

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0136  
Expires March 31, 2007

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		2005 AUG 25 PM 2:13 RECEIVED	
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. Jicarilla B #3M 33460	
2. Name of Operator CDX RIO, LLC. 222374		9. API Well No. 30-039-29638	
3a. Address 2010 Afton Place, Farmington, New Mexico 87401		3b. Phone No. (include area code) (505) 326-3003 12319	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1900' FSL, 2300' FEL At proposed prod. zone		10. Field and Pool, or Exploratory Blanco Mesaverde/Basin Dakota 71599	
14. Distance in miles and direction from nearest town or post office* 30 miles East of Lindrith, New Mexico		11. Sec., T., R., M., or Blk. and Survey or Area J Section 15, T-26-N, R-5-W	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1900'		12. County or Parish Rio Arriba	
16. No. of Acres in lease		13. State NM	
17. Spacing Unit dedicated to this well 320 S/2		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1500'	
19. Proposed Depth 7550'		20. BLM/BIA Bond No. on file National Bond on file	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6611' GR		22. Approximate date work will start*	
23. Estimated duration		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 <i>Richard Corcoran</i>	Name (Printed/Typed) Richard Corcoran	Date 7/26/05
Title Land Manager		
Approved by (Signature) <i>Jim Lovels</i>	Name (Printed/Typed)	Date 1/27/06
Title <i>Acting AFM</i>	Office	

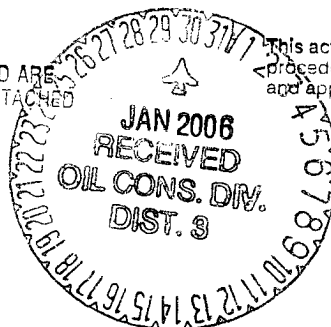
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

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 reverse)

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



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

NMOCD

**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 June 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

RECEIVED

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-039- 29638		<sup>2</sup> Pool Code 72319/71599	<sup>3</sup> Pool Name Blanco Mesaverde/Basin Dakota
<sup>4</sup> Property Code 33460 ✓	<sup>5</sup> Property Name JICARILLA B ✓		<sup>6</sup> Well Number 3M ✓
<sup>7</sup> OGRIID No. 222374 ✓	<sup>8</sup> Operator Name CDX GAS, LLC ✓ 212		<sup>9</sup> Elevation 6611' ✓


<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
J	15	26-N	5-W	.	1900	SOUTH	2300	EAST	RIO ARRIBA

<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 MV - S/320 DK - S/320			<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> 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>CALC'D CORNER BY DBL. PROP.</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</p> <p><i>Richard Corcoran</i> Signature Richard Corcoran Printed Name Land Manager Title 5/10/05 Date</p>
<p>CALC'D CORNER BY DBL. PROP.</p>	<p>LAT. 36°29'06.0"N (NAD 83) LONG. 107°20'43.1" W (NAD 83)</p> <p>15</p>	<p>2300'</p> <p>1900'</p> <p>5346.08' (C)</p>	<p>CALC'D CORNER BY DBL. PROP.</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>APR 2005 Date of Survey Signature and Seal of Registered Professional Surveyor:   </p> <p>Certificate Number</p>

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. 30-039- <b>29638</b>
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. Jicarilla Contract 109
7. Lease Name or Unit Agreement Name Jicarilla B
8. Well Number 3M
9. OGRID Number 222374
10. Pool name or Wildcat Blanco Mesaverde/Basin Dakota

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  
CDX RIO, LLC

3. Address of Operator  
2010 Afton Place, Farmington, New Mexico 87401

4. Well Location

Unit Letter J : 1900 feet from the South line and 2300 feet from the East line  
Section 15 Township 26N Range 5W NMPM Rio Arriba County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
6611' GR

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type New Drill Depth to Groundwater >50' Distance from nearest fresh water well >1000' Distance from nearest surface water >1000'

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: New Drill Pit  
☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: ☐

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.

