

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2006 JUN 8 PM 2 13
RECEIVED
NMSF-078417
Unit Reporting Number NMNM-078413A
070 FARMINGTON NM

1a. Type of Work
DRILL

1b. Type of Well
GAS

2. Operator
ConocoPhillips

3. Address & Phone No. of Operator
PO Box 4289, Farmington, NM 87499
(505) 326-9700

4. Location of Well
Unit N (SESW), 515' FSL & 2615' FWL
Latitude 36° 66985'N
Longitude 107° 59698'W

5. Lease Number
NMSF-078417
Unit Reporting Number NMNM-078413A

6. If Indian, All. or Tribe

7. Unit Agreement Name
San Juan 28-7 Unit

8. Farm or Lease Name

9. Well Number
#20B

10. Field, Pool, Wildcat
Blanco MV

11. Sec., Twn, Rge, Mer. (NMPM)
N Sec. 8, T28N, R07W
API # 30-039-29951

12. County
Rio Arriba

13. State
NM

14. Distance in Miles from Nearest Town

15. Distance from Proposed Location to Nearest Property or Lease Line
515'

16. Acres in Lease

17. Acres Assigned to Well
MV 304.04 whole section

18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease

19. Proposed Depth
5781'

20. Rotary or Cable Tools
Rotary

21. Elevations (DF, FT, GR, Etc.)
6625' GL

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program
See Operations Plan attached

24. Authorized by: Patsy Clugston
Sr. Regulatory Analyst
Date 6/8/06

PERMIT NO.

APPROVAL DATE

APPROVED BY [Signature]

TITLE AFM

DATE 7/20/06

Archaeological Report attached
Environmental Assessment is attached

PA

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.

NMOCD

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 30-039-29951		*Pool Code 72319	*Pool Name BLANCO MESAVERDE
*Property Code 31739	*Property Name SAN JUAN 28-7 UNIT		*Well Number 20B
*OGRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY		*Elevation 6625'

¹⁰ Surface Location

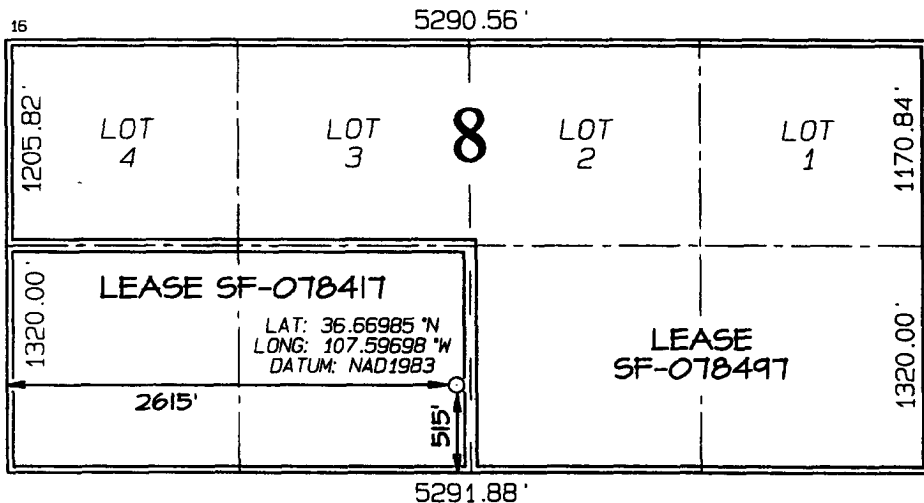
UL or lot no. N	Section 8	Township 28N	Range 7W	Lot Idn	Feet from the 515	North/South line SOUTH	Feet from the 2615	East/West line WEST	County RIO ARriba
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹² Dedicated Acres 304.04 Acres Entire Section	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



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information
contained herein is true and complete
to the best of my knowledge and belief

Virgil E. Chavez
Signature

Virgil E. Chavez
Printed Name

Projects & Operations Lead
Title

June 6, 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

Survey Date: SEPTEMBER 19, 2005

Signature and Seal of Professional Surveyor



Jason C. Edwards
Certificate Number 15269

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

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.	30-039- <u>29951</u>
5. Indicate Type of Lease	STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	Federal Lease SF-078417
7. Lease Name or Unit Agreement Name	San Juan 28-7 Unit
8. Well Number	#20B
9. OGRID Number	217817
10. Pool name or Wildcat	Blanco Mesaverde

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 : 515 feet from the South line and 2615 feet from the West line
Section 8 Township 28N Rng 7W NMPM County Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6625' 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 1200'

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

SUBSEQUENT REPORT OF:

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

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. Please be sure to include this language on all pit NOI's and C-144's.

