

Form 3160-3  
(February 2005)

2006 MAR 13 PM 1 00

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

070 FARMINGTON NM

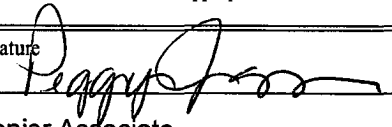
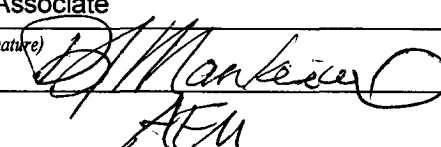
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-011349-B
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		6. If Indian, Allottee or Tribe Name
2. Name of Operator ConocoPhillips Company		7. If Unit or CA Agreement, Name and No. NMNM-078415 IB-DK NMNM-078415A MV
3a. Address 4001 Penbrook, Odessa, TX 79762		8. Lease Name and Well No. SAN JUAN 29-5 UNIT #14G
3b. Phone No. (include area code) 432-368-1230		9. API Well No. 30-039-29831
4. Location of Well (Report location clearly and in accordance with any State requirements, *) At surface SWSE 595 FSL - 1480 FEL At proposed prod. zone		10. Field and Pool, or Exploratory BLANCO MESAVERDE / BASIN DAKOTA
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area SECTION 27, T29N, R5W NMPM 0
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 160 ACRES	17. Spacing Unit dedicated to this well MV & DK - 320.0 ACRES - E/2
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 8300'	20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6839' 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:

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 must 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 BLM~

25. Signature 	Name (Printed/Typed) Peggy James	Date 3/10/2006
Title Senior Associate		
Approved by (Signature) 	Name (Printed/Typed) AFU	Date 6/2/06
Title AFU	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)

ConocoPhillips Company proposes to drill a vertical 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.

The notice of staking for this well was submitted as a Blanco Mesaverde single well - the San Juan 29-5 Unit # 14C. This well has since changed to a Mesaverde/Dakota and the well number has changed to the #14G.

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

NMOC

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

RECEIVED

070 FARMINGTON NM

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-29831</b>	*Pool Code 72319 / 71599	*Pool Name BLANCO MESAVERDE / BASIN DAKOTA
*Property Code 31325	*Property Name SAN JUAN 29-5 UNIT	*Well Number 14G
*GRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY	*Elevation 6839'

<sup>10</sup> Surface Location

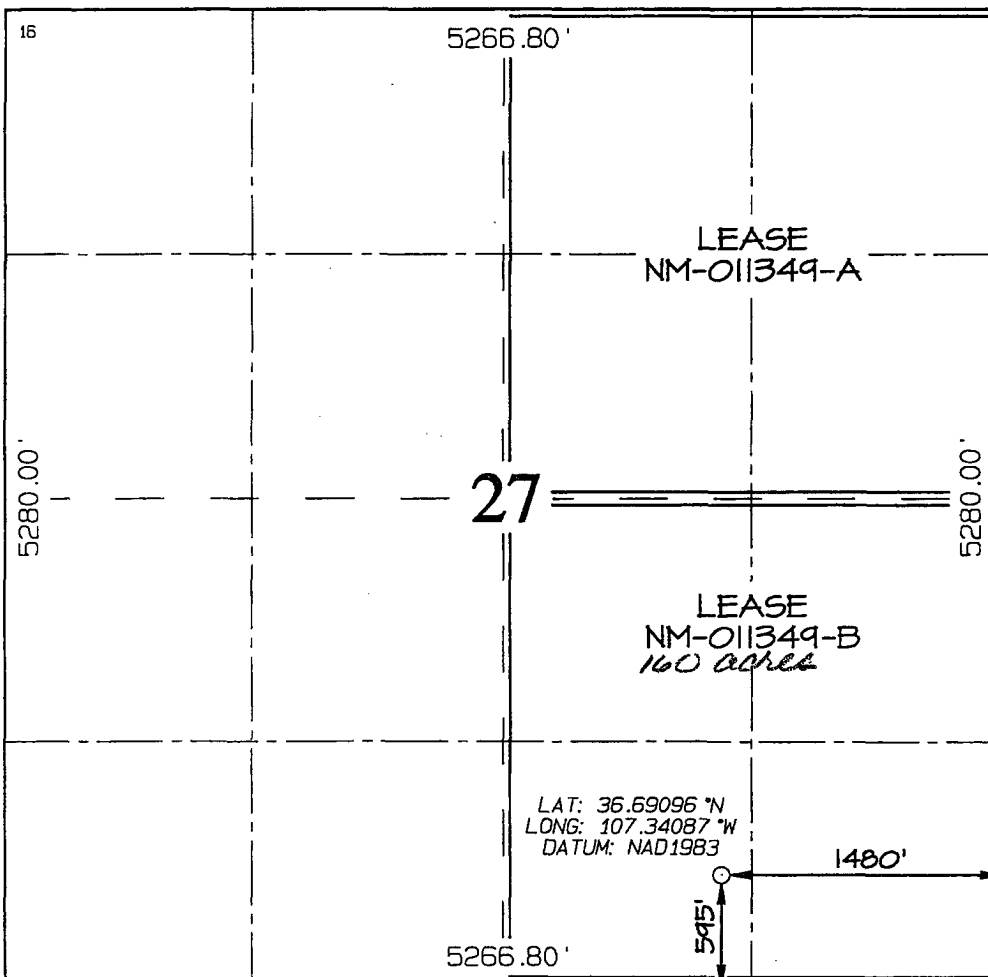
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	27	29N	5W		595	SOUTH	1480	EAST	RIO ARriba

<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 320.0 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



<sup>17</sup> OPERATOR CERTIFICATION

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

*Virgil E. Chavez*  
Signature  
Virgil E. Chavez

Printed Name  
Projects & Operations Lead  
Title

Date  
*February 22, 2006*

<sup>18</sup> 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: DECEMBER 27, 2005

Signature and Seal of Professional Surveyor



*Jason C. Edwards*  
Certificate Number 15269

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-103  
May 27, 2004

WELL API NO. <b>30-039-29831</b>	
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name SAN JUAN 29-5 UNIT	
8. Well Number	14G
9. OGRID Number	217817
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  
ConocoPhillips Company

3. Address of Operator  
4001 Penbrook, Odessa, TX 79762

4. Well Location  
Unit Letter O 595 feet from the SOUTH line and 1480 feet from the EAST line  
Section 27 Township 29N Range 5W NMPM RIO ARRIBA County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
6839' GL

Pit or Below-grade Tank Application ☒ Closure ☐

Pit type DRILL Depth to Groundwater 51' Distance from nearest fresh water well 7,290' Distance from nearest surface water 555'

Liner Thickness: 12 mil Below-Grade Tank: Volume 4400 bbls; Construction Material SYNTHETIC

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 1103. 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 NMOCDD. 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 NMOCDD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐

SIGNATURE Peggy James

TITLE Senior Associate

DATE

Type or print name  
**For State Use Only**

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

Telephone No.: (432)368-1230

APPROVED BY:

TITLE

**DEPUTY OIL & GAS INSPECTOR, MST. JR.**

DATE JUN 05 2006

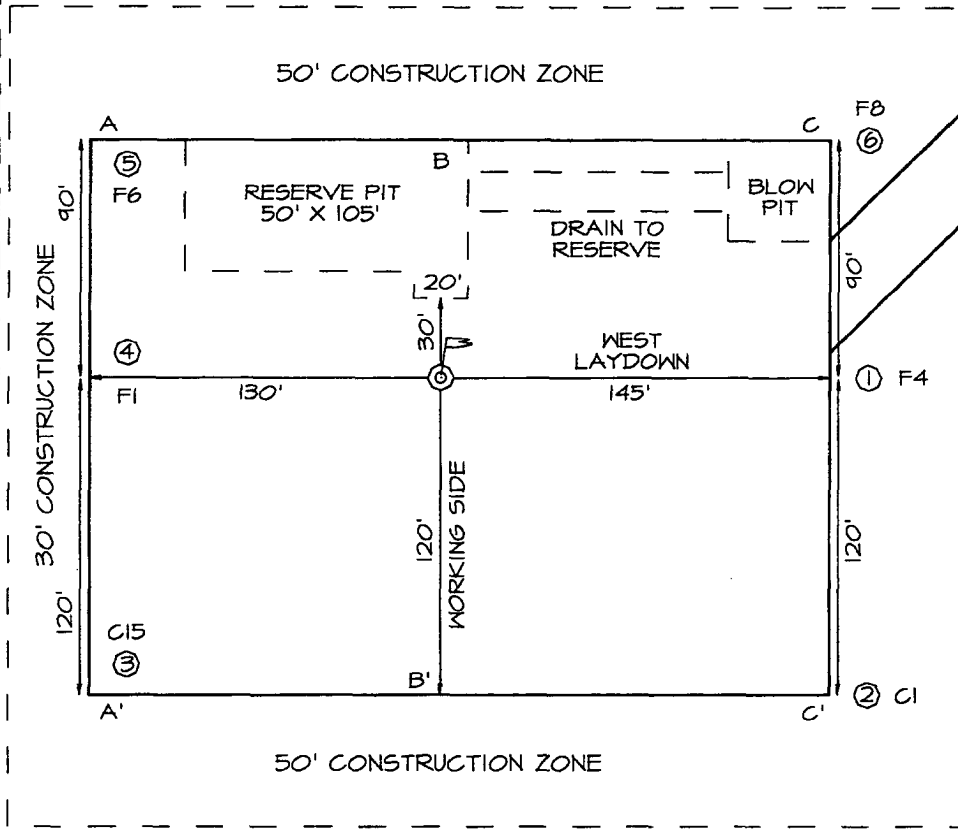
Conditions of Approval (if any):

