

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RCVD MAY 16 '07  
OIL CONS. DIV.  
DIST. 3

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	2006 JUN 28 PM 4 00 RECEIVED OTO FARMINGTON NM	5. Lease Number NMSF-079289-A Unit Reporting Number NMNM-078413C-DK NMNM-078413A-MU
1b. Type of Well GAS		6. If Indian, All. or Tribe
2. Operator ConocoPhillips		7. Unit Agreement Name San Juan 28-7 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700		8. Farm or Lease Name 9. Well Number #255F
4. Location of Well Unit C (NENW), 1115' Fnl & 2485' FWL,  Latitude 36° 39.9247'N Longitude 107° 33.6505'W		10. Field, Pool, Wildcat Basin Dakota / Blanco MV 11. Sec., Twn, Rge, Mer. (NMPM) C Sec. 15, T28N, R07W, NMPM API # 30-039-29980
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 1115'		
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 7355'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6146' GL	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u>Patsy Chugster</u> Sr. Regulatory Analyst	Date <u>6/28/06</u>	

PERMIT NO.

APPROVAL DATE

APPROVED BY [Signature]

TITLE AFM

DATE 5/14/07

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.

PKI  
NMOC

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

10

5/17/07

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-039-29980</b>		Pool Code <b>72319 \ 71599</b>		Pool Name <b>BLANCO MESAVERDE \ BASIN DAKOTA</b>	
Property Code <b>31739</b>		Property Name <b>SAN JUAN 28-7 UNIT</b>			Well Number <b>255F</b>
OGRID No. <b>217817</b>		Operator Name <b>CONOCOPHILLIPS COMPANY</b>			Elevation <b>6146'</b>

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot 10n	Feet from the	North/South line	Feet from the	East/West line	County
C	15	28N	7W		1115	NORTH	2485	WEST	RIO ARriba

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 10n	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 320.0 Acres - W/2 (MV) 320.0 Acres - W/2 (DK)									
					<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. <b>RCUD MAY16'07</b> <b>OIL CONS. DIV.</b> <b>DIST. 3</b>		

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

<div><p>15</p><p>2644.62'</p><p>2485'</p><p>LAT: 36°39.9247'N LONG: 107°33.6505'W DATUM: NAD27</p><p>5280.00'</p><p>15</p><p>5286.60'</p><p>LEASE SF-079289-A</p></div>	<div><p><sup>17</sup> OPERATOR CERTIFICATION</p><p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p><p><i>Virgil E. Chavez</i> Signature Virgil E. Chavez</p><p>Printed Name Projects &amp; Operations Lead</p><p>Title <i>June 28, 2006</i> Date</p></div>
	<div><p><sup>18</sup> SURVEYOR CERTIFICATION</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: AUGUST 15, 2005</p><p>Signature and Seal of Professional Surveyor</p><div><p>JASON C. EDWARDS NEW MEXICO 15269 REGISTERED PROFESSIONAL SURVEYOR</p></div><p><i>JASON C. EDWARDS</i> Certificate Number 15269</p></div>

Office

Energy, Minerals and Natural Resources

May 27, 2004

District I

WELL API NO.

30-039- *2980*

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil &amp; Gas Lease No.

Federal Lease - SF-079289A

7. Lease Name or Unit Agreement Name

San Juan 28-7 Unit

8. Well Number

#255F

9. OGRID Number

217817

10. Pool name or Wildcat

Blanco MV / Basin DK

**SUNDRIY 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 C : 1115 feet from the North line and 2485 feet from the West line  
 Section 15 Township 28N Rng 7W NMPM County Rio Arriba

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

6146' GL

Pit or Below-grade Tank Application

☐ or Closure ☐Pit type New Drill

Depth to Groundwater

100'

Distance from nearest fresh water well

>1000'

Distance from nearest surface water

*2200*<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 ☐TEMPORARILY ABANDON ☐PULL OR ALTER CASING ☐PLUG AND ABANDON ☐CHANGE PLANS ☐MULTIPLE COMPL ☐

OTHER:

REVISED SUNDRIY - New Drill ☒

## SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐COMMENCE DRILLING OPNS. ☐CASING/CEMENT JOB ☐ALTERING CASING ☐P AND A ☐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.