14. CDX RIO, LLC requests approval to construct a drilling pit in accordance with CDX RIO, LLC General Construction Plan submitted August, 2004. The pit will be a lined as per the general plan. The pit will be closed within 180 days from completion of project as per General Closure Plan submitted August, 2004.

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 ☐.

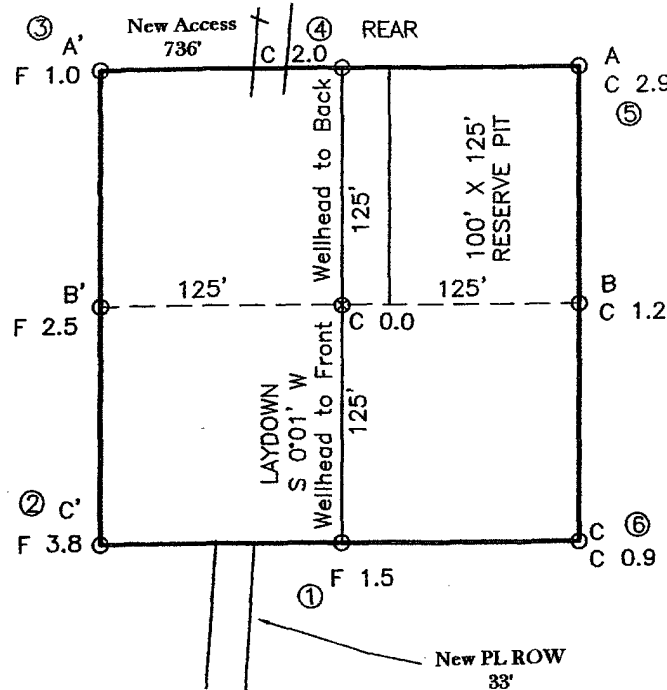
SIGNATURE Nancy Oltmanns TITLE Agent DATE 6/28/05

Type or print name Nancy Oltmanns E-mail address: nancy.oltmanns@cdxgas.com Telephone No. (505) 326-3003  
**For State Use Only**

APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 40 DATE JAN 30 2006  
Conditions of Approval (if any):

CDX GAS, LLC  
 JICARILLA B No. 3M, 1900 FSL 2300 FEL  
 SECTION 15, T26N, R5W, N.M.P.M., RIO ARriba COUNTY, N. M.  
 GROUND ELEVATION: 6611', DATE: APRIL 01, 2005

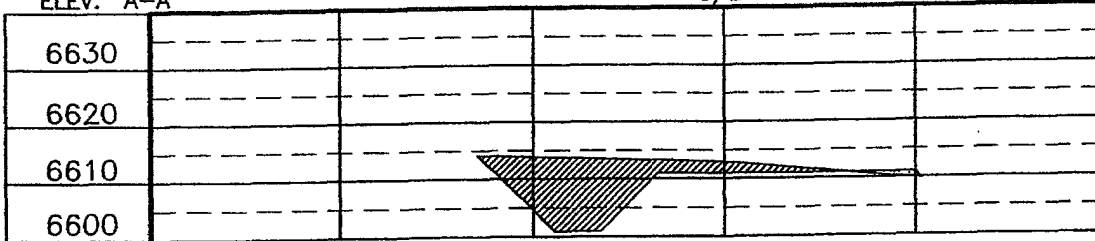
LAT. = 36°29'06.0" N.  
 LONG. = 107°20'43.1" W  
 NAD 83



NOTE: DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

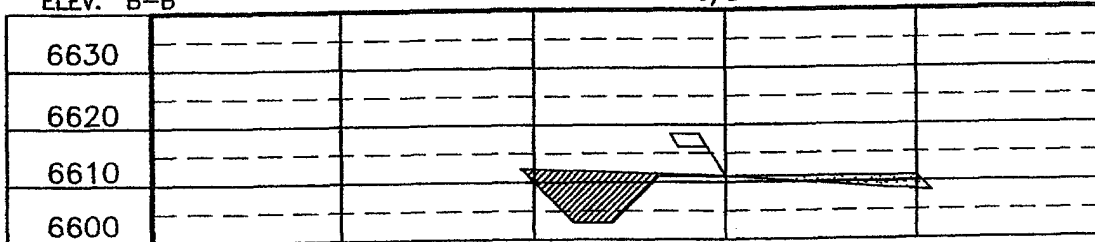
ELEV. A-A'

C/L



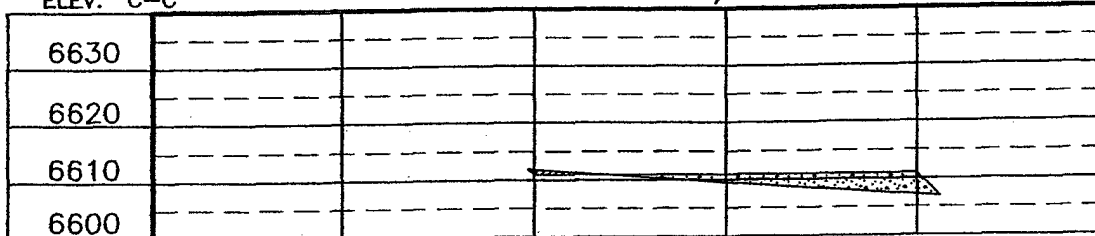
ELEV. B-B'

C/L



ELEV. C-C'

C/L



NOTE: CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

REVISION	DATE	REVISION	DATE
<p>Daggett Enterprises, Inc.          Surveying and Oil Field Services          P. O. Box 15068 • Farmington, NM 87401          Phone (505) 326-1772 • Fax (505) 326-6019          NEW MEXICO L.S. No. 14831</p>			
<p>CDXFILE: CDXGAS070GCFB          DATE: 04/09/05</p>		<p>DRAWN BY: B.L.          ROW#: CDXGAS070</p>	

### **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 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 AND CEMENTING DESIGN:

##### Casing Program:

<u>Hole Size</u>	<u>Depth</u>	<u>Casing Size</u>
12 1/4"	250'	9 5/8"
8 3/4"	3500' +/- Lewis seat	7"
6 1/4"	7653'	4 1/2"

Hole Size	Casing Type	Top (MD)	Bottom (MD)	Wt. (lb./ft)	Grade	Thread	Condition
9-5/8"	Surface	0'	250'	36.0	J55	STC	New
7"	Intermediate	0'	3500' +/-	23.0	N80	LTC	New
4 1/2"	Prod Liner	3500'	7550'	11.6	N80	LTC	New

OD	Casing Data			Collapse (psi)	Burst (psi)	Min. Tensile (Lbs.)
	Wt/Ft	Grade	Thread			
9-5/8"	36.0 lbs.	J55	STC	2,020	3,520	394,000
7"	23.0 lbs.	N80	LTC	3,830	6,340	442,000
4 1/2"	11.6 lbs.	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: 3,500 - 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 Kirtland formation. One centralizer below stage tool and one centralizer above stage tool.

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

### **Cementing Program:**

#### **9-5/8" Surface casing: 250'**

140 sxs Type III cement with 2% CaCl<sub>2</sub>, 1/4#/sx celloflake. 100% excess to circulate cement to surface. WOC 12 hrs.

Slurry weight: 15.2 ppg  
Slurry yield: 1.27 ft<sup>3</sup>/sack

Volume basis:	40' of 9-5/8" shoe joint	17 cu ft
	250' of 12-1/4" x 9-5/8" annulus	78 cu ft
	100% excess (annulus)	78 cu ft
	Total	173 cu ft

Note:

1. Design top of cement is the surface.
2. Have available 100 sx Type III cement with 2% CaCl<sub>2</sub> for top out purposes.

#### **7" Intermediate Casing: 3500'**

1st Stage: 146 sacks of Type III cement

Slurry weight: 14.5 ppg  
Slurry yield: 1.4 ft<sup>3</sup>/sack

2<sup>nd</sup> Stage: (Stage tool at 2591' +/-): 297 sacks of Premium Lite FM

Slurry weight: 12.4 ppg  
Slurry yield: 1.92 ft<sup>3</sup>/sack

<u>Volume Basis:</u>	40' of 7" shoe joint	9 cu ft
	3250' of 7" x 8 3/4" annulus	489 cu ft
	250' of 7" x 9 5/8" csg	42 cu ft
	<u>50% excess (annulus)</u>	<u>245 cu ft</u>
	Total	776.0 cu ft

Note:

1. Design top of cement is surface.
2. Actual cement volumes to be based on caliper log plus 50%.

**4 1/2" Production casing: Air Drilled Hole 3500' – 7550' (4050')**

Stage 1: 262 sacks of Premium Lite High Strength FM out guide shoe.

Slurry weight: 12.3 ppg  
Slurry yield: 2.13 ft<sup>3</sup>/sack

<u>Volume basis:</u>	40' of 4 1/2" shoe joint	4 cu ft
	4253' of 4 1/2 " x 6 1/4" hole	416 cu ft
	120' of 4 1/2" x 7" casing	13 cu ft
	<u>30% excess (annulus)</u>	<u>125 cu ft</u>
	Total	558 u ft

Note:

1. Design top of cement is 3380 +/- ft. or 120 ft. into 7" intermediate casing.
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 250 feet as necessary to keep hole clean.

The intermediate hole will be drilled with water till mud up at about 2300 ft. From 2300' to 3500', intermediate casing depth, will be drilled with LSND mud. 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.

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

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.