**CONOCOPHILLIPS COMPANY SAN JUAN 29-5 UNIT #14G**  
**595' FSL & 1480' FEL, SECTION 27, T29N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6839'**

**LATITUDE: 36.69096° N**  
**LONGITUDE: 107.34087° W**  
 DATUM: NAD1983

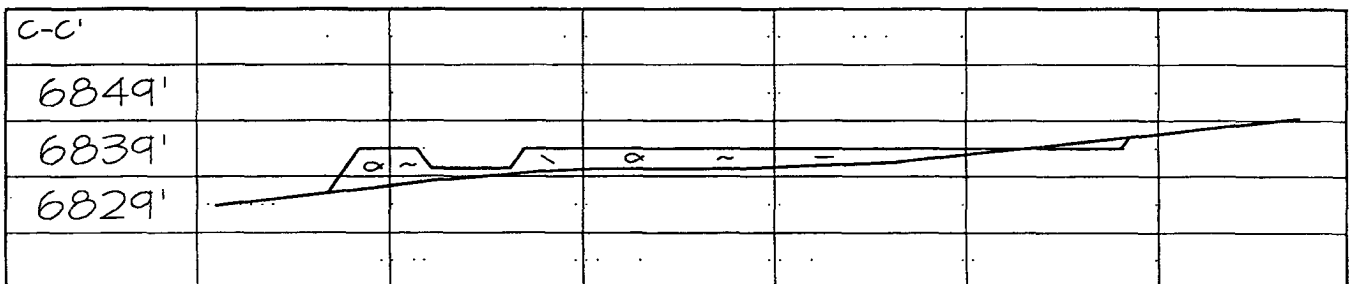
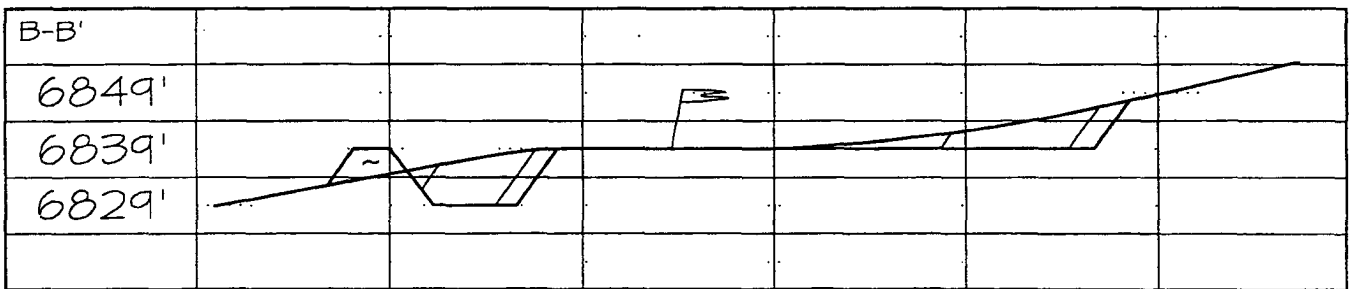
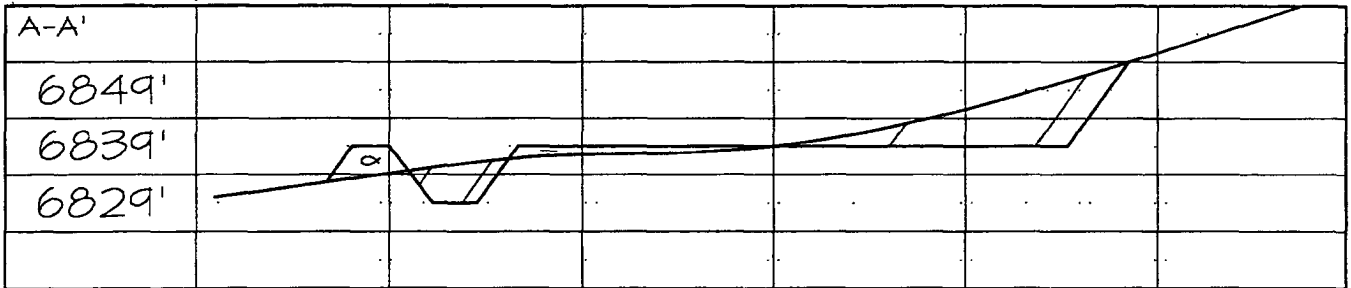


