

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number NMSF-078781 Unit-Reporting Number 070 FARMINGTON NM	
1b. Type of Well GAS	6. If Indian, All. or Tribe	
2. Operator ConocoPhillips	7. Unit Agreement Name	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name	
4. Location of Well Unit J (NWSE), 2075 FSL & 2155' FWL, Latitude 36° 83975'N Longitude 108° 03032'W	9. Well Number Bruington LS #4M 10. Field, Pool, Wildcat Blanco MV / Basin DK 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 6, T30N, R11W API # 30-045-33877	
14. Distance in Miles from Nearest Town	12. County San Juan	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 450'	17. Acres Assigned to Well 314.26 EP MV 320.48 SP DK	
16. Acres in Lease	18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease	
19. Proposed Depth 6898'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 5807' GL	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u>Peter Chught</u> Sr. Regulatory Analyst	Date <u>7/3/06</u>	

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
APPROVED BY [Signature] TITLE AFU DATE 10/6/06

Archaeological Report submitted

Environmental Assessment was submitted.

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 3105.3 and appeal pursuant to 43 CFR 3105.4

HOLD C104 FOR NSL

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

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>30-045-33877</b>		*Pool Code <b>72319 / 71599</b>		*Pool Name <b>BLANCO MESAVERDE / BASIN DAKOTA</b>	
*Property Code <b>31799</b>		*Property Name <b>BRUINGTON LS</b>			*Well Number <b>4M</b>
*OGRID No <b>217817</b>		*Operator Name <b>CONOCOPHILLIPS COMPANY</b>			*Elevation <b>5807'</b>

<sup>10</sup> Surface Location

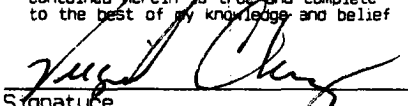

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	6	30N	11W	14	2075	SOUTH	2155	EAST	SAN JUAN

<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 <b>314.26 Acres - E/2 (MV) 320.45 Acres - S/2 (DK)</b>	<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>16</sup> 1331.22' 1280.40' 2638.02' 1310.76'		<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.  Signature Virgil E. Chavez Printed Name Projects & Operations Lead Title <u>June 28, 2006</u> Date	
1298.88' LOT 4 LOT 10 LOT 9 LOT 8 1300.86'			
1298.22' LOT 5 LOT 11 LOT 12			
2632.74' LOT 6 LEASE FEE LOT 15 LEASE SF-078781 1381.38' 1303.50'			
LOT 14 LOT 13 2155' LEASE SF-078781 2557.50'			
2607.00' 2075' 450' 510' LAT: 36.83975° N LONG: 108.03032° W DATUM: NAD83		<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. Date of Survey: MARCH 10, 2006 Signature and Seal of Professional Surveyor  <b>JASON C. EDWARDS</b> 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.

30-045- 33877

5. Indicate Type of Lease

STATE ☐

FEE ☐

6. State Oil & Gas Lease No.

Federal Lease - SF-078781

7. Lease Name or Unit Agreement Name

Bruington LS

8. Well Number

#4M

9. OGRID Number

217817

10. Pool name or Wildcat

Blanco Mesaverde / Basin DK

### 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 K : 2075' feet from the South line and 2155' feet from the East line

Section 6 Township 30N Rng 11W NMPM County San Juan

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

5807' 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 >1000'

Pit Liner Thickness:

12

mil

Below-Grade Tank:

Volume

bbbs;

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 ☐

#### SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐

COMMENCE DRILLING OPNS. ☐

CASING/CEMENT JOB ☐

ALTERING CASING ☐

P AND A ☐

OTHER:

New Drill ☒

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 Specialist

DATE

6/29/2006

Type or print name

Patsy Clugston

E-mail address:

plclugston@br-inc.com

Telephone No.

