

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RCVD DEC 7 06  
OIL CONS. DIV.  
DIST. 3

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number NMSF-078999	2005 MAY 11 AM 11 01
1b. Type of Well GAS	Unit Reporting Number NMNM-0784213-DK NMNM-078421A-MV	RECEIVED FARMINGTON NM
2. Operator ConocoPhillips	6. If Indian, All. or Tribe	7. Unit Agreement Name San Juan 31-6 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name	9. Well Number #16F
4. Location of Well Unit M (SWSW), 855' FSL & 410' FWL,  Latitude 36° 55.0690'N Longitude 107° 28.5135'W	10. Field, Pool, Wildcat Basin Dakota / Blanco MV  11. Sec., Twn, Rge, Mer. (NMPM) M Sec. 33, T31N, R06W, NMPM  API # 30-039-29904	
14. Distance in Miles from Nearest Town	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 410'		
16. Acres in Lease	17. Acres Assigned to Well DK & MV 320 W/2	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease		
19. Proposed Depth 8054'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6473' GL	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u>Patsy Clugston</u> Sr. Regulatory Analyst	Date 5/8/06	

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

Archaeological Report attached

Environmental Assessment is attached.

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

Title 18 U.S.C. Section 1001, makes 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 presentations as to any matter within its jurisdiction.

This action is subject to technical and procedural review pursuant to 43 CFR 3165.2 and appeal pursuant to 43 CFR 3165.4

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

8 12/12/06  
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

2006 MAY 11 AM 11:01

AMENDED REPORT

RECEIVED

RCVD DEC 7 06  
OIL CONS. DIV.

DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-29904</b>	*Pool Code 72319 \ 71599	*Pool Name BLANCO MESAVERDE \ BASIN DAKOTA
*Property Code 31328	*Property Name SAN JUAN 31-6 UNIT	*Well Number 16F
*GRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY	*Elevation 6473'

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
M	33	31N	6W		855	SOUTH	410	WEST	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

12 Dedicated Acres	320.0 Acres - W/2 (MV) 320.0 Acres - W/2 (DK)	13 Joint or Infill	14 Consolidation Code	15 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	5281.32'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief <i>Virgil E. Chavez</i> Signature Virgil E. Chavez Printed Name Projects & Operations Lead Title <i>April 21, 2006</i> Date
LEASE SF-078999	33	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. Date of Survey: AUGUST 11, 2005 Signature and Seal of Professional Surveyor  <i>JASON C. EDWARDS</i> Certificate Number 15269
5280.00'	5280.00'	
410'	LAT: 36°51.0690'N LONG: 107°28.5135'W DATUM: NAD27	
5280.00'	5280.00'	

8

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

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  
3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location  
Unit Letter M : 855 feet from the South line and 410 feet from the West line  
Section 33 Township 31N Rng 6W NMPM County Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
6473' GL

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 ☒

**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 the November 1, 2004 guidelines. See the attached diagram that details the location of the pit in reference to the proposed wellhead. The dirll 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 Patsy Clugston TITLE Sr. Regulatory Analyst DATE 5/8/2006

Type or print name Patsy Clugston E-mail address: pclugston@br-inc.com Telephone No. 505-326-9518  
**For State Use Only**

