

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2008 DEC 7 PM 2 54

1a. Type of Work DRILL	5. Lease Number SF-078972 Unit Reporting Number NMNM-78413C-DK NMNM-78413A-MV	
1b. Type of Well GAS	6. If Indian, All. or Tribe	
2. Operator Conoco Phillips	7. Unit Agreement Name San Juan 28-7 Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name	
4. Location of Well SURF: Unit K (NESW), 1386' FSL & 1410' FWL BH: Unit J (NWSE) 2100' FSL & 2300' FEL SURF: Latitude 36° 35' 13.10906 N SURF: Longitude 107° 32' 42.71690 W BH: Latitude 36° 35' 17.12500 N BH: Longitude 107° 32' 30.95200 W	9. Well Number #157G	
10. Field, Pool, Wildcat Basin DK/Blanco MV	11. Sec., Twn, Rge, Mer. (NMPM) K Sec. 11, T27N, R7W API # 30-039-30134	
14. Distance in Miles from Nearest Town 55 miles/Bloomfield	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1840'	16. Acres in Lease	17. Acres Assigned to Well DK & MV - 320.0 E/2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease	19. Proposed Depth 7685'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6576.8' GL	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by Rhonda Rogers (Regulatory Technician)	10-5-06 Date	

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

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.

HOLD ON RE-DRILLING SURVEY

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

OCT 18 2007 NMOC

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

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

## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

1301 W. Grand Avenue, 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 & 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 - 7 Copies

Fee Lease - 3 Copies

2007 AUG 23 PM 4:01

RECEIVED ☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-039-30134		<sup>2</sup> Pool Code 72319/71599		<sup>3</sup> Pool Name DAKOTA/MESAVERDE	
<sup>4</sup> Property Code 31739		<sup>5</sup> Property Name SAN JUAN 28-7 UNIT			<sup>6</sup> Well Number 157G
<sup>7</sup> OGRID No. 217817		<sup>8</sup> Operator Name CONOCOPHILLIPS COMPANY			<sup>9</sup> Elevation 6643

<sup>10</sup> SURFACE LOCATION

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	11	27-N	7-W		1380	SOUTH	1410	WEST	RIO ARriba

<sup>11</sup> 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
J	11	27-N	7-W		1590	SOUTH	2400	EAST	RIO ARriba

<sup>12</sup> Dedicated Acres 320 E/2	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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		17 OPERATOR CERTIFICATION	
<p>WELL FLAG NAD 83 LAT: 36.585682° N LONG: 107.547874° W NAD 27 LAT: 36°35.140383' N LONG: 107°32.836044' W 1410'</p>		<p>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 working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Rhonda Rogers</i> Signature Rhonda Rogers Printed Name</p>	
		<p>E/2 DEDICATED ACREAGE SF-078972 SECTION 11, T-27-N, R-7-W</p>	
		<p>Bottom Hole NAD 83 LAT: 36.586360° N LONG: 107.542846° W NAD 27 LAT: 36°35.181100' N LONG: 107°32.534368' W 2400'</p>	
<p>18 SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Date of Survey: 7/17/07 Signature and Seal of Professional Surveyor:</p> <p><i>Henry P. Broadhurst, Jr.</i> Professional Surveyor NEW MEXICO 11383</p> <p>Certificate Number: NM 11383</p>			

Office

Energy, Minerals and Natural Resources

May 27, 2004

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-

30134

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil &amp; Gas Lease No.

SF-078972

7. Lease Name or Unit Agreement Name

San Juan 28-7 Unit

8. Well Number

157G

9. OGRID Number

217817

10. Pool name or Wildcat

Basin DK/Blanco MV

## 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

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter K

: 1840

feet from the

South

line and

2004

feet from the

West

line

Section 11

Township 27N

Rng 7W

NMPM

County

Rio Arriba

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

6576.8

Pit or Below-grade Tank Application

☐ or Closure ☐

Pit type

New Drill

Depth to Groundwater

&gt;100'

Distance from nearest fresh water well

&gt;1000'

Distance from nearest surface water

&lt;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

☐

PLUG AND ABANDON

☐

TEMPORARILY ABANDON

☐

CHANGE PLANS

☐

PULL OR ALTER CASING

☐

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, Lined:

ConocoPhillips proposes to construct a new drilling pit and an associated vent/flare pit. Based on Burlington's interpretation of the Ecosphere's risk ranking criteria, the new drilling pit will be a lined pit as detailed in Burlington's Revised Drilling / Workover Pit Construction / Operation Procedures dated November 11, 2004 on file at the NMOCD 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. Burlington Resources anticipates closing these pits according to the Drilling / Workover Pit Closure Procedure dated August 2, 2004 on file at the NMOCD office.

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

TITLE

Regulatory Assistant

DATE

10-1506

Type or print name

Rhonda Rogers

E-mail address:

rhonda.s.rogers@conocophillips.com

Telephone No.

505-599-4018

For State Use Only

APPROVED BY

TITLE

Deputy Oil & Gas Inspector,  
District #3

DATE

OCT 18 2007

Conditions of Approval (if any):

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Sundry Notices and Reports on Wells **2007 AUG 23 PM 4:01**

- |   |  |
|---|--|
| <p>1. Type of Well<br/>GAS</p> <p>2. Name of Operator<br/><b>ConocoPhillips</b></p> <p>3. Address &amp; Phone No. of Operator<br/>PO Box 4289, Farmington, NM 87499 (505) 326-9700</p> <p>4. Location of Well, Footage, Sec., T, R, M<br/>Surf: Unit K (NESW), 1380' FSL &amp; 1410' FWL, Section 11, T27N, R7W, NMPM<br/>BH: Unit J (NWSW), 1590' FSL &amp; 2400' FEL, Section 11, T27N, R7W, NMPM</p> | <p>5. Lease Number<br/>SF-078972</p> <p>6. If Indian, All. or Tribe Name</p> <p>7. Unit Agreement Name<br/>San Juan 28-7 Unit</p> <p>8. Well Name &amp; Number<br/>San Juan 28-7 Unit 157G</p> <p>9. API Well No.<br/>30-039- 30134</p> <p>10. Field and Pool</p> <p>11. County and State<br/>Rio Arriba Co., NM</p> |
|---|--|

**12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA**

## Type of Submission

- ☒ Notice of Intent
- ☐ Subsequent Report
- ☐ Final Abandonment

## Type of Action

- ☐ Abandonment ☐ Change of Plans
- ☐ Plugging ☐ Non-Routine Fracturing
- ☐ Casing Repair ☐ Water Shut off
- ☐ Altering Casing ☐ Conversion to Injection

☒ Other - move location

RCVD OCT 15 '07  
OIL CONS. DIV.  
DIST. 3

**13. Describe Proposed or Completed Operations**

ConocoPhillips wants to move this location from Surface of 1840' FSL & 2004 FWL, BH 2100' FSL & 2300 FEL to

Surf: 1380' FSL & 1410' FWL, BH: 1590' FSL & 2400' FEL.

Attached are a new C-102 (plat), Direction drill plan and survey, cut & fill, TOPO & driving directions.

**14. I hereby certify that the foregoing is true and correct.**

Signed Rhonda Rogers Title Regulatory Technician Date 8/23/07

(This space for Federal or State Office use)

APPROVED BY [Signature] Title AFM Date 10/18/07

CONDITION OF APPROVAL, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**NMOCD**

# PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 28-7 UNIT 157G

DEVELOPMENT

Lease:		AFE #: WAN.CNV.7161		AFE \$:	
Field Name: 28-7		Rig: Aztec Rig 730		State: NM	County: RIO ARRIBA
Geologist:		Phone:		Geophysicist:	
Geoscientist: Riley, Brook		Phone: +1 505-324-6108		Prod. Engineer: Fontenot, Jessie C	
Res. Engineer: McKee, Cory J		Phone: 505-326-9826		Proj. Field Lead: Fransen, Eric E.	
				Phone:	

Primary Objective (Zones):	
Zone	Zone Name
R20002	MESAVERDE(R20002)
R20076	DAKOTA(R20076)

<b>Location:</b> Surface		<b>Datum Code:</b> NAD 27		<b>Deviated</b>	
Latitude: 36.585671	Longitude: -107.547264	X:	Y:	Section: 11	Range: 007W
Footage X: 1410 FWL	Footage Y: 1380 FSL	Elevation: 6643	(FT)	Township: 027N	
Tolerance:					

<b>Location:</b> Bottom Hole		<b>Datum Code:</b> NAD 27		<b>Deviated</b>	
Latitude: 36.586351	Longitude: -107.542244	X:	Y:	Section: 11	Range: 007W
Footage X: 2400 FEL	Footage Y: 1590 FSL	Elevation:	(FT)	Township: 027N	
Tolerance:					

Location Type: Year Round	Start Date (Est.): 1/1/2007	Completion Date:	Date In Operation:
Formation Data: Assume KB = 6659 Units = FT			