505-326-9518

For State Use Only

APPROVED BY

*[Signature]*

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. 6

DATE

OCT 06 2006

Conditions of Approval (if any):

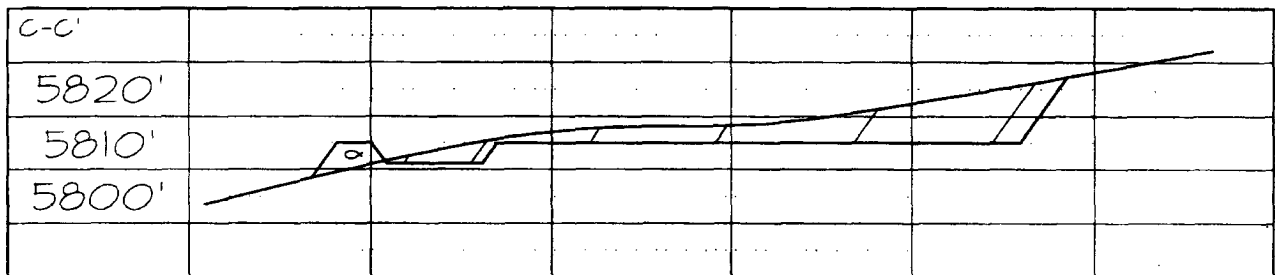
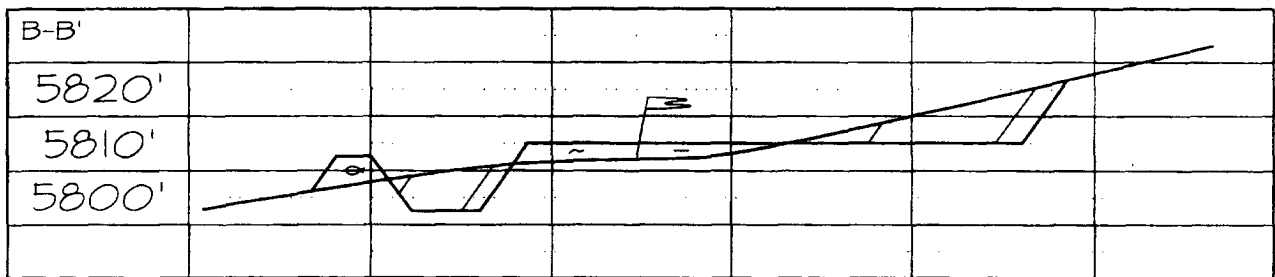
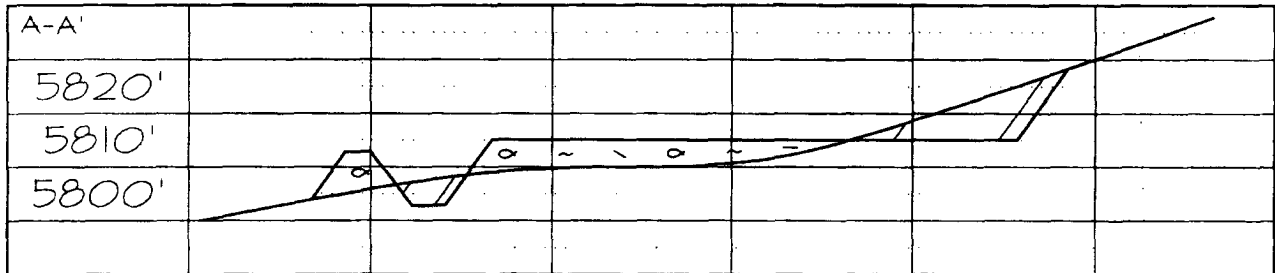
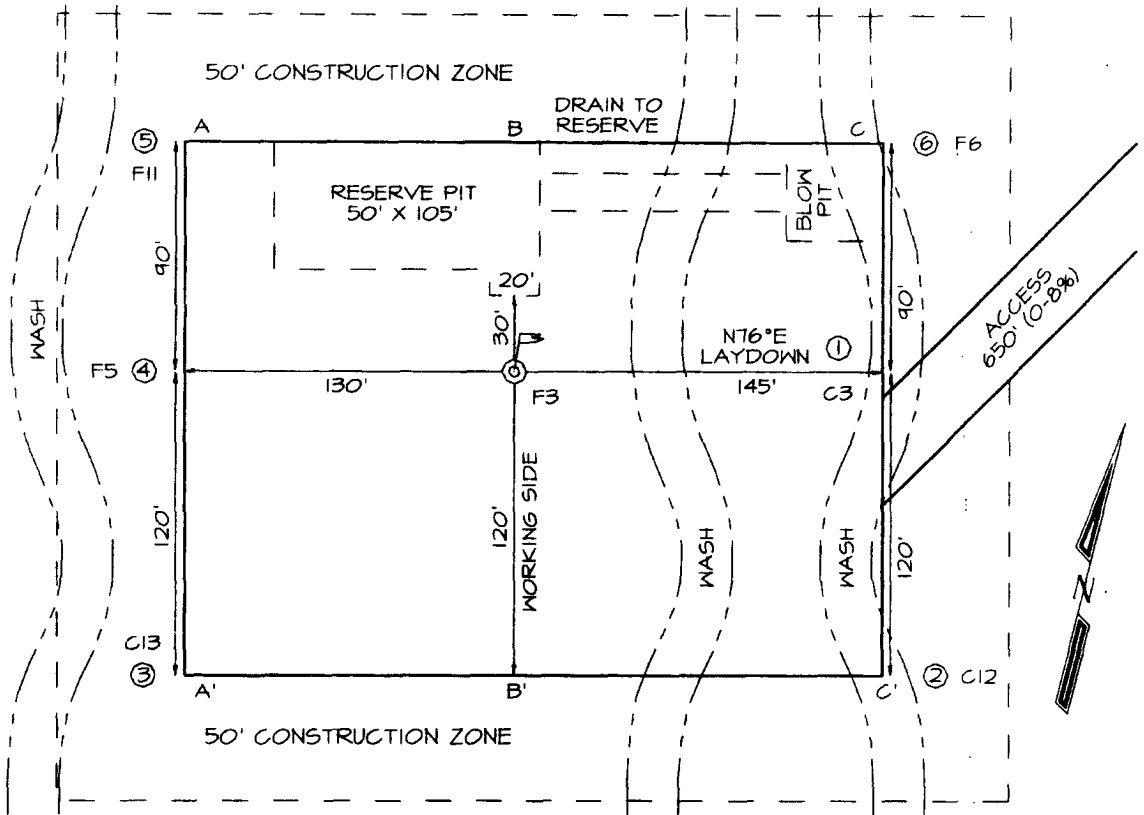
B 10/11