# Jicarilla B No. 3M

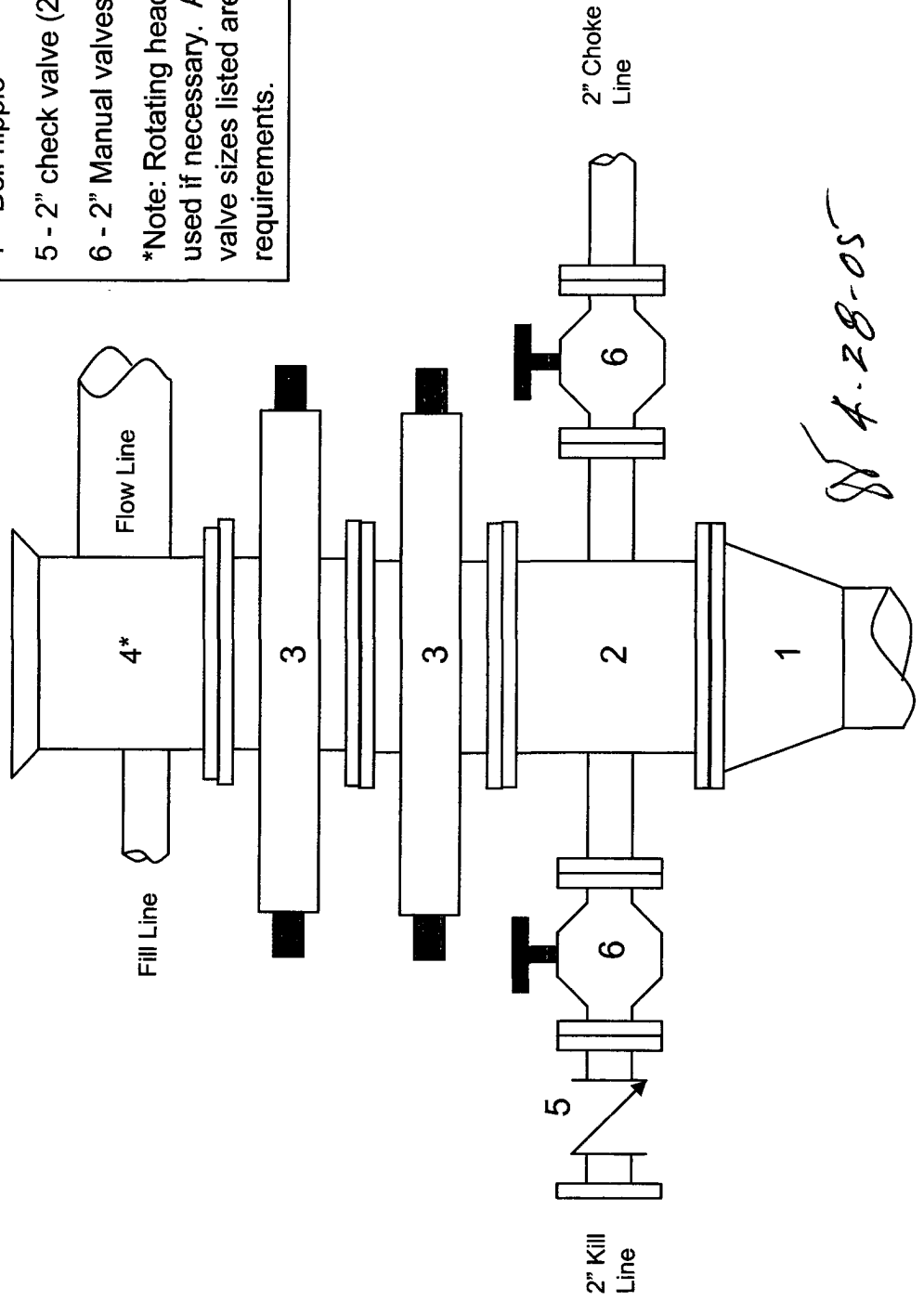
2000 psi BOP stack

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.