We are constructing Drilling and workover pits as per our General plan on file with the OCD dated June 2005 and we are closing all pits as per the November 1, 2004 Guidelines.

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

6/28/2006

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 &amp; GAS INSPECTOR, DIST. 33

DATE

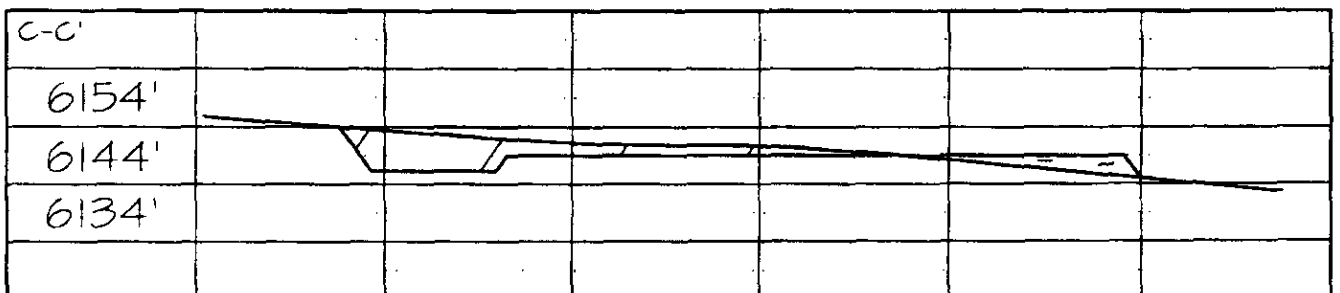
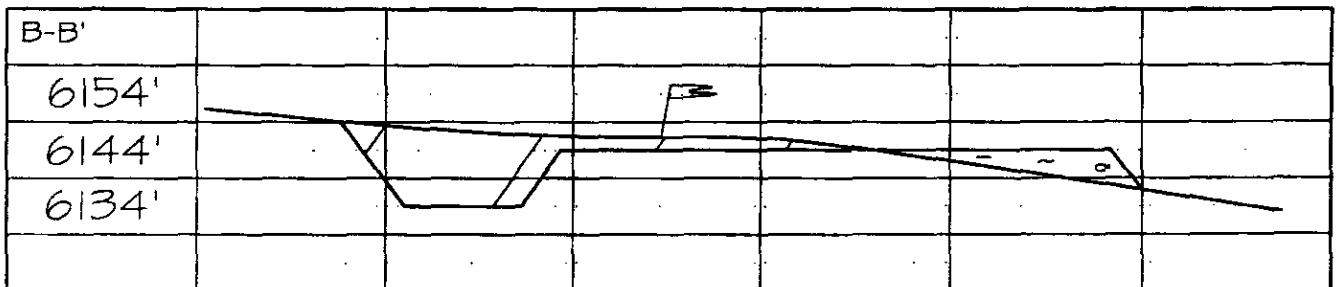
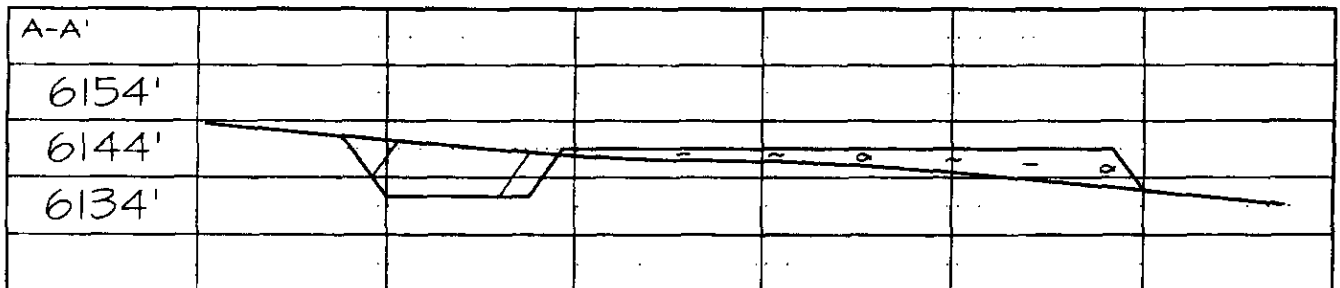
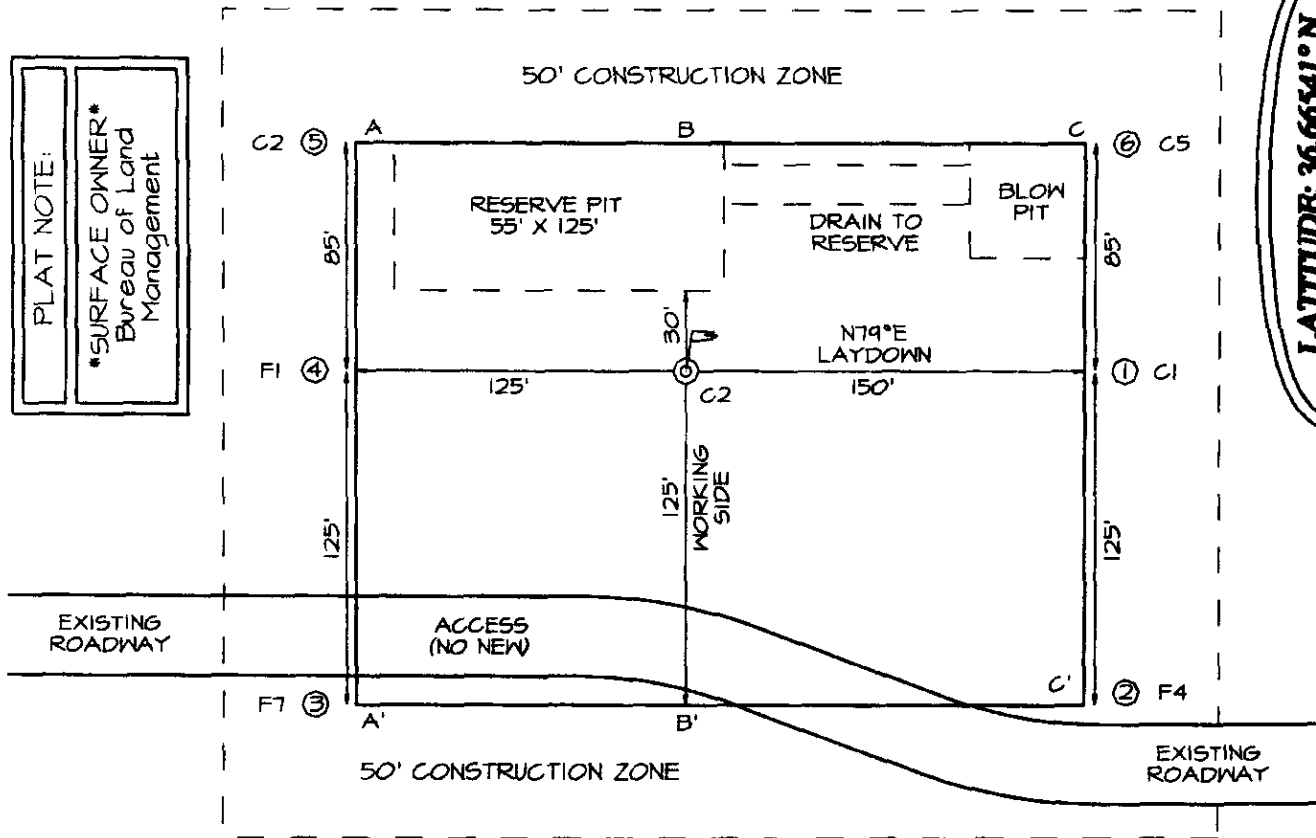
MAY 17 2007

Conditions of Approval (if any):

