

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM012698
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		6. If Indian, Allottee or Tribe Name
2. Name of Operator CONOCOPHILLIPS COMPANY		7. If Unit or CA Agreement, Name and No.
Contact: PATSY CLUGSTON E-Mail: pclugs@ppco.com		8. Lease Name and Well No. SAN JUAN 29-6 UNIT 89M
3a. Address 5525 HWY. FARMINGTON, NM 87401	3b. Phone No. (include area code) Ph: 505.599.3454 Fx: 505-599-3442	9. API Well No. 3003927581
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWSE 2010FSL 1700FEL 36.73844 N Lat, 107.42883 W At proposed prod. zone		10. Field and Pool, or Exploratory BASIN DK & BLANCO MV
14. Distance in miles and direction from nearest town or post office* APPROX. 41 MILES EAST OF BLOOMFIELD, NM		11. Sec., T., R., M., or Blk. and Survey or Area J Sec 11 T29N R6W Mer NMP SME: BLM
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	12. County or Parish RIO ARRIBA
17. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	18. Proposed Depth 8189 MD 8189 TVD	13. State NM
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6761 GL	22. Approximate date work will start 03/01/2004	14. Spacing Unit dedicated to this well 320.00 E/2 MV S/2 QH
23. Estimated duration 30 DAYS		20. BLM/BIA Bond No. on file ES0085

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 (Electronic Submission)	Name (Printed/Typed) PATSY CLUGSTON	Date 01/20/2004
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 7-19-04
Title AFM	Office FFO	

Application approval does not warrant or certify 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.

Additional Operator Remarks (see next page)

Electronic Submission #26974 verified by the BLM Well Information System  
For CONOCOPHILLIPS COMPANY, sent to the Farmington

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

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

NMOCD

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

District II  
PO Drawer 00, 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 <b>30-039-27581</b>		*Pool Code <b>72319 / 71599</b>	*Pool Name <b>BLANCO MESAVERDE / BASIN DAKOTA</b>
*Property Code <b>31326</b>	*Property Name <b>SAN JUAN 29-6 UNIT</b>		*Well Number <b>89M</b>
*GRID No. <b>217817</b>	*Operator Name <b>CONOCOPHILLIPS COMPANY</b>		*Elevation <b>6761'</b>

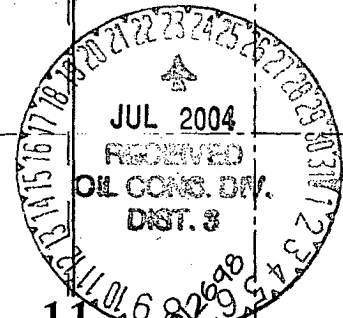
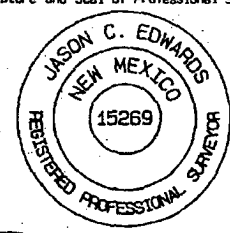
#### 10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	11	29N	6W	2010		SOUTH	1700	EAST	RIO ARriba

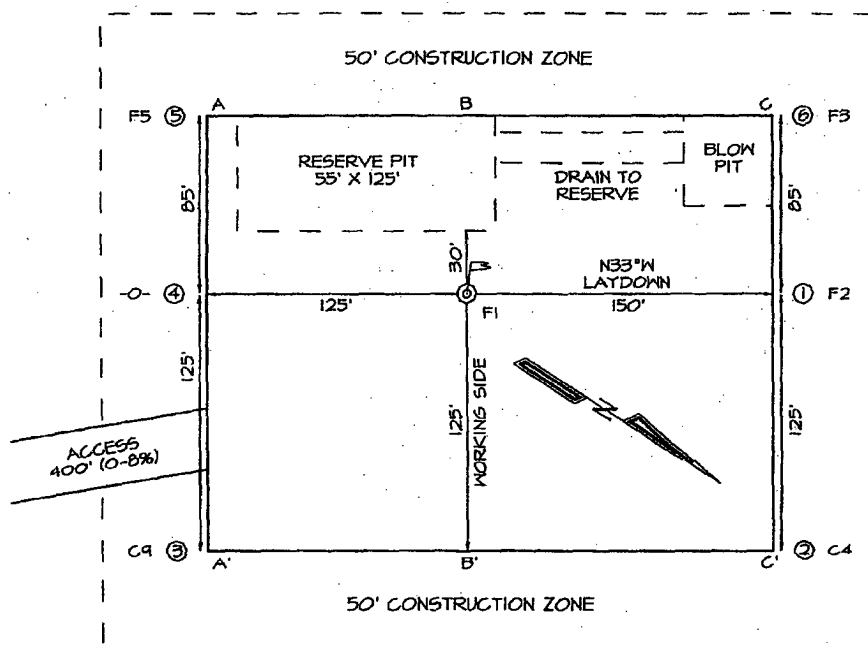
#### 11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
*Dedicated Acres 320.0 Acres - F/2 (MV) 320.0 Acres - S/2 (DK)					*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