1/16th SECTION LINE / PROPERTY LINE



ACCESS  
950' (0-8%)

PLAT NOTE:  
 \*FEE SURFACE OWNER\*  
 La Familia de los Candelarias



# PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 29-5 14G

Lease:		AFE #: WAN.CNV.6160		AFE \$:	
Field Name: 29-5		Rig:	State: NM	County: RIO ARRIBA	API #:
Geoscientist: Glaser, Terry J		Phone: (832)486-2332	Prod. Engineer: Moody, Craig E.		Phone: 486-2334
Res. Engineer: Johnson, Tom B.		Phone: (832)-486-2347	Proj. Field Lead: Fransen, Eric E.		Phone:

## Primary Objective (Zones):

Zone	Zone Name
R20002	MESAVERDE(R20002)
R20076	DAKOTA(R20076)

## Location: Surface Datum Code: NAD 27 Straight Hole

Latitude: 36.690960	Longitude: -107.340870	X:	Y:	Section: 27	Range: 5W
Footage X: 1480 FEL	Footage Y: 595 FSL	Elevation: 6839	(FT)	Township: 29N	

Tolerance:

Location Type: Summer Only Start Date (Est.): Completion Date: Date In Operation:

Formation Data: Assume KB = 6855 Units = FT

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	216	6639	<input type="checkbox"/>			13-1/2hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
NCMT	1655	5200	<input type="checkbox"/>			
CJAM	2955	3900	<input type="checkbox"/>			Possible water flows.
KRLD	3155	3700	<input type="checkbox"/>			
FRLD	3545	3310	<input type="checkbox"/>			Possible gas.
PCCF	3805	3050	<input type="checkbox"/>			
LEWS	4005	2850	<input type="checkbox"/>			
Intermediate Casing	4105	2750	<input type="checkbox"/>			8 3/4" Hole. 4000' of 7", 20 ppf, J-55, STC Casing on top, 105' of 7", 23 ppf, J-55, LTC on bottom (special drift to 6.25" ID). Circulate cement to surface.
CHRA	4755	2100	<input type="checkbox"/>			
CLFH	5645	1210	<input type="checkbox"/>			Gas; possibly wet
MENF	5695	1160	<input type="checkbox"/>			Gas.
PTLK	6000	855	<input type="checkbox"/>			Gas.
CLLP	7245	-390	<input type="checkbox"/>			Gas. Possibly wet.
CRHN	7950	-1095	<input type="checkbox"/>			Gas possible, highly fractured
CBBO	8105	-1250	<input type="checkbox"/>			Gas
TOTAL DEPTH DK	8300	-1445	<input type="checkbox"/>			6-1/4" Hole. 4-1/2", 11.6 ppf, N-80, LTC casing. Circulate cement a minimum of 100' inside the previous casing string. No open hole logs. Cased hole TDT with GR to surface.

## Reference Wells:

Reference Type	Well Name	Comments
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## Logging Program:

Intermediate Logs: ☐ Log only if show ☐ GR/ILD ☐ Triple Combo

TD Logs: ☐ Triple Combo ☐ Dipmeter ☐ RFT ☐ Sonic ☐ VSP ☒ TDT

**TOPSET FRUITLAND COAL Wells:** (topset casing above coal to prepare for cavitation/DO/UR)

**Drilling Mud Program:**

Surface: spud mud

Intermediate: fresh water mud with bentonite and polymer as needed

Below Intermediate: air/mist/nitrogen drilling media with foamer, polymer, & corrosion inhibitor as needed

**Centralizer Program:**

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2<sup>nd</sup>, 3<sup>rd</sup>, & 4<sup>th</sup> joints

Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup>, & 10<sup>th</sup> joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

**CASE & FRAC FRUITLAND COAL Wells:** (casing set below coal to prepare for frac completion)

**Drilling Mud Program:**

Surface: spud mud

Production: fresh water mud with bentonite and polymer as needed

**Centralizer Program:**

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2<sup>nd</sup>, 3<sup>rd</sup>, & 4<sup>th</sup> joints

Production: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup>, & 10<sup>th</sup> joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

**MESA VERDE Wells:**

**Drilling Mud Program:**

Surface: spud mud

Intermediate: fresh water mud with bentonite and polymer as needed

Below Intermediate: air/mist drilling media with foamer, polymer, & corrosion inhibitor as needed

