

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

RECEIVED

MAR 05 2012

Sundry Notices and Reports on Wells

Farmington Field Office
Bureau of Land Management.

1. Type of Well
GAS

5. Lease Number
SF-079185

6. If Indian, All. or
Tribe Name

7. Unit Agreement Name

2. Name of Operator
BURLINGTON
RESOURCES OIL & GAS COMPANY LP

3. Address & Phone No. of Operator

PO Box 4289, Farmington, NM 87499 (505) 326-9700

8. Well Name & Number
Federal 13N

9. API Well No.

30-039-31033

4. Location of Well, Footage, Sec., T, R, M

Surface: Unit M (SWSW), 711' FSL & 777' FWL, Section 21, T26N, R6W, NMPM

BH: Unit M (SWSW), 919' FSL & 708' FWL, Section 21, T26N, R6W, NMPM

10. Field and Pool
Blanco MV / Basin DK

11.
Rio Arriba, NM

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

Type of Submission

Type of Action

☒ Notice of Intent☐ Abandonment☒ Change of Plans☐ Other -☐ Subsequent Report☐ Recompletion☐ New Construction☐ Final Abandonment☐ Plugging☐ Non-Routine Fracturing☐ Casing Repair☐ Water Shut off☐ Altering Casing☐ Conversion to Injection**13. Describe Proposed or Completed Operations**

This well is twinned with the Scott Federal #5. Plans are to use directional tools to nudge away from the existing well's wellbore to avoid collision issues. Upon completion of the well, COPC will supply a certified directional survey, the completion reports which will indicate the bottomhole location and an "as drilled plat" will also be supplied with the completion paperwork.

Attached please find the revised C102 showing revised BH location, proposed directional plan and new project proposal.

RCVD MAR 8 '12
OIL CONS. DIV.

DIST. 3

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

Signed

Denise Journey

Denise Journey

Title: Regulatory Technician

Date 3/1/12

(This space for Federal or State Office use)

APPROVED BY *Troy L. Salvers*Title *Petroleum Engineer*Date *3/6/2012*

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

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

**BLM'S APPROVAL OR ACCEPTANCE OF THIS
ACTION DOES NOT RELIEVE THE LESSEE AND
OPERATOR FROM OBTAINING ANY OTHER
AUTHORIZATION REQUIRED FOR OPERATIONS
ON FEDERAL AND INDIAN LANDS**

AMDCD
OPERATOR

PC

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

MAR 06 2012

☐ AMENDED REPORT

Farmington Field Office

Bureau of Land Management

WELL LOCATION AND ACREAGE

¹ API Number 30-039-31033		² Pool Code 71599/72319		³ Pool Name BASIN DAKOTA / BLANCO MESAVERDE	
⁴ Property Code 31535		⁵ Property Name FEDERAL			⁶ Well Number 13N
⁷ OGRID No. 217817		⁸ Operator Name CONOCOPHILLIPS COMPANY			⁹ Elevation 6688

¹⁰ SURFACE LOCATION

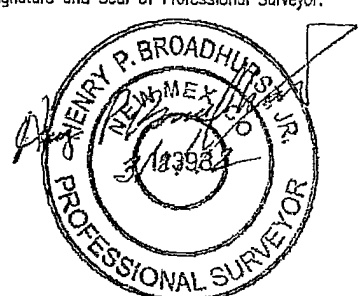
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	21	26-N	6-W		711	SOUTH	777	WEST	RIO ARriba

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
M	21	26-N	6-W		919	SOUTH	708	WEST	RIO ARriba

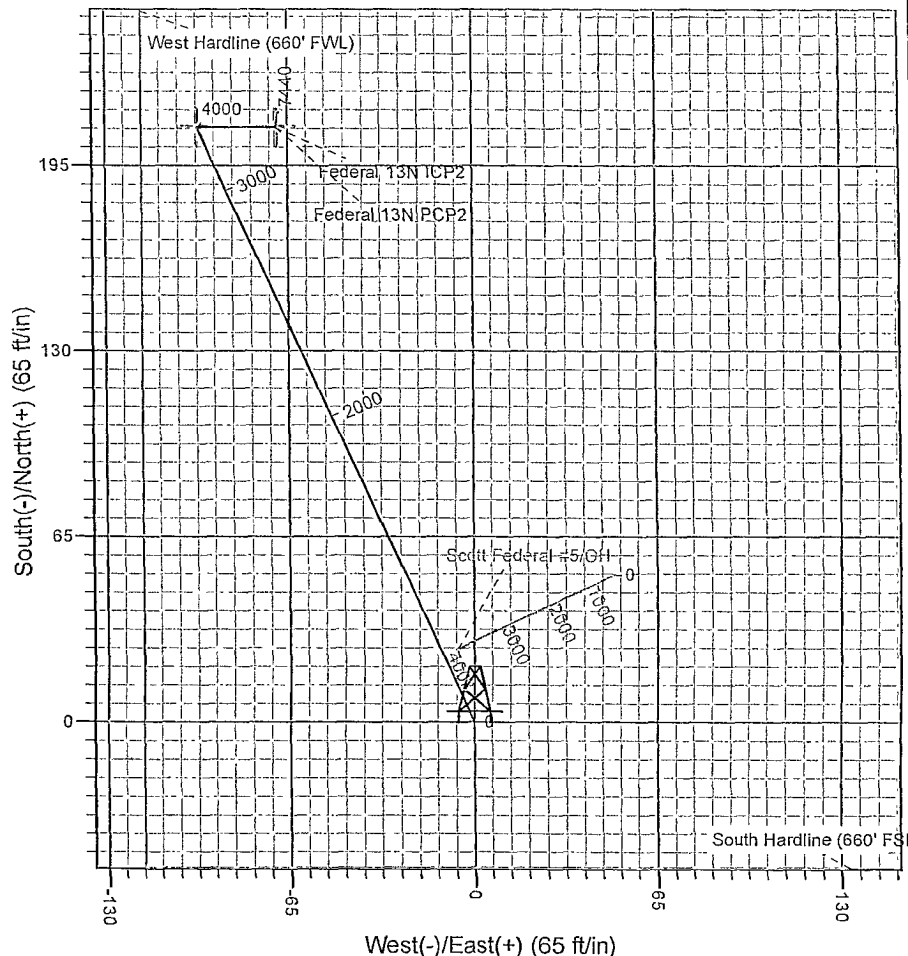
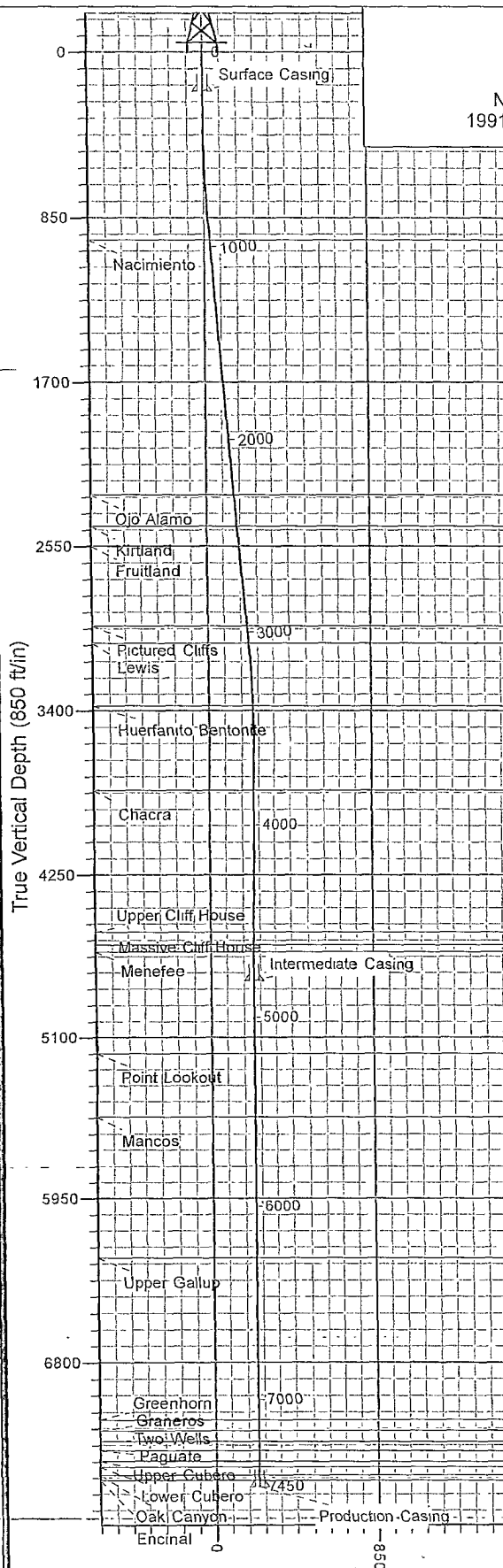
¹² Dedicated Acres S/2 320.0	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN
CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

¹⁶ BASIS OF BEARING IS THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD83 AS DETERMINED BY GPS OBSERVATION AND NGS/OPUS SOLUTION.		¹⁷ 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 working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Denise Journey</i> Signature Denise Journey Printed Name Regulatory Technician Title and E-mail Address 3/5/12 Date	
BOTTOM HOLE NAD 83 LAT: 36.467469° N LONG: 107.479950° W NAD 27 LAT: 36°28.047543' N LONG: 107°28.760758' W SECTION 21, T-26-N, R-6-W BLM 1957		BLM 1955	
N25°54'57"W 219' WELL FLAG NAD 83 LAT: 36.466899° N LONG: 107.479714° W NAD 27 LAT: 36°28.013332' N LONG: 107°28.746643' W S/2 DEDICATED ACREAGE USA SF-079185 BLM 1956		USA NM-03553 BLM 1956	
2705.7' (R) 2703.4' (M) W 0'13" W 0'22" 31" N 708' 777' 919' 711' S 89°40'13" W - 2659.0' (M) S 89°56' W 2652.2' (R) BLM 1956		¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plot 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: 8/26/10 Signature and Seal of Professional Surveyor:  Certificate Number: NM 11393	

WELL DETAILS: Federal #13N
GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Ground Level 6688.0

Northing 1991464.99 Easting 138588.67 Latitude 36° 28' 0.800 N Longitude 107° 28' 44.799 W



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	900.0	5.00	335.00	899.4	19.8	-9.2	1.00	335.00	21.7	
4	3038.0	5.00	335.00	3029.2	188.6	-88.0	0.00	0.00	206.8	
5	3538.0	0.00	0.00	3528.6	208.4	-97.2	1.00	180.00	228.4	
6	4009.4	0.00	0.00	4000.0	208.4	-97.2	0.00	0.00	228.4	
7	4409.4	4.00	90.00	4399.7	208.4	-83.2	1.00	90.00	224.0	
8	4809.4	0.00	90.00	4799.4	208.4	-69.3	1.00	180.00	219.6	
9	4811.1	0.00	90.00	4801.0	208.4	-69.3	0.00	90.00	219.6	Federal 13N ICP2
10	7450.1	0.00	90.00	7440.0	208.4	-69.3	0.00	90.00	219.6	Federal 13N PCP2

Date: 8:42, March 01 2012

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Federal #13N, True North
Vertical (TVD) Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Calculation Method: Minimum Curvature

PROJECT DETAILS: SJB (NM Central)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD-1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico Central-3002
System Datum: Mean Sea Level

Vertical Section at 341.62° (850 ft/in)



ConocoPhillips

SJB (NM Central)
SEC 21-T26N-R6W
Federal #13N

OH

Plan: Plan 4

Standard Planning Report

01 March, 2012



Database: EDM 2003.21 Single User Db
Company: ConocoPhillips
Project: SJB (NM Central)
Site: SEC 21-T26N-R6W
Well: Federal #13N
Wellbore: OH
Design: Plan 4

Local Co-ordinate Reference: Well Federal #13N
TVD Reference: GL 6688' & KB 15' @ 6703 0ft (AWS 711)
MD Reference: GL 6688' & KB 15' @ 6703 0ft (AWS 711)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	SJB (NM Central), New Mexico, S-Type MV/DK Wells		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		Using Well Reference Point
Map Zone:	New Mexico Central 3002		Using geodetic scale factor