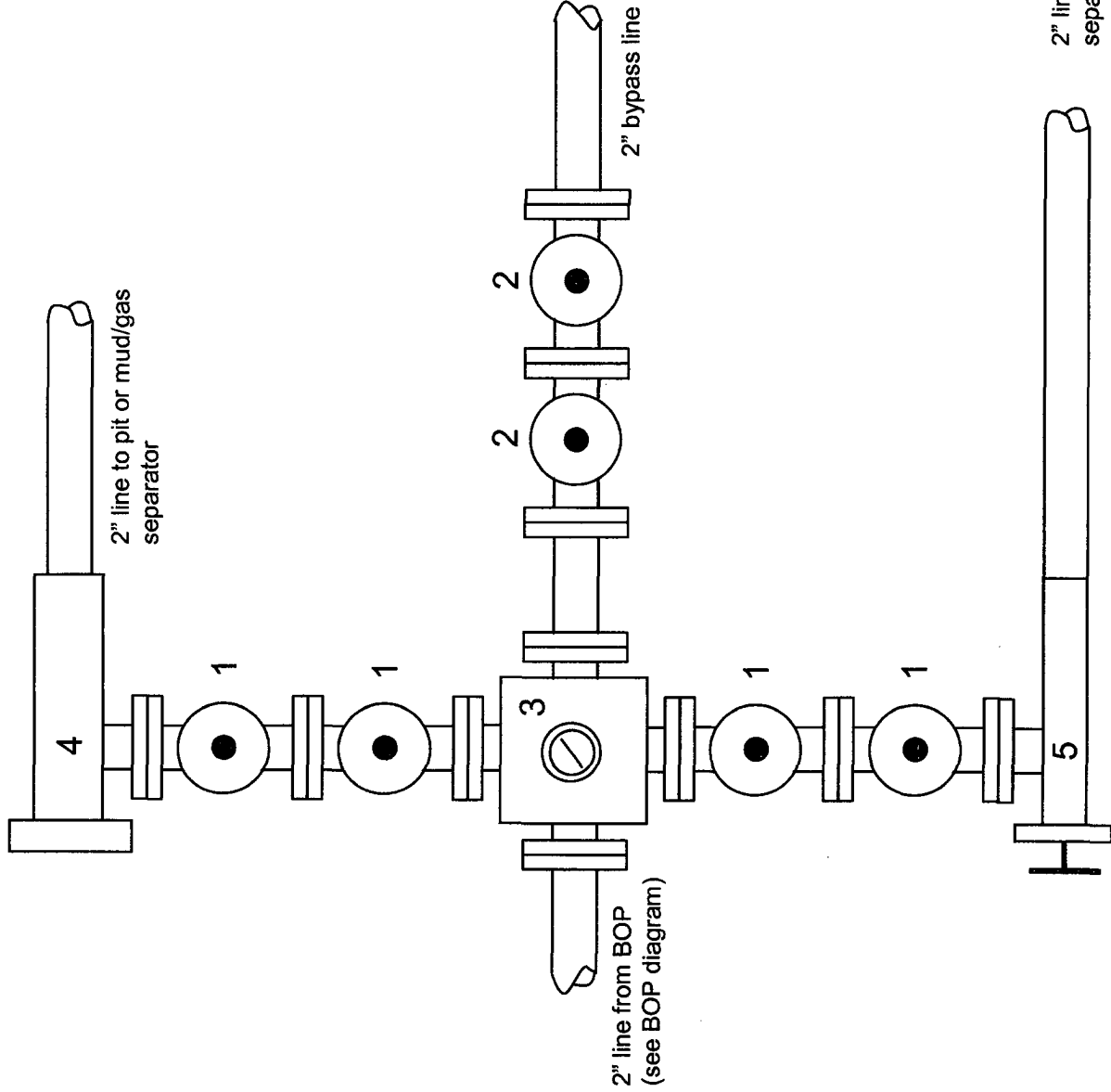
# Jicarilla B No. 3M

2000 psi Choke Manifold  
Minimum requirements

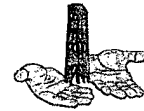
## Components

- 1 – 2" Valve (2M)
- 2 – 2" Valve (2M)
- 3 – Mud cross with gauge (2M) flanged below the gauge.
- 4 – Replaceable beam choke (2M)
- 5 – Adjustable needle choke (2M)

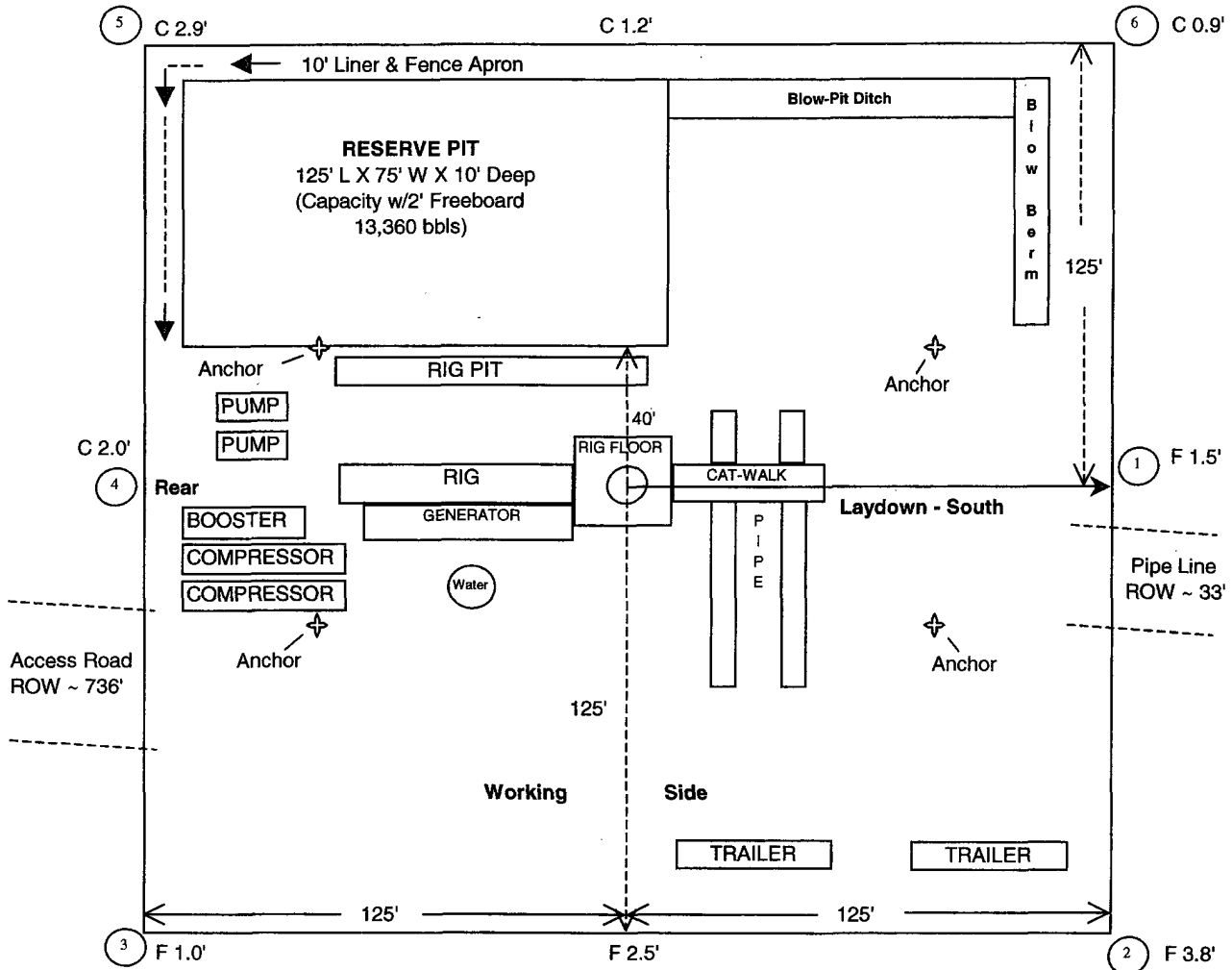
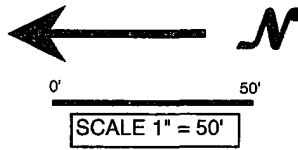
Note: All line and valve sizes listed are minimum requirements.



W 4-28-05



Neeley Consulting Service, LLC  
3001 Northridge Dr., Farmington, NM  
505-486-0211



### CDX RIO, LLC

#### Wellsite Layout Plat with Cut & Fills Jicarilla B 3M

1900' FSL & 2300' FEL  
Sec 15, T26N, R5W, NMPM  
Rio Arriba Co., New Mexico  
Elevation: 6611' UGL

submitted in lieu of Form 3160-5  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

2005 SEP 13 PM 1 18

1. Type of Well  
GAS

RECEIVED  
070 FARMINGTON NM

2. Name of Operator  
CDX RIO, LLC

3. Address & Phone No. of Operator

2010 Afton Place, Farmington, New Mexico 87401 (505) 326-3003

4. Location of Well, Footage, Sec., T, R, M  
1900'FSL, 2300'FEL, Sec.15, T-26-N, R-5-W, NMPM

5. Lease Number  
Jicarilla Contract  
6. If Indian, All. or  
Tribe Name  
Jicarilla Apache  
7. Unit Agreement Name

8. Well Name & Number

Jicarilla B #3M  
9. API Well No.

30-039- 29638  
10. Field and Pool

Blanco Mesaverde/Basin Dakota  
11. County and State

Rio Arriba Co, NM

12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA

Type of Submission

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment

Type of Action

☐ Abandonment

☐ Recompletion

☐ Plugging

☐ Casing Repair

☒ Altering Casing

☐ Other

☐ Change of Plans

☐ New Construction

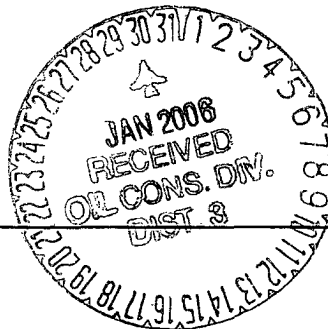
☐ Non-Routine Fracturing

☐ Water Shut off

☐ Conversion to Injection

13. Describe Proposed or Completed Operations

Please replace the attached pages of the operation plan in the Application for Permit to Drill, or Reenter submitted 8-25-05. These pages have also been submitted to the Jicarilla Apache Tribe and the Bureau of Indian Affairs.



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

Signed

*Nancy Olthmann*

Title Agent

Date 9/13/05

(This space for Federal or State Office use)

APPROVED BY

*Jim Labe*

Title

*Acting AFM*

Date

*11/27/06*

CONDITION OF APPROVAL, if any: