

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number NMSF-078998	
1b. Type of Well GAS	Unit Reporting Number 6. If Indian, All. or Tribe	
2. Operator ConocoPhillips	7. Unit Agreement Name San Juan 32-7 Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name 9. Well Number #17A	
4. Location of Well Surface - X 815' FSL & 1665' FEL, Est. BH - "P" 760' FSL & 760' FEL, Surf-Latitude 36° 39451'N; Longitude-107° 59109'W BH-Latitude 36° 89437'N; Longitude-107° 58800'W	10. Field, Pool, Wildcat Blanco MV 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 17 T31N, R07W API # 30-039-33832	
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 760'		
16. Acres in Lease	17. Acres Assigned to Well 320. E/2 MV	
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease		
19. Proposed Depth 6048'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6492' GL	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u>Patsy Chisota</u> Sr. Regulatory Analyst	Date <u>7/3/06</u>	

PERMIT NO.

APPROVAL DATE

APPROVED BY [Signature]

TITLE

DATE 9/19/06

Archaeological Report attached

Environmental Assessment is 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.

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

NMOC

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

District II
PO Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-33832	*Pool Code 72319	*Pool Name BLANCO MESAVERDE
*Property Code 31329	*Property Name SAN JUAN 32-7 UNIT	*Well Number 17A
*OGRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY	*Elevation 6492'

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
0	17	31N	7W		815	SOUTH	1665	EAST	SAN JUAN

¹¹Bottom 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
P	17	31N	7W		760	SOUTH	760	EAST	SAN JUAN
¹² Dedicated Acres					¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.
320.0 Acres - E/2									

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

5260.20'

5280.00'

5280.00'

5269.44'

17

LEASE
SF-078998

SURFACE LOCATION
LAT: 36.89451°N
LONG: 107.59109°W
DATUM: NAD83

BOTTOM-HOLE
LAT: 36.89437°N
LONG: 107.58800°W
DATUM: NAD83

015'

1665'

760'

760'

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
April 21, 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: NOVEMBER 9, 2005

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

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

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.)		WELL API NO. 30-045- 33832
1. Type of Well: Oil Well ☐ Gas Well ☒ Other ☐		5. Indicate Type of Lease STATE ☐ FEE ☐
2. Name of Operator ConocoPhillips Company		6. State Oil & Gas Lease No. Federal Lease - SF-078998
3. Address of Operator 3401 E. 30TH STREET, FARMINGTON, NM 87402		7. Lease Name or Unit Agreement Name San Juan 32-7 Unit
4. Well Location Unit Letter <u>O</u> : <u>815'</u> feet from the <u>South</u> line and <u>1665'</u> feet from the <u>East</u> line Section <u>17</u> Township <u>31N</u> Rng <u>7W</u> NMPM County <u>San Juan</u>		8. Well Number #17A
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6492' GL		9. OGRID Number 217817
Pit or Below-grade Tank Application ☐ or Closure ☐		10. Pool name or Wildcat Blanco Mesaverde
Pit type <u>New Drill</u> Depth to Groundwater <u>> 100'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u><1000'</u> Pit Liner Thickness: <u>12</u> mill Below-Grade Tank: Volume <u> </u> bbls; Construction Material <u> </u>		

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.

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 NMOC guidelines ☐, a general permit ☒ or an (attached) alternative OCD-approved plan ☐.

 SIGNATURE Patsy Clugston TITLE Sr. Regulatory Specialist DATE 6/29/2006

 Type or print name Patsy Clugston E-mail address: pclugston@br-inc.com Telephone No. 505-326-9518
For State Use Only

 APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 4 DATE SEP 21 2006
 Conditions of Approval (if any):

CHECKED BY: JCE

PROJECT PROPOSAL - New Drill / Sidetrack

SAN JUAN 32-7 17A

Lease:		AFE #: WAN.CNV.6120		AFE \$:	
Field Name: 32-7	Rig: H&P 282	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)

Location: Surface		Datum Code: NAD 27		Deviated	
Latitude: 36.894510	Longitude: -107.591090	X:	Y:	Section: 17	Range: 7W
Footage X: 1665 FEL	Footage Y: 815 FSL	Elevation: 6492	(FT)	Township: 31N	
Tolerance:					

Location: Bottom Hole		Datum Code: NAD 27		Deviated	
Latitude: 36.894370	Longitude: -107.588000	X:	Y:	Section: 17	Range: 7W
Footage X: 760 FEL	Footage Y: 760 FSL	Elevation:	(FT)	Township: 31N	
Tolerance:					

Location Type: Summer Only	Start Date (Est.):	Completion Date:	Date In Operation:
Formation Data: Assume KB = 6508 Units = FT			

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	216	6292	☐			12-1/4 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
NCMT	1098	5410	☐			
OJAM	2283	4225	☐			Possible water flows.
KRLD	2408	4100	☐			
FRLD	3028	3480	☐			Possible gas.
PCCF	3418	3090	☐			
LEWS	3618	2890	☐			
Intermediate Casing	3718	2790	☐			8 3/4" Hole. 7", 23 ppf, J-55, LTC Casing. Circulate cement to surface.
CHRA	4558	1950	☐			
CLFH	5368	1140	☐			Gas; possibly wet
MENF	5418	1090	☐			Gas.
PTLK	5698	810	☐			Gas.
MNCS	5948	560	☐			
Total Depth	6048	460	☐			6-1/4" Hole. 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
----------------	-----------	----------

PROJECT PROPOSAL - New Drill / Sidetrack

SAN JUAN 32-7 17A

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
----------	-------	-----------	---------	----------------	---------

Comments: Zones - 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

General/Work Description - Funds in the amount of \$854,543.75 gross (\$649,624 COPC net) are requested to drill and equip the referenced well as an 6,095' MV 160-acre well, to be located 660' FSL & 1400' FEL of Section 17-T31N-R7W, San Juan Co., NM. COPC has 76.02/63.29% in the MV. The pre-drill charge code is WAN.RFE.PD06.64. The subject well is scheduled to spud on May 17, 2006.

Section 17-T31N-R7W is in an area with well-developed pay in the Point Lookout and Menefee members of the Mesaverde Group. It is estimated that this well will produce 1.09 Bcf, EUR. The commingled flowstream has an IP of 360 mcf/d and production for 40 years. The 13% economic indicators generated are: PI 1.15, NPV \$197M, AARR of 17.6%.

HOLE: 12.25 "
 CSG OD: 9.625 "
 CSG ID: 9.001 "
 WGT: 32.3 ppf
 GRADE: H-40
 EXCESS: 125 %
 DEPTH: **213**

HOLE: 8.75 "
 CSG OD: 7 "
 CSG ID: 6.366 "
 WGT: 23 ppf
 GRADE: J-55
 EXCESS: 150 %
 TAIL: **771.6**
 DEPTH: **3858**

HOLE: 6.25 "
 CSG OD: 4.5 "
 CSG ID: 4.052 "
 WGT: 10.5 ppf
 GRADE: J-55
 EXCESS: 50 %
 DEPTH: **6188**

SURFACE:
 Option 1
 135 sx
 28.0 bbls
 157.4 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
 130 sx
 28.0 bbls
 157.4 cuft
 1.21 ft³/sx
 15.6 ppg
 5.29 gal/sx
 Standard Cement
 + 3% Calcium Chloride
 + 0.25 lb/sx Flocele

Option 3
 59 sx
 17.0 bbls
 95.7 cuft
 1.61 ft³/sx
 14.5 ppg
 7.41 gal/sx
 Type I-II Ready Mix
 + 20% Fly Ash

Comp. Strength
 6 hrs 250 psi
 8 hrs 500 psi

Comp. Strength
 8 hrs 475 psi
 24 hrs 1375 psi

INTERMEDIATE LEAD:

Option 1
 411 sx
 199.0 bbls
 1117.5 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
 430 sx
 199.0 bbls
 1117.5 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
 425 sx
 199.0 bbls
 1117.5 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
 9 hrs 300 psi
 48 hrs 525 psi

Comp. Strength
 1:47 hrs 50 psi
 12 hrs 350 psi
 24 hrs 450 psi

Comp. Strength
 3 hrs 100 psi
 24 hrs 443 psi

INTERMEDIATE TAIL:

Option 1
 229 sx
 53.3 bbls
 299.4 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
 225 sx
 53.3 bbls
 299.4 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
 234 sx
 53.3 bbls
 299.4 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

Comp. Strength
 3:53 500 psi
 8:22 1000 psi
 24 hrs 3170 psi
 48 hrs 5399 psi

Comp. Strength
 2:05 50 psi
 4:06 500 psi
 12 hrs 1250 psi
 24 hrs 1819 psi

Comp. Strength
 24 hrs 1850 psi
 48 hrs 3411 psi

PRODUCTION:

Option 1
 264 sx
 67.8 bbls
 380.9 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
 263 sx
 67.8 bbls
 380.9 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
 263 sx
 67.8 bbls
 380.9 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
 7 hrs 500 psi
 24 hrs 2100 psi

Comp. Strength
 9:32 50 psi
 12 hrs 500 psi
 13:29 1026 psi
 24 hrs 2300 psi

Comp. Strength
 24 hrs 1850 psi
 48 hrs 3411 psi

San Juan 32-7 #17A

SURFACE:

HOLE: 12.25 "
CSG OD: 9.625 "
CSG ID: 9.001 "
WGT: 32.3 ppf
GRADE: H-40
EXCESS: 125 %
DEPTH: 213

INTERMEDIATE LEAD:

Option 4

388 sx
199.0 bbls
1117.5 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: 6.366 "
WGT: 23 ppf
GRADE: J-55
EXCESS: 150 %
TAIL: 771.6
DEPTH: 3858

Option 5

532 sx
199.0 bbls
1117.5 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

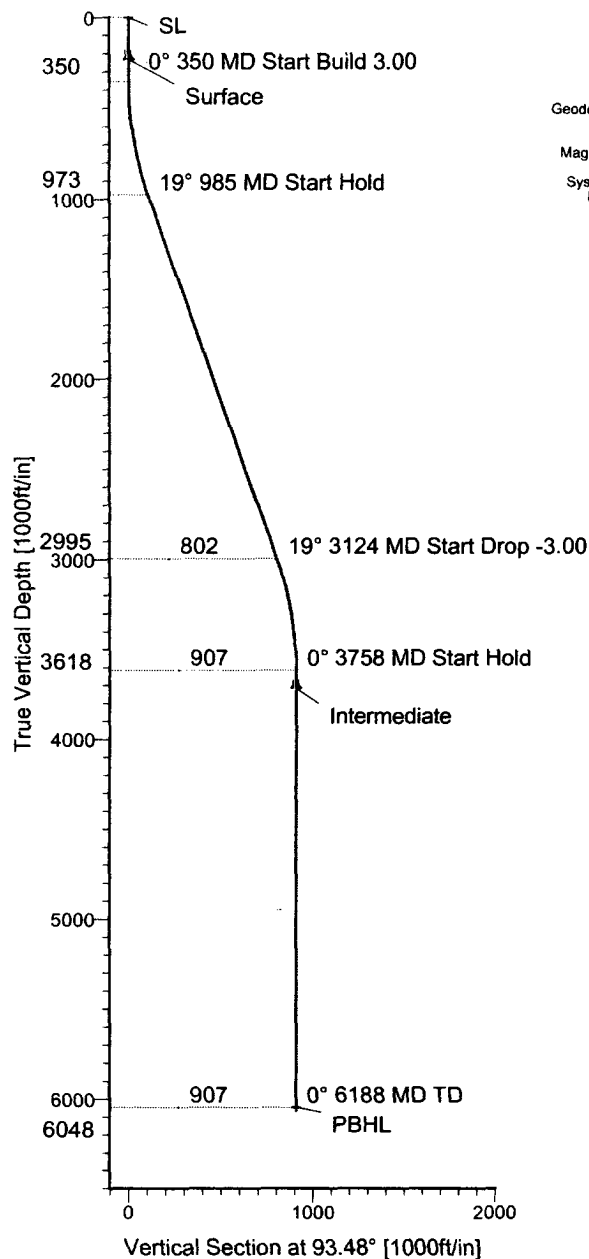
INTERMEDIATE TAIL:

PRODUCTION:

HOLE: 6.25 "
CSG OD: 4.5 "
CSG ID: 4.052 "
WGT: 10.5 ppf
GRADE: J-55
EXCESS: 50 %
DEPTH: 6188

ConocoPhillips

ConocoPhillips
Field: San Juan County, NM
Site: San Juan 32-7 #17A
Well: Well #17A
Wellpath: Original Hole
Plan: Plan #1

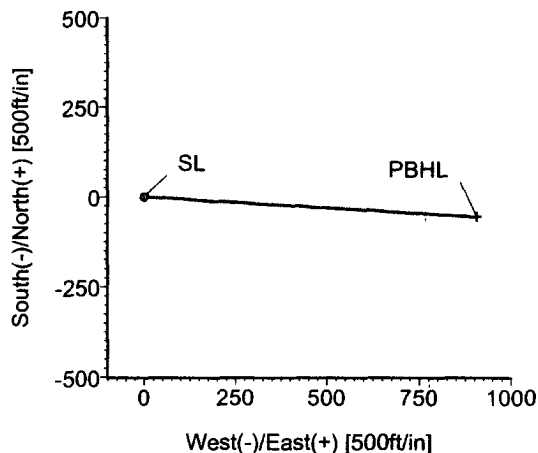


FIELD DETAILS

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

San Juan 32-7 #17A
 Sec. 17, T31N, R7W
 San Juan County, New Mexico
 Water Depth: 0.00
 Positional Uncertainty: 0.00
 Convergence: 0.00



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	6048.00	-55.00	905.00	0.00	0.00	Point

WELLPATH DETAILS

Original Hole		SITE		0.00ft	
Rig:	Ref. Datum:	V. Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
		93.48°	0.00	0.00	0.00

CASING DETAILS

No.	TVD	MD	Name	Size
1	230.00	230.00	Surface	13.375
2	3718.00	3858.23	Intermediate	6.250

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	93.48	0.00	0.00	0.00	0.00	0.00	0.00	
2	350.00	0.00	93.48	350.00	0.00	0.00	0.00	0.00	0.00	
3	984.60	19.04	93.48	972.99	-6.34	104.27	3.00	93.48	104.46	
4	3123.63	19.04	93.48	2995.01	-48.66	800.73	0.00	0.00	802.20	
5	3758.23	0.00	93.48	3618.00	-55.00	905.00	3.00	180.00	906.67	
6	6188.23	0.00	93.48	6048.00	-55.00	905.00	0.00	0.00	906.67	PBHL

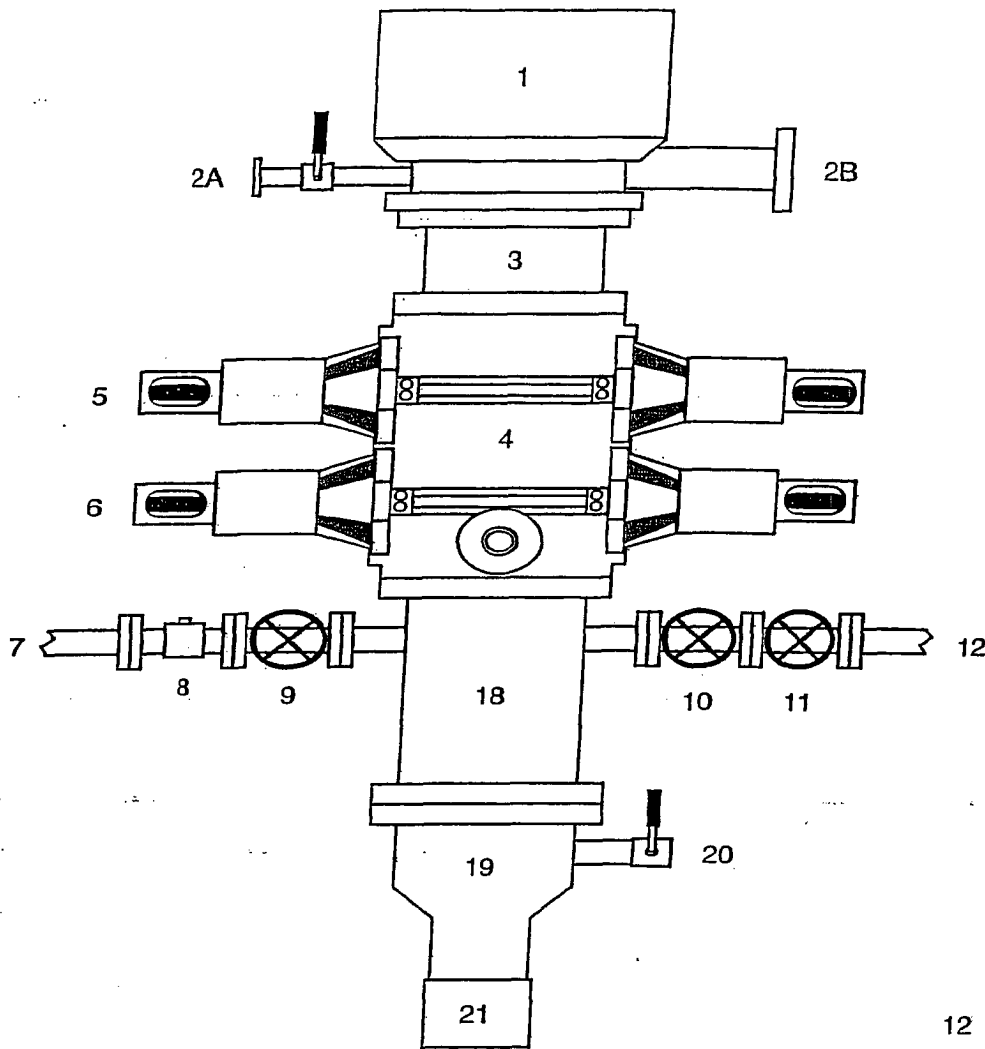
San Juan 32-7 #17A

TVD - MD Formation Tops

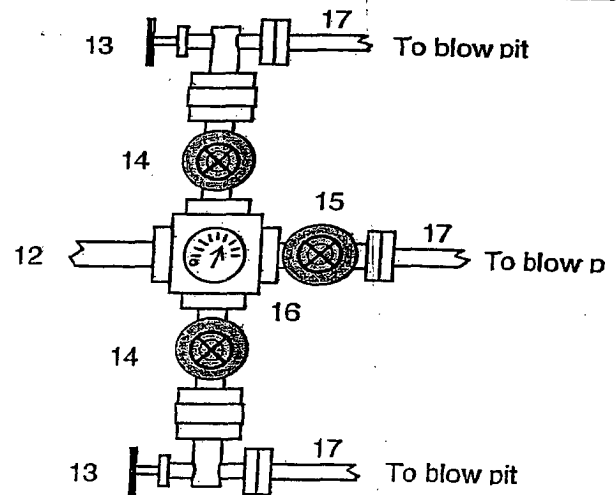
Formation	TVD	MD
San Jose	13	13
Surface Casing	213	213
NCMT	1098	1116.85
OJAM	2283	2370.41
KRLD	2408	2500.00
FRLD	3028	3158.29
PCCF	3418	3600.00
Lewis	3618	3520.00
Intermediate Casing	3718	3858.00
Chacra	4558	4698.23
Cliffhouse	5368	5500.00
Menefee	5418	5558.23
Point Lookout	5698	5838.23
Mancos	5948	5900.00
TD	6048	6188.00

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

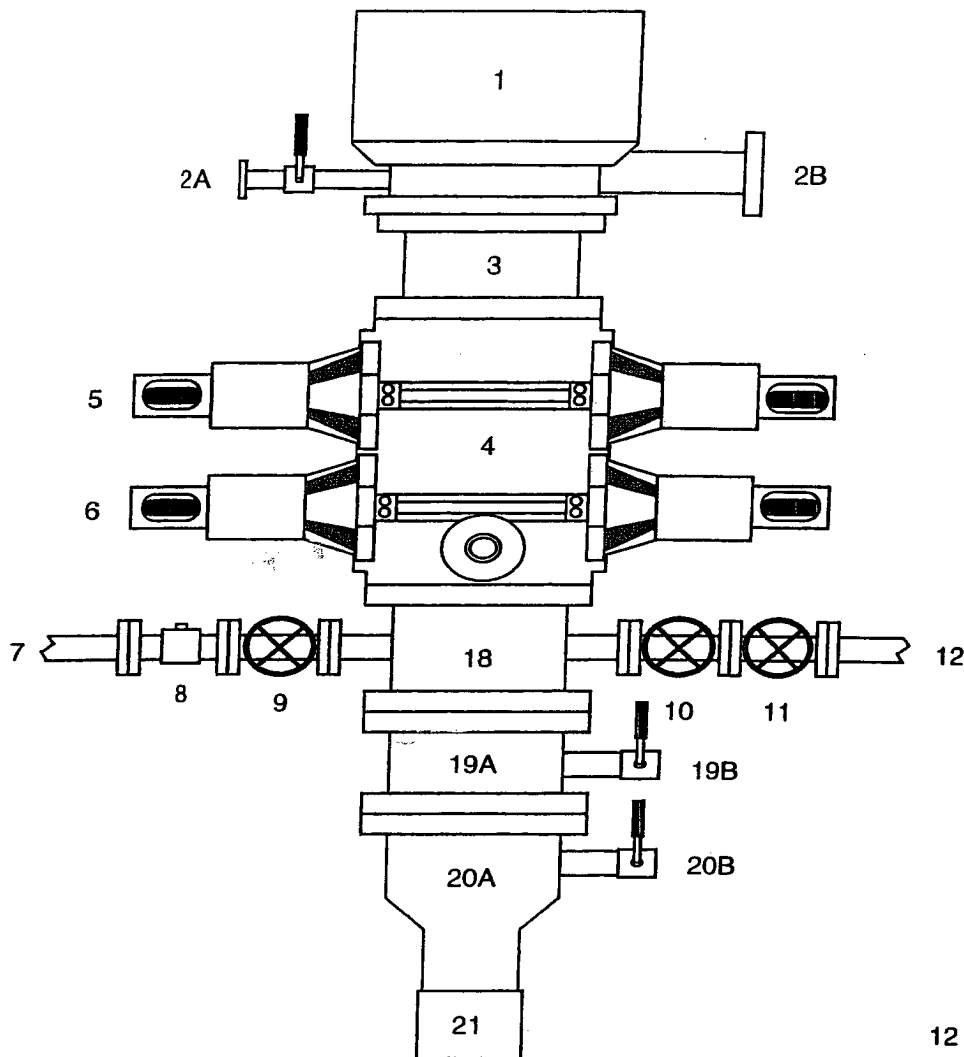


A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe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

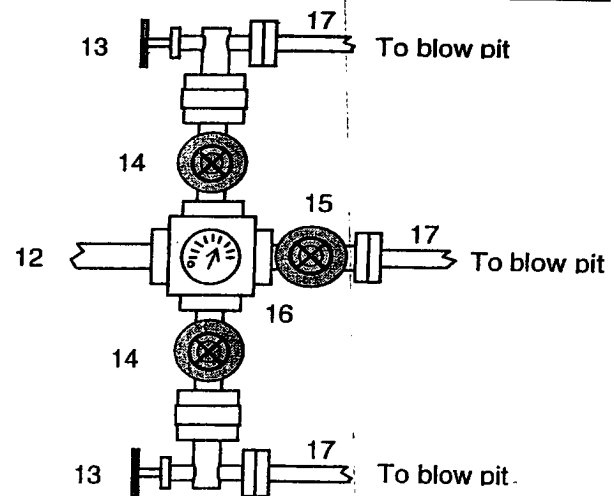
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



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