

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BLM FORM 3165-3
OIL GAS DRILL

6.1510

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	2006 OCT 30 07 13 25	5. Lease Number SF-078995
1b. Type of Well GAS	RECEIVED OIL GAS DIVISION	Unit Reporting Number NMNM-78421A-MV NMNM 78421B-DK
2. Operator ConocoPhillips		6. If Indian, All. or Tribe
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700		7. Unit Agreement Name San Juan 31-6 Unit
4. Location of Well Unit N (SESW), 1070' FSL, 1980' FWL Latitude 36° 51.9727'N Longitude 107° 29.2742'W		8. Farm or Lease Name
		9. Well Number #41F
		10. Field, Pool, Wildcat Basin Dakota/Blanco Mesaverde
		11. Sec., Twn, Rge, Mer. (NMPM) N Sec. 29, T31N, R6W API # 30-039-30097
14. Distance in Miles from Nearest Town 48.5 Miles Blanco		12. County Rio Arriba
		13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1070'		
16. Acres in Lease		17. Acres Assigned to Well 320.00 acres W/2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease		
19. Proposed Depth 8079'		20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6508' GL		22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u>Quanta Farnell</u> Regulatory Specialist		<u>10/30/06</u> Date

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY Chip Haraden TITLE Acting AFM DATE 11/3/06

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.

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 West Grand Avenue, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Ed., Aztec, N.M. 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

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039- 30097	² Pool Code 72319/71599	³ Pool Name Blanco Mesaverde / Basin Dakota
⁴ Property Code 31328	⁵ Property Name SAN JUAN 31-6 UNIT	⁶ Well Number 41F
⁷ OGHD No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY	⁹ Elevation 6508'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot km	Feet from the	North/South line	Feet from the	East/West line	County
N	29	31-N	6-W		1070'	SOUTH	1980'	WEST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot km	Feet from the	North/South line	Feet from the	East/West line	County
N									
¹² Dedicated Acres 320 acres W2			¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.		

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

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SF-078995			
	29		
	LAT: 36°51.9727' N. LONG: 107°29.2742' W. NAD 1927 LAT: 36.866217 N. LONG: 107.486509 W. NAD 1983		
N 0° 00' 55" E 2857.01'	1980'	1070'	N 88° 59' 51" E 2854.37'

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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 a working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature
Amanda Sanchez/Regulatory

Printed Name
Analyst

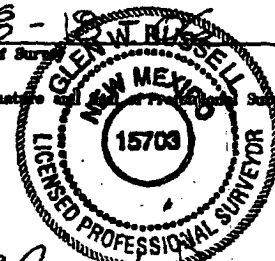
18

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
8-19-05

Signature of Professional Surveyor:
Glen W. Russell



Certificate Number

15703

District I

Energy, Minerals and Natural Resources

May 27, 2004

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

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

WELL API NO.

30-039-

30097

5. Indicate Type of Lease

STATE ☐

FEE ☐

6. State Oil & Gas Lease No.

Federal Lease SF-078995

7. Lease Name or Unit Agreement Name

San Juan 31-6 Unit

8. Well Number

#41F

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 ☐

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 N : 1070' feet from the South line and 1980' feet from the West line
Section 29 Township 31N Rng 6W NMPM County Rio Arriba

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

6508'

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

4400

bbls;

Construction Material

Synthetic

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.

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 lined pits as detailed in ConocoPhillips' General Plan dated June 2005 on file at the NMOCDD 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. 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 NMOCDD guidelines ☐ a general permit ☒ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE

Juanita Farrell

TITLE

Regulatory Specialist

DATE

9/13/2006

Type or print name
For State Use Only

Juanita Farrell

E-mail address:

Telephone No.

505-326-9567

APPROVED BY

[Signature]

TITLE

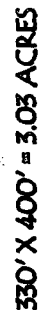
DEPUTY OIL & GAS INSPECTOR, DIST. 01

DATE

NOV 08 2006

Conditions of Approval (if any):

SAN JUAN 31-6 UNIT 41F, 1070' FSL & 1980' FWL
SECTION 29, T-31- N, R-6-W, NMPM, RIO ARRIBA COUNTY, NM
GROUND ELEVATION: 6508', DATE: AUGUST 17, 2006



LATITUDE: 36° 51.9727'N LONGITUDE: 107° 29.2742'W NAD27

CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED
PIPELINES OR CABLES ON WELL PAD AND/OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

SAN JUAN 31-6 UNIT 41F, 1070' FSL & 1980' FWL
SECTION 29, T-31- N, R-6-W, NMPM, RIO ARRIBA COUNTY, NM
GROUND ELEVATION: 6508', DATE: AUGUST 17, 2006

ELEV. 3'-B	CL
6520	
6510	
6500	
6490	

NOTE: VECTOR SURVEYS LLC 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 AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

HOLE: 12.25 "
 CSG OD: 9.625 "
 CSG ID: 9.001 "
 WGT: 32.3 ppg
 GRADE: H-40
 EXCESS: 200 %
 DEPTH: 120'

SURFACE:

Option 1
 99 sx
 20.7 bbls
 116.3 cuft
 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

Option 2
 96 sx
 20.7 bbls
 116.3 cuft
 1.21 ft³/sx
 15.6 ppg
 5.29 gal/sx
 Standard Cement
 + 3% Calcium Chloride
 + 0.25 lb/sx Flocele

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

INTERMEDIATE LEAD:

Option 1
 247 sx
 119.6 bbls
 671.4 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

Option 2
 258 sx
 119.6 bbls
 671.4 cuft
 2.60 ft³/sx
 11.5 ppg
 14.82 gal/sx
 Type III Ashgrove Cement
 + 30 lb/sx San Juan Poz
 + 3% Bentonite
 + 5.0 lb/sx Phenoseal

Option 3
 255 sx
 119.6 bbls
 671.4 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 CamiNet

HOLE: 8.75 "
 CSG OD: 7 "
 CSG ID: 6.456 "
 WGT: 20 ppg
 GRADE: J-55
 EXCESS: 50 %
 TAIL: 750.8'
 DEPTH: 3754'

INTERMEDIATE TAIL:

Option 1
 137 sx
 31.9 bbls
 178.9 cuft
 1.31 ft³/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
 135 sx
 31.9 bbls
 178.9 cuft
 1.33 ft³/sx
 13.5 ppg
 5.52 gal/sx
 50/50 Poz: Standard Cement
 + 2% Bentonite
 + 6.0 lb/sx Phenoseal

Option 3
 140 sx
 31.9 bbls
 178.9 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 Gilsomite 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:

Option 1
 417 sx
 107.0 bbls
 600.5 cuft
 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 Gilsomite 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
 414 sx
 107.0 bbls
 600.5 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% Halad-9 Fluid Loss Additive
 + 3.5 lb/sx Phenoseal

Option 3
 414 sx
 107.0 bbls
 600.5 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% Halad-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

HOLE: 6.25 "
 CSG OD: 4.5 "
 CSG ID: 4.052 "
 WGT: 10.5 ppg
 GRADE: J-55
 EXCESS: 30 %
 DEPTH: 8079'

MS-10/26/06

San Juan 31-6 Unit #41F

HOLE: 12.25"
CSG OD: 9.625"
CSG ID: 9.001"
WGT: 32.3 ppg
GRADE: H-40
EXCESS: 200 %
DEPTH: 120'

SURFACE:

INTERMEDIATE LEAD:

Option 4

233 sx
119.6 bbls
671.4 cuft
2.88 ft³/sx
11.5 ppg
16.85 gal/sx
Standard Cement
+ 3% Econolite (Extender)
+ 10 lb/sx Phenoseal

Option 5
320 sx
119.6 bbls
671.4 cuft
2.10 ft³/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

HOLE: 8.75"
CSG OD: 7"
CSG ID: 6.456"
WGT: 20 ppg
GRADE: J-55
EXCESS: 50 %
TAIL: 750.8'

DEPTH: 3754'

INTERMEDIATE TAIL:

HOLE: 6.25"
CSG OD: 4.5"
CSG ID: 4.052"
WGT: 10.5 ppg
GRADE: J-55
EXCESS: 30 %
DEPTH: 8079'

PRODUCTION:

If the 9 5/8" surface casing is preset drilled (NOTE) will cement w/75 sx Type I-II cement w/20% Flyash mixed @ 1.61 cf/sx. 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.

M 3-10/26/04

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 31-6 41F

Lease: AFE #: WAN.CNV.7206 AFE \$:
 Field Name: 31-6 Rig: State: NM County: RIO ARRIBA API #:
 Geoscientist: Glaser, Terry J Phone: (832)486-2332 Prod. Engineer: Piotrowicz, Greg M. Phone: +1 832-486-3486
 Res. Engineer: Pena, David Fernando 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: 36.866211 Longitude: -107.487904 X: 0.00 Y: 0.00 Section: 29 Range: 6W
 Footage X: 1980 FWL Footage Y: 1070 FSL Elevation: 6508 (FT) Township: 31N
 Tolerance:

Location Type: Summer Only Start Date (Est.): Completion Date: Date In Operation:

Formation Data: Assume KB = 6524 Units = FT

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
NCMT	1349	5175	<input type="checkbox"/>			
OJAM	2674	3850	<input type="checkbox"/>			Possible water flows.
KRLD	2874	3650	<input type="checkbox"/>			
FRLD	3104	3420	<input type="checkbox"/>			Possible gas.
PCCF	3454	3070	<input type="checkbox"/>			
LEWS	3654	2870	<input type="checkbox"/>			
CHRA	4629	1895	<input type="checkbox"/>			
CLFH	5454	1070	<input type="checkbox"/>			Gas; possibly wet
MENF	5494	1030	<input type="checkbox"/>			Gas.
PTLK	5744	780	<input type="checkbox"/>			Gas.
MNCS	5994	530	<input type="checkbox"/>			
GLLP	7044	-520	<input type="checkbox"/>			Gas. Possibly wet.
GRHN	7774	-1250	<input type="checkbox"/>			Gas possible, highly fractured
GRRS	7824	-1300	<input type="checkbox"/>			
PAGU	7942	-1418	<input type="checkbox"/>			Gas. Highly Fractured.
CBBO	7949	-1425	<input type="checkbox"/>			Gas
CBRL	7994	-1470	<input type="checkbox"/>			
TD	8079	-1555	<input type="checkbox"/>			

Reference Wells:

Reference Type	Well Name	Comments
Intermediate	San Juan 31-6 27	28-31N-6W, KB = 6493
Intermediate	San Juan 31-6 46	32-31N-6W, KB = 6350

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:

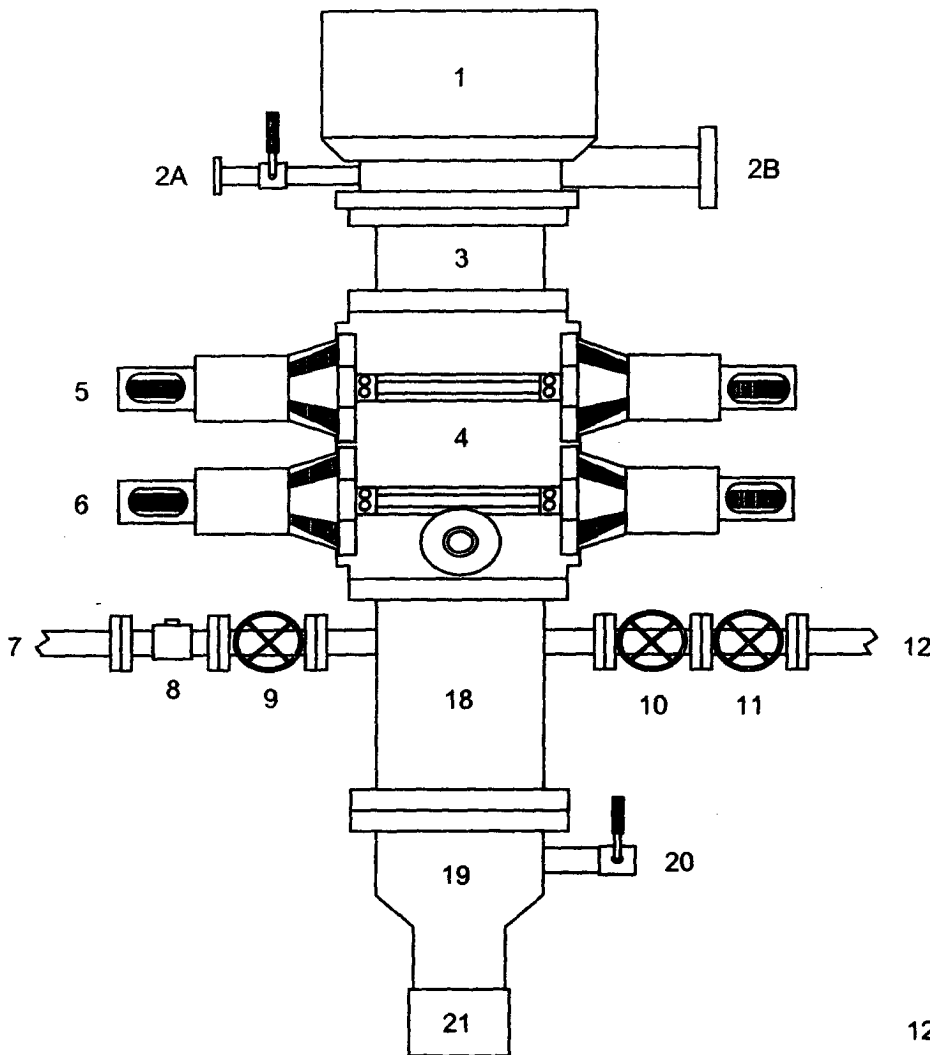
Surface: spud mud
Intermediate: fresh water mud with bentonite and polymer as needed
Below Intermediate: air/mist/nitrogen drilling media with foamer, polymer, & corrosion inhibitor as needed

Centralizer Program:

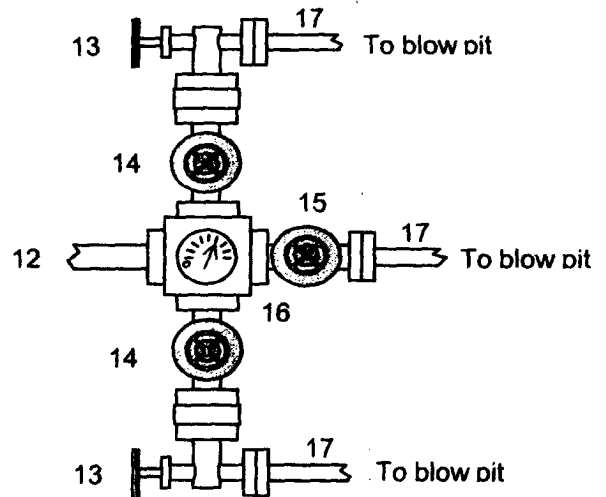
Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 3rd, & 4th joints
Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th joints
Turbolizers placed one per joint from the top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



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



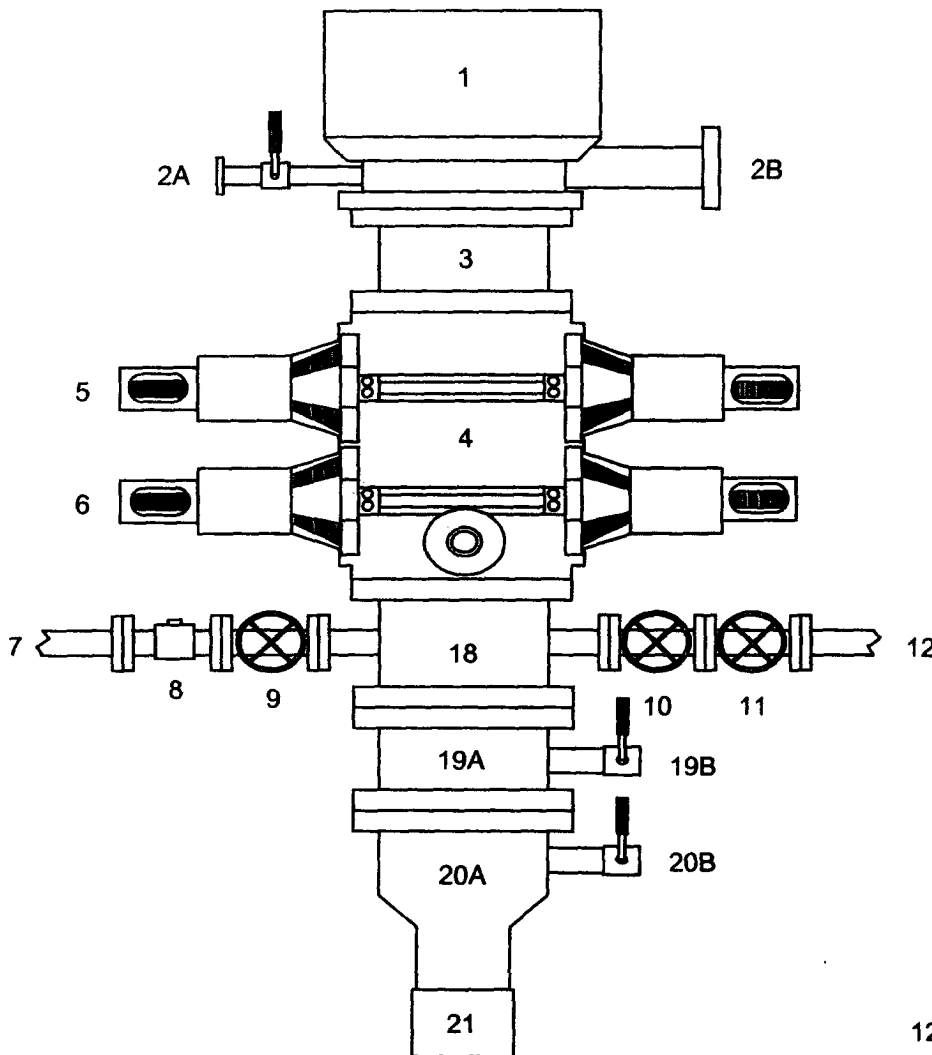
A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe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

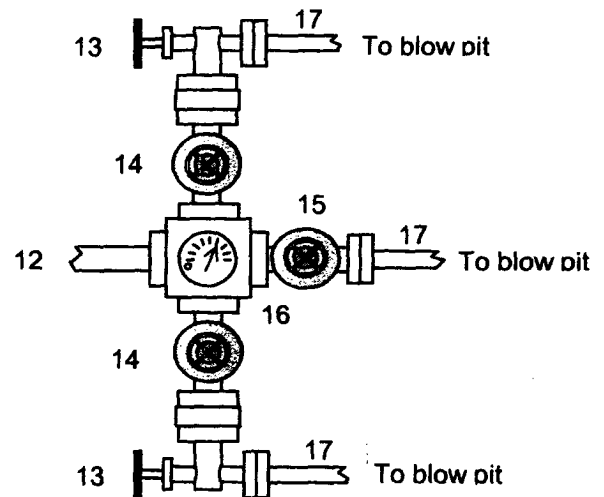
1. Upper Kelly cock Valve with handle
2. Stab-in TIW valve for all drillstrings in use

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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