**CONOCOPHILLIPS COMPANY SAN JUAN 28-7 UNIT #255F**  
**1115' FNL & 2485' FWL, SECTION 15, T28N, R7W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6146'**

**LATITUDE: 36.66541° N**  
**LONGITUDE: 107.56084° W**  
 DATUM: NAD1927

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



# PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 28-7 255F

Lease:		AFE #:		AFE \$:	
Field Name: 28-7		Rig: H&P 282		State: NM	County: RIO ARRIBA
Geoscientist: Glaser, Terry J		Phone: (832)486-2332	Prod. Engineer: Fontenot, Jessie C		Phone: +1 832-486-3483
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: 36.665410	Longitude: -107.560840	X:	Y:	Section: 15	Range: 7W
Footage X: 2485 FWL		Footage Y: 1115 FNL		Elevation: 6146 (FT)	Township: 28N
Tolerance:					

Location Type: Year Round	Start Date (Est.):	Completion Date:	Date In Operation:
Formation Data: Assume KB = 6165 Units = FT			

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	216	5949	<input type="checkbox"/>			12-1/4 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
NCMT	815	5350	<input type="checkbox"/>			
OJAM	1965	4200	<input type="checkbox"/>			Possible water flows.
KRLD	2135	4030	<input type="checkbox"/>			
FRLD	2595	3570	<input type="checkbox"/>			Possible gas.
PCCF	2865	3300	<input type="checkbox"/>			
LEWS	3065	3100	<input type="checkbox"/>			
Intermediate Casing	3165	3000	<input type="checkbox"/>			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.
CHRA	3800	2365	<input type="checkbox"/>			
CLFH	4490	1675	<input type="checkbox"/>			Gas; possibly wet
MENF	4650	1515	<input type="checkbox"/>			Gas.
PTLK	5065	1100	<input type="checkbox"/>			Gas.
GLLP	6305	-140	<input type="checkbox"/>			Gas. Possibly wet.
GRHN	7005	-840	<input type="checkbox"/>			Gas possible, highly fractured
TWLS	7095	-930	<input type="checkbox"/>			Gas
CBBO	7190	-1025	<input type="checkbox"/>			Gas
TOTAL DEPTH DK	7355	-1190	<input type="checkbox"/>			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 28-7 255F**

Additional Information:

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
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Comments: Location/Tops/Logging - Location is in an ACEC. See Zones tab for location comments.

Zones - In MV & DK PA. N/2 NW/4 of Section is ACEC. The requested location is on a road, off the drainage axis, near the ACEC edge. IF this will not get us ACEC relief, move (surface) location to ~750 FNL & ~2630 FEL (500' N of road & just far enough FEL to keep pad in NE/4 & out of ACEC). We will then need to kick the well to the west to a BHL ~750' FNL & ~2630' FWL.

HOLE: 12.25 "  
CSG OD: 9.625 "  
CSG ID: 9.001 "  
WGT: 32.3 ppg  
GRADE: H-40  
EXCESS: 125 %  
DEPTH: 235'

SURFACE:  
Option 1  
148 sx  
30.8 bbls  
172.9 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  
143 sx  
30.8 bbls  
172.9 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

Option 3  
65 sx  
18.6 bbls  
104.3 cuft  
1.61 ft<sup>3</sup>/sx  
14.5 ppg  
7.41 gal/sx  
Type II Ready Mix  
+ 20% Fly Ash

Comp. Strength  
6 hrs 250 psi  
8 hrs 500 psi

Comp. Strength  
8 hrs 475 psi  
24 hrs 1375 psi

INTERMEDIATE LEAD:

HOLE: 8.75 "  
CSG OD: 7 "  
CSG ID: 6.456 "  
WGT: 20 ppg  
GRADE: J-55  
EXCESS: 150 %  
TAIL: 633'  
DEPTH: 3165'

Option 1  
333 sx  
161.1 bbls  
904.7 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  
348 sx  
161.1 bbls  
904.7 cuft  
2.60 ft<sup>3</sup>/sx  
11.5 ppg  
14.62 gal/sx  
Type III Asgrove Cement  
+ 30 lb/sx San Juan Poz  
+ 3% Bentonite  
+ 5.0 lb/sx Phenoseal

Option 3  
344 sx  
161.1 bbls  
904.7 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  
9 hrs 300 psi  
48 hrs 525 psi

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

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 ppg  
GRADE: N-80  
EXCESS: 50 %  
DEPTH: 7355'

Option 1  
189 sx  
44.1 bbls  
247.5 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 Gilsomite Extender  
+ 0.1% D046 Antifoamer  
+ 6 lb/sx Phenoseal

Option 2  
186 sx  
44.1 bbls  
247.5 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  
193 sx  
44.1 bbls  
247.5 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 Gilsomite Extender  
+ 2% S001 Calcium Chloride  
+ 0.1% D046 Antifoamer  
+ 0.15% D065 Dispersant  
+ 1.0 lb/bbl CemNet

Comp. Strength  
2:05 50 psi  
4:06 500 psi  
12 hrs 1250 psi  
24 hrs 1819 psi

Comp. Strength  
24 hrs 1850 psi  
48 hrs 3411 psi

PRODUCTION:

Option 1  
464 sx  
119.1 bbls  
668.5 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 Gilsomite Extender  
+ 0.25% D167 Fluid Loes  
+ 0.25% D065 Dispersant  
+ 0.1% D800 Retarder  
+ 0.1% D046 Antifoamer  
+ 3.5 lb/sx Phenoseal

Option 2  
481 sx  
119.1 bbls  
668.5 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% Helad-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

HOLE: 12.25 "  
CSG OD: 9.625 "  
CSG ID: 9.001 "  
WGT: 32.3 ppf  
GRADE: H-40  
EXCESS: 125 %  
DEPTH: 235'

HOLE: 8.75 "  
CSG OD: 7 "  
CSG ID: 6.456 "  
WGT: 20 ppf  
GRADE: J-55  
EXCESS: 150 %  
TAIL: 633'  
DEPTH: 3165'

HOLE: 6.25 "  
CSG OD: 4.5 "  
CSG ID: 4 "  
WGT: 11.6 ppf  
GRADE: N-80  
EXCESS: 50 %  
DEPTH: 7355'

SURFACE:

INTERMEDIATE LEAD:

Option 4

314 sx  
161.1 bbls  
904.7 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

Option 5

431 sx  
161.1 bbls  
904.7 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 Cellophane Flakes  
+ 3% D079 Extender  
+ 0.20% D046 Antifoam

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

INTERMEDIATE TAIL:

PRODUCTION:



**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:**

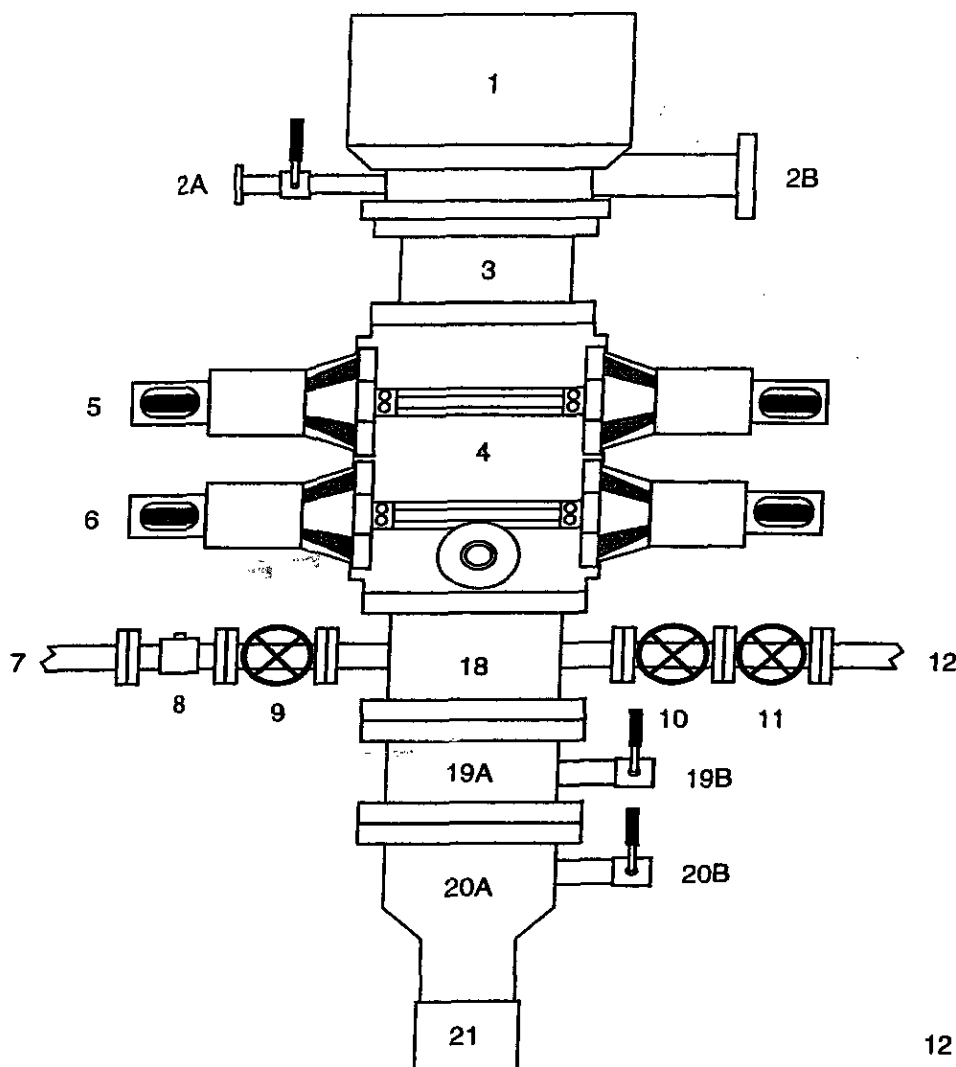
Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2<sup>nd</sup>, 3<sup>rd</sup>, & 4<sup>th</sup> joints

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

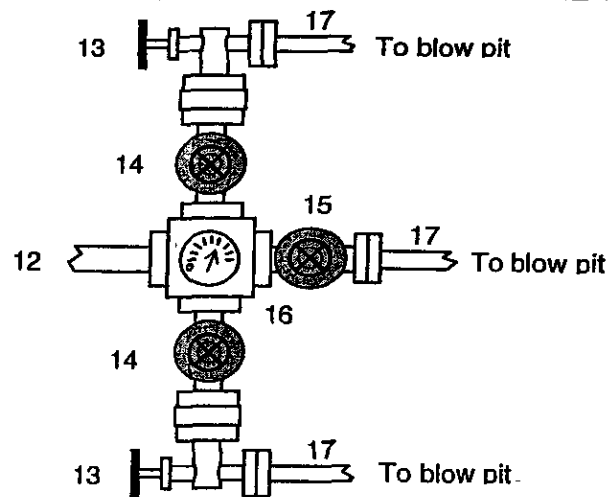
Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

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

### For Drilling to TD and Setting 4.5 inch Casing



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



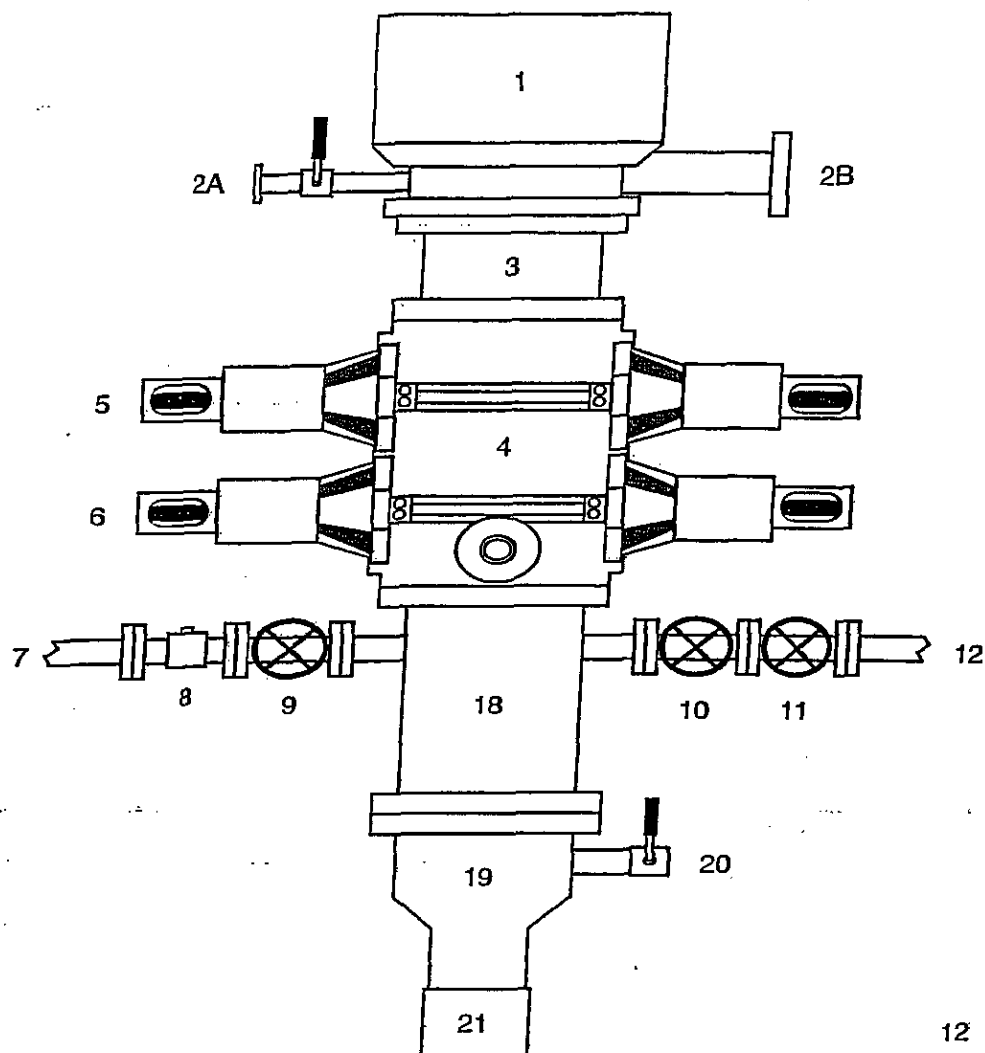
After the 7" intermediate casing has been run and cemented, the Casing Spool ("B" Section) will be installed on the wellhead ("A" Section) and the BOP will be installed on the Casing Spool. A test plug will be set in the wellhead and the pipe rams, blind rams, and choke manifold will be tested to 200 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:

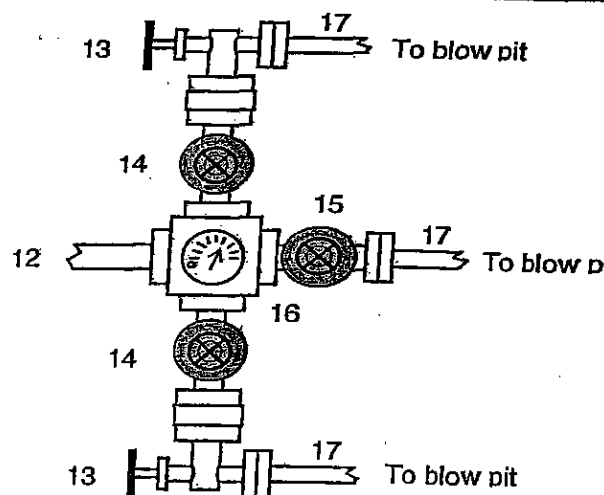
1. Upper Kelly cock Valve with handle
2. Stab-in TIW valve for all drillstrings in use

# 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: