

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2006 OCT 10 PM 3 41

1a. Type of Work DRILL	5. Lease Number SF-080245 Unit Reporting Number
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 87493 (505) 326-9700	8. Farm or Lease Name Hamner 9. Well Number #2M
4. Location of Well Unit E (SWNW), 1695' FNL & 636' FWL, Latitude 36° 41.56.45790 N Longitude 107° 47.25.56190 W	10. Field, Pool, Wildcat Basin DK/Blanco MV 11. Sec., Twn, Rge, Mer. (NMPM) E Sec. 28, T29N, R9W API # 30-045-33995
14. Distance in Miles from Nearest Town 3 miles/Blanco	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 636'	
16. Acres in Lease	17. Acres Assigned to Well DK & MV - 320 - (W/2)
18. Distance from Proposed Location to Nearest Well, Drilg, Compl, or Applied for on this Lease 1100' Hamner#5/PC	
19. Proposed Depth 6675'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 5728' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	RCVD JUN14'07 OIL CONS. DIV. DIST. 3
24. Authorized by: Rhonda Rogers (Regulatory Assistant)	10-9-06 Date

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

Archaeological Report attached

Threatened and Endangered Species Report 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.

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

NMOCD

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.8
and appeal pursuant to 43 CFR 3165.4

District I

1625 N. Fr. ach Dr., Hobbs, NM 88240

District II

1361 W. Grand Avenue, 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 & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Fee Lease - 3 Copies

State Lease - 7 Copies

Submit to Appropriate District Office

Revised June 10, 2003

Form C-102

2006 OCT 10 PM 3 41

☐ AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

CITY, NEW MEXICO

¹ API Number 30-045- 33995	² Pool Code 71599	³ Pool Name Blanco Mesaverde/Basin Dakota (R20076)
⁴ Property Code A706609 MW/DK	⁵ Property Name HAMNER	⁶ Well Number 2M
⁷ OGRID No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY	⁹ Elevation 5,728.2'

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
E	28	29-N	9-W		1695	NORTH	636	WEST	SAN JUAN

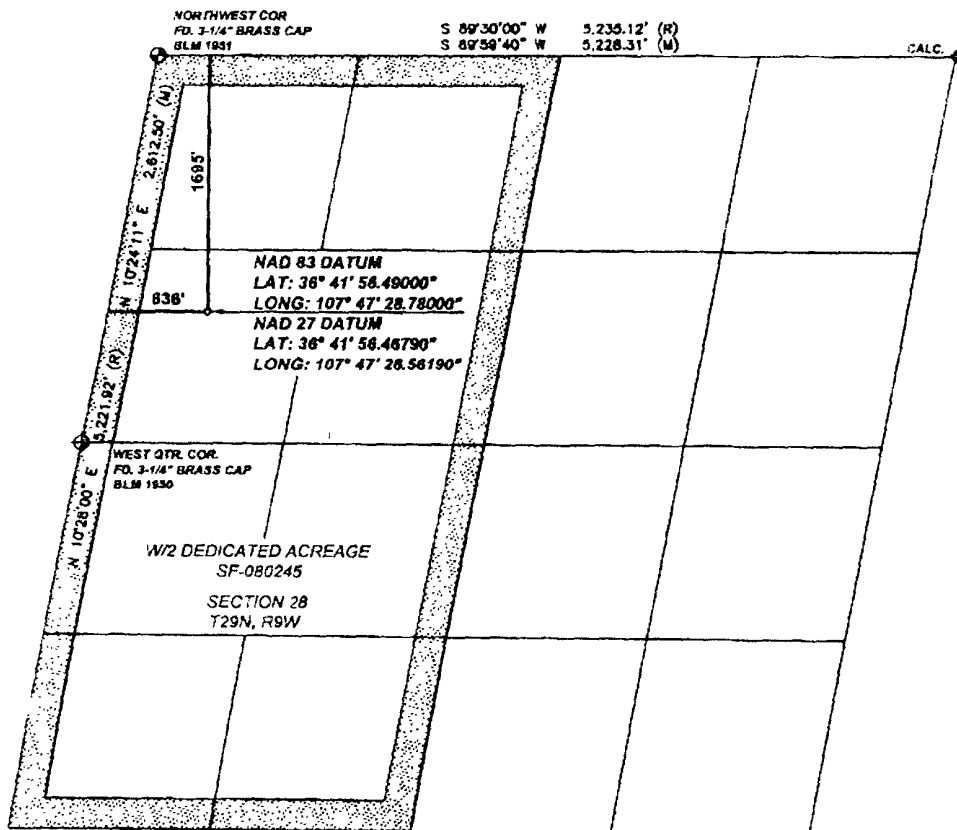
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E									

¹² Dedicated Acres 320	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

¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Amanda Sanchez
Signature

Amanda Sanchez

Printed Name
Regulatory Analyst

Title and E-mail Address
September 1 2006

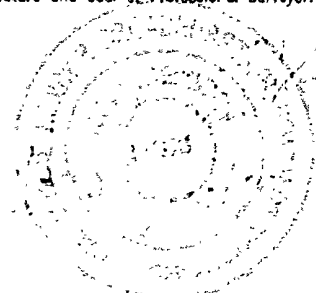
Date

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: 6/15/06

Signature and Seal of Professional Surveyor:



Certificate Number: NM 11393

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

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1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

2006 OCT 10 PM 3:41

WELL API NO.

30-045-33995

5. Indicate Type of Lease

STATE ☐

FEE ☐

6. State Oil & Gas Lease No.

41

SF-080245

7. Lease Name or Unit Agreement Name

NM

Hamner

8. Well Number

#2M

9. OGRID Number

217817

10. Pool name or Wildcat

Basin DK/Blanco MV

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

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter E : 1695 feet from the North line and 636 feet from the West line
Section 28 Township 29N Rng 9W NMPM County San Juan

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

5728

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 <200'

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:

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.

New Drill, Lined:

ConocoPhillips proposes to construct a new drilling pit and an associated vent/flare pit. Based on Burlington's interpretation of the Ecosphere's risk ranking criteria, the new drilling pit will be a lined pit as detailed in Burlington's Revised Drilling / Workover Pit Construction / Operation Procedures dated November 11, 2004 on file at the NMOCD office. A portion of the vent/flare pit will be designed to manage fluids and that portion will be lined as per the risk ranking criteria. Burlington Resources anticipates closing these pits according to the Drilling / Workover Pit Closure Procedure dated August 2, 2004 on file at the NMOCD office.

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

Rhonda Rogers

TITLE

Regulatory Assistant

DATE

10/4/2006

Type or print name

Rhonda Rogers

E-mail address:

rhonda.s.rogers@conocophillips.com

Telephone No.

505-599-4018

For State Use Only

APPROVED BY

[Signature]

TITLE

Deputy Oil & Gas Inspector,
District #3

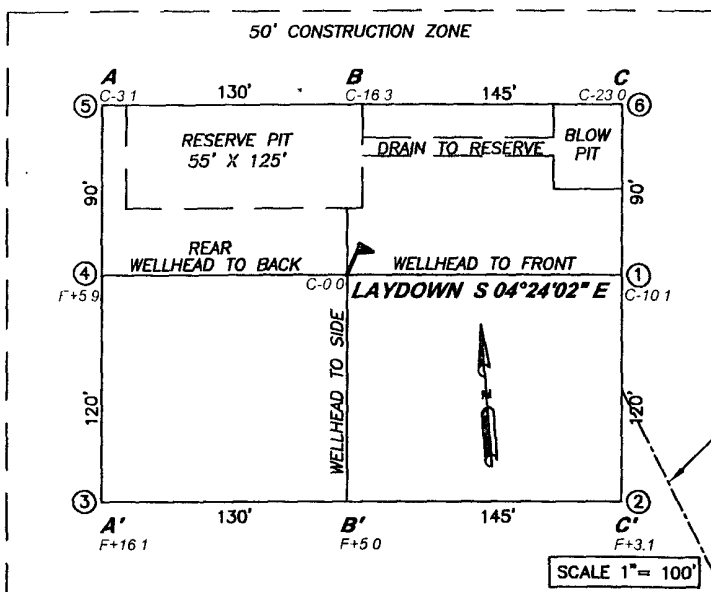
DATE

JUN 28 2007

Conditions of Approval (if any):

NAD 27 DATUM
LAT: 36° 41' 56.46700"
LONG: 107° 47' 26.56190"

NAD 83 DATUM
LAT: 36° 41' 56.49000"
LONG: 107° 47' 28.78000"



CONOCOPHILLIPS COMPANY

HAMNER 2M
1695' FNL, 636' FWL
SECTION 28, T29N, R9W,
SAN JUAN COUNTY, NEW MEXICO
ELEV.: 5,728.2' NADV88

A - A'

C/L

5740

5730

5720

5710

150'

100'

50'

C/L

50'

100'

150'

HORIZ. SCALE 1" = 50'
VERT. SCALE 1" = 30'

B - B'

5740

5730

5720

5710

150'

100'

50'

C/L

50'

100'

150'

HORIZ. SCALE 1" = 50'
VERT. SCALE 1" = 30'

C - C'

C/L

5740

5730

5720

5710

150'

100'

50'

C/L

50'

100'

150'

HORIZ. SCALE 1" = 50'
VERT. SCALE 1" = 30'

NOTE: CCI IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES

CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD PRIOR TO CONSTRUCTION

REVISIONS			
NO	DESCRIPTION	REVISED BY	DATE

CCI

1300 W BROADWAY
BLOOMFIELD, NM, 87413
PHONE (505)632-7777

CHENAULT CONSULTING INC.

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

HAMNER 2M

Lease:	AFE #: WAN.CNV.7110			AFE \$:
Field Name: NEW MEXICO-WEST	Rig: H&P 281 - DE Shon Robinson	State: NM	County: SAN JUAN	API #:
Geoscientist: Brain, Ted H.	Phone: 832-486-2592	Prod. Engineer:	Phone: 486-2334	
Res. Engineer: Harrington, Tim R.	Phone: 832-486-2207	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: 36.699000	Longitude: -107.790700	X:	Y:	Section: 28
Footage X: 636 FWL	Footage Y: 1695 FNL	Elevation: 5728 (FT)	Township: 29N	

Tolerance:

Location Type: Year Round	Start Date (Est.):	Completion Date:	Date In Operation:
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Formation Data: Assume KB = 5744 Units = FT

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
SURFACE CSG	216	5528	<input type="checkbox"/>			13-1/2" or 12-1/4 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
OJAM	988	4756	<input type="checkbox"/>			Possible water flows.
KRLD	1146	4598	<input type="checkbox"/>			
FRLD	1872	3872	<input type="checkbox"/>			Possible gas.
PCCF	2132	3612	<input type="checkbox"/>			
LEWS	2329	3415	<input type="checkbox"/>			
Intermediate Casing	2855	2889	<input type="checkbox"/>			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.
CHRA	3114	2630	<input type="checkbox"/>			
CLFH	3790	1954	<input type="checkbox"/>			Gas; possibly wet
MENF	3819	1925	<input type="checkbox"/>			Gas.
PTLK	4404	1340	<input type="checkbox"/>			Gas.
GLLP	5469	275	<input type="checkbox"/>			Gas. Possibly wet.
GRHN	6351	-607	<input type="checkbox"/>			Gas. Possibly wet.
TWLS	6484	-740	<input type="checkbox"/>			Gas
PAGU	6506	-762	<input type="checkbox"/>			Gas. Highly Fractured.
CBBO	6548	-804	<input type="checkbox"/>			Gas
CBRL	6614	-870	<input type="checkbox"/>			
TD	6675	-931	<input type="checkbox"/>			6-1/4" Hole. 4-1/2", 11.6 ppf, N-80, LTC Casing. Circulate cement a minimum of 100' inside 7" casing. No open hole logs. Cased hole GR/CCL.

Reference Wells:

Reference Type	Well Name	Comments
Intermediate	L.V. HAMNER B1	29-29N-9W-NE, KB = 5836
Intermediate	A.B. GEREN 6	29-29N-9W-NE, KB = 5836
Intermediate	Hamner 2E	28-29N-9W-SW, KB = 5830

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

HAMNER 2M

Logging Program:

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

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

Additional Information:

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

Hamner 2m

APD Cement Calculations

HOLE. 12 25 "
CSG OD 9 625 "
CSG ID 9 001 "
WGT 32 3 ppf
GRADE H-40
EXCESS 125 %

DEPTH: 216'

HOLE 8 75 "
CSG OD 7 "
CSG ID 6.456 "
WGT 20 ppf
GRADE J-55
EXCESS 150 %

TAIL 571'

DEPTH: 2855'

HOLE. 6 25 "
CSG OD 4 5 "
CSG ID 4 "
WGT 11 6 ppf
GRADE N-80
EXCESS 50 %

DEPTH: 6675'

SURFACE:

Option 1
136 sx Comp Strength
28 4 bbls 6 hrs 250 psi
159 6 cuft 8 hrs 500 psi
1 17 ft³/sx
15 8 ppg
4 973 gal/sx
Class G Cement
+ 3% S001 Calcium Chloride
+ 0 25 lb/sx D029 Cellophane Flakes

INTERMEDIATE LEAD:

Option 1
300 sx Comp Strength
145 2 bbls 9 hrs 300 psi
815 2 cuft 48 hrs 525 psi
2 72 ft³/sx
11 7 ppg
15 74 gal/sx
Class G Cement
+ 3% D079 Extender
+ 0 20% D046 Antifoam
+ 10 lb/sx Phenoseal

INTERMEDIATE TAIL:

Option 1
171 sx Comp Strength
39 9 bbls 3 53 500 psi
224 2 cuft 8 22 1000 psi
1 31 ft³/sx 24 hrs 3170 psi
13 5 ppg 48 hrs 5399 psi
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

PRODUCTION:

Option 1
425 sx Comp Strength
108 9 bbls 7 hrs 500 psi
611 5 cuft 24 hrs 2100 psi
1 44 ft³/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
132 sx Comp Strength
28 4 bbls 6 hrs 250 psi
159 6 cuft 8 hrs 500 psi
1 21 ft³/sx
15 6 ppg
5 29 gal/sx
Standard Cement
+ 3% Calcium Chloride
+ 0 25 lb/sx Flocele

Option 2
314 sx Comp Strength
145 2 bbls 1 47 hrs 50 psi
815 2 cuft 12 hrs 350 psi
2 60 ft³/sx 24 hrs 450 psi
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 2
169 sx Comp Strength
39 9 bbls 2 05 50 psi
224 2 cuft 4 06 500 psi
1 33 ft³/sx 12 hrs 1250 psi
13 5 ppg 24 hrs 1819 psi
5 52 gal/sx
50/50 Poz Standard Cement
+ 2% Bentonite
+ 6 0 lb/sx Phenoseal

Option 2
422 sx Comp Strength
108 9 bbls 9 32 50 psi
611 5 cuft 12 hrs 500 psi
1 45 ft³/sx 13 29 1026 psi
13 1 ppg 24 hrs 2300 psi
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

Option 3
60 sx Comp Strength
17 3 bbls 8 hrs 475 psi
96 9 cuft 24 hrs 1375 psi
1 61 ft³/sx
14 5 ppg
7 41 gal/sx
Type I-II Ready Mix
+ 20% Fly Ash

Option 3
310 sx Comp Strength
145 2 bbls 3 hrs 100 psi
815 2 cuft 24 hrs 443 psi
2 63 ft³/sx
11 7 ppg
15 92 gal/sx
Class G Cement
+ 3% D079 Extender
+ 0 20% D046 Antifoam
+ 1 0 lb/bbl CemNet

Option 3
175 sx Comp Strength
39 9 bbls 24 hrs 1850 psi
224 2 cuft 48 hrs 3411 psi
1 28 ft³/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

82 970
10/4/06

Hamner 2m

HOLE 12 25 "
CSG OD 9 625 "
CSG ID 9 001 "
WGT 32 3 ppf
GRADE H-40
EXCESS 125 %

DEPTH: 216'

SURFACE:

INTERMEDIATE LEAD:

Option 4

283 sx Comp Strength
145.2 bbls 1.47 50 psi
815 2 cuft 12 hrs 350 psi
2 88 ft³/sx 24 hrs 450 psi
11.5 ppg
16 85 gal/sx
Standard Cement
+ 3% Econolite (Extender)
+ 10 lb/sx Phenoseal

Option 5

388 sx Comp Strength
145 2 bbls 10 56 500 psi
815 2 cuft 42 hrs 1012 psi
2 10 ft³/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

HOLE 8 75 "
CSG OD 7 "
CSG ID 6.456 "
WGT 20 ppf
GRADE J-55
EXCESS 150 %

TAIL 571'

DEPTH: 2855'

INTERMEDIATE TAIL:

HOLE: 6 25 "
CSG OD 4 5 "
CSG ID 4 "
WGT 11 6 ppf
GRADE N-80
EXCESS 50 %

PRODUCTION:

DEPTH: 6675'

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 2nd, 3rd, & 4th joints
Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th 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 2nd, 3rd, & 4th joints
Production: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th 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 2nd, 3rd, & 4th joints
Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th 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:

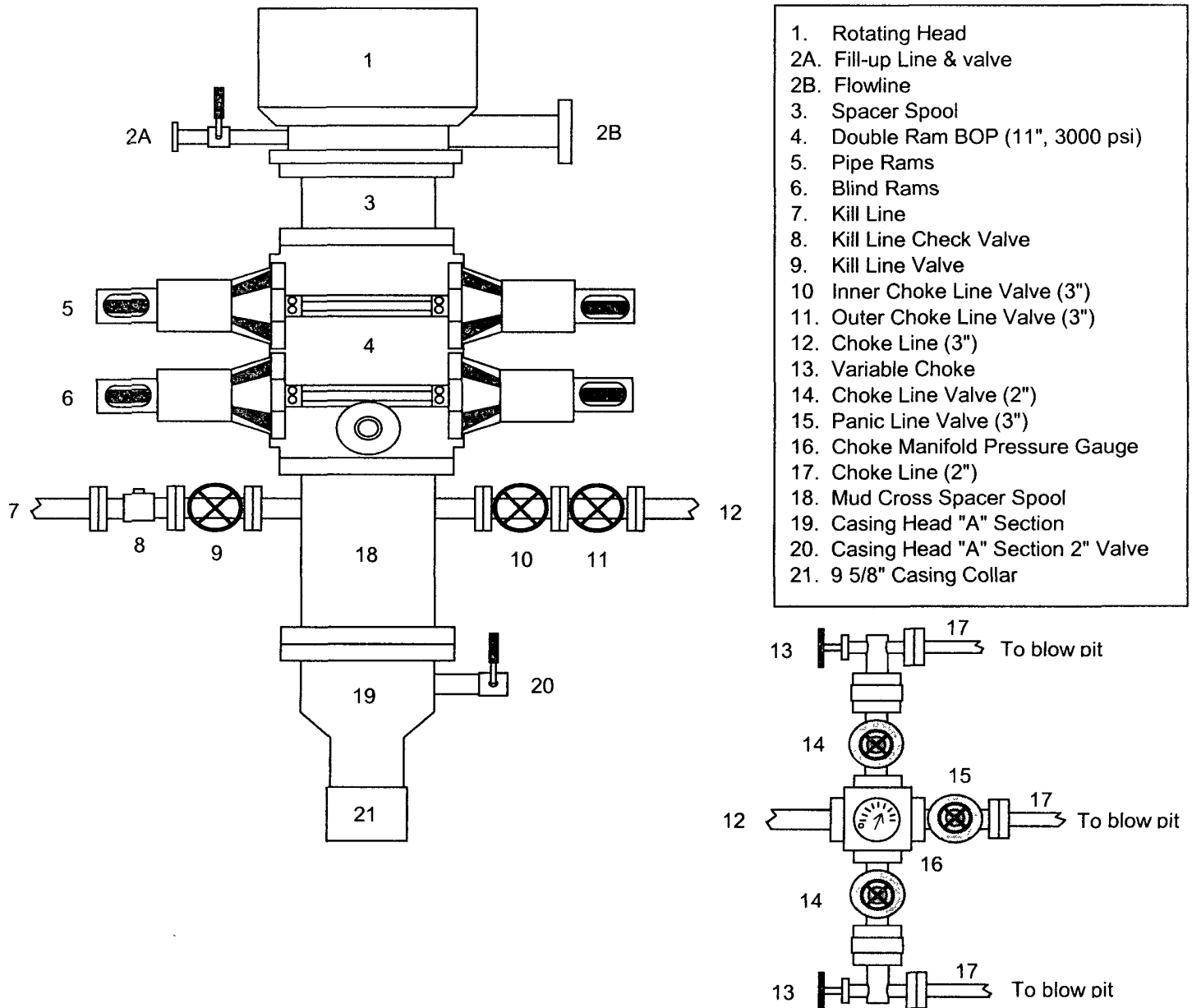
Surface: spud mud
Intermediate: fresh water mud with bentonite and polymer as needed
Below Intermediate: air/mist/nitrogen drilling media with foamer, polymer, & corrosion inhibitor as needed

Centralizer Program:

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 3rd, & 4th joints
Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th 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



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.

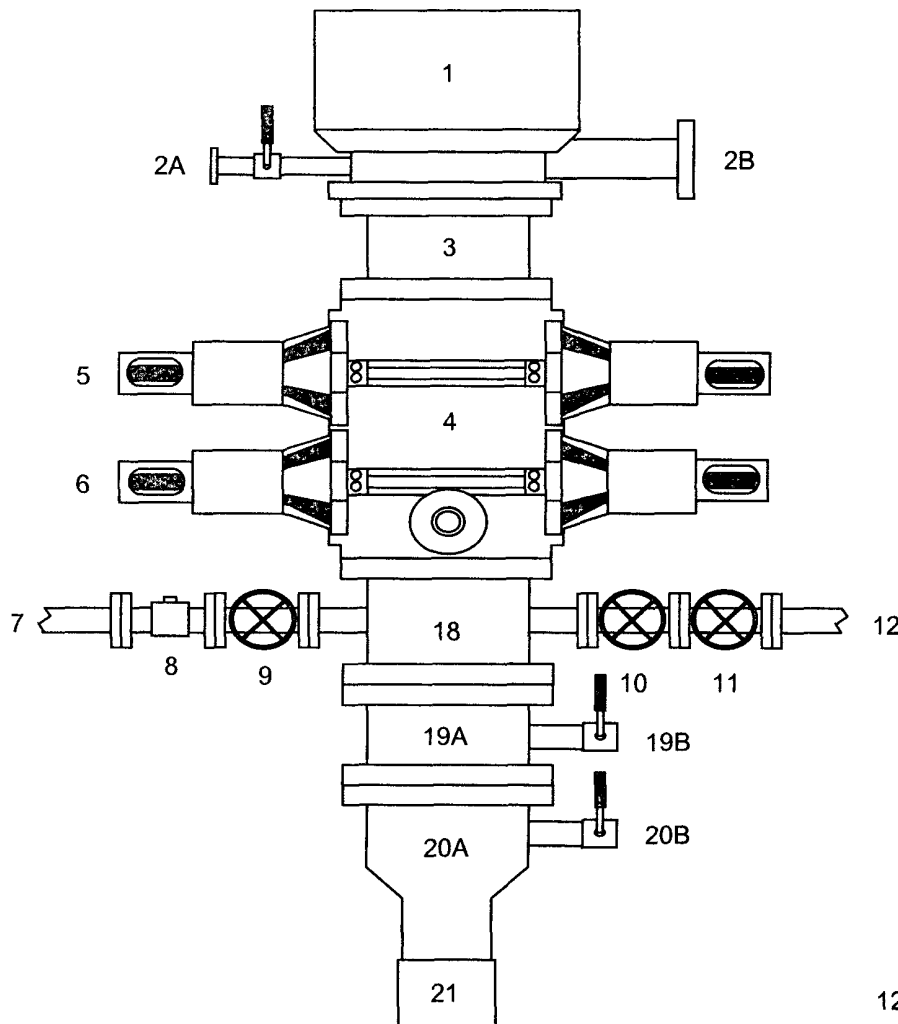
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

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

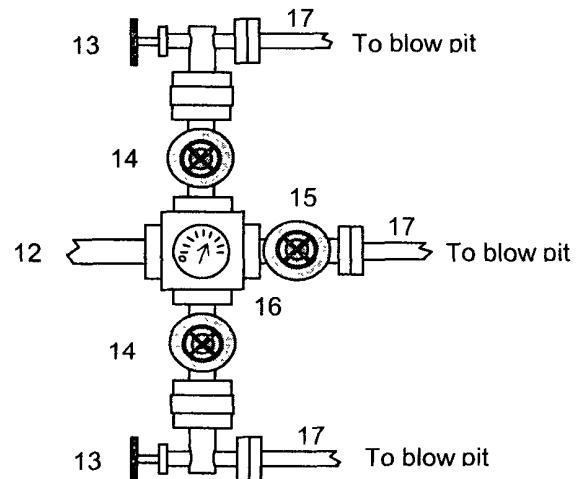
Revision Date: September 1, 2004

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

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