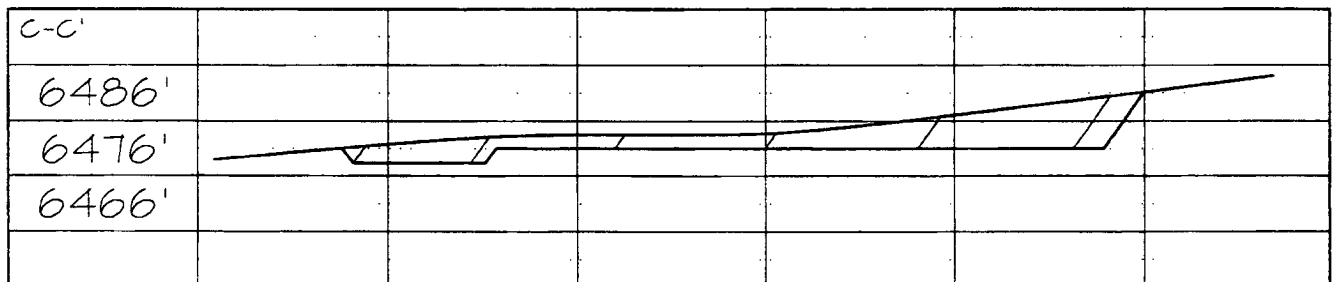
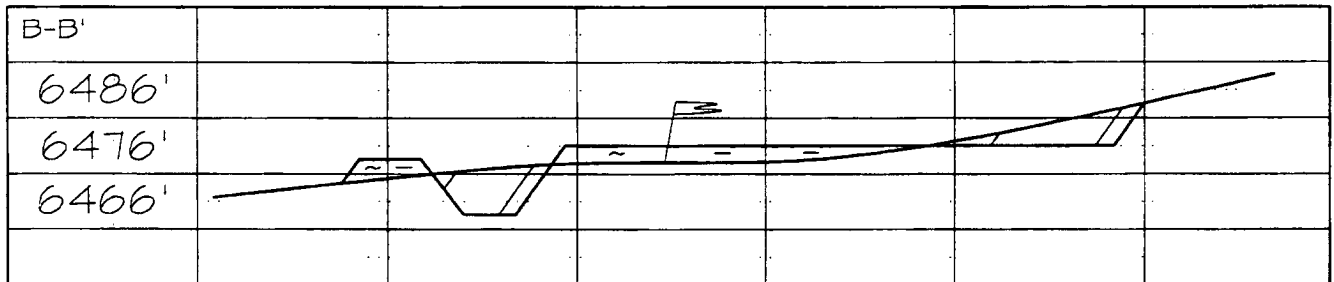
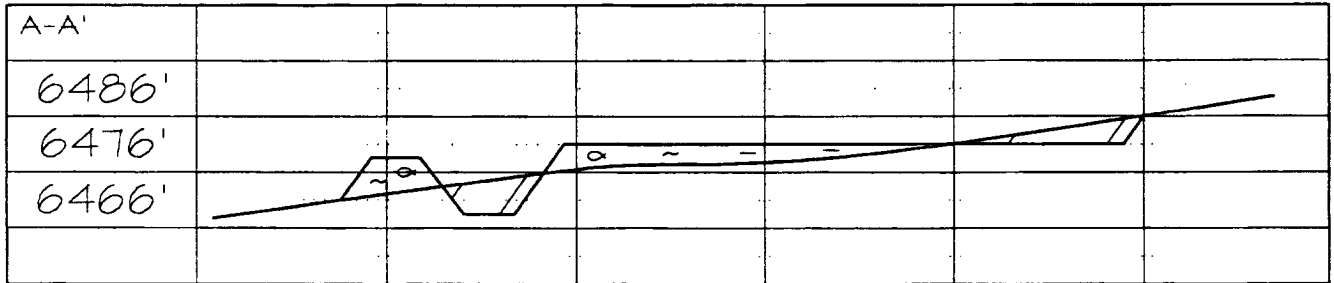
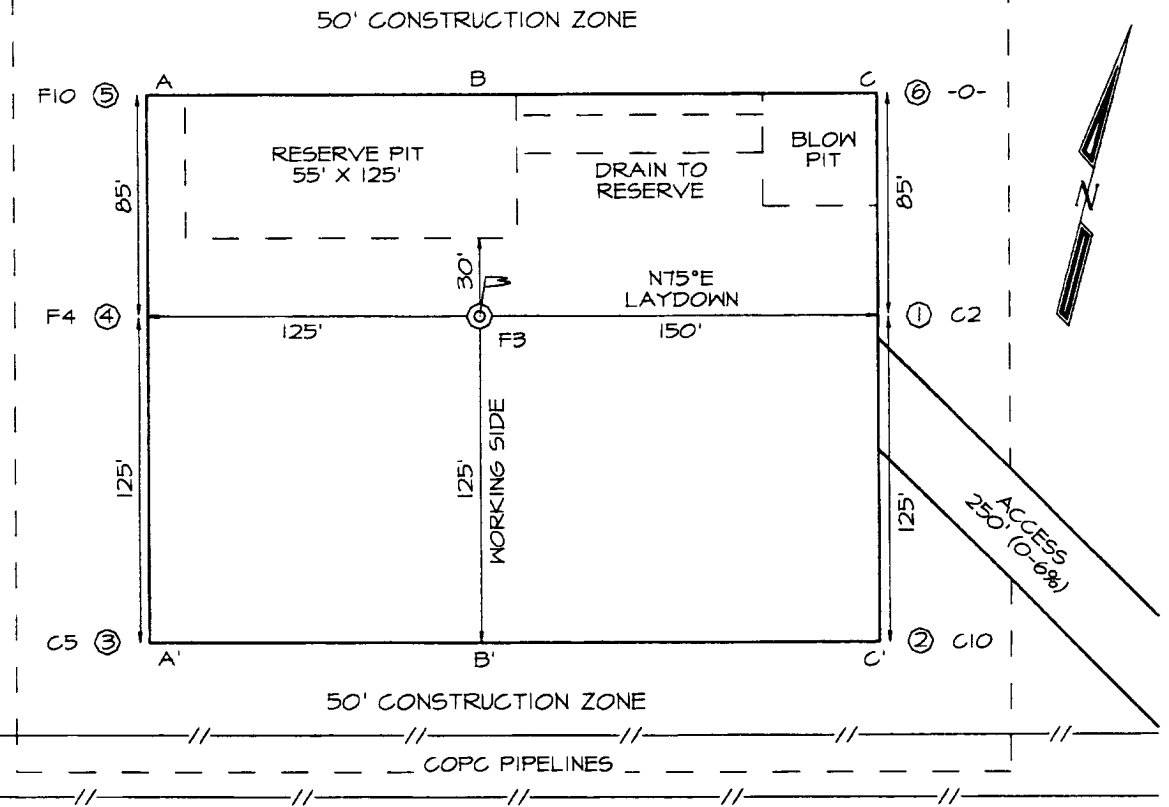
APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. III DATE DEC 12 2006  
Conditions of Approval (if any):

