

RCVD MAR 27 07
OIL CONS. DIV.
DIST. 3

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2007 JUN 8 PM 4 22

1a. Type of Work DRILL	5. Lease Number NM-011350-A Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator ConocoPhillips	7. Unit Agreement Name San Juan 29-5 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name San Juan 29-5 Unit 9. Well Number #35M
4. Location of Well Unit D (NWNW), 610' FNL & 755' FWL. Latitude 36° 41.2592'N Longitude 107° 21.0353'W	10. Field, Pool, Wildcat Blanco MV/Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 34, T29N, R5W API # 30-039-30155
14. Distance in Miles from Nearest Town 7 Miles from Gobernador	12. County Rio Arriba 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 610'	
16. Acres in Lease	17. Acres Assigned to Well MV/DK- 320 acres W/2
18. Distance from Proposed Location to Nearest Well, Drilg. Compl. or Applied for on this Lease	
19. Proposed Depth 8120'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6792' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Andrés Polanco</u> Regulatory Technician	Date: <u>1/5/07</u>

PERMIT NO.

APPROVAL DATE

APPROVED BY [Signature]

TITLE ATM

DATE 3/23/07

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.

3/28/07

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4

NMOCD

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

District I
PO Box 1080, Hobbs, NM 88241-1980

District II
PO Drawer 100, 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

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

PO Box 2088
Santa Fe, NM 87504-2088

COPY

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-30155	*Pool Code 72319 / 71599	*Pool Name BLANCO MESAVERDE / BASIN DAKOTA
*Property Code 31325	*Property Name SAN JUAN 29-5 UNIT	*Well Number 35M
*GRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY	*Elevation 6792


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
D	34	29N	5W		610	NORTH	755	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					¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No. RCVD MAR27'07 OIL CONS. DIV. DIST. 3

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

¹⁶ 755' 60' LAT: 36.68766°N LONG: 107.35119°W DATUM: NAD83	5266.80'		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 August 30, 2006 Date	
5280.00'	LEASE FEE	34		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 1, 2005 Signature and Seal of Professional Surveyor  JASON C. EDWARDS Certificate Number 15269
LEASE NM-011350 A	LEASE FEE			
	LEASE SF-078412	5280.00'		

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. 30-039- 30155	
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No. NM-011350	
7. Lease Name or Unit Agreement Name San Juan 29-5 Unit	
8. Well Number #35M	
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 <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other	
2. Name of Operator ConocoPhillips Company	
3. Address of Operator 3401 E. 30TH STREET, FARMINGTON, NM 87402	
4. Well Location Unit Letter <u>D</u> : <u>610'</u> feet from the <u>North</u> line and <u>755'</u> feet from the <u>West</u> line Section <u>34</u> Township <u>29N</u> Rng <u>5W</u> NMPM County <u>Rio Arriba</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6792'	
<u>Pit or Below-grade Tank Application</u> <input type="checkbox"/> or Closure <input type="checkbox"/>	
Pit type <u>New Drill</u> Depth to Groundwater <u><50'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>>1000'</u>	
Pit Liner Thickness: <u>N/A</u> mil Below-Grade Tank: <u>Volume</u> 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, Unlined:

ConocoPhillips proposes to construct a new drilling pit, an associated vent/flare pit and a pre-set mud pit (if required). Based on ConocoPhillips' interpretation of the Ecosphere's risk ranking criteria, the new drilling pit and pre-set mud pit will be unlined pits as detailed in ConocoPhillips' General Plan dated June 2005 on file at the NMOCD office. A portion of the vent/flare pit will be designed to manage fluids and that portion will be unlined as per the risk ranking criteria. ConocoPhillips anticipates closing these pits according to 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 ☐.

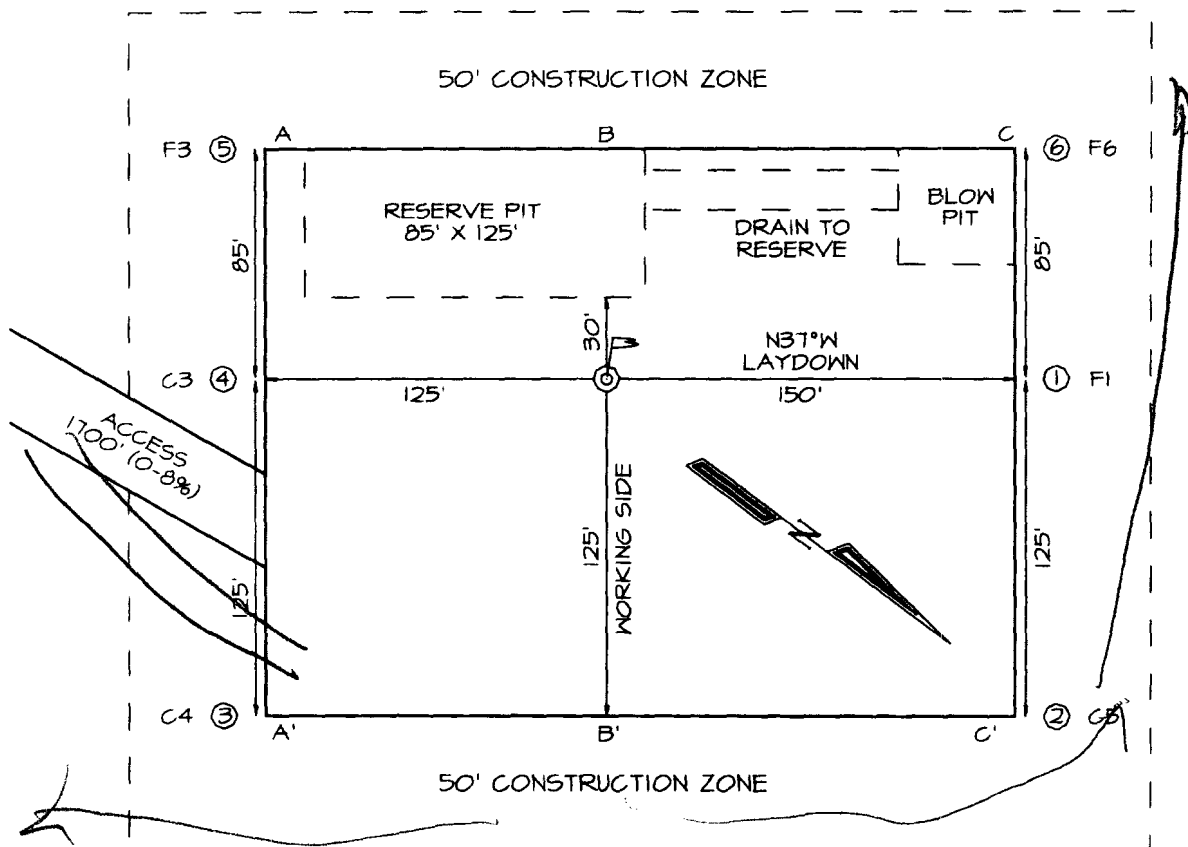
SIGNATURE Kandis Roland TITLE Regulatory Technician DATE 1/8/2007

Type or print name Kandis Roland E-mail address: kburns@br-inc.com Telephone No. 505-326-9518
For State Use Only

APPROVED BY [Signature] TITLE SENIOR OIL & GAS INSPECTOR, DSI. DATE MAR 28 2007
Conditions of Approval (if any):

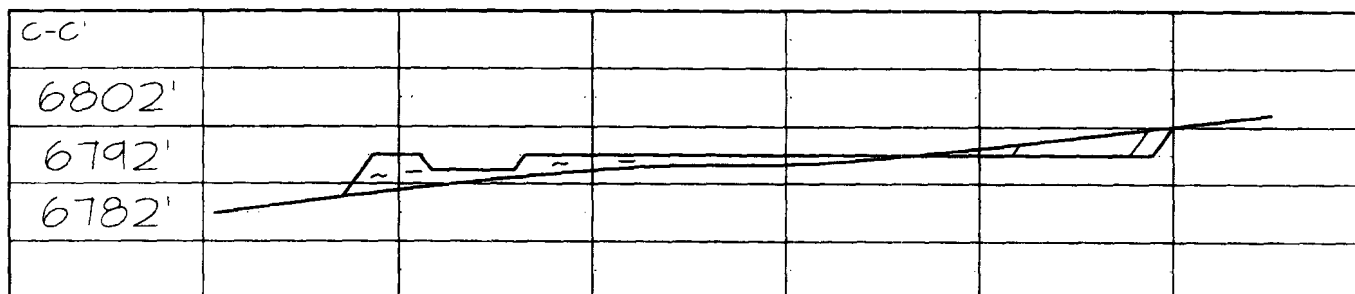
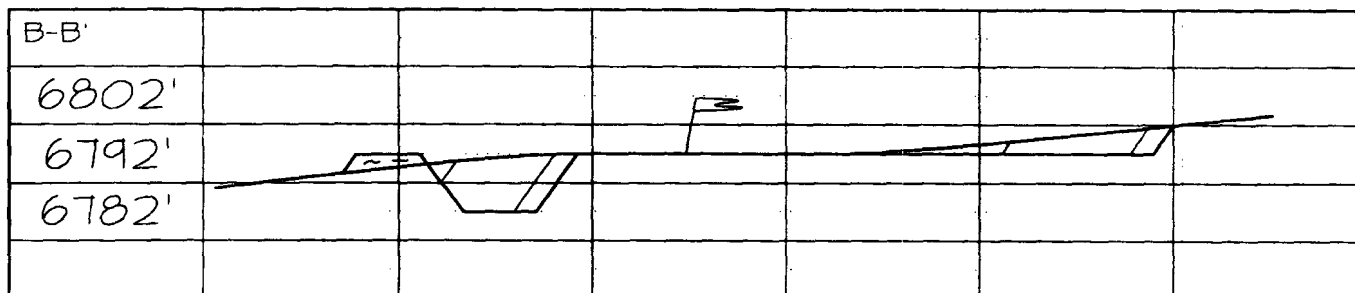
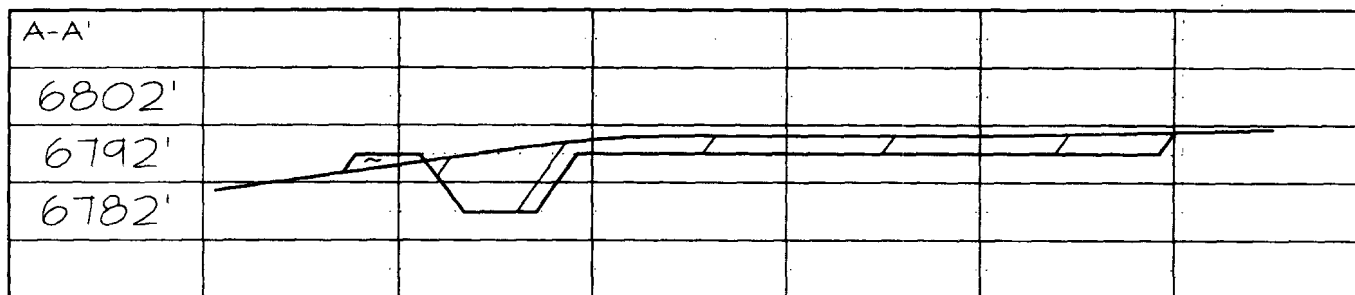
CONOCOPHILLIPS COMPANY SAN JUAN 29-5 UNIT #35M
610' FNL & 755' FWL, SECTION 34, T29N, R5W, NMPM
RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6792'

LATITUDE: 36.68766° N
LONGITUDE: 107.35119° W
 DATUM: NAD1983



PLAT NOTE:

SURFACE OWNER
 Bureau of Land
 Management



PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 29-5 35M

Lease:		AFE #: WAN.CNV.6165		AFE \$:	
Field Name: 29-5		Rig: Aztec Rig 184		State: NM	County: RIO ARRIBA
Geoscientist: Glaser, Terry J		Phone: (832)486-2332		Prod. Engineer: Phone: 486-2334	
Res. Engineer:		Phone: 832-486-2385		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: 36.687652	Longitude: -107.350589	X:	Y:	Section: 34	Range: 5W
Footage X: 755 FWL	Footage Y: 610 FNL	Elevation: 6792 (FT)	Township: 29N		

Tolerance:					
Location Type: Year Round		Start Date (Est.):		Completion Date:	
Formation Data: Assume KB = 6808		Units = FT			

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
NCMT	1633	5175	<input type="checkbox"/>			
OJAM	2908	3900	<input type="checkbox"/>			Possible water flows.
KRLD	3108	3700	<input type="checkbox"/>			
FRLD	3478	3330	<input type="checkbox"/>			Possible gas.
PCCF	3768	3040	<input type="checkbox"/>			
LEWS	3968	2840	<input type="checkbox"/>			
CHRA	4728	2080	<input type="checkbox"/>			
CLFH	5628	1180	<input type="checkbox"/>			Gas; possibly wet
MENF	5668	1140	<input type="checkbox"/>			Gas.
PTLK	5938	870	<input type="checkbox"/>			Gas.
GLLP	7198	-390	<input type="checkbox"/>			Gas. Possibly wet.
GRHN	7876	-1068	<input type="checkbox"/>			Gas possible, highly fractured
GRRS	7936	-1128	<input type="checkbox"/>			
TWLS	8003	-1195	<input type="checkbox"/>			Gas
CBBO	8054	-1246	<input type="checkbox"/>			Gas
CBRL	8065	-1257	<input type="checkbox"/>			
TD	8120	-1312	<input type="checkbox"/>			

Reference Wells:		
Reference Type	Well Name	Comments
Intermediate	SJ 29-5 70M	28-29N-5W-SW, KB = 6662

San Juan 29-5 Unit 35M

APD Cement Calculations

HOLE: 12.25 "
CSG OD: 9.625 "
CSG ID: 9.001 "
WGT: 32.3 ppf
GRADE: H-40
EXCESS: 125 %
DEPTH: 4081'

SURFACE:

Option 1
79 sx
16.4 bbls
91.9 cuft
1.17 ft³/sx
15.8 ppg
4.973 gal/sx
Class G Cement
+ 3% S001 Calcium Chloride
+ 0.25 lb/sx D029 Cellulophane Flakes
Comp. Strength
6 hrs 250 psi
8 hrs 500 psi
psi

Option 2

76 sx
16.4 bbls
91.9 cuft
1.21 ft³/sx
15.6 ppg
5.29 gal/sx
Standard Cement
+ 3% S001 Calcium Chloride
+ 0.25 lb/sx Floccel
Comp. Strength
6 hrs 250 psi
8 hrs 500 psi
psi

Option 3

37 sx
10.6 bbls
59.3 cuft
1.61 ft³/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

HOLE: 8.75 "
CSG OD: 7 "
CSG ID: 6.456 "
WGT: 23/20 ppf
GRADE: J-55
EXCESS: 50 %
TAIL: 813.6'
DEPTH: 4068'

INTERMEDIATE LEAD:

Option 1
268 sx
129.7 bbls
728.0 cuft
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
Comp. Strength
9 hrs 300 psi
48 hrs 525 psi
psi

Option 2

280 sx
129.7 bbls
728.0 cuft
2.60 ft³/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
1.47 hrs 50 psi
12 hrs 350 psi
24 hrs 450 psi
psi

Option 3

277 sx
129.7 bbls
728.0 cuft
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
Comp. Strength
3 hrs 100 psi
24 hrs 443 psi
psi

INTERMEDIATE TAIL:

Option 1
147 sx
34.4 bbls
193.1 cuft
1.31 ft³/sx
13.5 ppg
5.317 gal/sx
50/50 Poz. Class G Cement
+ 0.25 lb/sx D029 Cellulophane Flakes
+ 3% S001 Calcium Chloride
+ 2% D020 Bentonite
+ 1.5 lb/sx D024 Gilsontite Extender
+ 0.1% D046 Antifoam
+ 6 lb/sx Phenoseal
Comp. Strength
3.53 500 psi
8:22 1000 psi
24 hrs 3170 psi
48 hrs 5399 psi
psi

Option 2

145 sx
34.4 bbls
193.1 cuft
1.33 ft³/sx
13.5 ppg
5.52 gal/sx
50/50 Poz. Standard Cement
+ 2% Bentonite
+ 6.0 lb/sx Phenoseal
Comp. Strength
2.05 50 psi
4:06 500 psi
12 hrs 1250 psi
24 hrs 1819 psi
psi

Option 3

151 sx
34.4 bbls
193.1 cuft
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 Gilsontite Extender
+ 2% S001 Calcium Chloride
+ 0.1% D046 Antifoam
+ 0.15% D065 Dispersant
+ 1.0 lb/bbl CemNet
Comp. Strength
24 hrs 1850 psi
48 hrs 3411 psi
psi

HOLE: 6.25 "
CSG OD: 4.5 "
CSG ID: 4 "
WGT: 10.5/11.6 ppf
GRADE: J-55
EXCESS: 30 %
DEPTH: 8120'

PRODUCTION:

Option 1
392 sx
100.5 bbls
564.1 cuft
1.44 ft³/sx
13.0 ppg
6.47 gal/sx
50/50 Poz. Class G Cement
+ 0.25 lb/sx D029 Cellulophane Flakes
+ 3% D020 Bentonite
+ 1.0 lb/sx D024 Gilsontite Extender
+ 0.25% D167 Fluid Loss
+ 0.25% D065 Dispersant
+ 0.1% D800 Retarder
+ 0.1% D046 Antifoam
+ 3.5 lb/sx Phenoseal
Comp. Strength
7 hrs 500 psi
24 hrs 2100 psi
psi

Option 2

399 sx
100.5 bbls
564.1 cuft
1.45 ft³/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% Hald-9 Fluid Loss Additive
+ 3.5 lb/sx Phenoseal
Comp. Strength
9:32 50 psi
12 hrs 500 psi
13:29 1026 psi
24 hrs 2300 psi
psi

M 3-1/5/06

San Juan 29-5 Unit 35M

SURFACE:

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

DEPTH: **450'**

INTERMEDIATE LEAD:

Option 4

253 sx
129.7 bbls
728.0 cuft
2.88 ft³/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

347 sx
129.7 bbls
728.0 cuft
2.10 ft³/sx
11.7 ppg
11.724 gal/sx
75% Type XI / 25% Class G Cement
+ 0.25 lb/sx D029 Cellulophane Flakes
+ 3% D079 Extender
+ 0.20% D046 Antifoam

Comp. Strength
10.56 500 psi
42 hrs 1012 psi

HOLE: 8.75 "
CSG OD: 7 "
CSG ID: 6.456 "
WGT: 23/20 ppf
GRADE: J-55
EXCESS: 50 %

TAIL: **813.8'**

DEPTH: **4068'**

INTERMEDIATE TAIL:

HOLE: 6.25 "
CSG OD: 4.5 "
CSG ID: 4 "
WGT: 10.5/11.6 ppf
GRADE: J-55
EXCESS: 30 %

DEPTH: **8120'**

PRODUCTION:

If the 9 5/8" surface casing is preset drilled (MOT) will cement w/75 sx Type I-H cement w/20% Flyash mixed @ 1.61 cfsx. Will bring cement to surface. Wait on cement for 24 hours for pre-set hole before pressure testing or drilling out. If H&P rig is used to drill the well will use 13 1/2" surface hole then will adjust cement to insure cement reaches surface.

M³ - 1/5/06

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

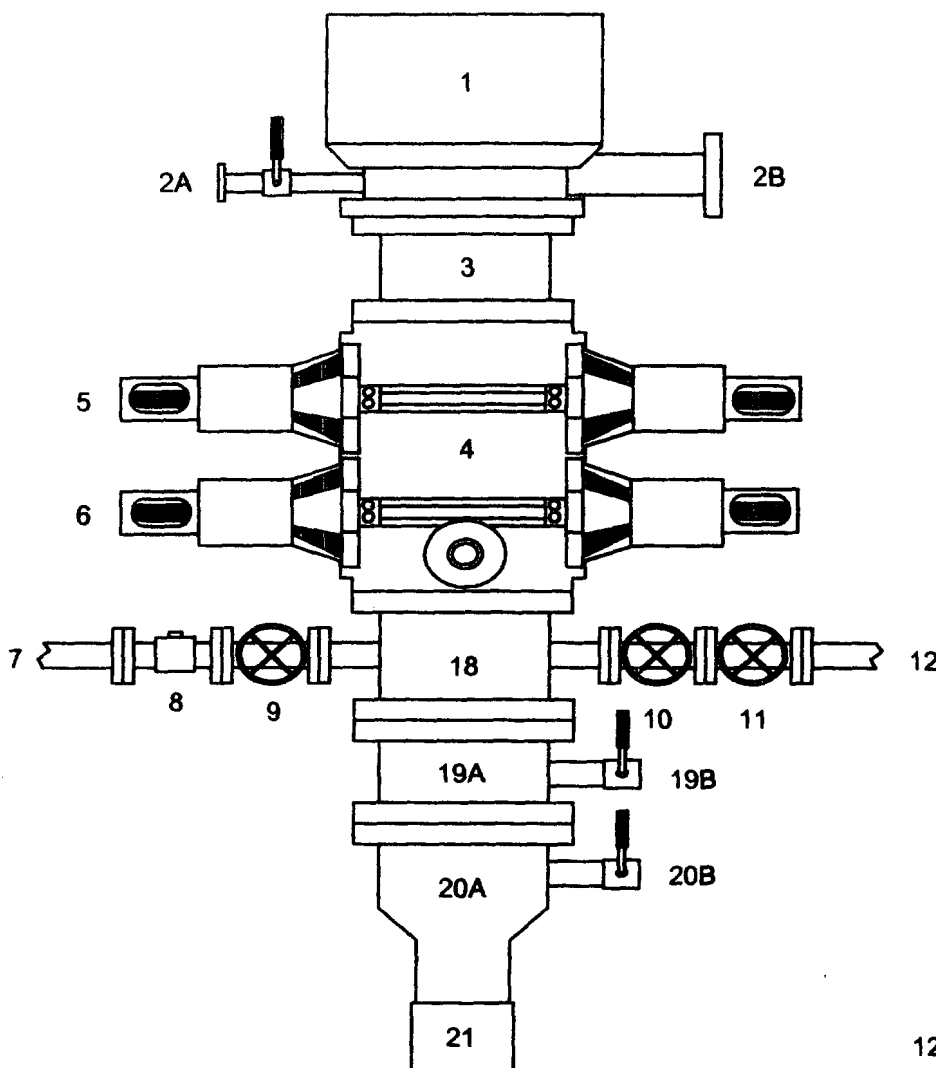
Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th joints

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

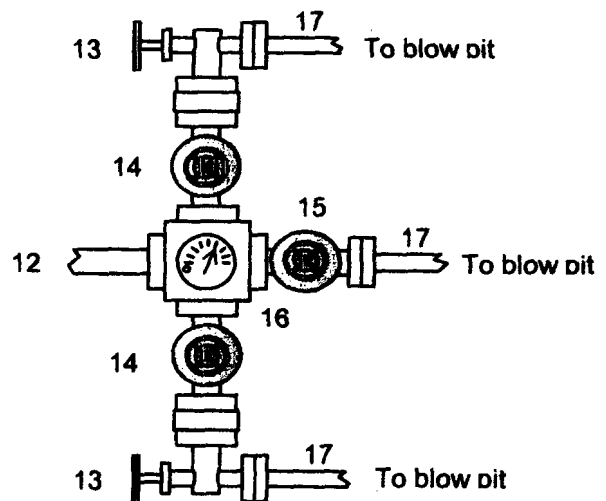
Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



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

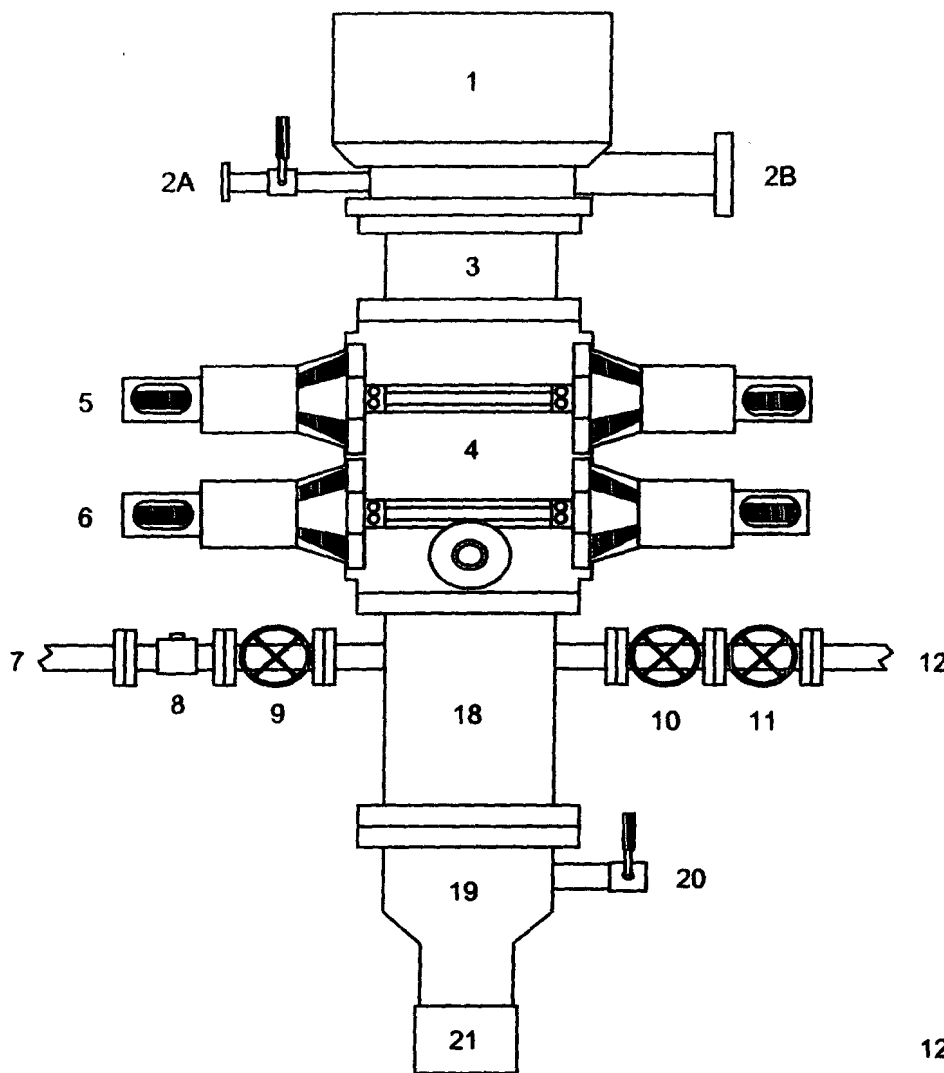
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

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

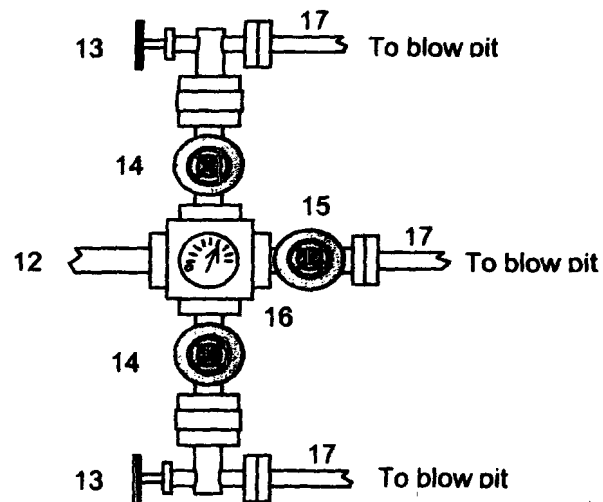
Revision Date: September 1, 2004

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:

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

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