**CONOCOPHILLIPS COMPANY BRUINGTON LS #4M**  
**2075' FSL & 2155' FEL, SECTION 6, T30N, R11W, NMPM**  
**SAN JUAN COUNTY, NEW MEXICO ELEVATION: 5807'**

**LATITUDE: 36.83975° N**  
**LONGITUDE: 108.03032° W**  
 DATUM: NAD1983

PLAT NOTE:

\*SURFACE OWNER\*  
 Bureau of Land  
 Management



# PROJECT PROPOSAL - New Drill / Sidetrack

BRUINGTON LS 4M

Lease:		AFE #: WAN.CNV.6140		AFE \$:	
Field Name: NEW MEXICO-WEST		Rig: 486-0597	State: NM	County: SAN JUAN	API #:
Geoscientist: Brain, Ted H.		Phone: 832-486-2592	Prod. Engineer: Piotrowicz, Greg M.		Phone: +1 832-486-3486
Res. Engineer: Harrington, Tim R.		Phone: 832-486-2207	Proj. Field Lead: Fransen, Eric E.		Phone:
<b>Primary Objective (Zones):</b>					

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

<b>Location:</b> Surface		<b>Datum Code:</b> NAD 27			<b>Straight Hole:</b>	
Latitude: 36.839750	Longitude: -108.030320	X:	Y:	Section: 6	Range: 11W	
Footage X: 2155 FEL	Footage Y: 2075 FSL	Elevation: 5807	(FT)	Township: 30N		
Tolerance:						

Location Type: Year Round	Start Date (Est.):	Completion Date:	Date In Operation:
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Formation Data: Assume KB = 5823 Units = FT

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	216	5607	<input type="checkbox"/>			12-1/4 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
OJAM	673	5150	<input type="checkbox"/>			Possible water flows.
KRLD	943	4880	<input type="checkbox"/>			
FRLD	1923	3900	<input type="checkbox"/>			Possible gas.
PCCF	2243	3580	<input type="checkbox"/>			
LEWS	2443	3380	<input type="checkbox"/>			
Intermediate Casing	2543	3280	<input type="checkbox"/>			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.
CLFH	3933	1890	<input type="checkbox"/>			Gas; possibly wet
MENF	3998	1825	<input type="checkbox"/>			Gas.
PTLK	4548	1275	<input type="checkbox"/>			Gas.
GLLP	6053	-230	<input type="checkbox"/>			Gas.
GRHN	6543	-720	<input type="checkbox"/>			Gas possible, highly fractured
TWLS	6663	-840	<input type="checkbox"/>			Gas
PAGU	6723	-900	<input type="checkbox"/>			Gas. Highly Fractured.
TOTAL DEPTH DK	6898	-1075	<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.
Total Depth	6898	-1075	<input type="checkbox"/>			6-1/4" hole possibly underreamed to 9.5" Optional Liner 5.5", 15.5#, J-55, LTC, left uncemented.

<b>Reference Wells:</b>		
Reference Type	Well Name	Comments

## Logging Program:

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

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

Additional Information:

Printed on: 7/3/2006 11:09:53 AM

HOLE: 12.25 "  
CSG OD: 9.625 "  
CSG ID: 9.001 "  
WGT: 32.3 ppf  
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 Floceal

Comp. Strength  
6 hrs 250 psi  
8 hrs 500 psi

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 I-II Ready Mix  
+ 20% Fly Ash

Comp. Strength  
8 hrs 475 psi  
24 hrs 1375 psi

**INTERMEDIATE LEAD:**

Option 1  
264 sx  
127.8 bbls  
717.6 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  
276 sx  
127.8 bbls  
717.6 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

Comp. Strength  
9 hrs 300 psi  
48 hrs 525 psi

Option 3  
273 sx  
127.8 bbls  
717.6 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

HOLE: 8.75 "  
CSG OD: 7 "  
CSG ID: 6.456 "  
WGT: 20 ppf  
GRADE: J-55  
EXCESS: 150 %  
TAIL: 508.6'  
DEPTH: 2543'

**INTERMEDIATE TAIL:**

Option 1  
153 sx  
35.8 bbls  
200.8 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 Gilsonite Extender  
+ 0.1% D046 Antifoamer  
+ 6 lb/sx Phenoseal

Option 2  
151 sx  
35.8 bbls  
200.8 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

Comp. Strength  
3:53 500 psi  
8:22 1000 psi  
24 hrs 3170 psi  
48 hrs 5399 psi

Option 3  
157 sx  
35.8 bbls  
200.8 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 Gilsonite 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

HOLE: 6.25 "  
CSG OD: 4.5 "  
CSG ID: 4 "  
WGT: 11.6 ppf  
GRADE: N-80  
EXCESS: 50 %  
DEPTH: 6998'

**PRODUCTION:**

Option 1  
482 sx  
123.6 bbls  
693.9 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 Gilsonite 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  
479 sx  
123.6 bbls  
693.9 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-3 Retarder  
+ 0.8% Halad-9 Fluid Loss Additive  
+ 3.5 lb/sx Phenoseal

Comp. Strength  
7 hrs 500 psi  
24 hrs 2100 psi

Bruington LS #4M

SURFACE:

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

INTERMEDIATE LEAD:

Option 4

249 sx  
127.8 bbls  
717.6 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: 508.6'  
DEPTH: 2543'

Option 5

342 sx  
127.8 bbls  
717.6 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:

HOLE: 6.25 "  
CSG OD: 4.5 "  
CSG ID: 4 "  
WGT: 11.6 ppf  
GRADE: N-80  
EXCESS: 50 %  
DEPTH: 6898'

**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

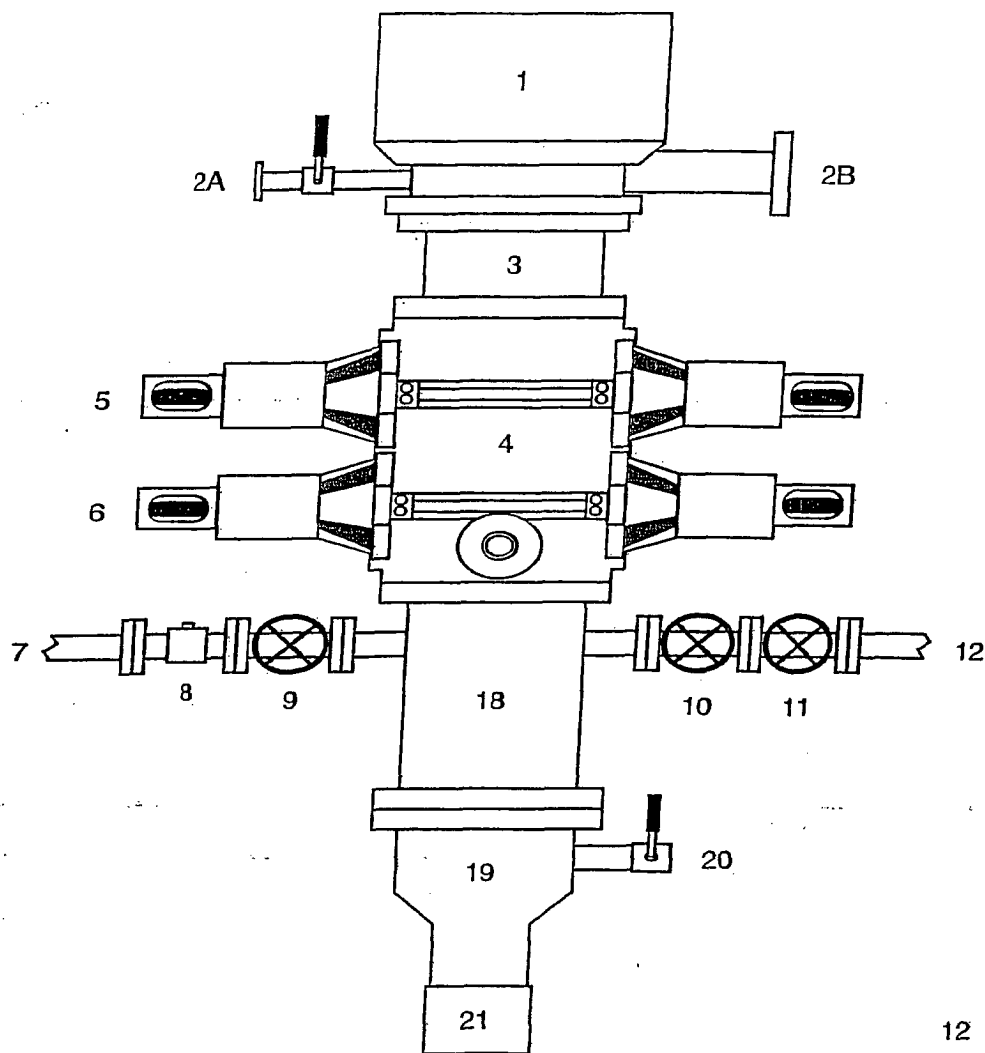
Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

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

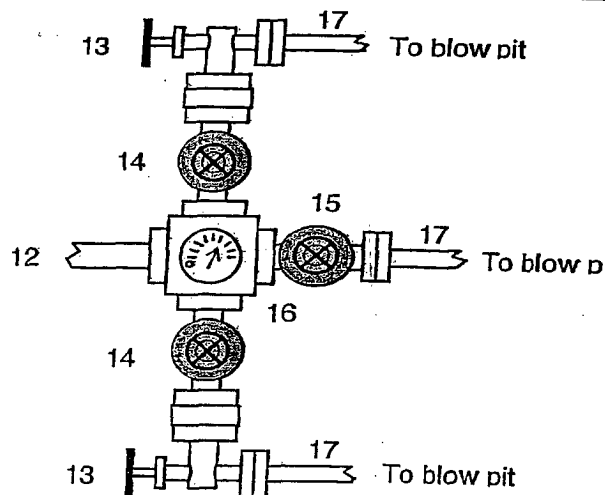


# BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

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

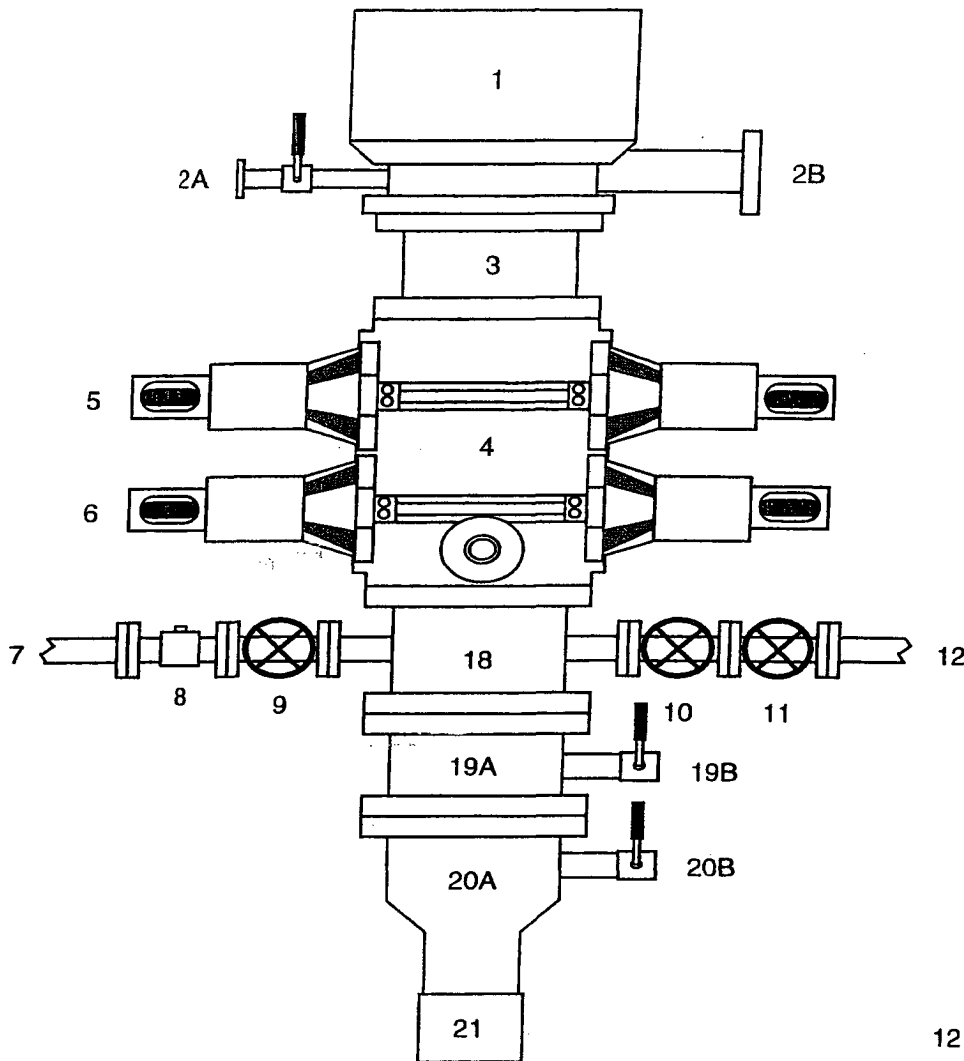


A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe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

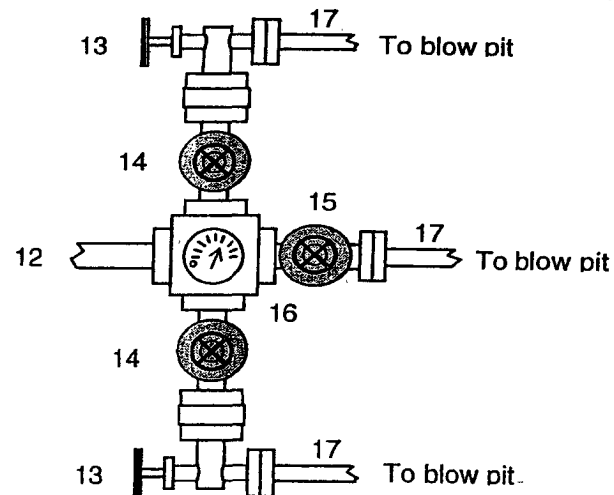
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

# BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



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