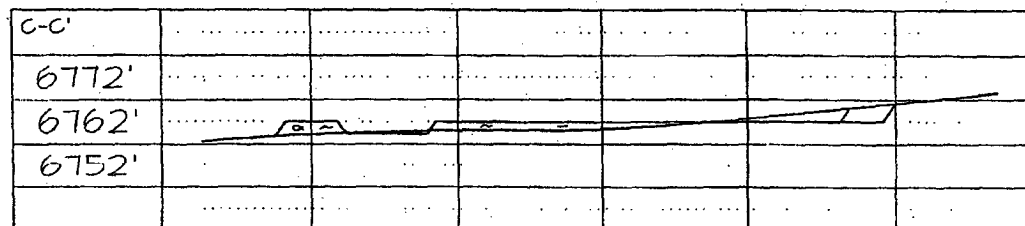
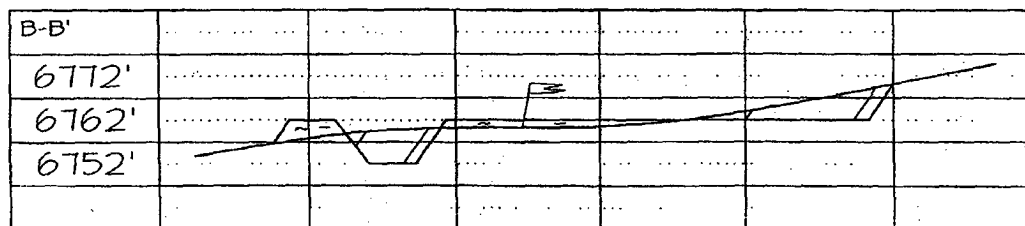
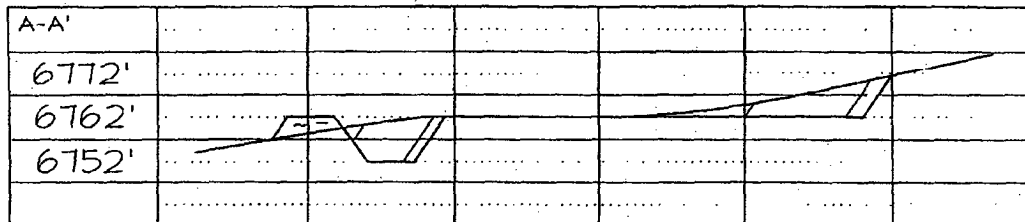
TRACT 42 LOT 1	5281.32'		5280.00'	17 OPERATOR CERTIFICATION	
				I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <i>Vicki R. Westby</i> Signature Vicki R. Westby Printed Name Sr. Analyst Title Date: <u>January 19, 2004</u>	
5280.00'	11	5278.68'	2010'	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 29, 2003 Signature and Seal of Professional Surveyor  <i>JASON C. EDWARDS</i> Certificate Number 15269	
LEASE USA NM 822698				LAT: 36°44.3062' N LONG: 107°25.7115' W DATUM: NAD27	

CONOCOPHILLIPS COMPANY SAN JUAN 29-6 UNIT #89M  
 2010' PSL & 1700' FEL, SECTION 11, T29N, R6W, NMPM  
 RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6761'