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 6/8/2006

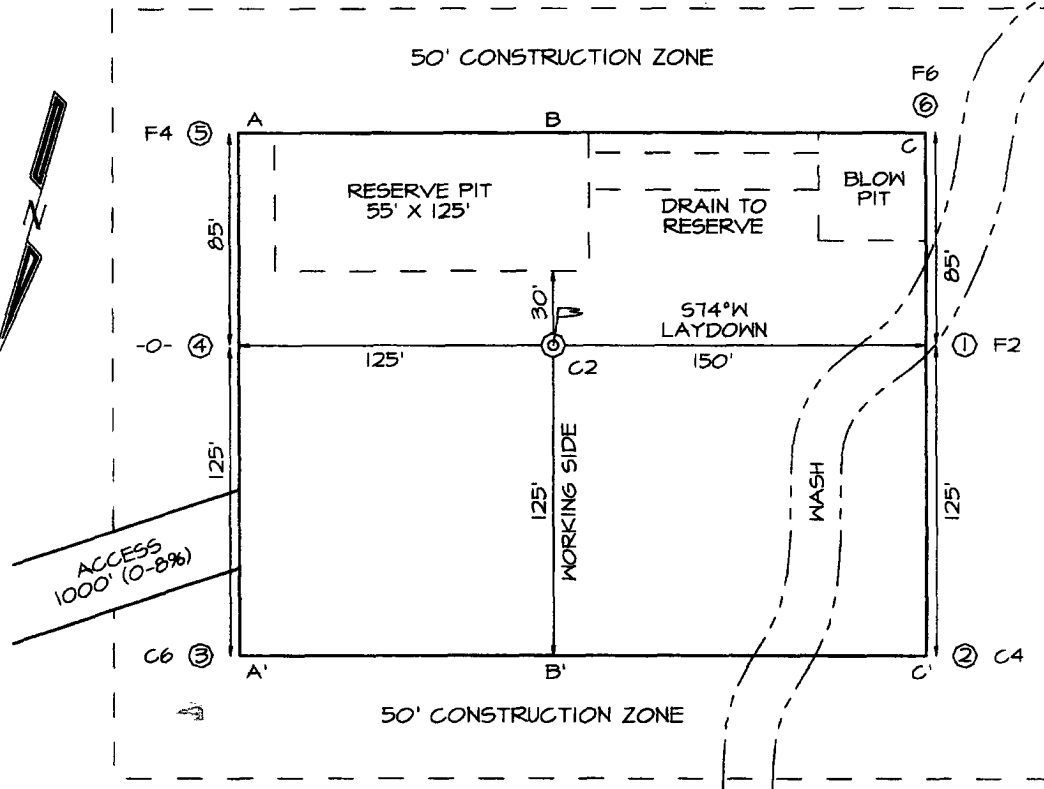
Type or print name Patsy Clugston E-mail address: plclugston@br-inc.com Telephone No. 505-326-9518

For State Use Only

APPROVED BY [Signature] TITLE OFFICE OIL & GAS INSPECTOR, DIST. 80 DATE JUL 24 2006

Conditions of Approval (if any):

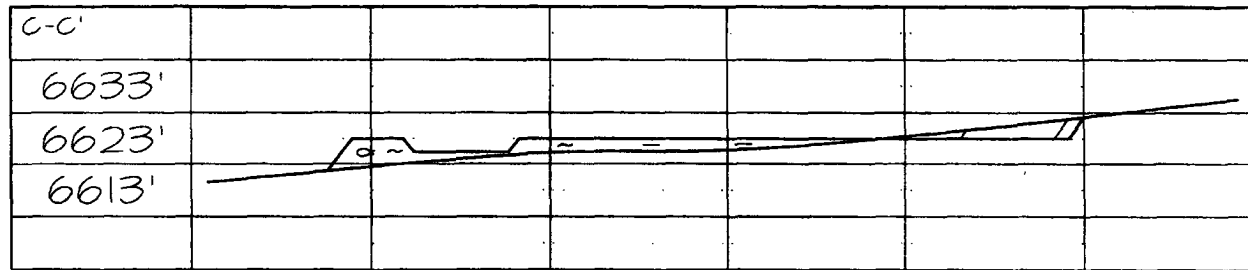
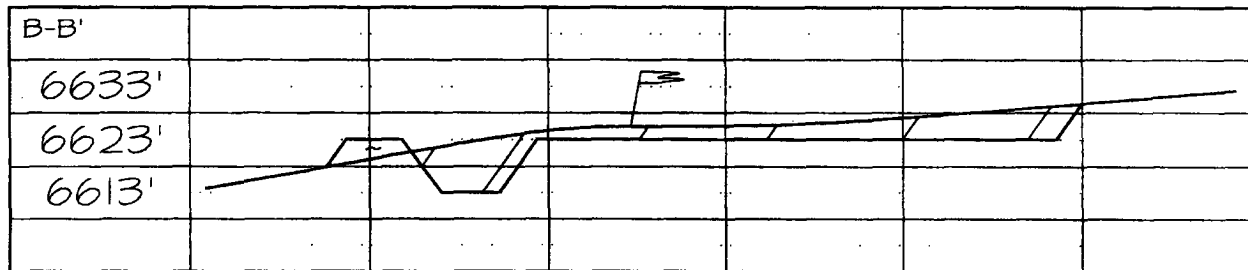
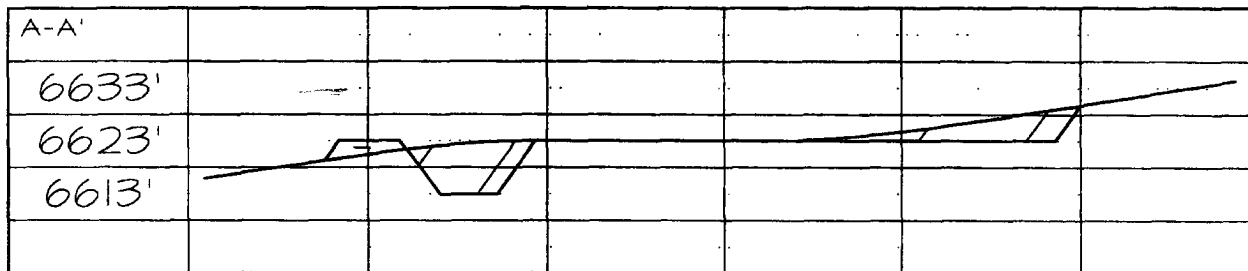
CONOCOPHILLIPS COMPANY SAN JUAN 28-7 UNIT #20B
515' FSL & 2615' FWL, SECTION 8, T28N, R7W, NMPM
RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6625'



LATITUDE: 36.66983° N
LONGITUDE: 107.59698° W
 DATUM: NAD1983

PLAT NOTE:

SURFACE OWNER
 Bureau of Land
 Management





TECHNICAL SERVICES
A CORROSION COMPANY

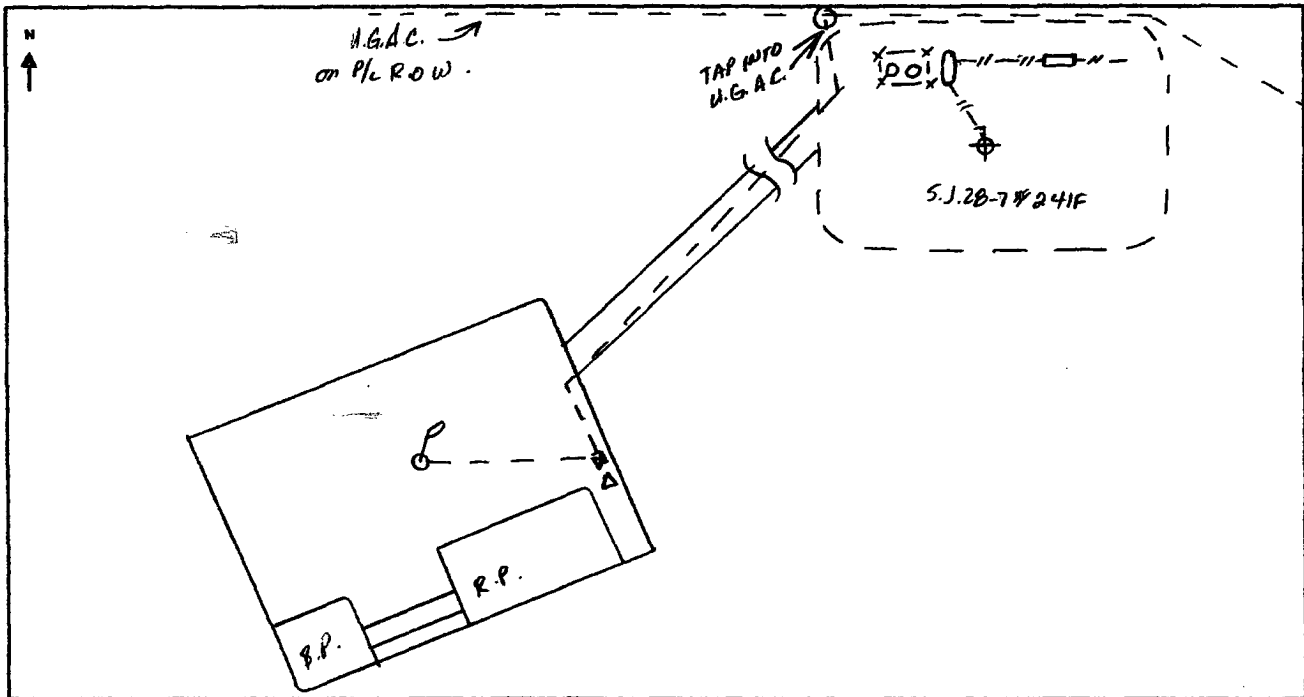
CATHODIC PROTECTION PLAN FOR NEW WELLS

WELL NAME SJ.28-7#20B

LEGALS N-8-28-7

COUNTY R.A.

PURPOSED C.P. SYSTEM: DRILL G.B. & SET RECT @ EAST EDGE OF LOC. TRENCH @ 200' X 8" NEG FROM RECT TO W.H. ALSO TRENCH @ 1450' OF A.C. FROM W.G.A.C. ON R.O.W. NORTH OF #241F TO RECT.



EXISTING WELLHEAD	METER HOUSE	G.B.	POWER SOURCE	CABLE	NEW WELL	OVERHEAD A.C.

COMMENTS: _____

NEAREST POWER SOURCE U.G.A.C.

DISTANCE: 1450'

PIPELINES IN AREA: _____

TECHNICIAN: Eli Goff

DATE: 4/9/06

6 CR 5412 BLOOMFIELD, N.M. 87413
OFFICE: 505-634-0271 CELL: 505-783-6953

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 28-7 20B

Lease:		AFE #:		AFE \$:	
Field Name: 28-7	Rig: H&P 282	State: NM	County: RIO ARRIBA	API #:	
Geoscientist: Glaser, Terry J	Phone: (281) 293 - 6538	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)

Location: Surface		Datum Code: NAD 27		Straight Hole	
Latitude: 36.669850	Longitude: -107.596980	X:	Y:	Section: 8	Range: 7W
Footage X: 2615 FWL	Footage Y: 515 FSL	Elevation: 6625	(FT)	Township: 28N	
Tolerance:					
Location Type: Year Round		Start Date (Est.):		Completion Date:	
				Date In Operation:	
Formation Data: Assume KB = 3641 Units = FT					

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	216	6425	<input type="checkbox"/>			12-1/4 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
NCMT	1141	5500	<input type="checkbox"/>			
CJAM	2341	4300	<input type="checkbox"/>			Possible water flows.
KRLD	2491	4150	<input type="checkbox"/>			
FRLD	3021	3620	<input type="checkbox"/>			Possible gas.
PCCF	3286	3355	<input type="checkbox"/>			
LEWS	3486	3155	<input type="checkbox"/>			
Intermediate Casing	3586	3055	<input type="checkbox"/>			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.
CHRA	4231	2410	<input type="checkbox"/>			
CLFH	4931	1710	<input type="checkbox"/>			Gas; possibly wet
MENF	5086	1555	<input type="checkbox"/>			Gas.
PTLK	5481	1160	<input type="checkbox"/>			Gas
MNCS	5731	910	<input type="checkbox"/>			
TOTAL DEPTH MV	5781	860	<input type="checkbox"/>			4 1/2", 10.5 ppf, J-55, STC 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

Additional Information:

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
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HOLE: 12.25"
 CSG OD: 9.625"
 CSG ID: 9.001"
 WGT: 32.3 ppg
 GRADE: H-40
 EXCESS: 125 %
 DEPTH: 235'

HOLE: 8.75"
 CSG OD: 7"
 CSG ID: 6.456"
 WGT: 20 ppg
 GRADE: J-55
 EXCESS: 150 %
 TAIL: 717.2'

DEPTH: 3586'

HOLE: 6.25"
 CSG OD: 4.5"
 CSG ID: 4.052"
 WGT: 10.5 ppg
 GRADE: J-55
 EXCESS: 50 %
 DEPTH: 5781'

SURFACE:

Option 1
 148 sx
 30.8 bbls
 172.9 cuft
 1.17 ft³/sx
 15.8 ppg
 4.973 gal/sx
 Class G Cement
 + 3% S001 Calcium Chloride
 + 0.25 lb/sx D029 Cellophane Flakes

Option 2
 143 sx
 30.8 bbls
 172.9 cuft
 1.21 ft³/sx
 15.6 ppg
 5.29 gal/sx
 Standard Cement
 + 3% Calcium Chloride
 + 0.25 lb/sx Flocele

Option 3
 65 sx
 18.6 bbls
 104.3 cuft
 1.61 ft³/sx
 14.5 ppg
 7.41 gal/sx
 Type III Ready Mix
 + 20% Fly Ash

INTERMEDIATE LEAD:

Option 1
 379 sx
 183.7 bbls
 1031.3 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
 397 sx
 183.7 bbls
 1031.3 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

Option 3
 392 sx
 183.7 bbls
 1031.3 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

INTERMEDIATE TAIL:

Option 1
 213 sx
 49.7 bbls
 279.2 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 Gilsonite Extender
 + 0.1% D046 Antifoam
 + 6 lb/sx Phenoseal

Option 2
 210 sx
 49.7 bbls
 279.2 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
 218 sx
 49.7 bbls
 279.2 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 Gilsonite Extender
 + 2% S001 Calcium Chloride
 + 0.1% D046 Antifoam
 + 0.15% D065 Dispersant
 + 1.0 lb/bbl CemNet

PRODUCTION:

Option 1
 251 sx
 64.4 bbls
 361.3 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 Gilsonite Extender
 + 0.25% D167 Fluid Loss
 + 0.25% D065 Dispersant
 + 0.1% D800 Retarder
 + 0.1% D046 Antifoam
 + 3.5 lb/sx Phenoseal

Option 2
 249 sx
 64.4 bbls
 361.3 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
 218 sx
 49.7 bbls
 279.2 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 Gilsonite Extender
 + 2% S001 Calcium Chloride
 + 0.1% D046 Antifoam
 + 0.15% D065 Dispersant
 + 1.0 lb/bbl CemNet

San Juan 28-7 #20B

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

358 sx
183.7 bbls
1031.3 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

491 sx
183.7 bbls
1031.3 cuft
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

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

INTERMEDIATE TAIL:

TAIL: 717.2'
DEPTH: 3498'

PRODUCTION:

HOLE: 6.25 "
CSG OD: 4.5 "
CSG ID: 4.052 "
WGT: 10.5 ppf
GRADE: J-55
EXCESS: 50 %
DEPTH: 5781'

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

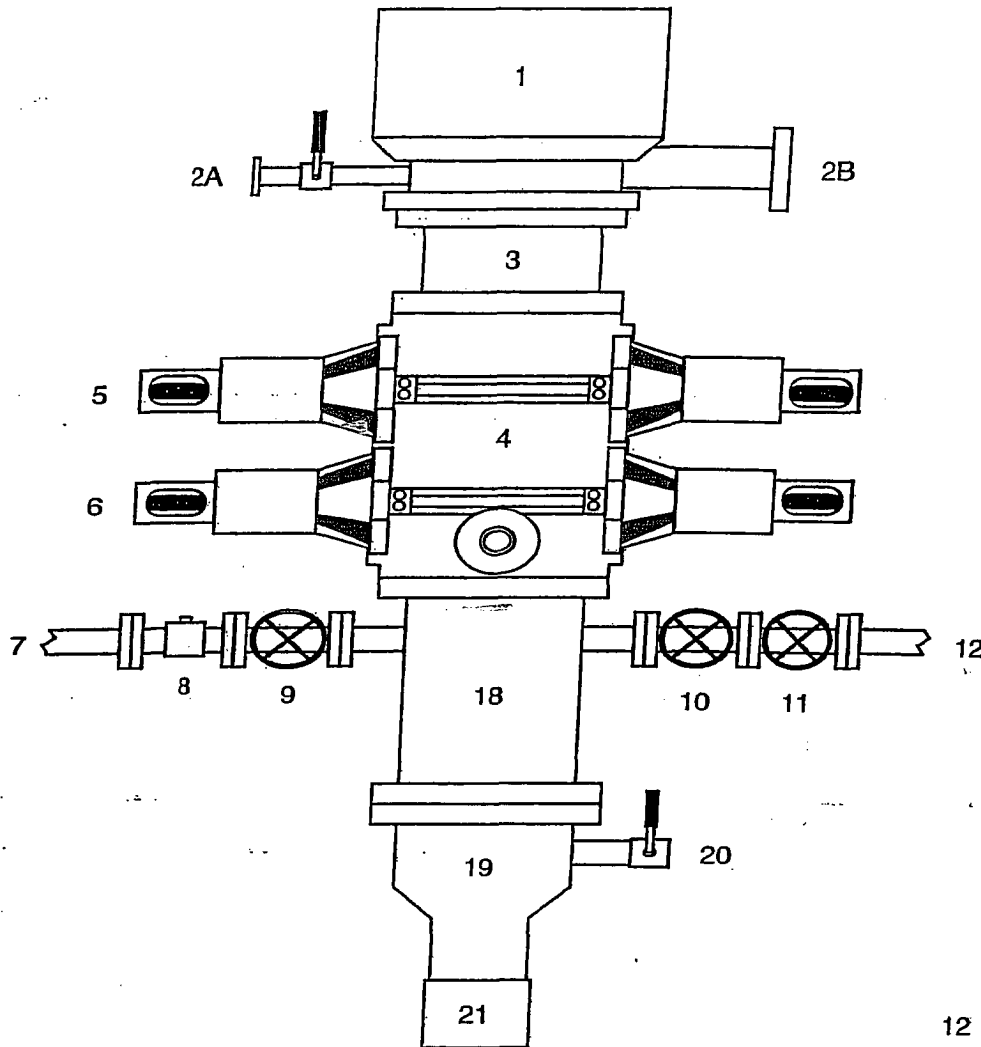
Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th joints

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

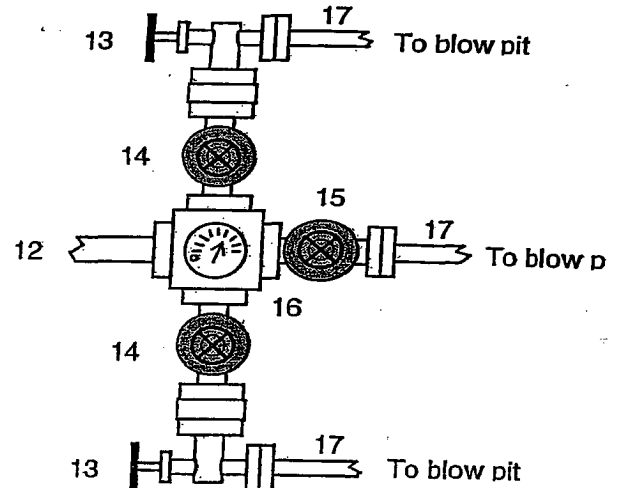
Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

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

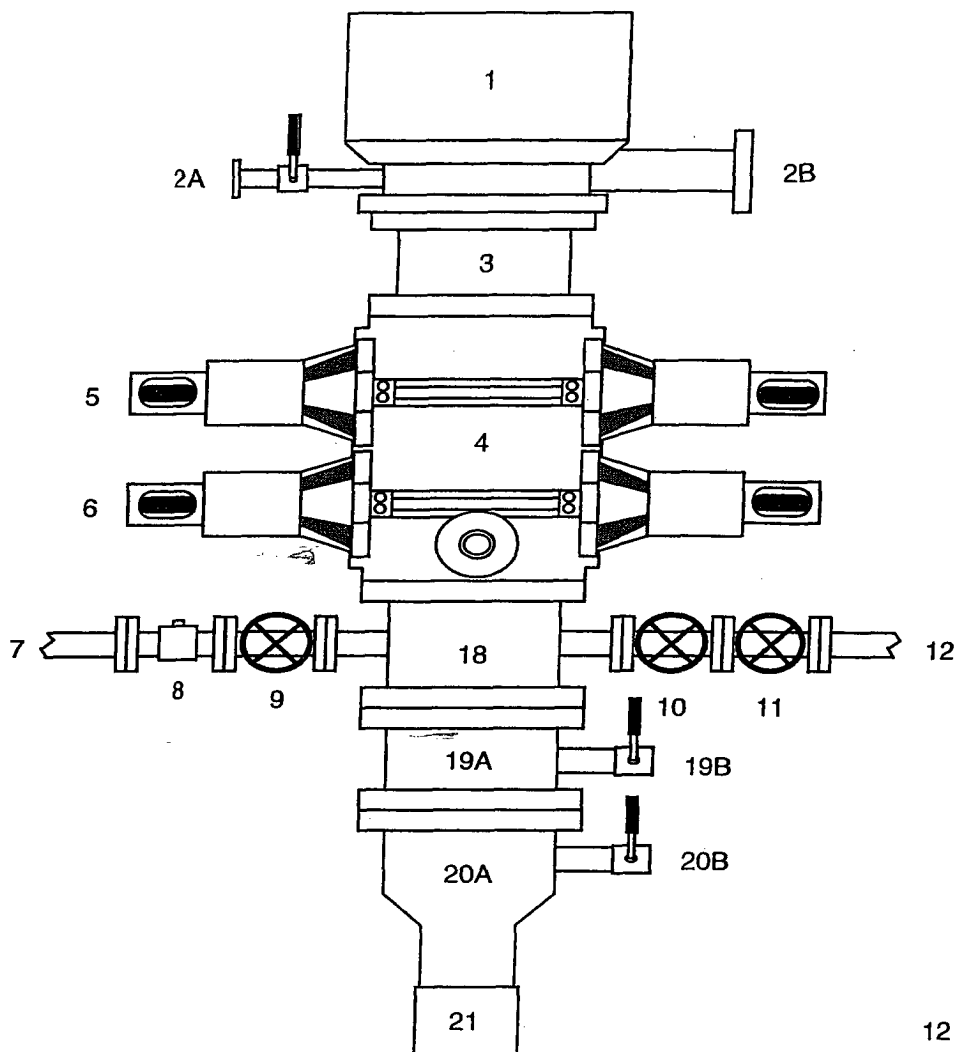


A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe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

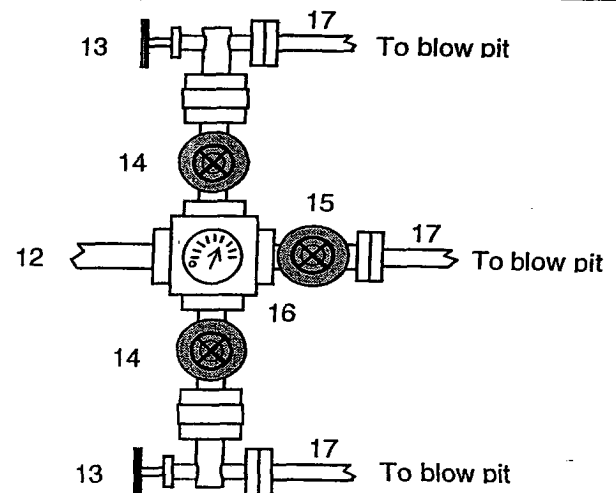
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

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