

2006 JAN 5 AM 11 51 FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
070 FARMINGTON NM  
Lease Serial No.  
NM-012735

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No. NMNM-0784214-MV
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 type="checkbox"/> Multiple Zone		8. Lease Name and Well No. SAN JUAN 31-6 UNIT # 3M
2. Name of Operator ConocoPhillips Company		9. API Well No. 30-039-29736
3a. Address 4001 Penbrook, Odessa, TX 79762		10. Field and Pool, or Exploratory BLANCO MESA VERDE / BASIN DAKOTA
3b. Phone No. (include area code) 432-368-1230		11. Sec., T. R. M. or Blk. and Survey or Area SECTION 6, T30N, R6W NMPM 0
4. Location of Well (Report location clearly and in accordance with any State requirements, *) At surface NESE 2630 FSL - 100 FEL 0 510 2016 At proposed prod. zone NESE 1900 FSL - 700 FEL P 1240 900		12. County or Parish RIO ARRIBA
14. Distance in miles and direction from nearest town or post office*		13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease 639.40 ACRES	17. Spacing Unit dedicated to this well MV & DK - E/2 - 319.55 ACRES
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 7847' TVD	20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6291 6284 GL	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, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature <i>Peggy James</i>	Name (Printed/Typed) Peggy James	Date 01/03/2006
Title Sr. Associate		

Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFM	Date 5/24/07
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 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) NOTIFY AZTEC OCD 24 HRS.

PRIOR TO CASING & CEMENT

HOLD G104 FOR directional survey

ConocoPhillips Company proposes to drill a directional wellbore to the Blanco Mesaverde / Basin Dakota formations. This well will be drilled and equipped in accordance with the attachments submitted herewith. This application is for APD / ROW.

This well will be downhole commingled pursuant to the terms and conditions outlined in Order R-11363.

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

06-08-07

b

BH

District II  
1301 W. Grand Avenue, Artesia, NM 88210

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

District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

Energy, Minerals & Natural Resources Department

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

Form C-102  
Revised October 12, 2005  
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 30-039-29736	*Pool Code 72319 / 71599	*Pool Name BLANCO MESAVERDE / BASIN DAKOTA
*Property Code 31328	*Property Name SAN JUAN 31-6 UNIT	*Well Number 3M
*OGRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY	*Elevation 6291'

<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
0	6	30N	6W		510	SOUTH	2015	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
P	6	30N	6W		1240	SOUTH	700	EAST	RIO ARriba

<sup>12</sup> Dedicated Acres 319.55 Acres - E/2	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

16

  <p><b>LOT 11</b></p> <p><b>LOT 10</b></p> <p><b>LOT 9</b></p> <p><b>LOT 8</b></p> <p><b>LEASE NM-012735</b></p> <p><b>6</b></p> <p><b>SURFACE LOCATION</b> LAT: 36°50.2639' N LONG: 107°50.211' W DATUM: NAD83</p> <p><b>BOTTOM-HOLE LOCATION</b> LAT: 36°50.1426' N LONG: 107°30.0905' W DATUM: NAD27</p> <p><b>1508.1' N60°36.2'E</b></p> <p><b>1240'</b></p> <p><b>700'</b></p> <p><b>2015'</b></p> <p><b>510'</b></p> <p><b>5285.28'</b></p>	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Rhonda Rogers</i> 2-8-07 Signature Date Rhonda Rogers Printed Name</p> <p><b><sup>18</sup> SURVEYOR CERTIFICATION</b></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>Survey Date: JANUARY 11, 2007</p> <p>Signature and Seal of Professional Surveyor</p> <p> <b>JASON C. EDWARDS</b> Certificate Number 15269</p>
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submitted in lieu of Form 3160-5  
**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Sundry Notices and Reports on Wells

2007 FEB 26 PM 3:18

1. Type of Well  
GAS

2. Name of Operator  
**ConocoPhillips**

3. Address & Phone No. of Operator  
PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. Location of Well, Footage, Sec., T, R, M

5. Lease Number  
NM-012735  
6. If Indian, All. or  
Tribe Name

7. Unit Agreement Name  
San Juan 31-6 Unit

8. Well Name & Number  
San Juan 31-6 Unit #3M  
9. API Well No.

30-039- 29736

10. Field and Pool

Blanco MV/Basin DK

Surf: Unit O (SWSE), 510' FSL & 2015' FEL, Section 6, T30N, R6W, NMPM  
BH: Unit P (SESE), 1240' FSL & 700' FEL, Section 6, T30N, R6W, NMPM

Rio Arriba Co., NM

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

Type of Submission	Type of Action
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment <input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Plugging <input type="checkbox"/> Non-Routine Fracturing
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Casing Repair <input type="checkbox"/> Water Shut off
	<input type="checkbox"/> Altering Casing <input type="checkbox"/> Conversion to Injection

X Other - Moved BH location

**13. Describe Proposed or Completed Operations**

Attached is a new C-102 with the moved bottom hole location. + new surface location

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

Signed Rhonda Rogers Title Regulatory Technician Date 2/8/07

(This space for Federal or State Office use)

APPROVED BY [Signature] Title AFN Date 5/24/07

CONDITION OF APPROVAL, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



NMOCD

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

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

Form C- 1 03  
May 27, 2004

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (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.)		WELL API NO. <b>30-039-29736</b>
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator ConocoPhillips Company		6. State Oil & Gas Lease No.
3. Address of Operator 4001 Penbrook, Odessa, TX 79762		7. Lease Name or Unit Agreement Name SAN JUAN 31-6 UNIT
4. Well Location Unit Letter <b>I</b> <b>510</b> feet from the <b>SOUTH</b> line and <b>2015</b> feet from the <b>EAST</b> line Section <b>6</b> Township <b>30N</b> Range <b>6W</b> NMPM <b>RIO ARRIBA</b> County		8. Well Number 3M
I 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 6281' GL		9. OGRID Number 217817
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> Closure		10. Pool name or Wildcat BLANCO MESAVERDE / BASIN DAKOTA
Pit type <b>DRILL</b> Depth to Groundwater <b>140'</b> Distance from nearest fresh water well <b>5,900'</b> Distance from nearest surface water <b>7780'</b> Liner Thickness: <b>12</b> mil Below-Grade Tank: Volume <b>4400</b> bbls; Construction Material <b>SYNTHETIC</b>		

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: ☐

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 I 1 03. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

The pit will be constructed and closed in accordance with Rule 50 and as per COPC June 2005 General Pit Plan on file with the NMOCD. See the attached diagram that details the location of the pit in reference to the proposed wellhead. The drill pit will be lined. The drill pit will be closed after the well has been completed

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 Peggy James

TITLE Sr. Associate

DATE 1/03/2006

Type or print name

E-mail address peggy.s.james@conocophillips.com:

Telephone No.: (432)368-1230

For State Use Only

APPROVED BY: 