**CONOCOPHILLIPS COMPANY SAN JUAN 31-6 UNIT #16F**  
**855' FSL & 410' FWL, SECTION 33, T31N, R6W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6473'**

PLAT NOTE:

\*SURFACE OWNER\*  
 State of New Mexico  
 Game & Fish Dept

**LATITUDE: 36.85115° N**  
**LONGITUDE: 107.47523° W**  
 DATUM: NAD1921



# PROJECT PROPOSAL - New Drill / Sidetrack

SAN JUAN 31-6 16F

Lease:		AFE #: WAN.CNV.6207		AFE \$:	
Field Name: 31-6	Rig: H&P 283	State: NM	County: RIO ARRIBA	API #:	
Geoscientist: Glaser, Terry J	Phone: (832)486-2332	Prod. Engineer: Moody, Craig E.	Phone: 486-2334		
Res. Engineer: Tomberlin, Timothy A	Phone: (832) 486-2328	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: 36.851150	Longitude: -107.475230	X: 0.00	Y: 0.00	Section: 33	Range: 6W
Footage X: 410 FWL	Footage Y: 855 FSL	Elevation: 6473	(FT)	Township: 31N	
Tolerance:					
Location Type: Summer Only		Start Date (Est.):	Completion Date:	Date In Operation:	
Formation Data: Assume KB = 6489 Units = FT					

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	216	6273	<input type="checkbox"/>			13-1/2" hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
NCMT	1389	5100	<input type="checkbox"/>			
CJAM	2589	3900	<input type="checkbox"/>			Possible water flows.
KRLD	2689	3800	<input type="checkbox"/>			
FRLD	3129	3360	<input type="checkbox"/>			Possible gas.
PCCF	3429	3060	<input type="checkbox"/>			
LEWS	3629	2860	<input type="checkbox"/>			
Intermediate Casing	3729	2760	<input type="checkbox"/>			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.
CHRA	4579	1910	<input type="checkbox"/>			
CLFH	5399	1090	<input type="checkbox"/>			Gas; possibly wet
MENF	5439	1050	<input type="checkbox"/>			Gas.
PTLK	5684	805	<input type="checkbox"/>			Gas.
MNCS	5934	555	<input type="checkbox"/>			
CLLP	7049	-560	<input type="checkbox"/>			Gas. Possibly wet.
CRHN	7704	-1215	<input type="checkbox"/>			Gas possible, highly fractured
CBBO	7899	-1410	<input type="checkbox"/>			Gas
TOTAL DEPTH DK	8054	-1565	<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

# PROJECT PROPOSAL - New Drill / Sidetrack

**SAN JUAN 31-6 16F**

Additional Information:

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
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Comments:

**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

HOLE: 13.5 "  
 CSG OD: 9.625 "  
 CSG ID: 9.001 "  
 WGT: 32.3 ppf  
 GRADE: H-40  
 EXCESS: 125 %  
 DEPTH: 235'

**SURFACE:**  
 Option 1  
 222 sx  
 46.2 bbls  
 259.5 cuft  
 1.17 ft<sup>3</sup>/sx  
 15.8 ppg  
 4.973 gal/sx  
 Class G Cement  
 + 3% S001 Calcium Chloride  
 + 0.25 lb/sx D029 Cellophane Flakes

Option 2  
 214 sx  
 46.2 bbls  
 259.5 cuft  
 1.21 ft<sup>3</sup>/sx  
 15.6 ppg  
 5.29 gal/sx  
 Standard Cement  
 + 3% Calcium Chloride  
 + 0.25 lb/sx Floccle

Comp. Strength  
 6 hrs 250 psi  
 8 hrs 500 psi

**INTERMEDIATE LEAD:**

HOLE: 8.75 "  
 CSG OD: 7 "  
 CSG ID: 6.456 "  
 WGT: 20 ppf  
 GRADE: J-55  
 EXCESS: 150 %  
 TAIL: 745.8'  
 DEPTH: 3729'

Option 1  
 395 sx  
 191.3 bbls  
 1074.3 cuft  
 2.72 ft<sup>3</sup>/sx  
 11.7 ppg  
 15.74 gal/sx  
 Class G Cement  
 + 3% D079 Extender  
 + 0.20% D046 Antifoam  
 + 10 lb/sx Phenoseal

Option 2  
 413 sx  
 191.3 bbls  
 1074.3 cuft  
 2.60 ft<sup>3</sup>/sx  
 11.5 ppg  
 14.62 gal/sx  
 Type III Ashgrove Cement  
 + 30 lb/sx San Juan Poz  
 + 3% Bentonite  
 + 5.0 lb/sx Phenoseal

Option 3  
 408 sx  
 191.3 bbls  
 1074.3 cuft  
 2.63 ft<sup>3</sup>/sx  
 11.7 ppg  
 15.92 gal/sx  
 Class G Cement  
 + 3% D079 Extender  
 + 0.20% D046 Antifoam  
 + 1.0 lb/bbl CemNet

Comp. Strength  
 3 hrs 100 psi  
 24 hrs 443 psi

**INTERMEDIATE TAIL:**

HOLE: 6.25 "  
 CSG OD: 4.5 "  
 CSG ID: 4 "  
 WGT: 11.6 ppf  
 GRADE: N-80  
 EXCESS: 50 %  
 DEPTH: 8054'

Option 1  
 221 sx  
 51.6 bbls  
 290.0 cuft  
 1.31 ft<sup>3</sup>/sx  
 13.5 ppg  
 5.317 gal/sx  
 50/50 Poz: Class G Cement  
 + 0.25 lb/sx D029 Cellophane Flakes  
 + 3% S001 Calcium Chloride  
 + 2% D020 Bentonite  
 + 1.5 lb/sx D024 Gilsolite Extender  
 + 0.1% D046 Antifoamer  
 + 6 lb/sx Phenoseal

Option 2  
 218 sx  
 51.6 bbls  
 290.0 cuft  
 1.33 ft<sup>3</sup>/sx  
 13.5 ppg  
 5.52 gal/sx  
 50/50 Poz: Standard Cement  
 + 2% Bentonite  
 + 6.0 lb/sx Phenoseal

Option 3  
 227 sx  
 51.6 bbls  
 290.0 cuft  
 1.28 ft<sup>3</sup>/sx  
 13.5 ppg  
 5.255 gal/sx  
 50/50 Poz: Class G Cement  
 + 2% D020 Bentonite  
 + 5.0 lb/sx D024 Gilsolite Extender  
 + 2% S001 Calcium Chloride  
 + 0.1% D046 Antifoamer  
 + 0.15% D065 Dispersant  
 + 1.0 lb/bbl CemNet

Comp. Strength  
 24 hrs 1850 psi  
 48 hrs 3411 psi

**PRODUCTION:**

HOLE: 6.25 "  
 CSG OD: 4.5 "  
 CSG ID: 4 "  
 WGT: 11.6 ppf  
 GRADE: N-80  
 EXCESS: 50 %  
 DEPTH: 8054'

Option 1  
 479 sx  
 122.8 bbls  
 689.3 cuft  
 1.44 ft<sup>3</sup>/sx  
 13.0 ppg  
 6.47 gal/sx  
 50/50 Poz: Class G Cement  
 + 0.25 lb/sx D029 Cellophane Flakes  
 + 3% D020 Bentonite  
 + 1.0 lb/sx D024 Gilsolite Extender  
 + 0.25% D167 Fluid Loss  
 + 0.25% D065 Dispersant  
 + 0.1% D800 Retarder  
 + 0.1% D046 Antifoamer  
 + 3.5 lb/sx Phenoseal

Option 2  
 475 sx  
 122.8 bbls  
 689.3 cuft  
 1.45 ft<sup>3</sup>/sx  
 13.1 ppg  
 6.55 gal/sx  
 50/50 Poz: Standard Cement  
 + 3% Bentonite  
 + 0.2% CFR-3 Friction Reducer  
 + 0.1% HR-5 Retarder  
 + 0.8% Halad-9 Fluid Loss Additive  
 + 3.5 lb/sx Phenoseal

Comp. Strength  
 7 hrs 500 psi  
 24 hrs 2100 psi

Comp. Strength  
 9:32 50 psi  
 12 hrs 500 psi  
 13:29 1026 psi  
 24 hrs 2300 psi



San Juan 31-6 #16F

HOLE: 13.5 "  
CSG OD: 9.625 "  
CSG ID: 9.001 "  
WGT: 32.3 ppf  
GRADE: H-40  
EXCESS: 125 %  
DEPTH: 235'

SURFACE:

INTERMEDIATE LEAD:

Option 4

373 sx  
191.3 bbls  
1074.3 cuft  
2.88 ft<sup>3</sup>/sx  
11.5 ppg  
16.85 gal/sx  
Standard Cement  
+ 3% Econolite (Extender)  
+ 10 lb/sx Phenoseal

Comp. Strength  
1:47 50 psi  
12 hrs 350 psi  
24 hrs 450 psi

HOLE: 8.75 "  
CSG OD: 7 "  
CSG ID: 6.456 "  
WGT: 20 ppf  
GRADE: J-55  
EXCESS: 150 %  
TAIL: 745.8'

DEPTH: 3728'

INTERMEDIATE TAIL:

Option 5  
512 sx  
191.3 bbls  
1074.3 cuft  
2.10 ft<sup>3</sup>/sx  
11.7 ppg  
11.724 gal/sx  
75% Type XI / 25% Class G Cement  
+ 0.25 lb/sx D029 Celophane Flakes  
+ 3% D079 Extender  
+ 0.20% D046 Antifoam

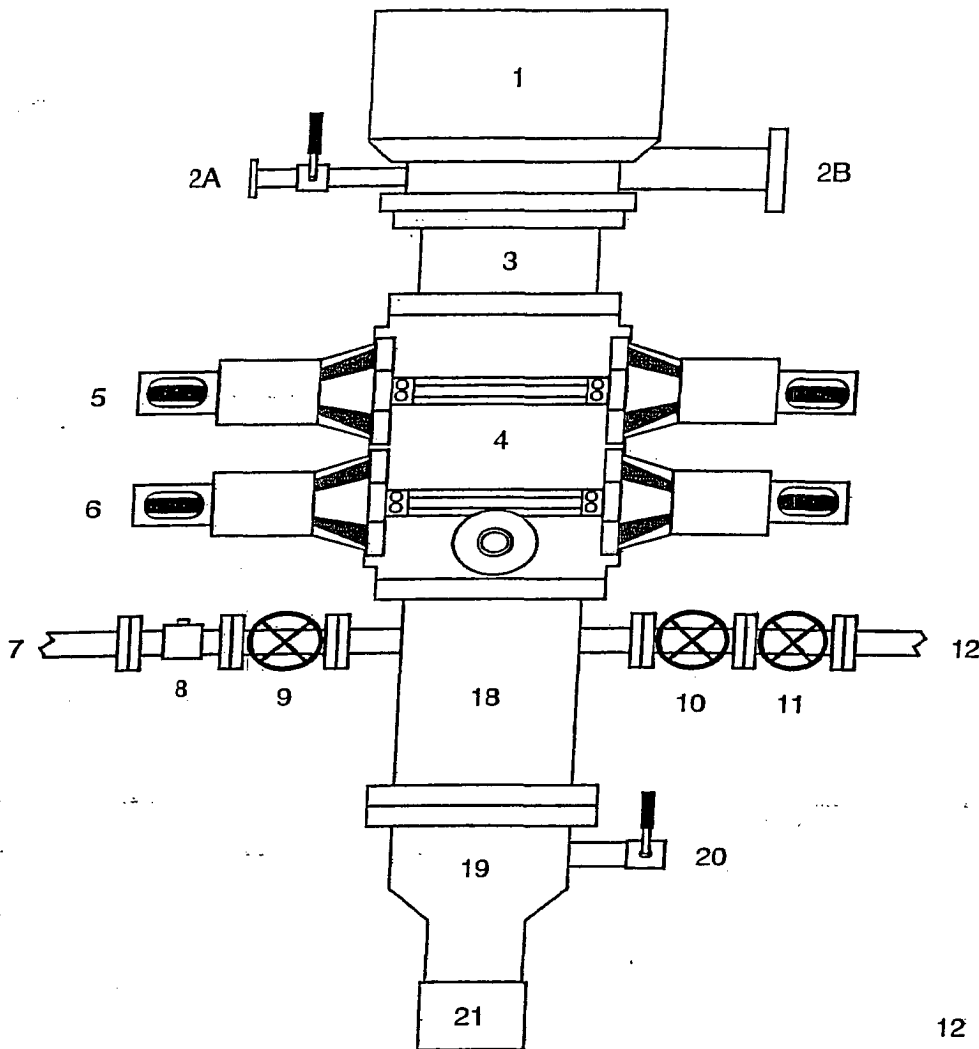
Comp. Strength  
10:56 500 psi  
42 hrs 1012 psi

HOLE: 6.25 "  
CSG OD: 4.5 "  
CSG ID: 4 "  
WGT: 11.6 ppf  
GRADE: N-80  
EXCESS: 50 %  
DEPTH: 3054'

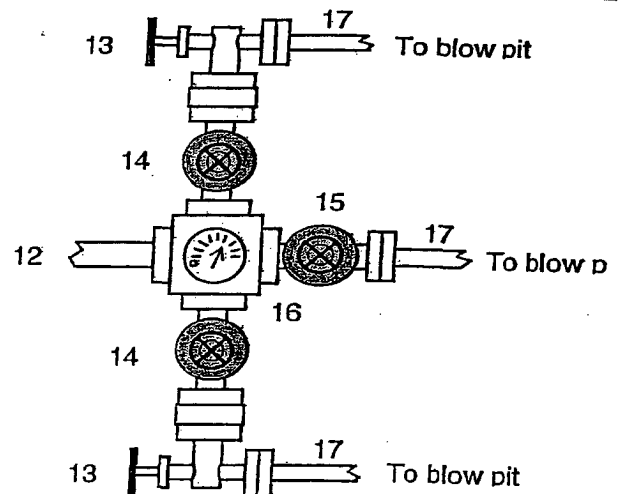
PRODUCTION:

# 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

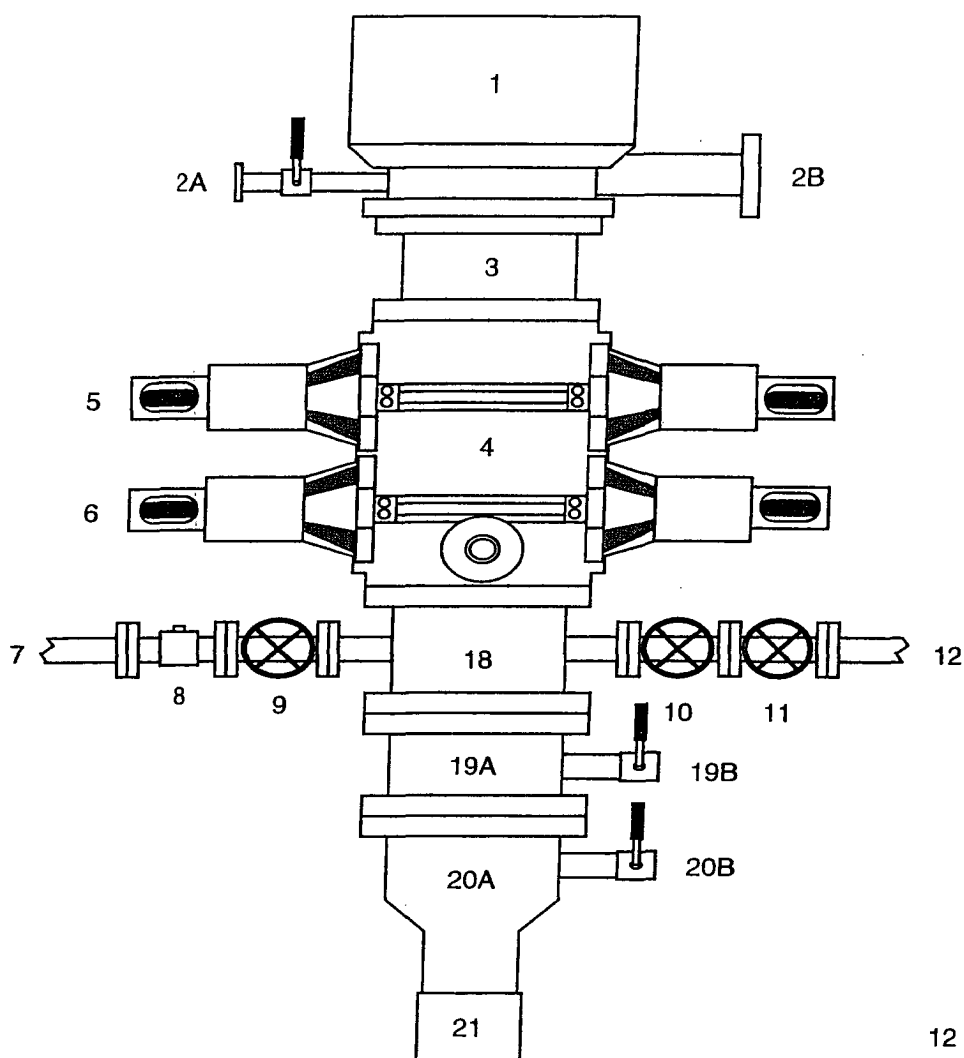


A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head 'A' Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head 'A' Section. A test plug will be set in the wellhead and the pipe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

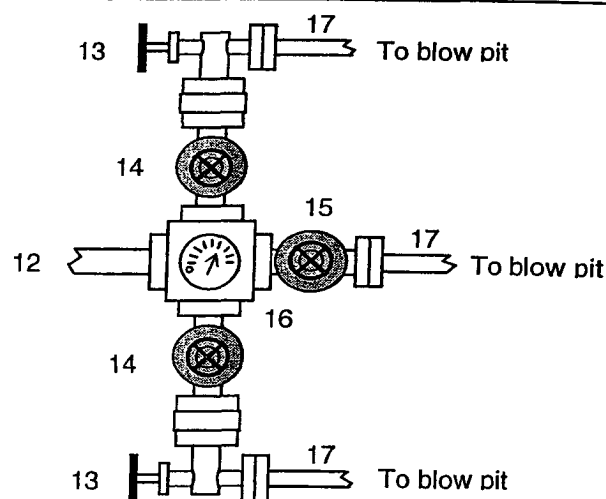
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

# BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



1. Rotating Head
- 2A. Fill-up Line & valve
- 2B. Bleeie 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