LATITUDE: 36.73844° N  
 LONGITUDE: 107.42853° W  
 DATUM: NAD83

PLAT NOTE:  
 \*SURFACE OWNER\*  
 Bureau of Land  
 Management



## CONOCOPHILLIPS COMPANY

WELL NAME: San Juan 29-6 Unit #89M (MV/DK)

### DRILLING PROGNOSIS

1. Location of Proposed Well: Unit J, 2010' FSL & 1700' FEL  
Section 11, T29N, R6W
2. Unprepared Ground Elevation: @ 6761' (unprepared)
3. The geological name of the surface formation is San Jose.
4. Type of drilling tools will be rotary.
5. Proposed drilling depth is 8189'.
6. The estimated tops of important geologic markers are as follows:

<u>Nacimientto - 1299'</u>	<u>Pt Lookout - 5859'</u>
<u>Ojo Alamo - 2804'</u>	<u>Mancos Shale - 6159'</u>
<u>Kirtland Sh - 3004'</u>	<u>Gallup - 7159'</u>
<u>Fruitland Fm. - 3440'</u>	<u>Greenhorn - 7839'</u>
<u>Pictured Cliffs - 3634'</u>	<u>Cubero - 8021'</u>
<u>Chacra - 4699'</u>	<u>Intermediate Casing - 3934'</u>
<u>Cliffhouse - 5494'</u>	<u>TD - 8189'</u>
<u>Menefee - 5574'</u>	
7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

Water:	<u>Ojo Alamo - 2804' - 3004'</u>
Gas & Water:	<u>Fruitland - 3440' - 3634'</u>
Gas:	<u>Pictured Cliffs - 3634' - 4699'</u>
	<u>Mesaverde - 5574' - 6159'</u>
	<u>Dakota - 8021' - 8189'</u>
8. The proposed casing program is as follows:

Surface String: 9-5/8", 32.3# H-40 @ 214' \*

Intermediate String: 7", 20#, J-55 @ 3934' (J-55 will be used, unless the K-55 is the only casing available)

Production String: 4-1/2", 11.6#, I-80 @ 8189' (TD)

\* The surface casing will be set at a minimum of 200', but could be set deeper if required to maintain hole stability.

## 9. Cement Program:

Surface String: 138 sx 50/50 POZ. + 2% Bentonite, 3% CaCl<sub>2</sub>, 5#/sx Gilsonite, 0.25#/sx Cellophane flakes, & 0.2% CFR-3 Friction Reducer (1.34 yield = 184.5 cf); Cement density – 13.5 ppg. Water required 5.39 gal/sx. Compressive Strength – Sample cured at 70 deg F for 8 hours; 3 hrs 05 min. 50 psi; 7 hrs 45 min 500 psi; cement to surface w/150% excess of casing/hole annulus volume.

Intermediate String: Lead Cement: 396 sx Standard cement + 3% Econolite (extender) + 10#/sx Pheno-seal; (2.88 yield = 1141.2 cf). Cement Density 11.5 ppg; Water required – 16.91 gal/sx. Compressive strength – Sample cured at 130 deg F for 24 hrs – 1 hr 47 min – 50 psi; 12 hrs – 350 psi; 24 hrs – 450 psi; Cement to surface with 150% excess of casing/hole annulus volume.

Tail Cement: 230 sx 50/50 POZ – Standard cement + 2% Bentonite + 6#/sx Pheno Seal; (1.33 yield = 305.4 cf); Cement Density – 13.5 ppg; Water required – 5.52 gal/sx; Compressive strength – Sample cured at 130 deg F for 24 hrs – 2 hrs 5 min – 50 psi; 2 hr 6 min – 500 psi; 12 hr – 1250 psi; 24 hrs – 1819 Cement to surface with 150% excess of casing/hole annulus volume.

Production String \*: Cement: 468 sx 50/50 POZ – Standard cement + 3% Bentonite + 5#/sx PhenoSeal + 0.2% CFR-3 Friction Reducer + 0.1% HR-5 Retarder + 0.8% Halad-9 Fluid Loss Additive (1.45 Yield – 678.54 cf) Cement density – 13.1 ppg; Water required 6.47 gal/sx; Compressive Strength – Sample cured at 200 de F for 23 hrs; 9 hr 50 min – 50 psi; 13 hrs 45 min – 500 psi; 16 hrs – 1500 psi; 23 hrs 2525 psi.

\*The production casing cement is calculated to cover the openhole interval with 50% excess and annular volume 200' within intermediate shoe. Depending on hole conditions, the well may be cemented in a single stage or two staged.

Centralizer Program:

Surface: Total four (4) - 1<sup>st</sup> joint - 10' above the shoe & 1 at the top of the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> joints latched over the casing collar

Intermediate: Total seven (9) 10' above shoe, top of 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, & 8<sup>th</sup>, 10<sup>th</sup> jts & 10<sup>th</sup> 1 jt. above surface casing, and on first two casing collars below the wellhead.

Production: None planned.

Turbulators: Total Three (3) – on intermediate casing at 1<sup>st</sup> jt. below the Ojo Alamo and next 2 jts up.

10. The minimum specifications for pressure control equipment which are to be used, a schematic diagram thereof showing sizes, pressure ratings (or) API series and the testing procedure and testing frequency are enclosed within the APD packet.
11. Drilling Mud Prognosis:     Surface - spud mud on surface casing.  
                                  Intermediate - spud mud generated from natural clays with gel sweeps pretreated w/LCM before entering coal interval.  
                                  Below Intermediate - air or gas drilled.
12. The testing, logging, and coring programs are as follows:  
D.S.T.s or cores: \_\_\_\_\_  
Logs: Cased hole TDT with GR to surface
13. Anticipated no abnormal pressures or temperatures to be encountered or any other potential hazards such as Hydrogen Sulfide Gas. Low risk H<sub>2</sub>S equipment will be used.  
  
Estimated Bottomhole pressure:  
                                  Dakota - 3000 psi  
                                  Mesaverde - 700 psi
14. The anticipated starting date is approximately March 1, 2004 with duration of drilling / completion operations for approximately 20 days thereafter.
15. ConocoPhillips will be DHC'ing the Mesaverde and Dakota intervals of the subject well per Order 11363. The original Reference Case where partner notification was made was R-11187. Once production tests are conducted we will be submitting the allocation factors we will be using to report both gas and oil production for this well.

**San Juan 29-6 Unit #89M(MV/DK)**

**SURFACE CASING :**

Drill Bit Diameter	12.25"	
Casing Outside Diameter	9.625"	Casing Inside Diam. 9.000"
Casing Weight	32.3	ppf
Casing Grade	H-40	
Shoe Depth	214'	
Cement Yield	1.34	cuft/sk
Excess Cement	150	%
Cement Required	138	sx

SHOE 214', 9.625", 32.3 ppf, H-40 STC

**INTERMEDIATE CASING :**

Drill Bit Diameter	8.75"	
Casing Outside Diameter	7"	Casing Inside Diam. 6.456"
Casing Weight	20	ppf
Casing Grade	J-55	
Shoe Depth	3934'	
Lead Cement Yield	2.88	cuft/sk
Lead Cement Excess	150	%
Tail Cement Length	786.8'	= 20% of setting depth
Tail Cement Yield	1.33	cuft/sk
Tail Cement Excess	150	%
Lead Cement Required	386	sx
Tail Cement Required	230	sx

SHOE 3934', 7", 20 ppf, J-55 STC

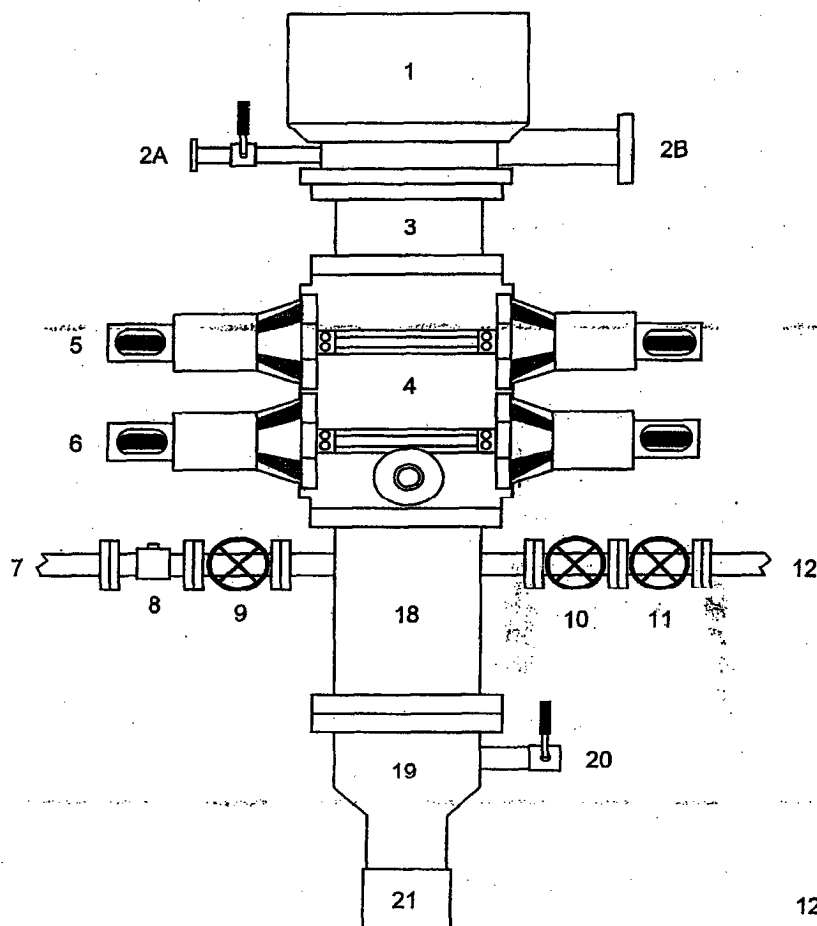
**PRODUCTION CASING :**

Drill Bit Diameter	6.25"	
Casing Outside Diameter	4.5"	Casing Inside Diam. 4.000"
Casing Weight	11.6	ppf
Casing Grade	I-80	
Top of Cement	3734'	200' inside intermediate casing
Shoe Depth	8189'	
Cement Yield	1.45	cuft/sk
Cement Excess	50	%
Cement Required	468	sx

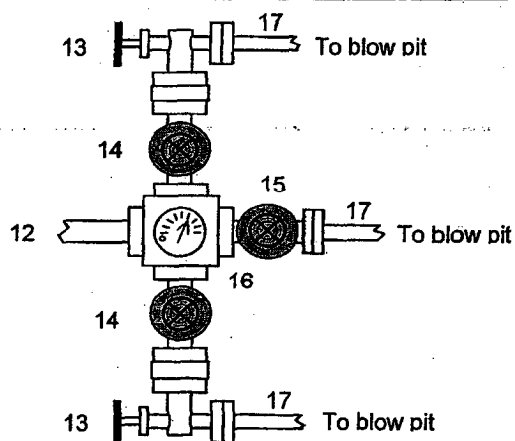
SHOE 8189', 4.5", 11.6 ppf, I-80 LTC

## 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



This BOP arrangement is for the drilling operations from the time the 9-5/8" surface casing is set through the setting of the 7" intermediate casing. 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. The Pipe Rams, Blind Rams, Choke Manifold, and 9-5/8" surface casing will be tested to a low pressure test of 200 psi to 300 psi and to a high pressure test of 1000 psi (this value is 44% of the minimum internal yield pressure of the 9-5/8" casing). We will drill the 8-3/4" hole to intermediate casing point and run and cement the 7" intermediate casing. Then we will nipple down the BOP, install a trash cap, & move out the drilling rig. We will install the casing spool on the 7" stub after the drilling rig is moved off location. At a later date we will move in the cavitation rig for the cavitation program.