**Centralizer Program:**

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2<sup>nd</sup>, 3<sup>rd</sup>, & 4<sup>th</sup> joints

Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup>, & 10<sup>th</sup> joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

**DAKOTA Wells:**

**Drilling Mud Program:**

Surface: spud mud

Intermediate: fresh water mud with bentonite and polymer as needed

Below Intermediate: air/mist/nitrogen drilling media with foamer, polymer, & corrosion inhibitor as needed

**Centralizer Program:**

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2<sup>nd</sup>, 3<sup>rd</sup>, & 4<sup>th</sup> joints

Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup>, & 10<sup>th</sup> joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

**San Juan 29-5 # 14G**  
**Halliburton Cementing Program**

**SURFACE CASING :**

Drill Bit Diameter	13.5 "	
Casing Outside Diameter	9.625 "	Casing Inside Diam. 9.001 "
Casing Weight	32.3 ppf	
Casing Grade	H-40	
Shoe Depth	235 '	
Cement Yield	1.21 cuft/sk	
Cement Density	15.6 lb/gal	
Excess Cement	125 %	
Cement Required	2.14 sx	

SHOE 235 ', 9.625 ", 32.3 ppf, H-40 STC

**INTERMEDIATE CASING :**

Note: 4000' of 7", 20 ppf, J-55, STC or  
105' of 7", 23 ppf, J-55, LTC on l

Drill Bit Diameter	8.75 "	
Casing Outside Diameter	7 "	Casing Inside Diam. 6.125 "
Casing Weight	23 ppf	
Casing Grade	J-55	
Shoe Depth	4105 '	
Lead Cement Yield	2.88 cuft/sk	
Lead Cement Density	11.5 lb/gal	
Lead Cement Excess	150 %	
Lead Cement Required	1.12 sx	
Tail Cement Length	821 '	
Tail Cement Yield	1.33 cuft/sk	
Tail Cement Density	13.5 lb/gal	
Tail Cement Excess	150 %	
Tail Cement Required	2.39 sx	

SHOE 4105 ', 7 ", 23 ppf, J-55 LTC

**PRODUCTION CASING :**

Drill Bit Diameter	6.25 "	
Casing Outside Diameter	4.5 "	Casing Inside Diam. 4.000 "
Casing Weight	11.6 ppf	
Casing Grade	N-80	
Top of Cement	3905 '	200' inside intermediate casing
Shoe Depth	8300 '	
Cement Yield	1.45 cuft/sk	
Cement Density	13.1 lb/gal	
Cement Excess	50 %	
Cement Required	4.58 sx	

SHOE 8300 ', 4.5 ", 11.6 ppf, N-80 LTC

**SAN JUAN 29-5 #14G****HALLIBURTON OPTION**

9-5/8 Surface Casing		
Cement Recipe	Standard Cement	
	+ 3% Calcium Chloride	
	+ 0.25 lb/sx Flocele	
Cement Volume	214	sx
Cement Yield	1.21	cuft/sx
Slurry Volume	259.5	cuft
	46.2	bbls
Cement Density	15.6	ppg
Water Required	5.29	gal/sx

7" Intermediate Casing		
Lead Slurry		
Cement Recipe	Standard Cement	
	+ 3% Econolite (extender)	
	+ 10 lb/sx Pheno Seal	
Cement Required	412	sx
Cement Yield	2.88	cuft/sx
Slurry Volume	1187.4	cuft
	211.5	bbls
Cement Density	11.5	ppg
Water Required	16.85	gal/sx

7" Intermediate Casing		
Tail Slurry		
Cement Slurry	50 / 50 POZ: Standard Cement	
	+ 2% Bentonite	
	+ 6 lb/sx Pheno Seal	
Cement Required	239	sx
Cement Yield	1.33	cuft/sx
Slurry Volume	317.3	cuft
	56.5	bbls
Cement Density	13.5	ppg
Water Required	5.52	gal/sx

4-1/2" Production Casing		
Cement Recipe	50 / 50 POZ: Standard Cement	
	+ 3% Bentonite	
	+ 3.5 lb/sx PhenoSeal	
	+ 0.2% CFR-3 Friction Reducer	
	+ 0.1% HR-5 Retarder	
	+ 0.8% Halad-9 Fluid Loss Additive	
Cement Quantity	458	sx
Cement Yield	1.45	cuft/sx
Cement Volume	664.7	cuft
	118.4	
Cement Density	13.1	ppg
Water Required	6.55	gal/sx