TITLE

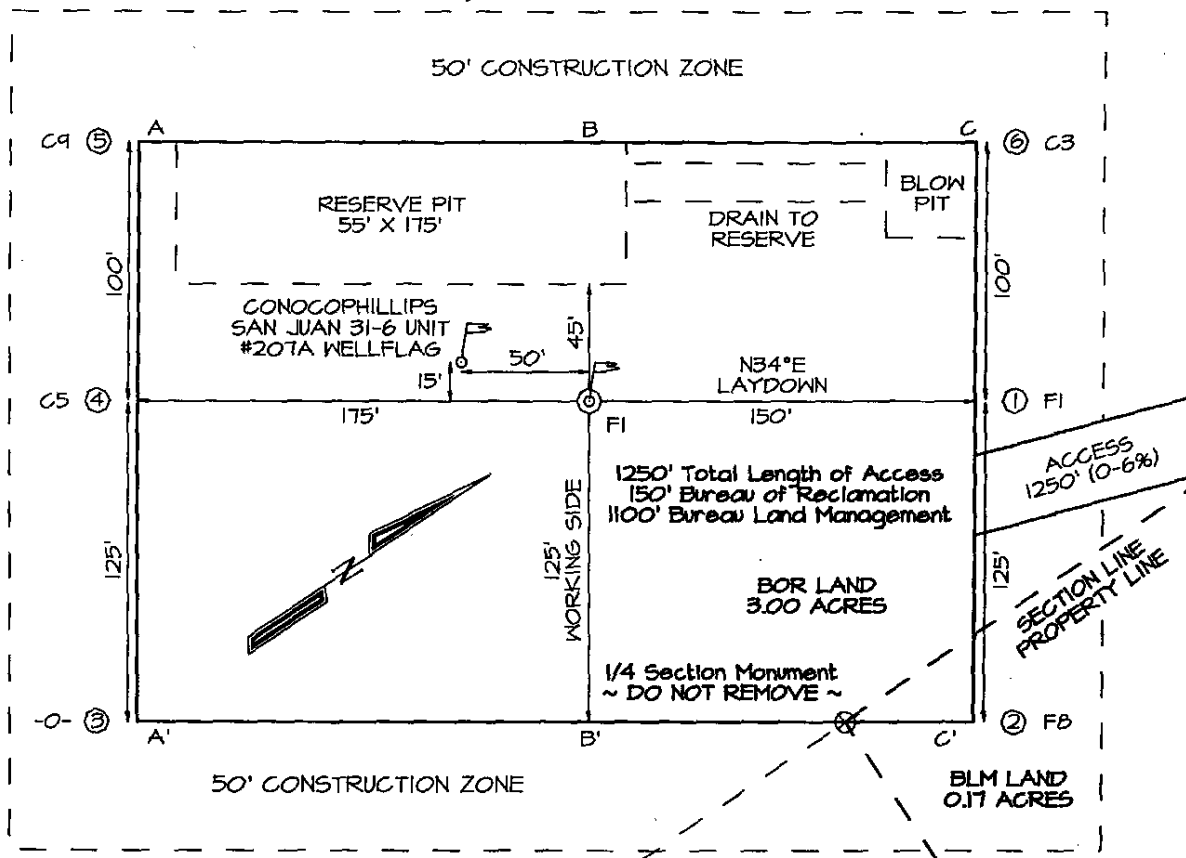
DEPUTY OIL & GAS INSPECTOR, DIST. #

DATE

JUN 08 2007

Conditions of Approval (if any):

**LATITUDE: 36.84156°N**  
**LONGITUDE: 107.49516°W**  
DATUM: NAD1927



A-A'						
6292'						
6282'						
6272'						
B-B'						
6292'						
6282'						
6272'						
C-C'						
6292'						
6282'						
6272'						

# **SJ 31-6 #3M OPERATIONS PLAN**

**Well Name:** SJ 31-6 #3M

**Objective:** Mesa Verde/Dakota

**Location:** Rio Arriba NM

**Elevation:** 6291'

**Surface Coordinates/Footages**

T - 30 N R - 6 W Sec.: 6  
 510' FSL 2015' FEL  
 Latitude: 36° .8357' N  
 Longitude: 107° .5015' W

**Bottom Hole Coordinates/Footages**

T - 30 N R - 6 W Sec.: 6  
 1240' FSL 700' FEL  
 Latitude: 36° .8377' N  
 Longitude: 107° .4970' W

<b><u>Formation</u></b>	<b><u>Top (TMD)</u></b>	<b><u>Top (TVD)</u></b>	<b><u>Contents</u></b>
San Jose	0	0	
Nacimiento	1051'	1025'	
Ojo Alamo	2347'	2213'	aquifer
Kirtland	2552'	2401'	
Fruitland	2942'	2759'	gas
Pictured Cliffs	3357'	3139'	
Lewis	3551'	3317'	
Huerfano Bentonite	4234'	3945'	
Chacra	4638'	4341'	
Cliffhouse	5143'	4846'	
Massive Cliff House	5450'	5153'	gas
Menefee	5495'	5198'	gas
Massive Point Lookout	5786'	5489'	gas
Mancos	6178'	5881'	
Gallup	7056'	6759'	gas
Greenhorn	7780'	7483'	gas
Graneros	7839'	7542'	
Cubero	7981'	7684'	gas
Lower Cubero	8007'	7710'	
Encinal	8074'	7777'	
<b>Total Depth:</b>	<b>8074'</b>	<b>7777'</b>	gas