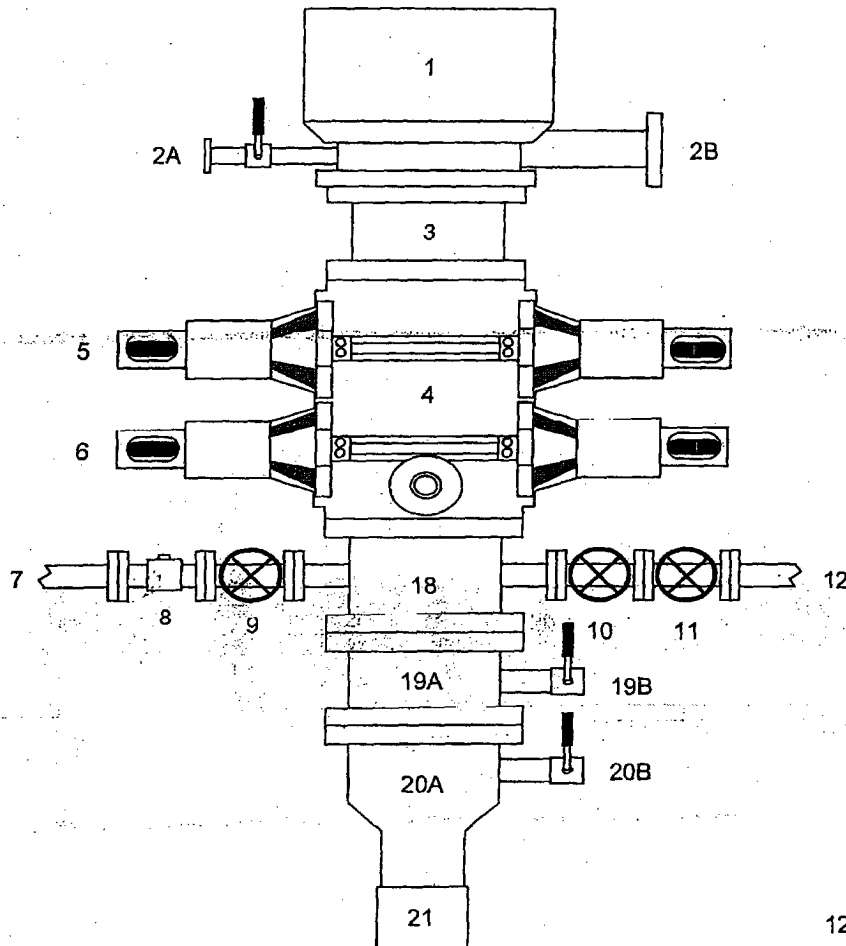
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

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

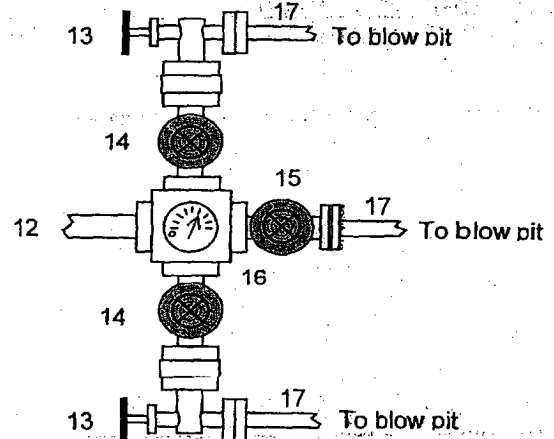


# BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



1. Rotating Head
- 2A. Fill-up Line & valve
- 2B. Bloopie 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 2-3 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 2-3 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 5-1/4" 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

**San Juan 29-6 Unit #89M  
NMNM012698; Unit J, 2010' FSL & 1700' FEL  
Section 11, T29N, R6W; Rio Arriba County, NM**

**Cathodic Protection**

ConocoPhillips proposes to drill a cathodic protection deep well groundbed for the subject well. Will drill a 6-7/8" hole to an anticipated minimum depth of 300' (maximum depth of 500'). Cement plugs will not be used unless more than one water zone is encountered. Prior drilling history for the area indicates only one zone to that depth. If more than one water zone is encountered, notification will be made and details of cement and casing will be provided.

All drilling activity will remain on existing well pad and a Farmington based company will be doing the drilling for ConocoPhillips.

See attached drawing on proposed placement of groundbed & underground AC & DC cables and rectifier.