**SCHLUMBERGER OPTION 1**

9-5/8 Surface Casing		
Cement Recipe	Class G Cement	
	+ 3% S001 Calcium Chloride	
	+ 0.25 lb/sx D029 Cellophane Flakes	
Cement Volume	222	sx
Cement Yield	1.17	cuft/sx
Cement Volume	259.5	cuft
Cement Density	15.8	ppg
Water Required	4.973	gal/sx

7" Intermediate Casing		
Lead Slurry		
Cement Recipe	Class G Cement	
	+ 0.25 lb/sx D029 Cellophane Flakes	
	+ 3% D079 Extender	
	+ 0.20% D046 Antifoam	
	+ 10 lb/sx Pheno Seal	
Cement Required	437	sx
Cement Yield	2.72	cuft/sx
Slurry Volume	1187.4	cuft
	211.5	bbls
Cement Density	11.7	ppg
Water Required	15.74	gal/sx

7" Intermediate Casing		
Tail Slurry		
Cement Slurry	50 / 50 POZ: Class G Cement	
	+ 0.25 lb/sx D029 Cellophane Flakes	
	+ 2% D020 Bentonite	
	+ 1.5 lb/sx D024 Gilsonite Extender	
	+ 2% S001 Calcium Chloride	
	+ 0.10% D046 Antifoam	
	+ 6 lb/sx Pheno Seal	
Cement Required	242	sx
Cement Yield	1.31	cuft/sx
Slurry Volume	317.3	cuft
	56.5	bbls
Cement Density	13.5	ppg
Water Required	5.317	gal/sx

4-1/2" Production Casing		
Cement Recipe	50 / 50 POZ: Class G Cement	
	+ 0.25 lb/sx D029 Cellophane Flakes	
	+ 3% D020 Bentonite	
	+ 1.0 lb/sx D024 Gilsonite Extender	
	+ 0.25% D167 Fluid Loss	
	+ 0.15% D065 Dispersant	
	+ 0.1% D800 Retarder	
	+ 0.1% D046 Antifoamer	
	+ 3.5 lb/sx PhenoSeal	
Cement Quantity	462	sx
Cement Yield	1.44	cuft/sx
Cement Volume	664.7	cuft
	118.4	
Cement Density	13	ppg
Water Required	6.47	gal/sx

**SCHLUMBERGER OPTION 2**

9-5/8 Surface Casing		
Cement Recipe	Type III Cement	
	+ 2% S001 Calcium Chloride	
	+ 0.25 lb/sx D029 Cellophane Flakes	
	+ 0.20% D046 Antifoam	
Cement Volume	195	sx
Cement Yield	1.33	cuft/sx
Cement Volume	259.5	cuft
Cement Density	14.8	ppg
Water Required	6.095	gal/sx

7" Intermediate Casing		
Lead Slurry		
Cement Recipe	75% Type XI / 25% Class G Cement	
	+ 0.25 lb/sx D029 Cellophane Flakes	
	+ 3% D079 Extender	
	+ 0.20% D046 Antifoam	
Cement Required	565	sx
Cement Yield	2.1	cuft/sx
Slurry Volume	1187.4	cuft
	211.5	bbls
Cement Density	11.7	ppg
Water Required	11.724	gal/sx

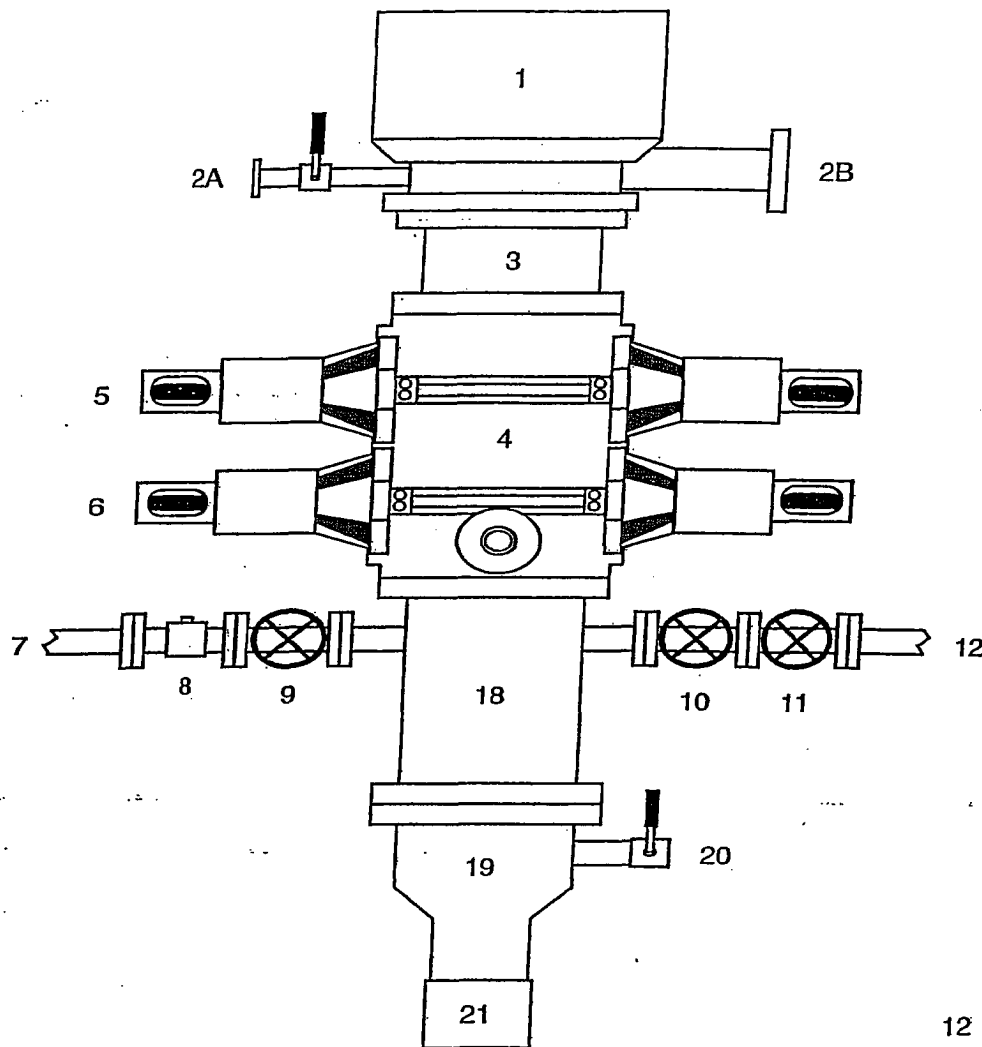
7" Intermediate Casing		
Tail Slurry		
Cement Slurry	50 / 50 POZ: Class G Cement	
	+ 0.25 lb/sx D029 Cellophane Flakes	
	+ 2% D020 Bentonite	
	+ 1.5 lb/sx D024 Gilsonite Extender	
	+ 2% S001 Calcium Chloride	
	+ 0.10% D046 Antifoam	
	+ 6 lb/sx Pheno Seal	
Cement Required	242	sx
Cement Yield	1.31	cuft/sx
Slurry Volume	317.3	cuft
	56.5	bbls
Cement Density	13.5	ppg
Water Required	5.317	gal/sx

4-1/2" Production Casing		
Cement Recipe	50 / 50 POZ: Class G Cement	
	+ 0.25 lb/sx D029 Cellophane Flakes	
	+ 3% D020 Bentonite	
	+ 1.0 lb/sx D024 Gilsonite Extender	
	+ 0.25% D167 Fluid Loss	
	+ 0.15% D065 Dispersant	
	+ 0.1% D800 Retarder	
	+ 0.1% D046 Antifoamer	
	+ 3.5 lb/sx PhenoSeal	
Cement Quantity	462	sx
Cement Yield	1.44	cuft/sx
Cement Volume	664.7	cuft
	118.4	
Cement Density	13	ppg
Water Required	6.47	gal/sx

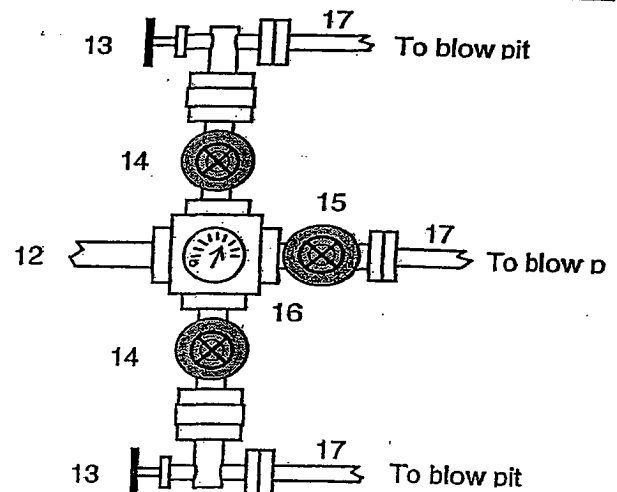


# BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

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

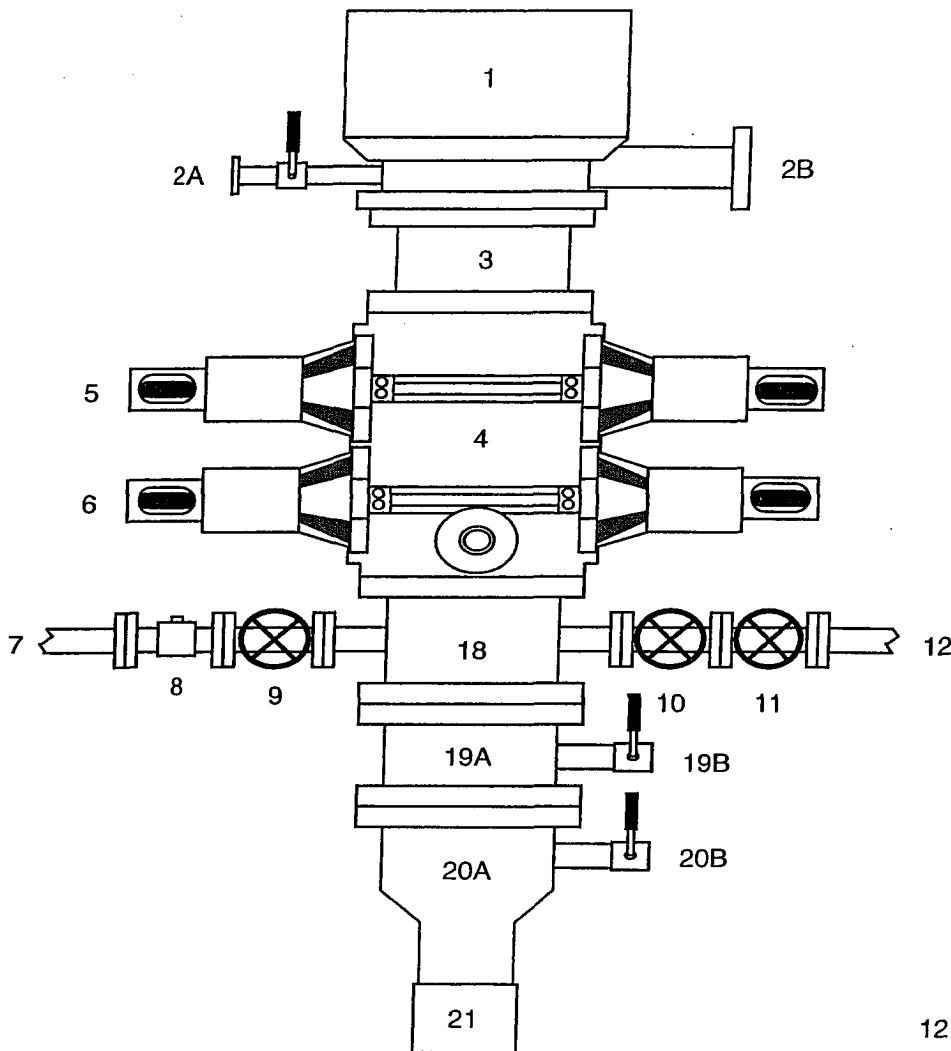


A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe 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.

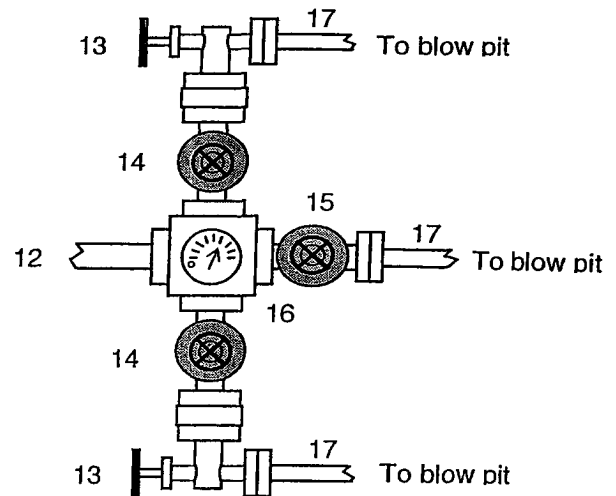
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

## 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 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

**Property :** SAN JUAN 29-5 UNIT **Well #:** 14G

**Surface Location:**

**Unit:** O **Section:** 27 **Township:** 29N **Range:** 5W

**County:** RIO ARRIBA **State:** New Mexico

**Footage:** 595 **from the** SOUTH **line,** 1480 **from the** EAST **line.**

**CATHODIC PROTECTION**

ConocoPhillips (COP) proposes to drill a cathodic protection deep well groundbed for the subject well. COP will drill a hole vertically at the surface large enough to accommodate 20 feet of 8 inch diameter PVC pipe for surface casing to assist in further drilling and loading. Casing may be cemented in place for stability if needed. COP 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 the existing well pad and a Farmington based company will be doing the drilling for ConocoPhillips.