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	216	6443	<input type="checkbox"/>			Severe lost circulation is possible. 13-1/2" or 12 1/4" Hole. 9 5/8", 32.3 ppf, H-40, STC casing. Cement with 203 cu.ft. Circulate cement to surface.
OJAM	2426	4233	<input type="checkbox"/>			Possible water flows
KRLD	2593	4066	<input type="checkbox"/>			
FRLD	2869	3790	<input type="checkbox"/>			Possible gas
PCCF	3232	3427	<input type="checkbox"/>			
LEWS	3392	3267	<input type="checkbox"/>			
Intermediate Casing	4000	2659	<input type="checkbox"/>			8 3/4 hole. 7", 20 ppf, J-55 STC Csg, cement with 960 cuft. Circulate cement to surface.
CHRA	4198	2461	<input type="checkbox"/>			
CLFH	4911	1748	<input type="checkbox"/>	416		Gas; possibly wet
MENF	5023	1636	<input type="checkbox"/>			Gas
PTLK	5481	1178	<input type="checkbox"/>			Gas
MNCS	5882	777	<input type="checkbox"/>			
GLLP	6653	6	<input type="checkbox"/>			
GRHN	7406	-747	<input type="checkbox"/>			Gas possible, highly fractured
GRANEROS	7470	-811	<input type="checkbox"/>			
TWLS	7495	-836	<input type="checkbox"/>			Gas
PAGU	7597	-938	<input type="checkbox"/>			
CBBO	7634	-975	<input type="checkbox"/>			Gas
CBRL	7667	-1008	<input type="checkbox"/>			
ENCINAL	7734	-1075	<input type="checkbox"/>			TD T/ENCN

# PROJECT PROPOSAL - New Drill / Sidetrack

SAN JUAN 28-7 UNIT 157G

DEVELOPMENT

Total Depth	7734	-1075	<input type="checkbox"/>	1100	4 1/2", 11.6 ppf, J-55, LTC, and 10.5 ppf, J-55, STC casing. Cement with 510 cu.ft. Circulate cement a minimum of 100' inside the previous casing string. No open hole logs. Cased hole TDT with GR to surface.
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Reference Wells:		
Reference Type	Well Name	Comments

Logging Program:	
Intermediate Logs:	<input type="checkbox"/> Log only if show <input type="checkbox"/> GR/ILD <input type="checkbox"/> Triple Combo

TD Logs:	<input type="checkbox"/> Triple Combo <input type="checkbox"/> Dipmeter <input type="checkbox"/> RFT <input type="checkbox"/> Sonic <input type="checkbox"/> VSP <input type="checkbox"/> TDT <input checked="" type="checkbox"/> Other
	GR_CBL

Additional Information:					
Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks

Comments: Location/Tops/Logging - ACEC - Move surf to twin the #107. See Zones tab for comments. MVNM027N007W11SE2 DK 27N07W11SE2

Zones - ACEC - Move location to twin the #107. Will increase the directional kick from ~950 to ~1,400'. Surface is in Unit Itr K, BHL is in J.

Locations were Final - surface will move to the above twin location. MVNM027N007W11SE2 DK 27N07W11SE2

General/Work Description - 80/80 Kd/Kmv - Directional Well

# ConocoPhillips or its affiliates

## Survey Report

Company:	ConocoPhillips Lower 48	Local Co-ordinate Reference:	Well SJ 28-7 #157G
Project:	San Juan Basin	TVD Reference:	WELL @ 6658.0ft (Original Well Elev)
Site:	Monty's Site for directional MV/DK wells	MD Reference:	WELL @ 6658.0ft (Original Well Elev)
Well:	SJ 28-7 #157G	North Reference:	True
Wellbore:	SJ 28-7 #157G	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM Central Planning

Planned Survey									
Measured Depth (ft)	Inclination (d)	Azimuth (d)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (d/100ft)	Build Rate (d/100ft)	Turn Rate (d/100ft)
8,039.2	0.00	0.00	7,734.0	210.0	1,470.0	1,484.9	0.00	0.00	0.00
Encinal - TD - SJ 28-7 #157G - PCP									

Targets									
Target Name	hit/miss target	Dip Angle (d)	Dip Dir (d)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (m)	Easting (m)	Latitude
SJ 28-7 #157G - ICP	- plan hits target	0.00	0.00	4,000.0	210.0	1,470.0	57.59	449.02	30° 59' 26.590" N
- Point									109° 25' 27.206" W
SJ 28-7 #157G - PCP	- plan hits target	0.00	0.00	7,734.0	210.0	1,470.0	57.59	449.02	30° 59' 26.590" N
- Point									109° 25' 27.206" W

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (d)	Dip Direction (d)	
2,623.8	2,426.0	Ojo Alamo		0.00		
2,808.4	2,593.0	Kirtland		0.00		
3,113.7	2,869.0	Fruitland		0.00		
3,514.8	3,232.0	Pictured Cliffs		0.00		
3,686.4	3,392.0	Lewis		0.00		
4,503.2	4,198.0	Chacra		0.00		
5,216.2	4,911.0	Cliffhouse		0.00		
5,328.2	5,023.0	Menefee		0.00		
5,786.2	5,481.0	Pt Lookout		0.00		
6,187.2	5,882.0	Mancos Shale		0.00		
6,958.2	6,653.0	Gallup		0.00		
7,711.2	7,406.0	Greenhorn		0.00		
7,775.2	7,470.0	Graneros		0.00		
7,800.2	7,495.0	Two Wells		0.00		
7,902.2	7,597.0	Paguate		0.00		
7,939.2	7,634.0	Upper Cubero		0.00		
7,972.2	7,667.0	Lower Cubero		0.00		
8,039.2	7,734.0	Encinal		0.00		
8,039.2	7,734.0	TD		0.00		

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

**SAN JUAN 28-7 UNIT 157G**

**1380' FSL, 1410' FWL**

**RIO ARriba COUNTY, NEW MEXICO**

GROUND ELEV.:6643 NAVD88 DATE: JULY 17, 2007

**NO NEW ACCESS**



1. RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW-3' WIDE AND 1' ABOVE SHALLOW SIDE).
2. C.C.I. SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.  
CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED  
PIPLINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

# CONOCOPHILLIPS COMPANY

SAN JUAN 28-7 UNIT 157G

1380' FSL, 1410' FWL

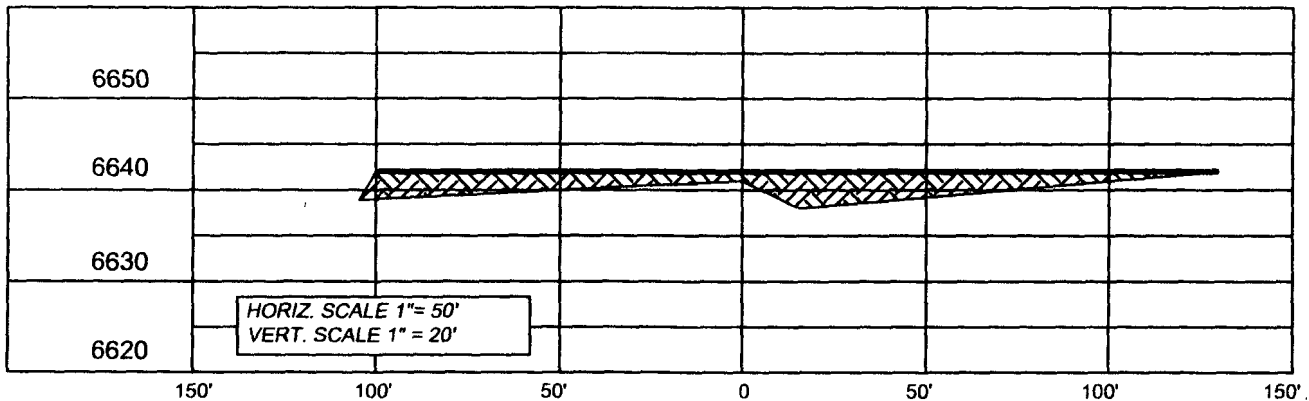
SECTION 11, T-27-N, R-7-W, N.M.P.M.,

RIO ARRIBA COUNTY, NEW MEXICO

ELEV.: 6643 NAVD88

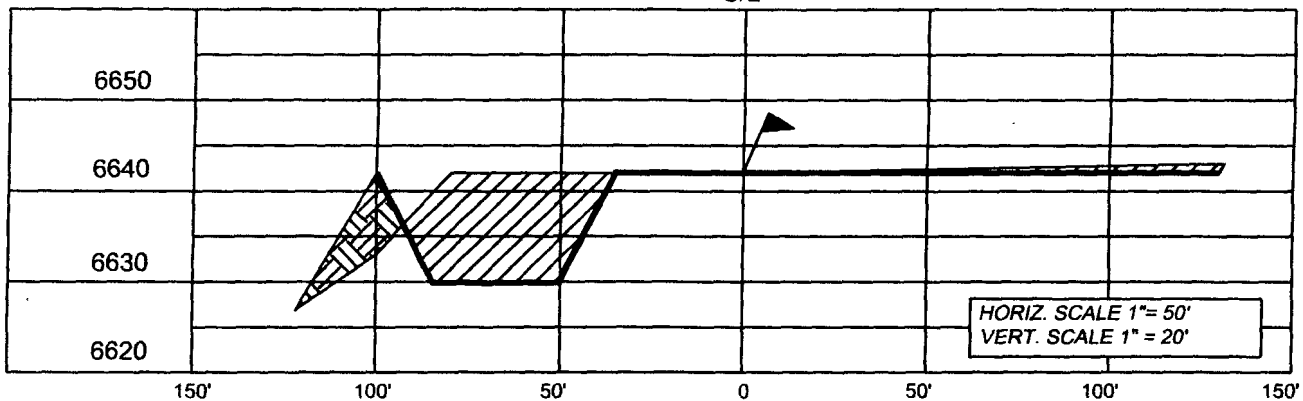
A - A'

C/L



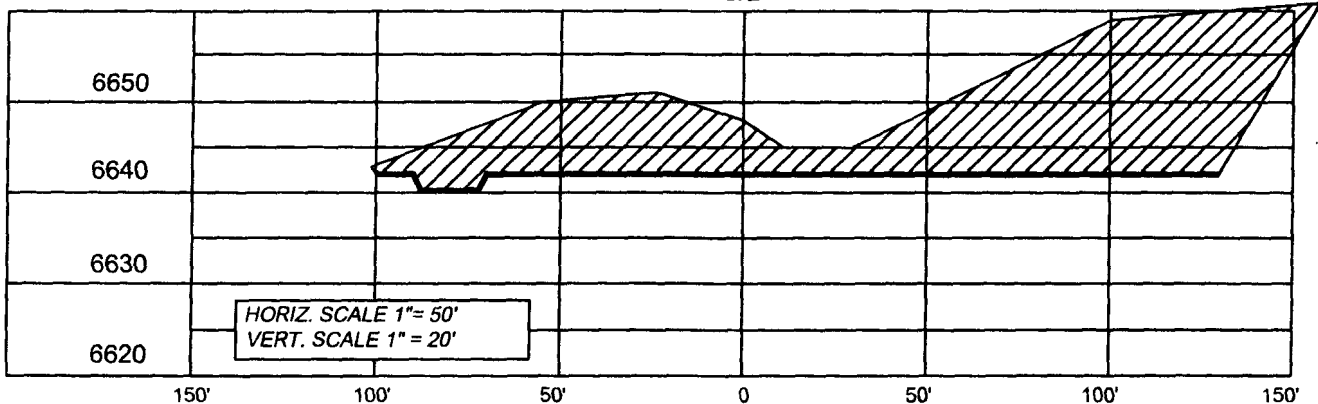
B - B'

C/L



C - C'

C/L



NOTE: CCI 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 PRIOR TO CONSTRUCTION.

## REVISIONS

NO.	DESCRIPTION	REVISED BY	DATE
1	ISSUE FOR REVIEW	L.H.	7/17/07

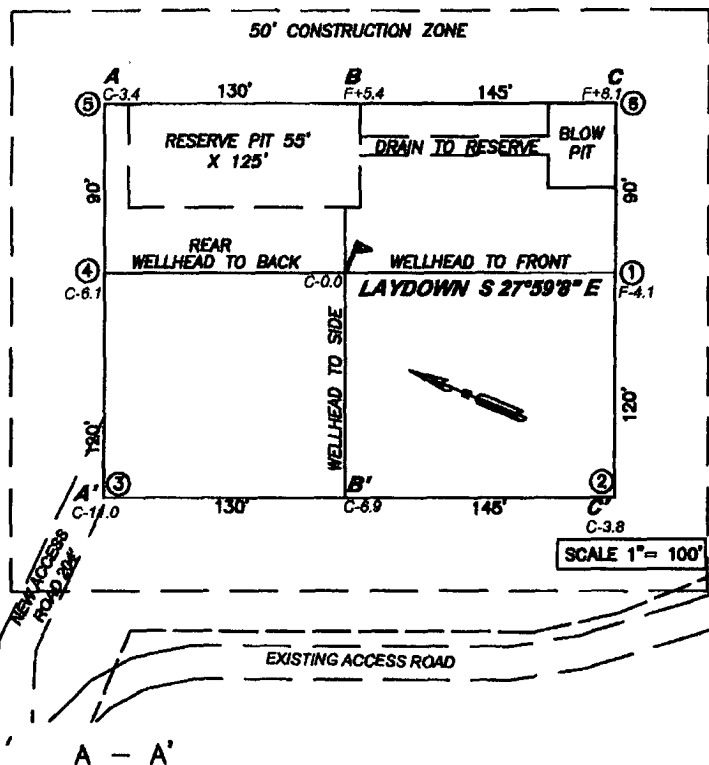
**CCI**

**CHENAULT CONSULTING INC.**

P.O. BOX 328  
BLOOMFIELD, NM, 87413  
PHONE: (505) 325-7707

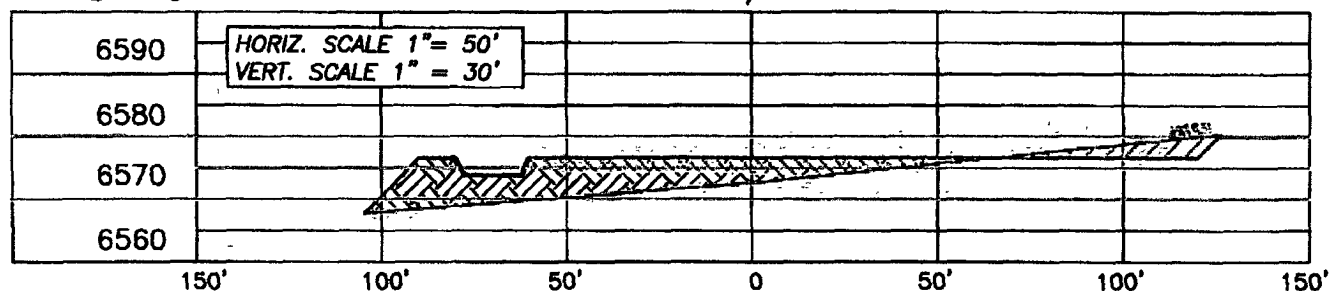
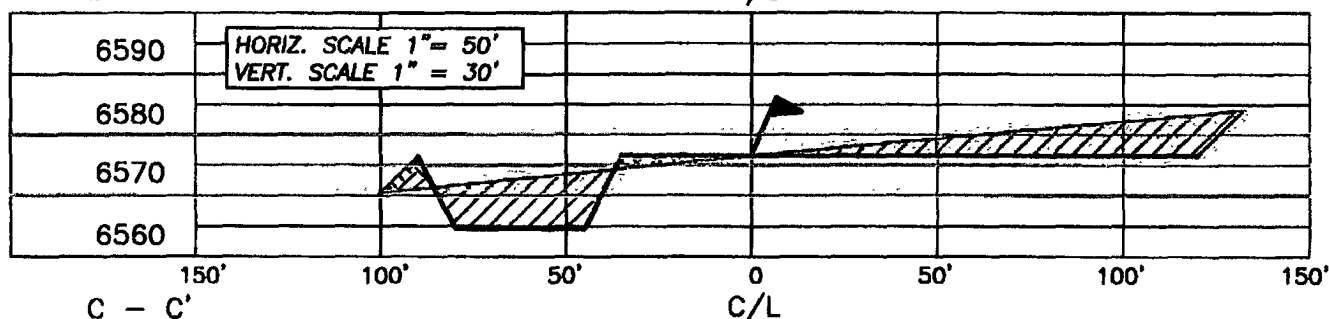
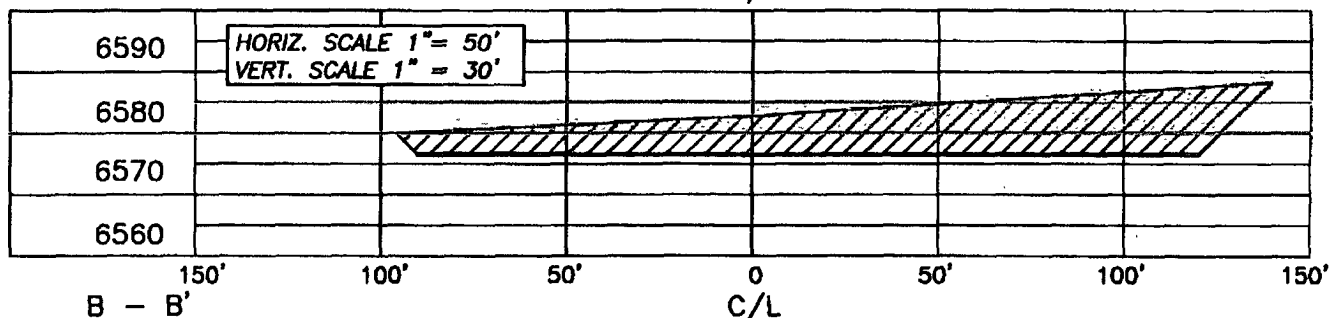
NAD 27 DATUM  
LAT: 36° 35' 13.10000"  
LONG: 107° 32' 42.77690"

NAD 83 DATUM  
LAT: 36° 35' 13.14000"  
LONG: 107° 32' 44.90000"



# CONOCOPHILLIPS COMPANY

SAN JUAN 28-7 157G  
1,840' FSL, 2,004' FWL  
SECTION 11, T27N, R07W, N.M.P.M.,  
RIO ARriba COUNTY, NEW MEXICO  
ELEV.: 6,576.8' NADV88



NOTE: CCI 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 PRIOR TO CONSTRUCTION.

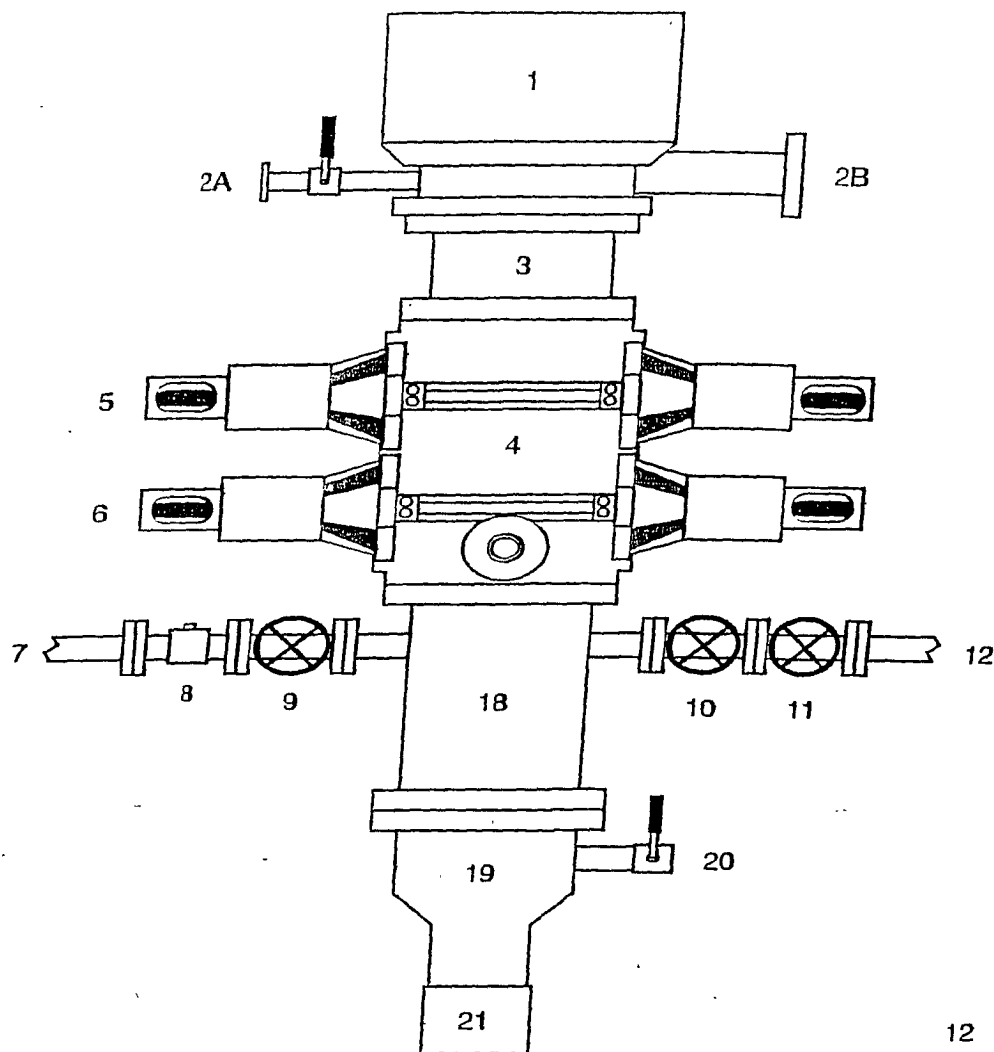
REVISIONS			
NO.	DESCRIPTION	REVISED BY	DATE

**CCI**  
1300 W. BROADWAY  
BLOOMFIELD, NM, 87413  
PHONE: (505) 832-7777

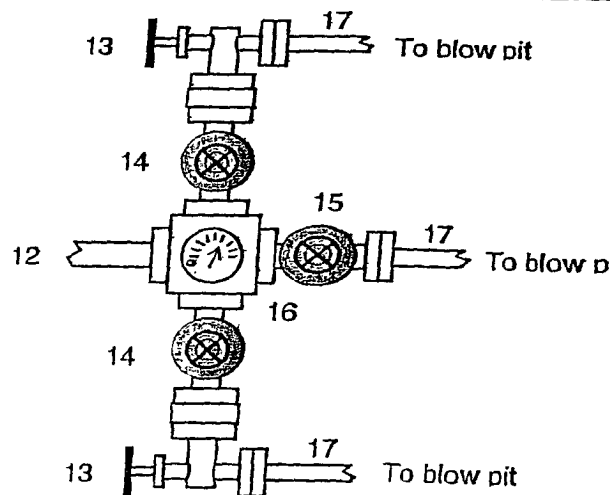
**CHENault CONSULTING INC.**

# 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

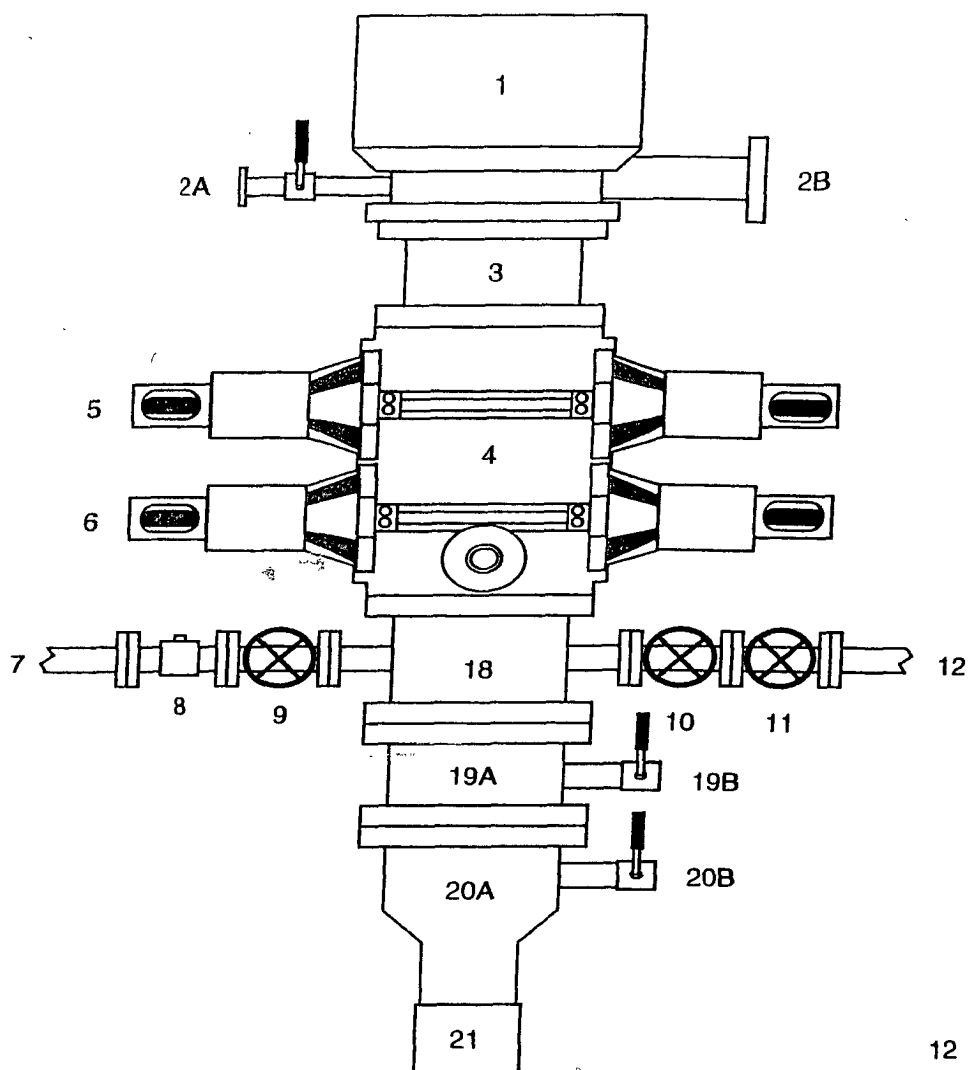


12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe rams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

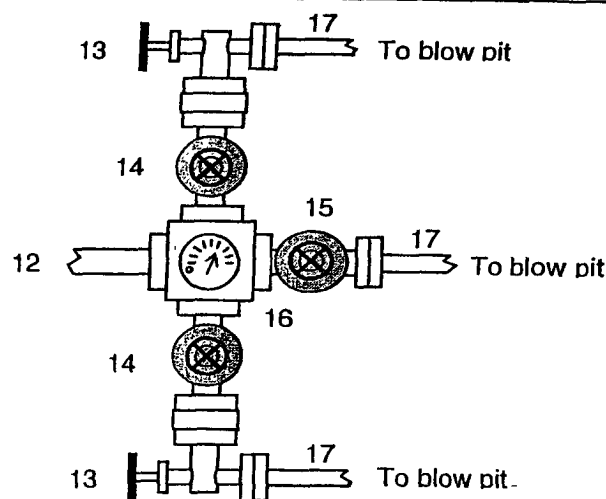
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

## BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



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