

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2006 AUG 25 10:18 AM
RECEIVED
OCT 2006
OIL & GAS DIV
BLM

1a. Type of Work DRILL	5. Lease Number NMNM-12641 012641 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 87499 (505) 326-9700	8. Farm or Lease Name Blanco 9. Well Number #7C
4. Location of Well Surface - Unit D (NWNW), 1090' FNL & 660' FWL, Est. BH - Unit E (SWNW) 1730' NFL & 800' FWL, Surface - Latitude 36° 85868'N Longitude 107° 65151'W	10. Field, Pool, Wildcat Blanco MV / Basin DK 11. Sec., Twn, Rge, Mer. (NMPM) 0 Sec. 35 T31N, R08W, NMPM API # 30-045-33915
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 660'	
16. Acres in Lease	17. Acres Assigned to Well MV & DK - 320 acres W/2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease	
19. Proposed Depth 7809'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6243' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Patsy Clugston</u> Sr. Regulatory Analyst	Date <u>8/24/06</u>

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

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 3.105.3 and 43 CFR 3.105.4

NMOCDB

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 30-045-33915		*Pool Code 72319 / 71599	*Pool Name BLANCO MESAVERDE / BASIN DAKOTA
*Property Code 31323	*Property Name BLANCO		*Well Number 7C
*OGRID No 217817	*Operator Name CONOCOPHILLIPS COMPANY		*Elevation 6243'

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	35	31N	8W		1090	NORTH	660	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	35	31N	8W		1730	NORTH	800	WEST	SAN JUAN

¹² Dedicated Acres 320.0 Acres - W/2	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 SURFACE LOCATION LAT: 36.85868°N LONG: 107.65151°W DATUM: NAD83 BOTTOM-HOLE LAT: 36.85691°N LONG: 107.65105°W DATUM: NAD83 LEASE NM-12641	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 Date <i>July 12, 2006</i> 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: MARCH 6, 2006 Signature and Seal of Professional Surveyor JASON C. EDWARDS Certificate Number 15269
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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

Form C-103

May 27, 2004

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

30-045-

33915

5. Indicate Type of Lease

STATE ☐

FEE ☐

6. State Oil & Gas Lease No.

Federal Lease - NM-12641

7. Lease Name or Unit Agreement Name

Blanco

8. Well Number

7C

9. OGRID Number

217817

10. Pool name or Wildcat

Blanco MV / 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 D

: 1090

feet from the

North

line and

660

feet from the

West

line

Section 35

Township

31M

Rng

8W

NMPM

County

San Juan

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

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
<1000'

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 ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐

COMMENCE DRILLING OPNS. ☐

CASING/CEMENT JOB ☐

ALTERING CASING ☐

P AND A ☐

OTHER:

New drill pit

☒

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

8/18/2006

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. 2

DATE

OCT 06 2006

Conditions of Approval (if any):

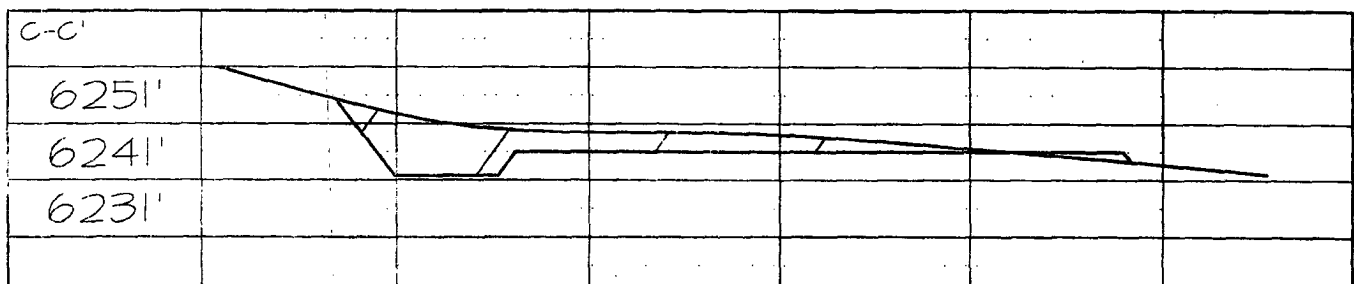
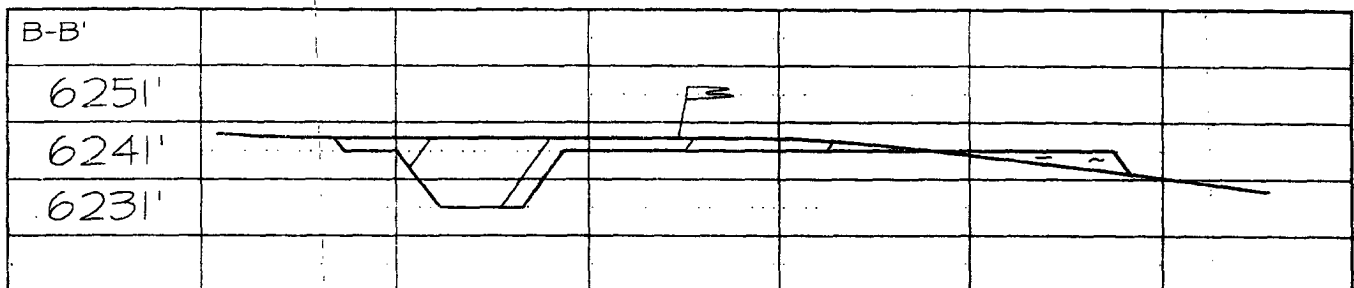
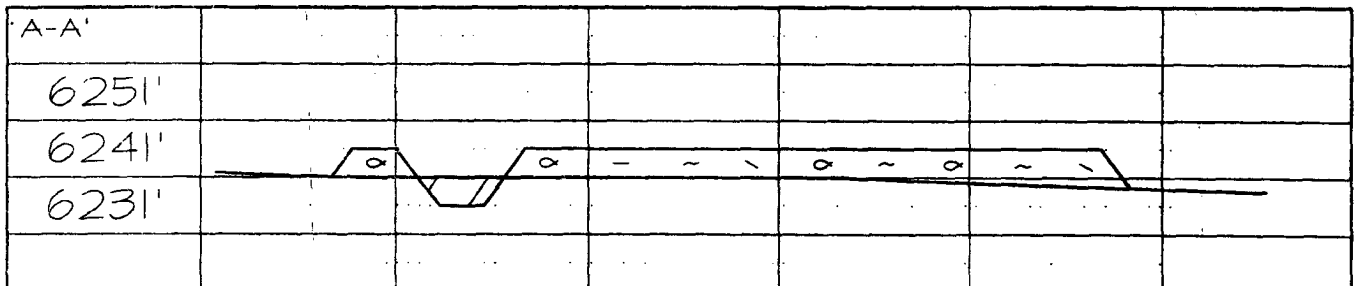
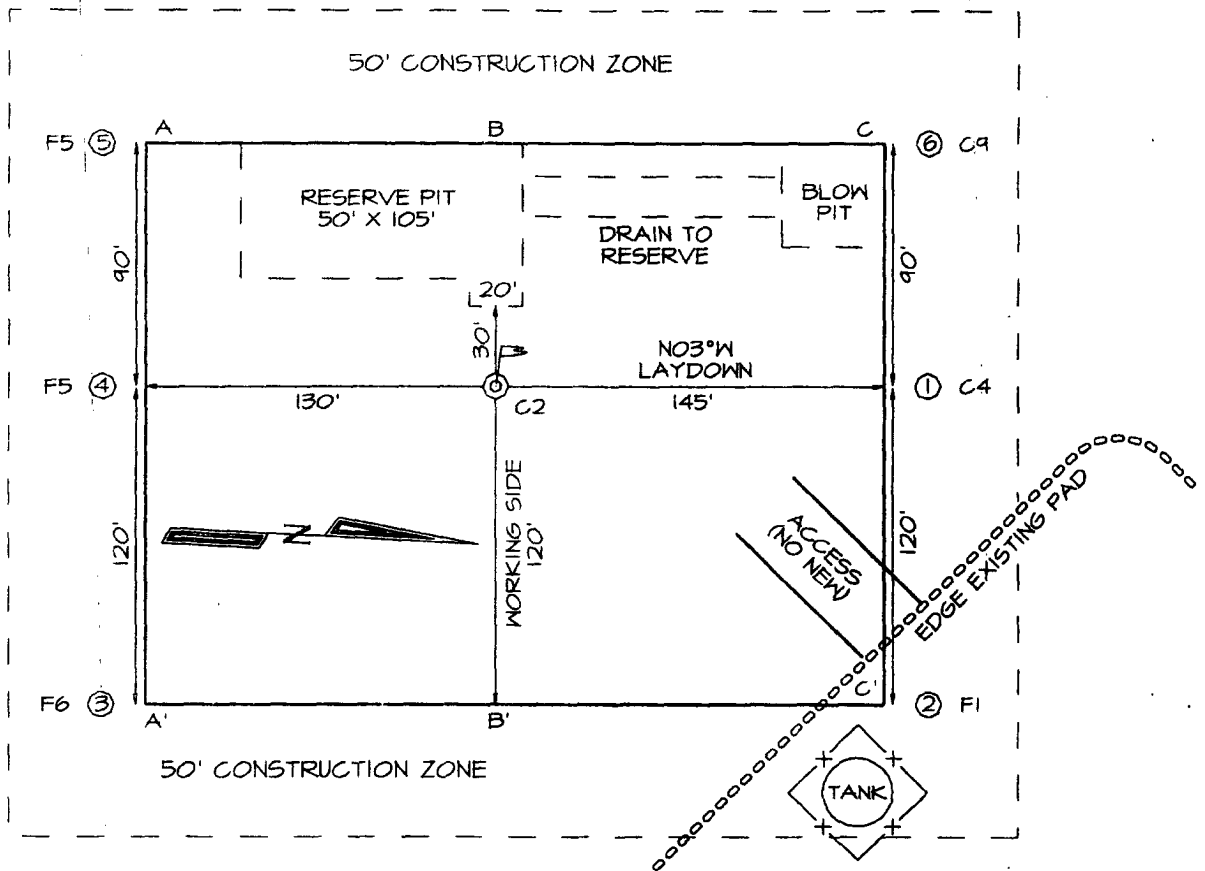
8 10/11