**Logging Program:** Cased Hole: CBL-GR  
 Open Hole: None

<b><u>Mud Program:</u></b>	<b><u>Interval (TMD)</u></b>	<b><u>Type</u></b>	<b><u>Weight (ppg)</u></b>	<b><u>Vis. (s/qt)</u></b>	<b><u>Fluid Loss (cc/30min)</u></b>
	0' - 300'	Spud	8.4-9.0	40-50	No control
	300' - 4697'	Non-dispersed	8.4-9.0	30-60	Less than 8
	4697' - 8074'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

<b><u>Casing program:</u></b>	<b><u>Interval (TMD)</u></b>	<b><u>Hole Size</u></b>	<b><u>Casing Size</u></b>	<b><u>Weight</u></b>	<b><u>Grade</u></b>
	0' - 300'	12 1/4"	9 5/8"	32.3#	H-40
	300' - 4697'	8 3/4"	7"	23.0#	L-80
	4697' - 8074'	6 1/4"	4 1/2"	11.6#	L-80

<b><u>Tubing program:</u></b>	<b><u>Interval (TMD)</u></b>	<b><u>Hole Size</u></b>	<b><u>Casing Size</u></b>	<b><u>Weight</u></b>	<b><u>Grade</u></b>
	0' - 8074'	Cased	2 3/8"	4.7#	J-55

**Wellhead Equipment**

9 5/8" x 7" X 4 1/2" x 2 3/8" – 11" (2000 psi) wellhead assembly

**Drilling:** Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

**Surface**

Drill to surface casing point of 300' and set 9.625" casing.

**Intermediate**

Mud drill to kick off point of 350'. At this point the well will be directionally drilled by building 4 degrees per 100' with an azimuth of 60.96 degrees. The end of the build will be at a TVD of 922', a TMD of 939', a reach of 70', and an inclination of 23.54 degrees. This angle and azimuth will be held to a TVD of 3821', a TMD of 4100', and a reach of 672'. At this point the well will be drilled with a drop of 3 degrees per 100'. The end of the drop will be at a TVD of 4400', a TMD of 4697', a reach of 731', and an angle of 0.0 degrees. 7" casing will be set at this point.

**Production**

From the shoe of the intermediate string, the well will be drilled vertically with an air hammer to a TVD of 7777' (TMD of 8074'). 4.5" casing will be set at this point.

**Cementing**

9.625" surface casing conventionally drilled: 125% excess cement to bring cement to surface.

Run 212 cu.ft. (166 sks) Type III cement with 3% CaCl<sub>2</sub> and 1/4 pps celloflake (1.28 sks/ cu.ft.). Wait on cement appropriate time until cement achieves 250 psi compressive strength at 60° F prior to nipple up of BOPE. Wait on cement for 8 hrs for conventionally set holes before pressure testing or drilling out from under surface.

7" intermediate casing: 50% excess cement to bring cement to surface.

Lead with 935 cu.ft. (439 sks) Premium Lite w/ 3% CaCl<sub>2</sub>, 0.25 pps Cello-Flake, 5 pps LCM-1, 0.4% FL-52 and 0.4% SMS (2.13 sks/ft<sup>3</sup>). Tail with 124 ft<sup>3</sup> (90 sks) Type III cmt. w/ 1% CaCl<sub>2</sub>, 0.25 pps Cello-Flake and 0.2% FL-52 (1.38 sks/ft<sup>3</sup>). If cement does not circulate to surface, a CBL or a temperature survey will be run to determine TOC.

4.5" production casing: 30% excess cement to achieve 100' overlap with intermediate casing.

Run 462 cu.ft. (233 sks) Premium Lite HS FM + 0.25pps Cello-Flake, 0.3% CD-32, 6.25pps LCM-1, 1% FL-52 (1.98 sks/ft<sup>3</sup>.)

**BOP and Tests**

Surface to Total Depth – 11", 2000 psi double gate BOP stack (Reference Figure #1).

