

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

5. Lease Serial No.
Jicarilla Contract 102

6. If Indian, Allottee or Tribe Name
Jicarilla Apache

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

8. Lease Name and Well No.
Jicarilla 102 #30B

9. API Well No.
30-039-29926

10. Field and Pool, or Exploratory
Blanco Mesaverde

11. Sec., T., R., M., or Blk. and Survey or Area
A
Section 10, T-26-N, R-4-W

12. County or Parish
Rio Arriba

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
CDX RIO, LLC

3a. Address
2010 Afton Place, Farmington, New Mexico 87401

3b. Phone No. (include area code)
(505) 326-3003

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface 660' FNL, 785' FEL, Lat. 36 30' 22.7", Long. 107 13' 56.5"
At proposed prod. zone

14. Distance in miles and direction from nearest town or post office*
30 miles east of Lindrith, New Mexico

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

17. Spacing Unit dedicated to this well
320 N/2

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 200'

19. Proposed Depth
7500'

20. BLM/BIA Bond No. on file
National bond on file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6864' 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.
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 *Richard Corcoran* Name (Printed/Typed) Richard Corcoran Date 5-23-06

Title

Land Manager

Approved by (Signature) *[Signature]* Name (Printed/Typed) Date 7/24/06

Title

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.

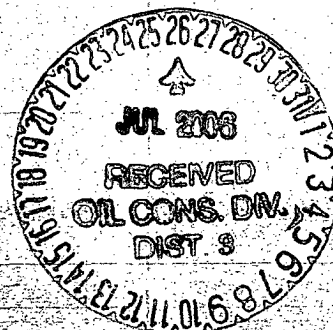
Conditions of approval, if any, are attached.

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 reverse)

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
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, 2002

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-29920		*Pool Code 72319	*Pool Name Blanco Mesaverde
*Property Code 33455	*Property Name JICARILLA 102		*Well Number 30B
*OGRID No. 222374	*Operator Name CDX RIO, LLC		*Elevation 6864'

¹⁰ Surface Location

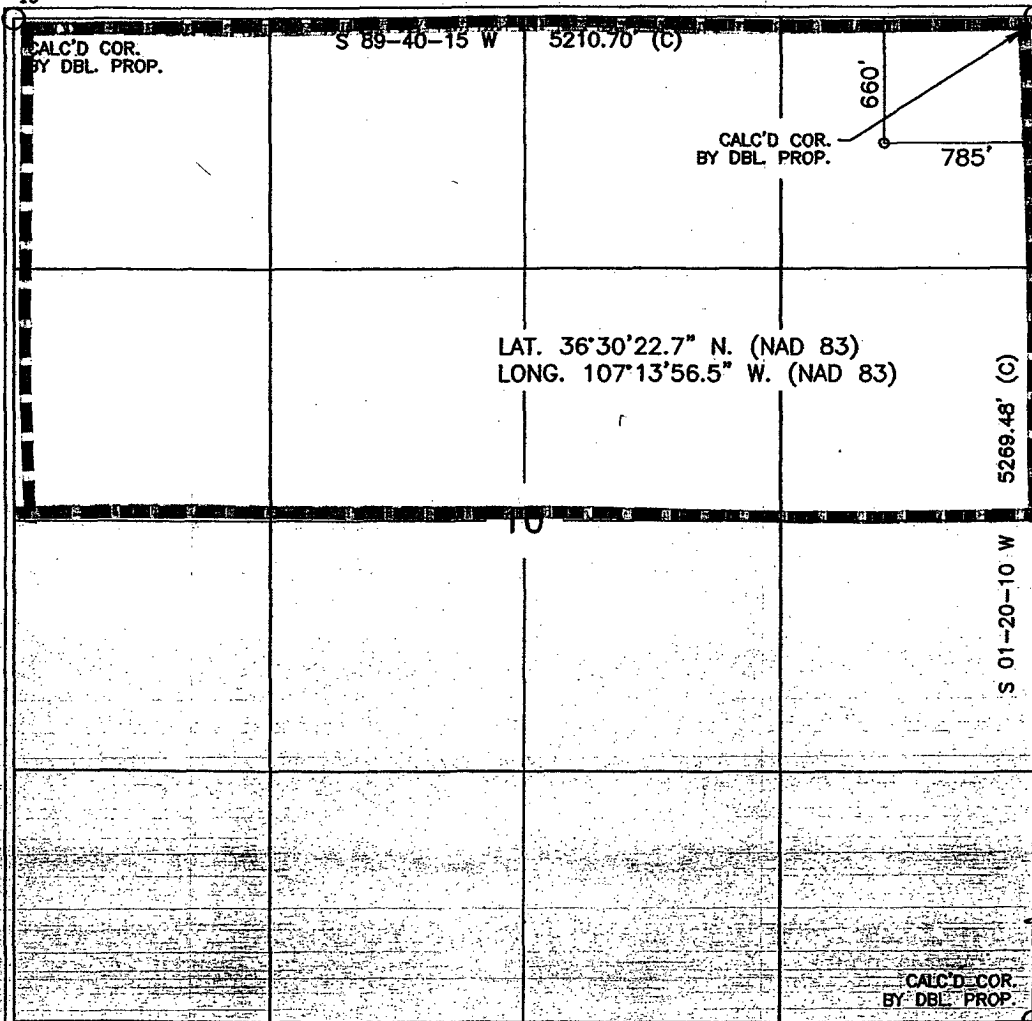
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	10	26-N	4-W		660	NORTH	785	EAST	RIO ARriba

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 MV - N/320					*Joint or Infill Y		*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

16



17 OPERATOR CERTIFICATION

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

Richard Corcoran
Signature
Richard Corcoran
Printed Name
Land Manager rich.corcoran@cdxgas.com
Title
5-23-06
Date

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.

DECEMBER 3, 2003
Date of Survey
Signature and Seal of Professional Surveyor
Certificate Number
14881
REGISTERED PROFESSIONAL SURVEYOR
NEW MEXICO

Submit 3 Copies To Appropriate District
Office
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

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-039- <u>29926</u>
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. Jicarilla 102
7. Lease Name or Unit Agreement Name Jicarilla 102
8. Well Number 30B
9. OGRID Number 222374
10. Pool name or Wildcat Blanco Mesaverde

Pit or Below-grade Tank Application ☐ or Closure ☐ 650
Pit type New Drill Depth to Groundwater 100' Distance from nearest fresh water well <1000' Distance from nearest surface water >200'
Pit Liner Thickness: 12 mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

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 A: 660' feet from the North line and 785' feet from the East line
Section 10 Township 26N Range 4W NMPM Rio Arriba County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6864' GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
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: <u>New Drill Pit Sundry</u> <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.

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 Regulatory Consultant DATE 12/27/05

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

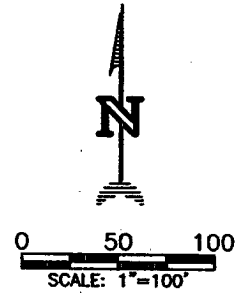
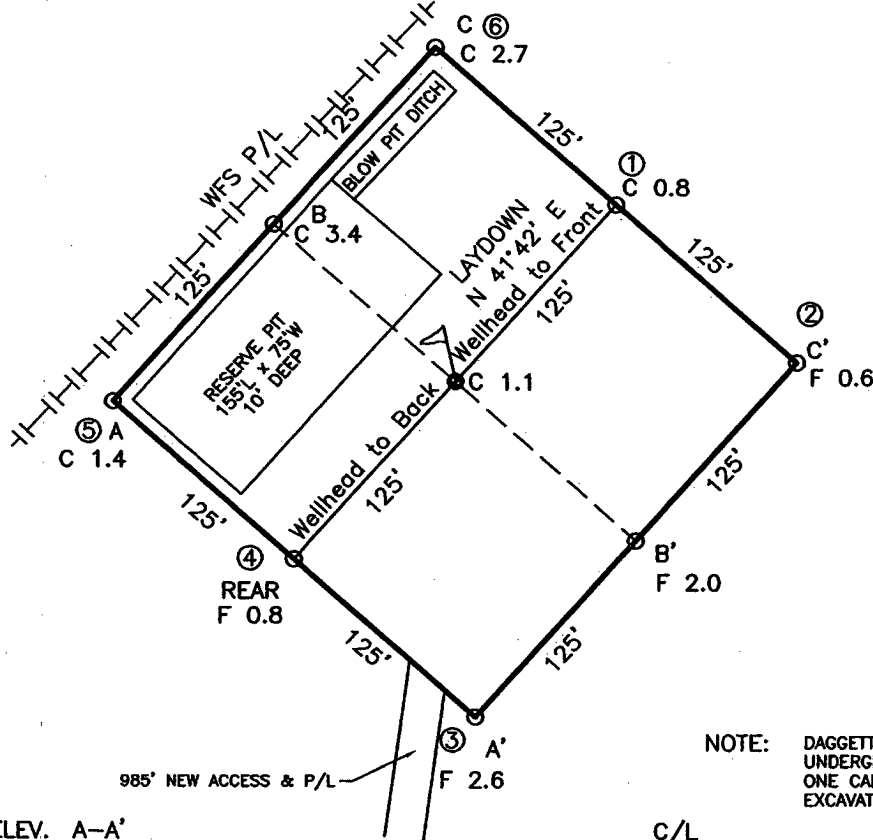
For State Use Only

APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE JUL 26 2008

Conditions of Approval (if any):

CDX RIO, LLC
 JICARILLA 102 No. 30B, 660 FNL 785 FEL
 SECTION 10, T26N, R4W, N.M.P.M., RIO ARRIBA COUNTY, N. M.
 GROUND ELEVATION: 6864', DATE: DECEMBER 03, 2005

LAT. = 36°30'22.7" N.
 LONG. = 107°13'56.5" 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
6870	
6860	
6850	
6840	

ELEV. B-B'	C/L
6870	
6860	
6850	
6840	

ELEV. C-C'	C/L
6870	
6860	
6850	
6840	

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	BY	REASON
1	11/15/05	A. GALLERO	WELL RESTAKE
2	12/13/05	A. GALLERO	WELL RESTAKE

Daggett Enterprises, Inc.
 Surveying and Oil Field Services
 P. O. Box 15088 • Farmington, NM 87401
 Phone (505) 326-1772 • Fax (505) 326-6019
 NEW MEXICO L.S. No. 14831
 CAPFILE: CDXGAS083C08
 DATE: 10/10/05

DRAWN BY: B. LEIDY
 ROW#: CDXGAS083

Jicarilla 102 30B
General Drilling Plan
CDX Rio, LLC
Rio Arriba County, New Mexico

1. LOCATION:

660' FNL & 785' FEL, Section 10, T26N, R4W
 Rio Arriba County, New Mexico
 UGL: 6864' Estimated KB: 6876'

Field: Blanco Mesa Verde
 Surface: Jicarilla Contract #102
 Minerals: Jicarilla Contract #102

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

Formation Tops	Top MD (KB)	Top Subsea (KB)	Rock Type	Comments
Ojo Alamo Sandstone	3291	3585	Sandstone	Possible Differential Sticking, Gas, Water
Kirtland Formation	3337	3539	Shale	
Fruitland Formation	3537	3339	Coal, Shale, Sandstone	Possible Lost Circulation Zone, Gas, Water
Pictured Cliffs Sandstone	3613	3263	Sandstone	Possible Lost Circulation Zone, Gas, Water
Lewis Shale	3672	3204	Shale	Sloughing Shale
Huerfanito Bentonite Bed	4067	2809	Shale	Tight Hole
Chacra Interval	4535	2341	Siltstone	Gas, Water
Mesaverde Formation (MVRD)	5256	1620	Coal, Sandstone, Shale	Possible Lost Circulation, Gas, Water
Cliff House Sandstone (MVRD)	5256	1620	Sandstone	Possible Lost Circulation, Gas, Water
Menefee Member (MVRD)	5377	1499	Coal, Sandstone, Shale	Possible Lost Circulation, Gas, Water
Point Lookout Sandstone(MVRD)	5723	1153	Sandstone	Possible Lost Circulation, Gas, Water
Mancos Shale	5857	1019	Shale	Sloughing Shale
				TD 100 feet into Mancos Shale

1875-23-06

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 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"	550'	9 5/8"
7 7/8"	5857' +/- Mancos Seat	5 1/2"

Csg Size	Casing Type	Top (MD)	Bottom (MD)	Wt. (lb./ft)	Grade	Thread	Condition
9-5/8"	Surface	0'	550'	36.0	J55	STC	New
5 1/2"	Production	0'	5857' +/-	17.0	N80	LTC	New

Casing Data				Collapse	Burst	Min. Tensile
OD	Wt/Ft	Grade	Thread	(psi)	(psi)	(Lbs.)
9-5/8"	36.0 lbs.	J55	STC	2,020	3,520	394,000
5 1/2"	17.0 lbs.	N80	LTC	6,280	7,740	348,000

MINIMUM CASING DESIGN FACTORS:

COLLAPSE: 1.125

BURST: 1.00

TENSION: 1.80

Area Fracture Gradient Range:

0.4 – 0.5 psi/foot

Maximum anticipated reservoir pressure:

1,600 psi

Maximum anticipated mud weight:

9.0 ppg

Maximum surface treating pressure:

3500 – 3750 psi

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Float Equipment:

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

Production Casing: 5 1/2" cement nosed guide shoe and a float collar on top of bottom joint with centralizers over potential hydrocarbon bearing zones. Stage tool above the Kirtland formation. On centralizer below stage tool and one centralizer above stage tool.

Cementing Program:**9-5/8" Surface casing: 550'**

262 sxs Type III cement with 2% CaCl₂, 1/4#/sx celloflake. 100% excess to circulate cement to surface. WOC 12 hrs.

Slurry weight: 15.2 ppg
Slurry yield: 1.27 ft³/sack

Volume basis:	40' of 9-5/8" shoe joint	17.4 cu ft
	550' of 12-1/4" x 9-5/8" annulus	157.6 cu ft
	<u>100% excess (annulus)</u>	<u>157.6 cu ft</u>
	Total	332.6 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.

5 1/2" Production Casing: 5857' *circulate cement*

1st Stage: 487 sacks of Type III cement: 5857' - 3237' (2620')

Slurry weight: 14.5 ppg Annular Vol = 454.0 cf + 227.0 cf (50% Access)
Slurry yield: 1.4 ft³/sack = 681.0 cf

2nd Stage: (Stage tool at 3237' +/-): 444 sacks of Premium Lite FM

Slurry weight: 12.4 ppg Volume = 851.5 cf
Slurry yield: 1.92 ft³/sack

<u>Volume Basis:</u>	40' of 5 1/2" shoe joint	5.2 cu ft
	<u>5307' of 5 1/2" x 7 7/8" annulus</u>	<u>919.5 cu ft</u>
	550' of 5 1/2" x 9 5/8" csg	148.0 cu ft
	<u>50% excess (open hole annulus)</u>	<u>459.8 cu ft</u>
	Total	1532.5 cu ft

Note:

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

5. MUD PROGRAM:

The 12 1/4" surface hole will be drilled with spud mud. Gel and polymer sweeps will be used from surface to 550 feet as necessary to keep hole clean.

The 7 7/8" production hole will be drilled with water until mud up at about 2300'. From 2300' to 5857' the hole will be drilled with a LSND mud. Anticipated mud weight ranges from 8.6 – 9.2 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: Surface Hole - None

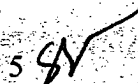
Production Hole: Open Hole Platform Express

7. ABNORMAL PRESSURE AND TEMPERATURE:

H ₂ S	None
Coal	Fruitland
Minerals	None
Water	None
Static BHT	155° F
Lost Circulation	Possible in tertiary sands, PC and MV
Hole Deviation	None
Abnormal Pressures	None
Unusual Drilling Problems	None

8. ANTICIPATED STARTING DATE: September 1, 2006

Anticipated duration: 16 days

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Jicarilla 102 No. 30B

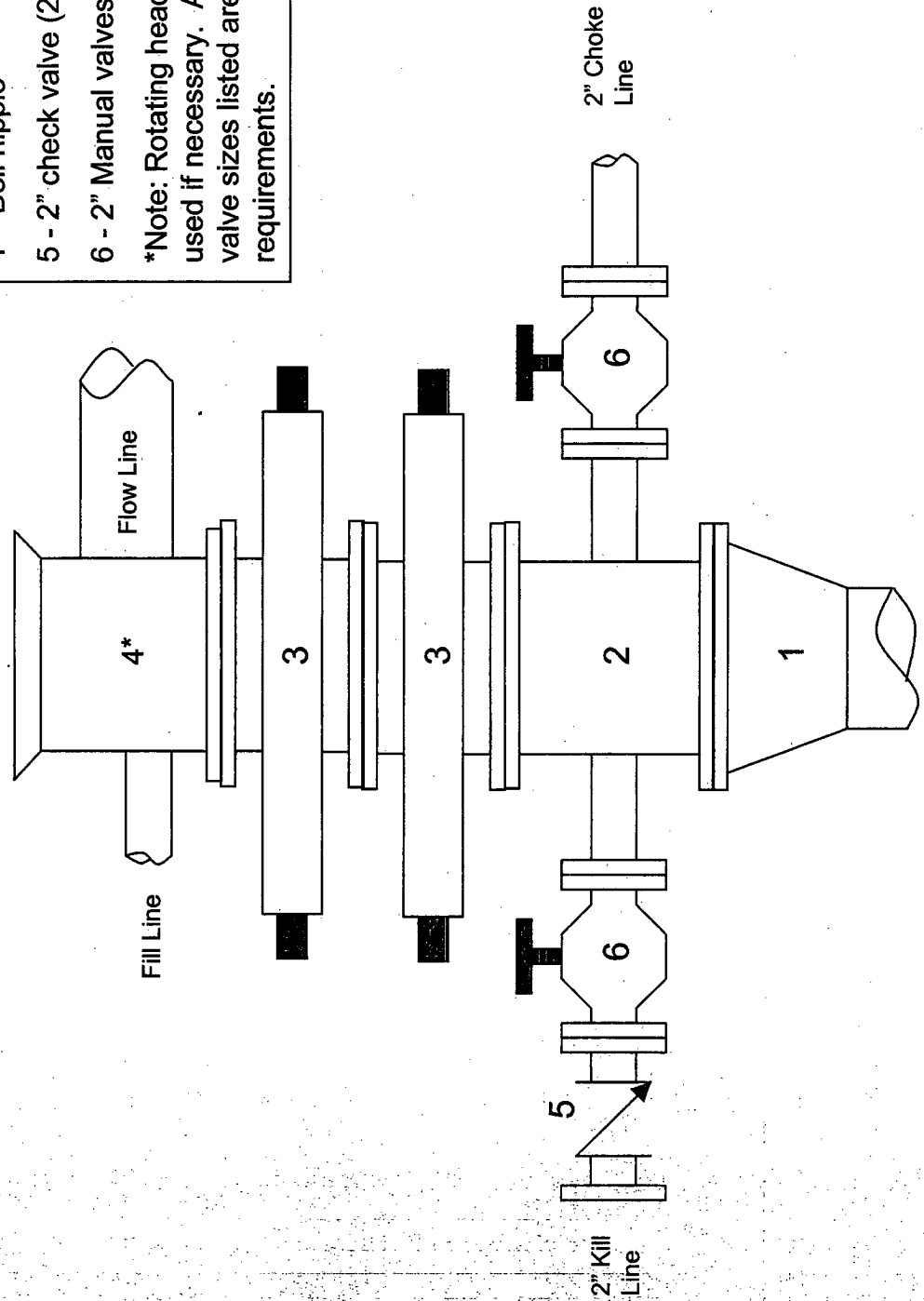
2000 psi BOP stack

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 102 No. 30B

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.