CONOCOPHILLIPS COMPANY BLANCO #7C
1090' FNL & 660' FWL, SECTION 35, T31N, R8W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6243'

LATITUDE: 36.85868° N
LONGITUDE: 107.65151° W
 DATUM: NAD1983

PLAT NOTE:

SURFACE OWNER
 Bureau of Land
 Management



PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

BLANCO 7C

Lease:		AFE #: WAN.CNV.6137		AFE \$:	
Field Name: NEW MEXICO-NORTH		Rig: H&P 281	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:		Phone: 832 486-2651	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			Deviated
Latitude: 36.858680	Longitude: -107.651510	X:	Y:	Section: 35	Range: 8W
Footage X: 660 FWL	Footage Y: 1090 FNL	Elevation: 6243	(FT)	Township: 31N	

Location: Bottom Hole		Datum Code: NAD 27			Deviated
Latitude: 36.856910	Longitude: -107.651050	X:	Y:	Section: 35	Range: 8W
Footage X: 800 FWL	Footage Y: 1730 FNL	Elevation:	(FT)	Township: 31N	

Tolerance:	
Location Type: Year Round	Start Date (Est.):
Completion Date:	Date In Operation:

Formation Data: Assume KB = 6259	Units = FT
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Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	216	6043	☐			12-1/4 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
NCMT	959	5300	☐			
OJAM	1839	4420	☐			Possible water flows.
KRLD	2089	4170	☐			
FRLD	2839	3420	☐			Possible gas.
PCCF	3139	3120	☐			
LEWS	3339	2920	☐			
Intermediate Casing	3439	2820	☐			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.
CHRA	4239	2020	☐			
CLFH	5004	1255	☐			Gas; possibly wet
MENF	5064	1195	☐			Gas.
PTLK	5384	875	☐			Gas.
MNCS	5634	625	☐			
GRHN	7409	-1150	☐			Gas. Possibly wet.
PAGU	7594	-1335	☐			Gas. Highly Fractured.
CBBO	7639	-1380	☐			Gas
TOTAL DEPTH DK	7809	-1550	☐			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	7809	-1550	☐			

Reference Wells:		
Reference Type	Well Name	Comments

PROJECT PROPOSAL - New Drill / Sidetrack

BLANCO 7C

Logging Program:Intermediate Logs: ☐ Log only if show ☐ GR/ILD ☐ Triple ComboTD 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: Zones - Well is to be drilled directionally to the southeast as a result of restrictions that prevent drilling on an ACEC.

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 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

Comp. Strength
 8 hrs 475 psi
 24 hrs 1375 psi

INTERMEDIATE LEAD:

Option 1
 372 sx
 180.1 bbls
 1011.1 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
 389 sx
 180.1 bbls
 1011.1 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
 384 sx
 180.1 bbls
 1011.1 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

HOLE: 8.75 "
 CSG OD: 7 "
 CSG ID: 6.456 "
 WGT: 20 ppf
 GRADE: J-55
 EXCESS: 150 %
 TAIL: 703.8'
 DEPTH: 3519'

INTERMEDIATE TAIL:

Option 1
 209 sx
 48.8 bbls
 274.2 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 Gilsontite Extender
 + 0.1% D046 Antifoamer
 + 6 lb/sx Phenoseal

Option 2
 206 sx
 48.8 bbls
 274.2 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
 214 sx
 48.8 bbls
 274.2 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 Gilsontite 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
 483 sx
 124.0 bbls
 696.2 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 Gilsontite 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
 480 sx
 124.0 bbls
 696.2 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
 480 sx
 124.0 bbls
 696.2 cuft
 1.45 ft³/sx
 13.29 psi
 24 hrs 2300 psi

HOLE: 6.25 "
 CSG OD: 4.5 "
 CSG ID: 4 "
 WGT: 11.6 ppf
 GRADE: N-80
 EXCESS: 50 %
 DEPTH: 7889'

Blanco #7C

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

SURFACE:

INTERMEDIATE LEAD:

Option 4

351 sx
180.1 bbls
1011.1 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

HOLE: 8.75 "
CSG OD: 7 "
CSG ID: 6.456 "
WGT: 20 ppf
GRADE: J-55
EXCESS: 150 %

TAIL: 703.8'

DEPTH: 3519'

Option 5

481 sx
180.1 bbls
1011.1 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:

HOLE: 6.25 "
CSG OD: 4.5 "
CSG ID: 4 "
WGT: 11.6 ppf
GRADE: N-80
EXCESS: 50 %
DEPTH: 7889'

PRODUCTION:

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

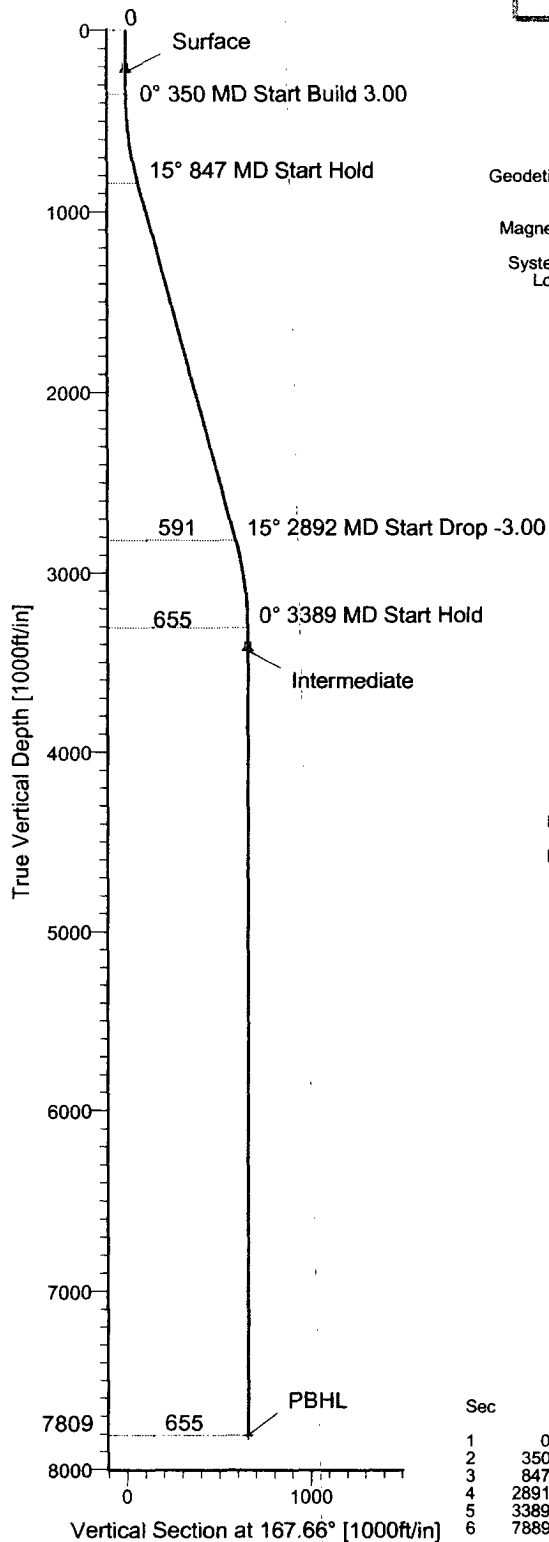
Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

ConocoPhillips

ConocoPhillips
Field: San Juan County, NM
Site: Blanco #7C
Well: Well # 7C
Wellpath: Original Hole
Plan: Plan #1



Azimuths to Grid North
 True North: -0.06°
 Magnetic North: 10.43°
 Magnetic Field
 Strength: 51356nT
 Dip Angle: 63.69°
 Date: 8/1/2006
 Model: igr2005



FIELD DETAILS

San Juan County, NM
 New Mexico
 USA

Geodetic System: US State Plane Coordinate System 1927
 Ellipsoid: NAD27 (Clarke 1866)
 Zone: New Mexico, Western Zone
 Magnetic Model: igr2005

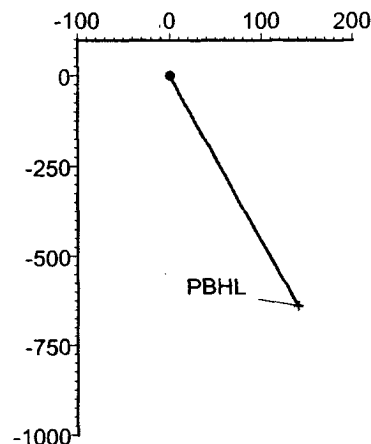
System Datum: Mean Sea Level
 Local North: Grid North

SITE DETAILS

Blanco #7C
 Sec 36-T31N-R8W

Water Depth: 0.00
 Positional Uncertainty: 0.00
 Convergence: 0.00

West(-)/East(+) [200ft/in]



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	7809.00	-640.00	140.00	0.00	0.00	Point

WELLPATH DETAILS

Original Hole

Rig:			
Ref. Datum:	SITE	0.00ft	
V. Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
167.66°	0.00	0.00	0.00

CASING DETAILS

No.	TVD	MD	Name	Size
1	230.00	230.00	Surface	9.625
2	3439.00	3519.12	Intermediate	7.000

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	167.66	0.00	0.00	0.00	0.00	0.00	0.00	
2	350.00	0.00	167.66	350.00	0.00	0.00	0.00	0.00	0.00	
3	847.30	14.92	167.66	841.70	-62.89	13.76	3.00	167.66	64.38	
4	2891.82	14.92	167.66	2817.30	-577.11	126.24	0.00	0.00	590.75	
5	3389.12	0.00	167.66	3309.00	-640.00	140.00	3.00	180.00	655.13	
6	7889.12	0.00	167.66	7809.00	-640.00	140.00	0.00	0.00	655.13	PBHL

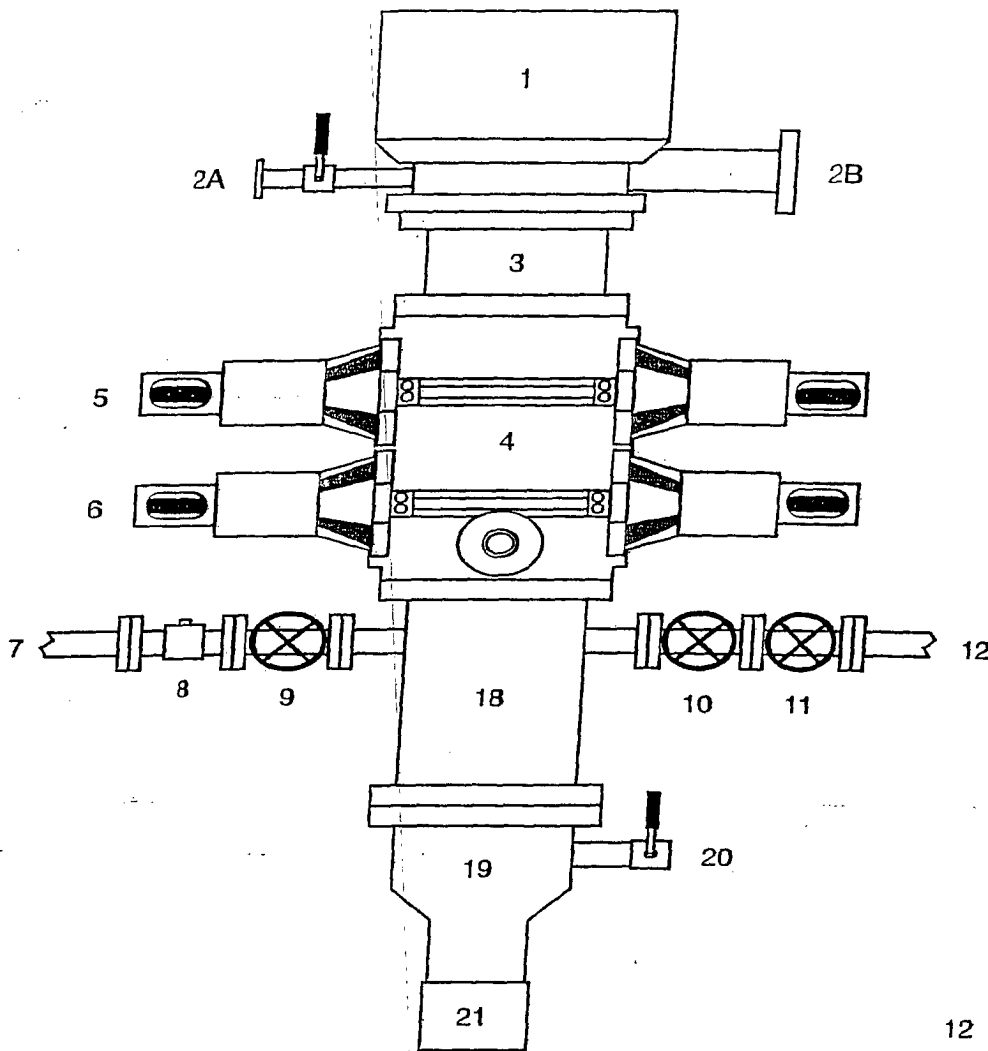


Blanco #7C**TVD - MD Formation Tops**

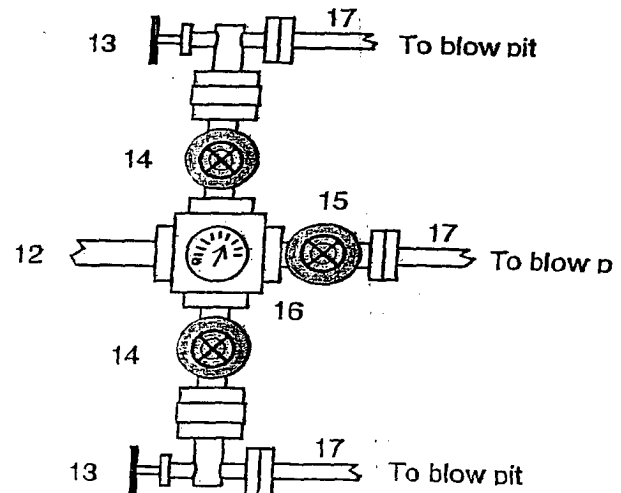
Formation	TVD	MD
San Jose	13	13
Surface Casing	216	216
NCMT	959	968.70
OJAM	1839	1879.40
KRLD	2089	2138.11
FRLD	2839	2914.17
PCCF	3139	3600.00
Lewis	3339	3520.00
Intermediate Casing	3439	3512.00
Chacra	4239	4319.12
Cliffhouse	5004	5084.12
Menefee	5064	5144.12
Point Lookout	5384	5464.12
Mancos Shale	5634	5714.12
Greenhorn	7409	7489.12
Pagu	7594	7674.18
Cubero	7639	7719.12
TD	7809	7889.00

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

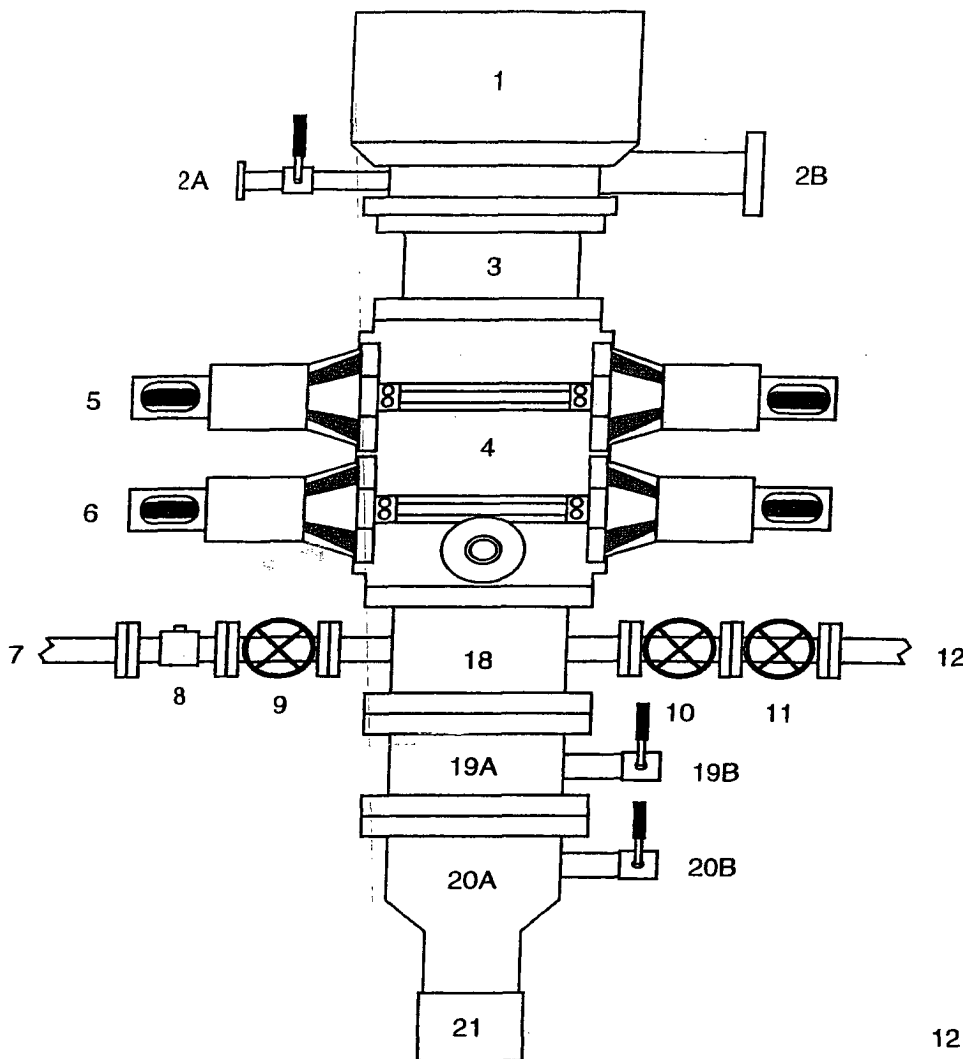


12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe rams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

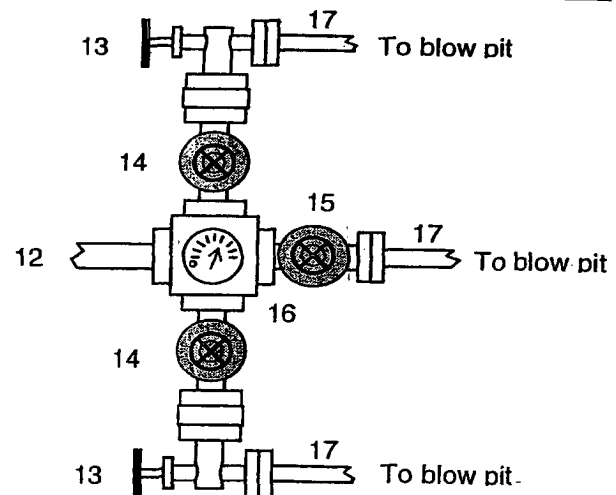
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

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