Surface to Total Depth – choke manifold (Reference Figure #2).

Prior to drilling out surface casing, test BOPE and casing to 600 psi for 30 minutes.

Pipe rams will be actuated at least once each day and blind rams will be actuated once each trip to test proper functioning. A Kelly cock valve and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

BOPE tests will be performed using an appropriately sized test plug and test pump and will be recorded using calibrated test gauges and a properly calibrated strip or chart recorder. The test will be recorded in the driller's log and will include a low pressure test requirement of 250 psig held for five minutes and a high pressure test requirement held for ten minutes as described in Onshore Order No. 2 or otherwise noted in the APD. A successful BOPE test using a test plug is considered when no pressure drop occurs over the duration of the test. Test gauges and recorders must be of the proper range and resolution commensurate with the authorized test pressure. Where the intermediate casing strings are used, only one BOPE test will be necessary contingent upon the test being conducted to the highest approved test pressure to which BOPE will be exposed. Casing pressure tests must be held for 30 minutes with no more than 10 percent pressure drop during the duration of the test.

**Additional Information:**

- No gas dedication.
- New casing will be utilized.
- Pipe movement (reciprocation) will be done if hole conditions permit.
- No abnormal pressure zones are expected.
- BHP is expected to be 2000 psi.

## PROJECT PROPOSAL - New Drill / Sidetrack

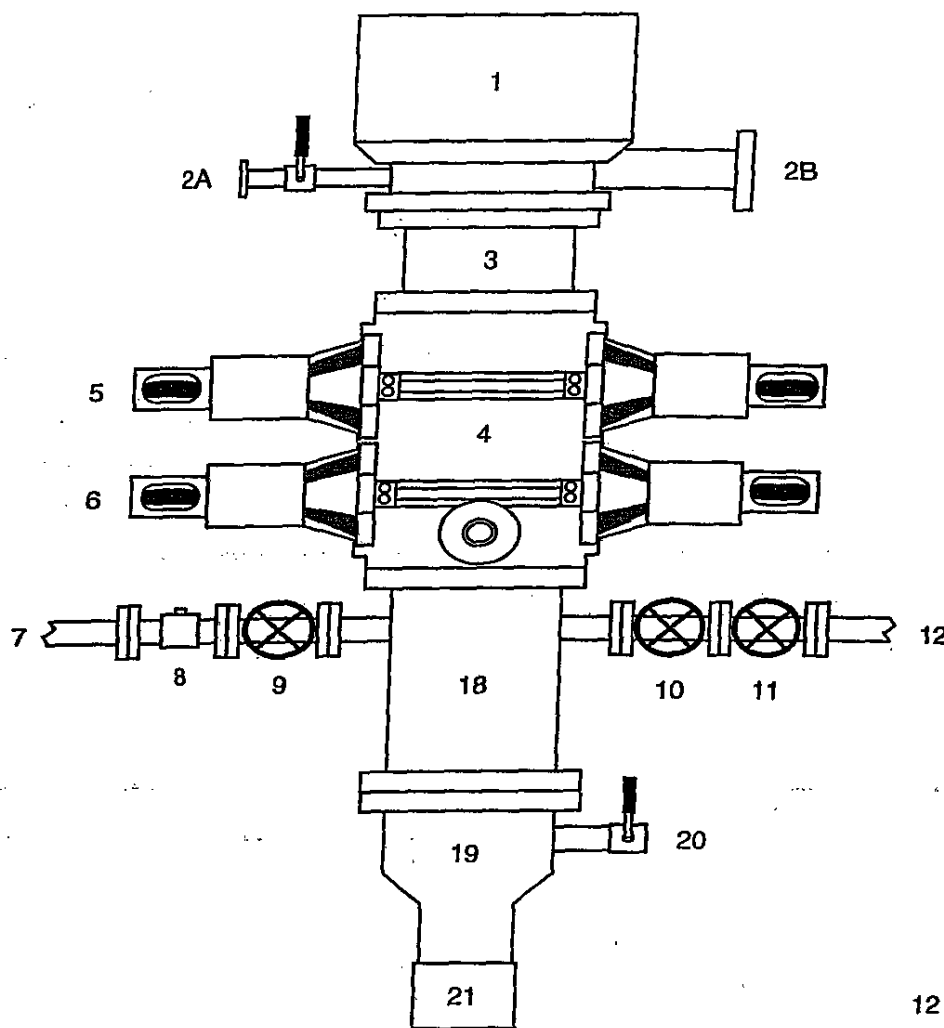
San Juan Business Unit

SAN JUAN 31-6 UNIT 3M

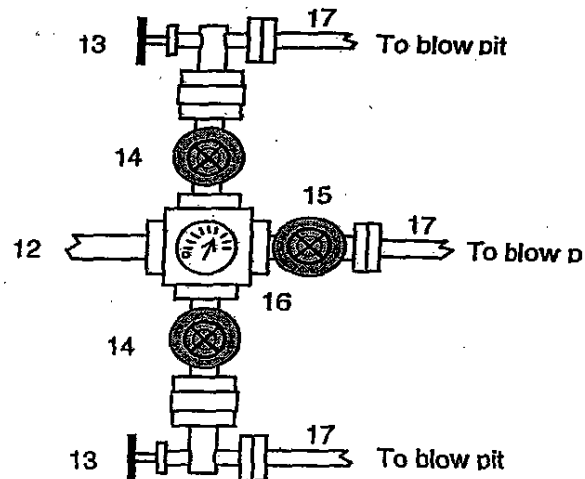
Lease:		AFE #: WAN.CNV.4111				AFE \$:	
Field Name: 31-6		Rig: XX 2008 31N		State: NM	County: RIO ARRIBA	API #:	
Geoscientist: Glaser, Terry J		Phone: (832)486-2332		Prod. Engineer:		Phone: 832-486-2345	
Res. Engineer: Tomberlin, Timothy A		Phone: 486-2328		Proj. Field Lead:		Phone:	
<b>Primary Objective (Zones):</b>							
Zone	Zone Name		$1240 + 510 = 730 \text{ N}$ $2015 - 700 = 1315 \text{ E}$				
FRR	BASIN DAKOTA (PRORATED GAS)						
RON	BLANCO MESAVERDE (PRORATED GAS)						
$36 \ 50 \ 8.57040 \quad 107 \ 30 \ 5.418$							
<b>Location: Surface</b>		<b>Datum Code: NAD 27</b>				<b>Deviated</b>	
Latitude: 36.835714	Longitude: -107.501505	X:	Y:	Section: 06	Range: 006W		
Footage X: 2015 FEL	Footage Y: 510 FSL	Elevation: 6291	(FT)	Township: 030N			
Tolerance: $36 \ 50 \ 15.9352 \quad 107 \ 29 \ 49.236$							
<b>Location: Bottom Hole</b>		<b>Datum Code: NAD 27</b>				<b>Deviated</b>	
Latitude: 36.837732	Longitude: -107.497010	X:	Y:	Section: 06	Range: 006W		
Footage X: 700 FEL	Footage Y: 1240 FSL	Elevation:	(FT)	Township: 030N			
Tolerance:							
Location Type: Summer Only		Start Date (Est.):		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 6305 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks	
NCMT	1025	5280	<input type="checkbox"/>				
OJAM	2213	4092	<input type="checkbox"/>			Possible water flows.	
KRLD	2401	3904	<input type="checkbox"/>				
FRLD	2759	3546	<input type="checkbox"/>			Possible gas.	
PCCF	3139	3166	<input type="checkbox"/>				
LEWS	3317	2988	<input type="checkbox"/>				
HUERFANITO BENTONITE	3945	2360	<input type="checkbox"/>				
CHRA	4341	1964	<input type="checkbox"/>				
CLFH	4846	1459	<input type="checkbox"/>			Gas; possibly wet	
MASSIVE CLIFF HOUSE	5153	1152	<input type="checkbox"/>				
MENF	5198	1107	<input type="checkbox"/>			Gas.	
PTLK	5489	816	<input type="checkbox"/>			Gas.	
MNCS	5881	424	<input type="checkbox"/>				
GLLP	6759	-454	<input type="checkbox"/>			Gas. Possibly wet.	
GRHN	7483	-1178	<input type="checkbox"/>			Gas possible, highly fractured	
GRANEROS	7542	-1237	<input type="checkbox"/>				
CBBO	7684	-1379	<input type="checkbox"/>			Gas	
CBRL	7710	-1405	<input type="checkbox"/>			On strike with 30-6 #33B	
ENCINAL	7777	-1472	<input type="checkbox"/>				
TOTAL DEPTH DK	7777	-1472	<input type="checkbox"/>			TD T/ENCN	
<b>Reference Wells:</b>							
Reference Type	Well Name		Comments				
Intermediate	SJ 31-6 #3A		SE 6-30N-6W				
Production	30-6 #33B		NW 8-30N-6W				

# BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to Intermediate Casing Point & Setting 7" Intermediate Casing



1. Rotating Head
- 2A. Fill-up Line & valve
- 2B. Flowline
3. Spacer Spool
4. Double Ram BOP (11", 3000 psi)
5. Pipe Rams
6. Blind Rams
7. Kill Line
8. Kill Line Check Valve
9. Kill Line Valve
10. Inner Choke Line Valve (3")
11. Outer Choke Line Valve (3")
12. Choke Line (3")
13. Variable Choke
14. Choke Line Valve (2")
15. Panic Line Valve (3")
16. Choke Manifold Pressure Gauge
17. Choke Line (2")
18. Mud Cross Spacer Spool
19. Casing Head "A" Section
20. Casing Head "A" Section 2" Valve
21. 9 5/8" Casing Collar



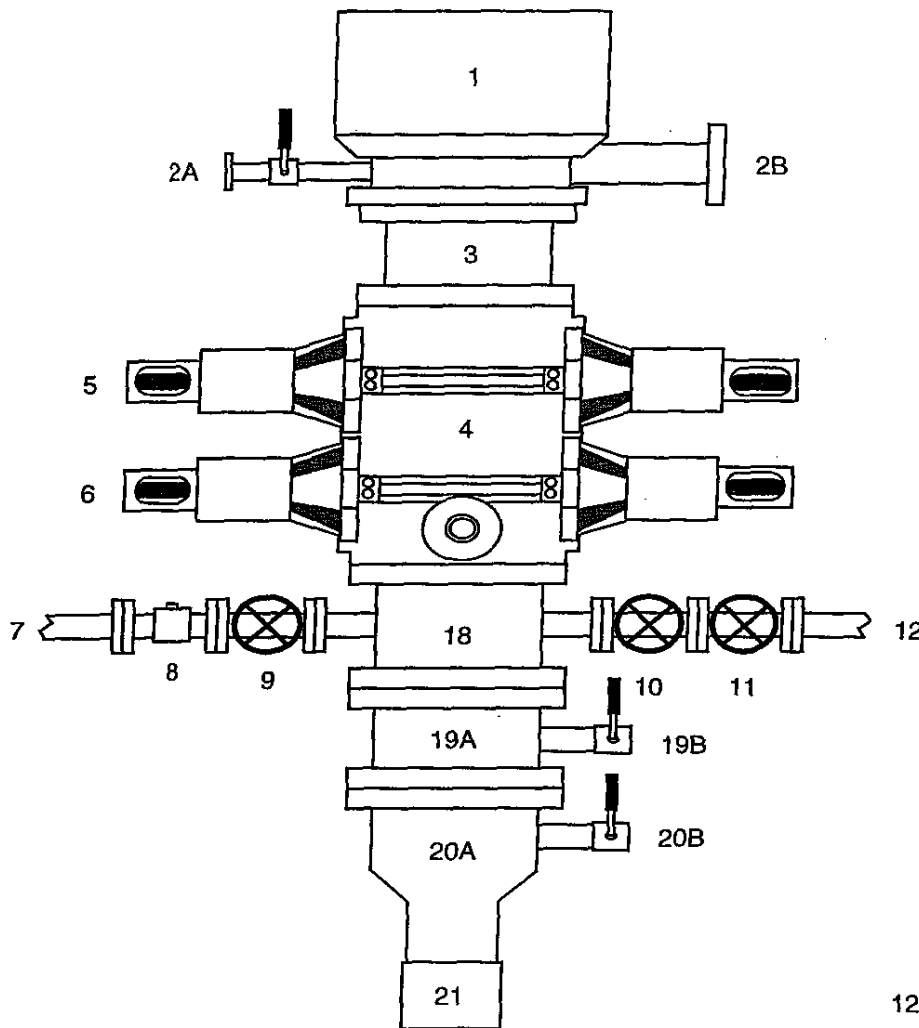
A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe rams and choke manifold will be tested to 200 psi to 300 psi (low pressure test) for 10 minutes and to 1000 psi (high pressure test) for 10 minutes. Then the test plug will be removed, and the 9-5/8" casing will be pressure tested against closed blind rams to 200 psi to 300 psi for 10 minutes and to 1000 psi for 30 minutes (this value is one 44% of the minimum internal yield pressure of the 9-5/8" casing). (Note: per regulatory requirements we will wait on cement at least 8 hrs after placement before testing the 9-5/8" surface casing). Then an 8-3/4" hole will be drilled to intermediate casing point and 7" intermediate casing will be run and cemented.

In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

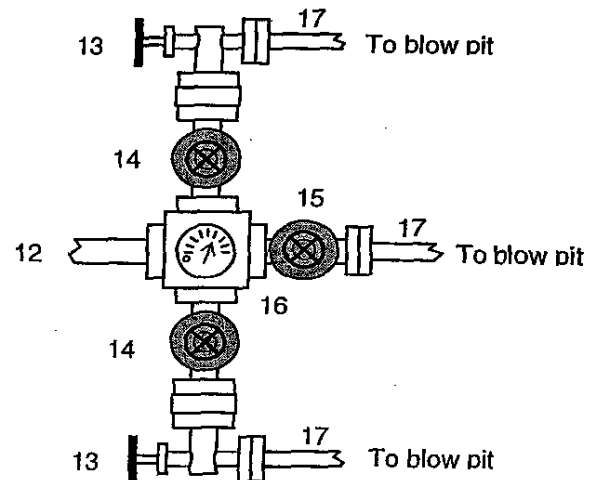
1. Inner Kelly cock Valve with handle

## BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



1. Rotating Head
- 2A. Fill-up Line & valve
- 2B. Bleeble Line (for Air Drilling)
3. Spacer Spool
4. Double Ram BOP (11", 3000 psi)
5. Pipe Rams
6. Blind Rams
7. Kill Line
8. Kill Line Check Valve
9. Kill Line Valve
10. Inner Choke Line Valve (3")
11. Outer Choke Line Valve (3")
12. Choke Line (3")
13. Variable Choke
14. Choke Line Valve (2")
15. Panic Line Valve (3")
16. Choke Manifold Pressure Gauge
17. Choke Line (2")
18. Mud Cross Spacer Spool
- 19A Csg Spool "B" Section (11", 3M)
- 19B "B" Section Csg Valve (2", 3M)
- 20A Csg Head "A" Section (11", 3M)
- 20B "A" Section Csg Valve (2", 3M)
21. 9 5/8" Casing Collar



After the 7" intermediate casing has been run and cemented, the Casing Spool ("B" Section) will be installed on the wellhead ("A" Section) and the BOP will be installed on the Casing Spool. A test plug will be set in the wellhead and the pipe rams, blind rams, and choke manifold will be tested to 200 psi to 300 psi (low pressure test) for 10 minutes and to 3000 psi (high pressure test) for 10 minutes. Then the test plug will be removed and the 7" casing will be pressure tested against closed blind rams to 200 psi to 300 psi for 10 minutes and to 1800 psi for 30 minutes - this test pressure is 48% of the minimum internal yield strength of 3740 psi for the 7", 20#, J-55, STC casing. Then we will air drill the 6-1/4" hole to TD and run and cement the 4-1/2" casing.

In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

1. Upper Kelly cock Valve with handle
2. Stab-in TIW valve for all drillstrings in use