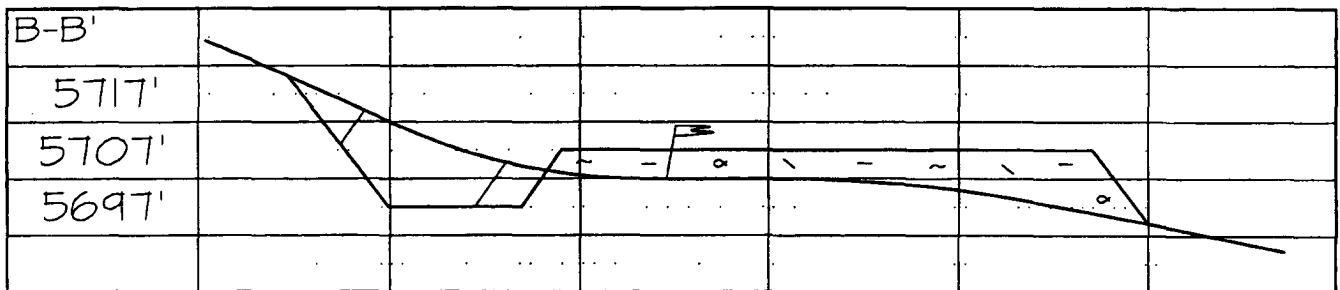
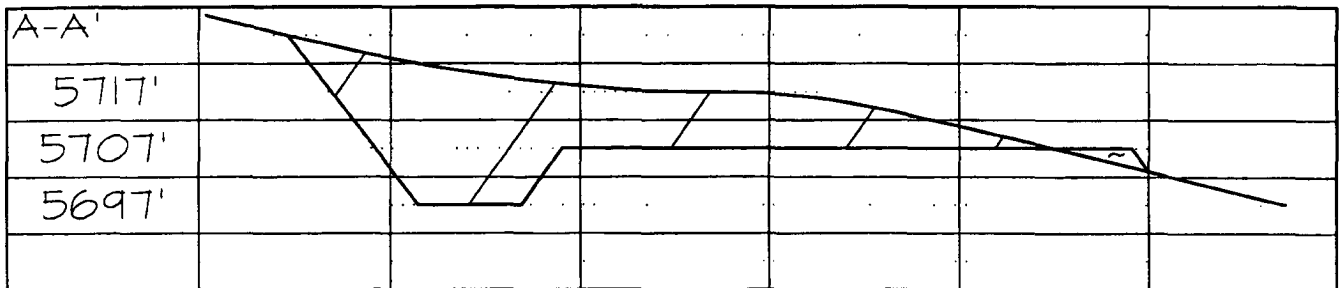
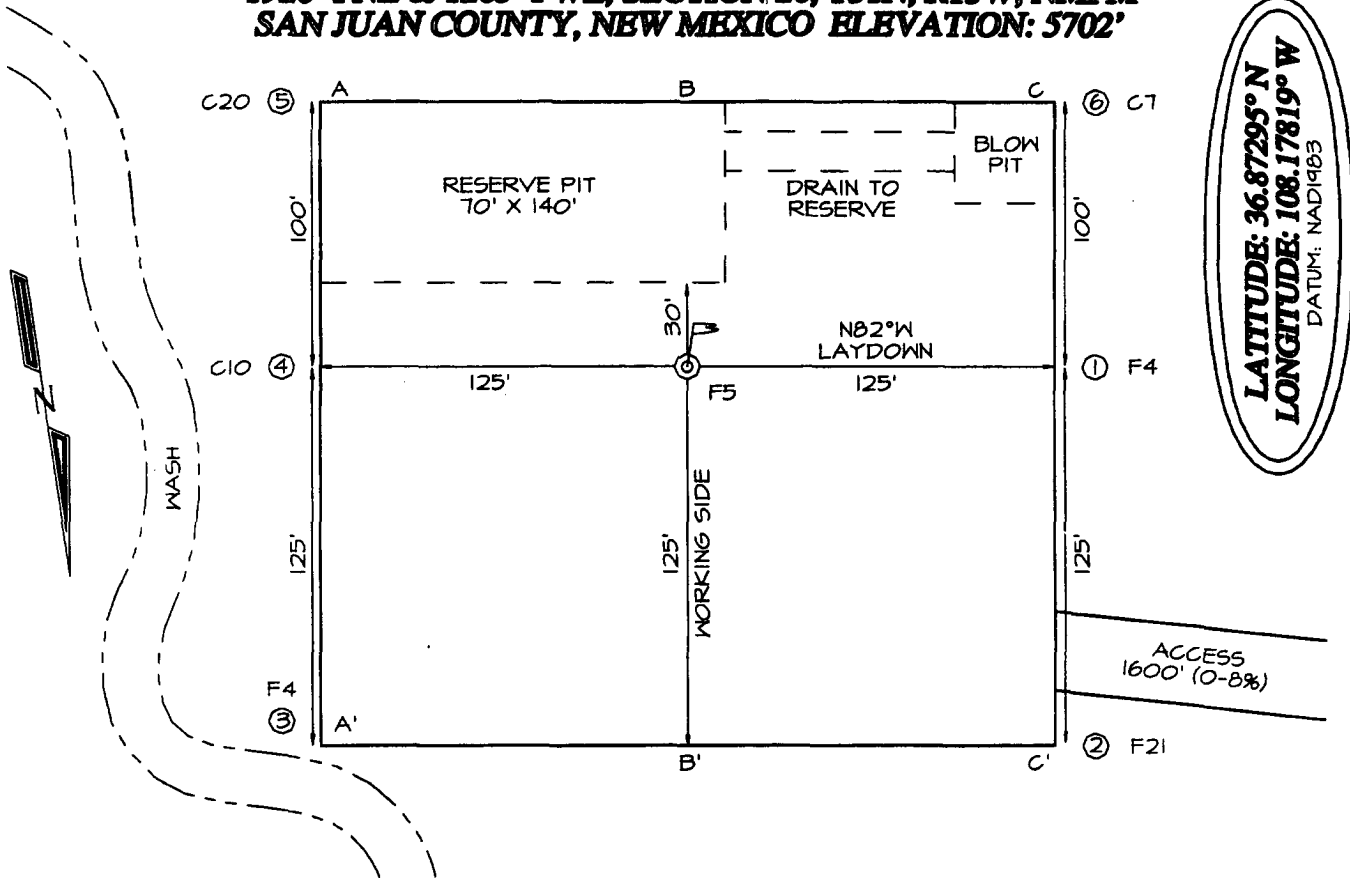
Survey Date: **FEBRUARY 7, 2006**

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

PATINA SAN JUAN, INC. BIG JAKE FEDERAL 26 #05
1920' FNL & 1265' FWL, SECTION 26, T31N, R13W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 5702'



**Big Jake Federal 26 #14
General Drilling Plan
Patina San Juan, Inc.
San Juan County, New Mexico**

1. LOCATION:

Est. elevation: 5968'
SESW of Section 26, 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><i>Formation</i></u>	<u><i>Estimated Formation Top (Ft)</i></u>
Ojo Alamo	1082
Kirtland	1219
Fruitland **	1763
Pictured Cliffs**	2163
Lewis	2347
Cliff House**	3738
Menefee**	3891
Point Lookout***	4523
Mancos	4894
Gallup	6057
Greenhorn	6585
Graneros	6649
Dakota ***	6726
TD	7000

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	4950
Production	6.25	4.5	4650	6900

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% 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: 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
	100% excess (annulus)	147 cu ft
	Total	311 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" 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 $\pm 3500'$)

Lead: 276 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
	4650' of 7" x 8 3/4" hole	699 cu ft
	300' of 7" x 9 5/8" casing	50 cu ft
	30% excess (annulus)	225 cu ft
	Total	983 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:

180 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
	2050' of 4 1/2" x 6 1/4" hole	210 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>73 cu ft</u>
	Total	365 cu ft

Note:

1. Design top of cement is ±4450' (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 (±4600'), 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.

Big Jake Federal 26 #06

2000 psi BOP stack

Minimum requirements

Components

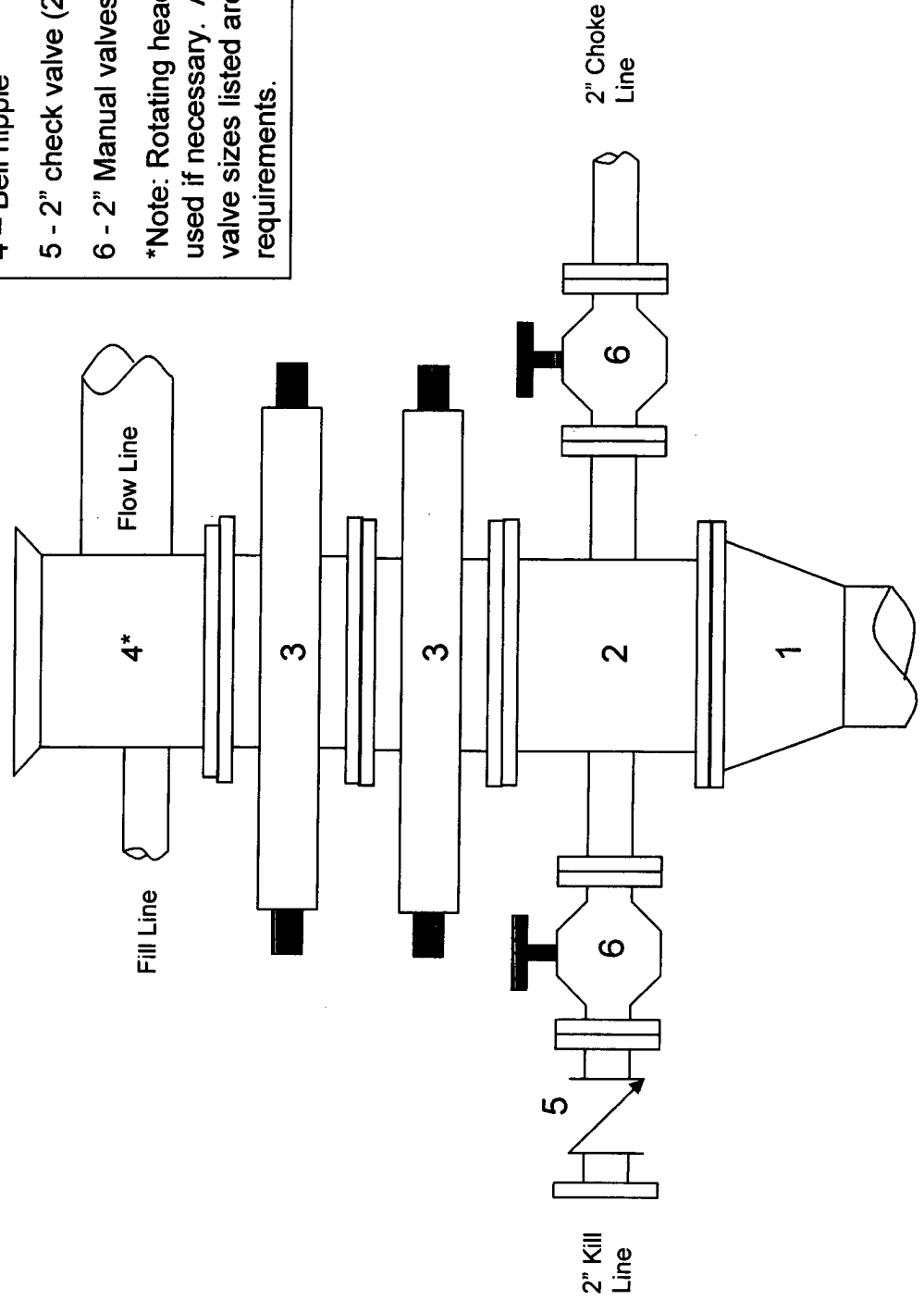
- 1 - Wellhead 9-5/8" (2M)
- 2 - Drilling spool 11" (2M)
- 3 - A double or two single rams with blinds on bottom 11" (2M)

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.



Big Jake Federal 26 #06

2000 psi Choke Manifold

Minimum requirements

Components

1 – 2" Valve (2M)

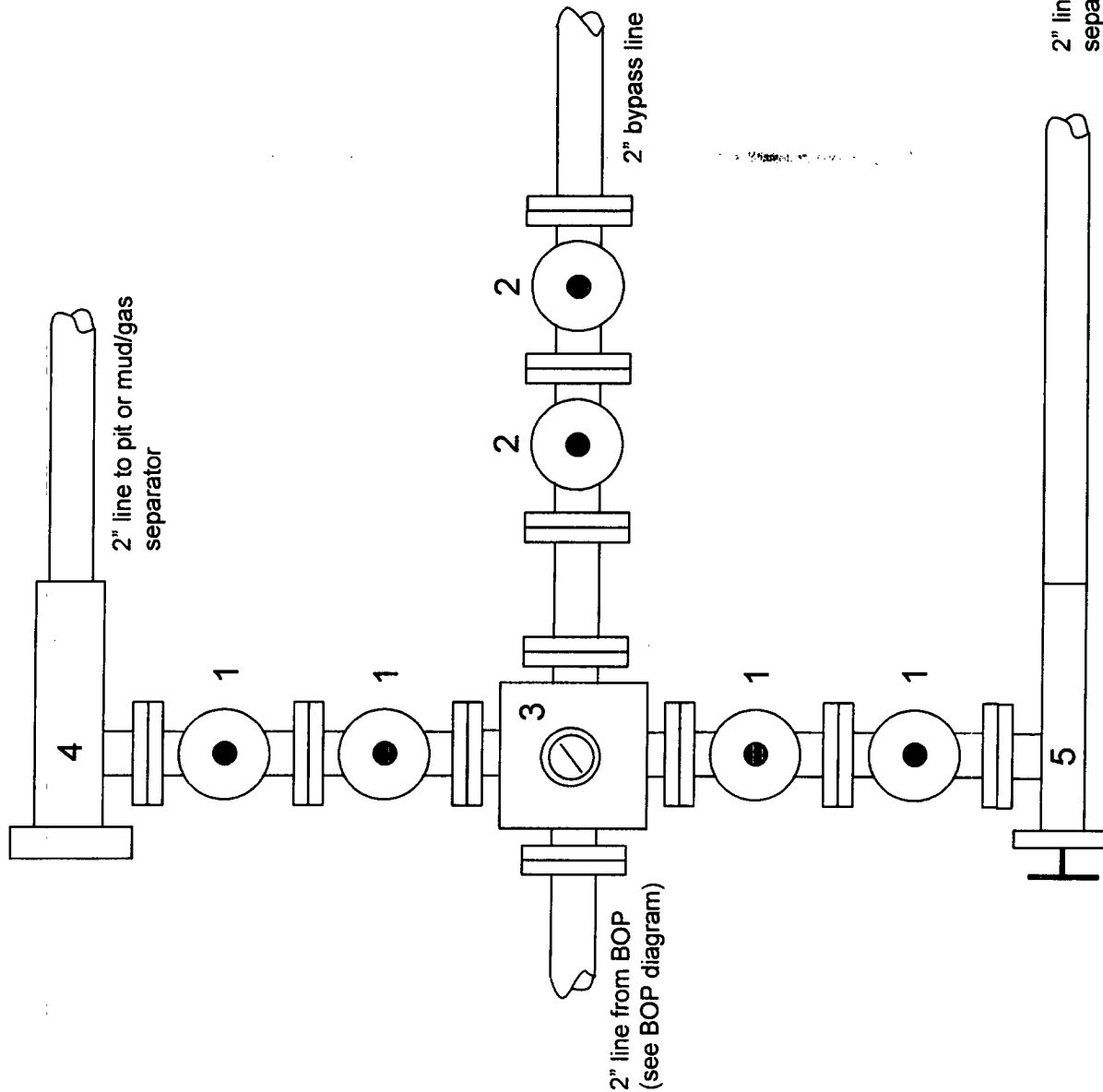
2 – 2" Valve (2M)

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.



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator **PATINA OIL AND GAS**

3a. Address
5802 US HIGHWAY 64 FARMINGTON, NM 87401

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

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
**1920' FNL AND 1265' FWL
E Sec. 26-T31N-R13W NMPM**

5. Lease Serial No.

NM 059848

NM8F078464

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SE078464

8. Well Name and No.

BIG JAKE FEDERAL

9. API Well No.

30-045- 33337

10. Field and Pool, or Exploratory Area

Basin Dakota/Basin Fruitland Coal

11. County or Parish, State

SAN JUAN COUNTY, NEW MEXICO

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

PATINA SAN JUAN, INC. REQUESTS THAT THE FOOTAGES ON THIS WELL BE CHANGED TO 1920' FNL AND 1265' FWL THE WELL PAD AND BORE LOCATIONS WERE CHANGED TO PROTECT COLONIES OF AZTEC GLIA PER THE BLM.

Name change to: Big Jake Federal ~~26~~ #05



RECEIVED
APR 12 PM 7 09
FARMINGTON NM

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

JEAN M. MUSE

Title **REGULATORY/ENGINEERING TECHNICIAN**

Signature

[Signature]

Date

04/11/2006

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice 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.

Title

APD

Date

4/14/06

Office

FPD

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)

NMOCD