Site	SEC 21-T26N-R6W		
Site Position:		Northing:	1,991,516.03 ft
From:	Lat/Long	Easting:	138,639 24 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	36° 28' 1.311 N
		Longitude:	107° 28' 44.188 W
		Grid Convergence:	-0.73 °

Well	Federal #13N, 711' FSL 777' FWL		
Well Position	+N/-S	-51.7 ft	Northing:
	+E/-W	-49.9 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	36° 28' 0.800 N
		Longitude:	107° 28' 44.799 W
		Ground Level:	6,688 0 ft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	BGGM2011	2012/02/29	9.66
			Dip Angle
			63.26
			Field Strength
			50,512

Design	Plan 4		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0 0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			Direction
			341.62

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0 0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0 00	0 00	400.0	0.0	0 0	0.00	0.00	0.00	0.00	
900.0	5.00	335.00	899.4	19.8	-9 2	1.00	1.00	0.00	335.00	
3,038.0	5.00	335.00	3,029.2	188.6	-88.0	0.00	-0.00	0.00	0.00	
3,538.0	0.00	0.00	3,528.6	208.4	-97.2	1.00	-1.00	0.00	180.00	
4,009.4	0.00	0.00	4,000.0	208.4	-97.2	0.00	0.00	0.00	0.00	
4,409.4	4.00	90.00	4,399.7	208.4	-83.2	1.00	1.00	0.00	90.00	
4,809.4	0.00	90.00	4,799 4	208.4	-69.3	1.00	-1.00	0.00	180.00	
4,811.1	0.00	90.00	4,801.0	208.4	-69.3	0.00	0.00	0.00	90.00	Federal 13N ICP2
7,450.1	0.00	90.00	7,440 0	208.4	-69.3	0.00	0.00	0.00	90.00	Federal 13N PCP2

Database: EDM 2003.21 Single User Db
Company: ConocoPhillips
Project: SJB (NM Central)
Site: SEC 21-T26N-R6W
Well: Federal #13N
Wellbore: OH
Design: Plan 4

Local Co-ordinate Reference: Well Federal #13N
TVD Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
MD Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
Surface Casing									
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	1.00	335.00	500.0	0.8	-0.4	0.9	1.00	1.00	0.00
600.0	2.00	335.00	600.0	3.2	-1.5	3.5	1.00	1.00	0.00
700.0	3.00	335.00	699.9	7.1	-3.3	7.8	1.00	1.00	0.00
800.0	4.00	335.00	799.7	12.6	-5.9	13.9	1.00	1.00	0.00
900.0	5.00	335.00	899.4	19.8	-9.2	21.7	1.00	1.00	0.00
965.9	5.00	335.00	965.0	25.0	-11.6	27.4	0.00	0.00	0.00
Nacimiento									
1,000.0	5.00	335.00	999.0	27.7	-12.9	30.3	0.00	0.00	0.00
1,100.0	5.00	335.00	1,098.6	35.6	-16.6	39.0	0.00	0.00	0.00
1,200.0	5.00	335.00	1,198.2	43.5	-20.3	47.6	0.00	0.00	0.00
1,300.0	5.00	335.00	1,297.8	51.4	-23.9	56.3	0.00	0.00	0.00
1,400.0	5.00	335.00	1,397.5	59.3	-27.6	64.9	0.00	0.00	0.00
1,500.0	5.00	335.00	1,497.1	67.2	-31.3	73.6	0.00	0.00	0.00
1,600.0	5.00	335.00	1,596.7	75.1	-35.0	82.3	0.00	0.00	0.00
1,700.0	5.00	335.00	1,696.3	83.0	-38.7	90.9	0.00	0.00	0.00
1,800.0	5.00	335.00	1,795.9	90.9	-42.4	99.6	0.00	0.00	0.00
1,900.0	5.00	335.00	1,895.6	98.7	-46.0	108.2	0.00	0.00	0.00
2,000.0	5.00	335.00	1,995.2	106.6	-49.7	116.9	0.00	0.00	0.00
2,100.0	5.00	335.00	2,094.8	114.5	-53.4	125.5	0.00	0.00	0.00
2,200.0	5.00	335.00	2,194.4	122.4	-57.1	134.2	0.00	0.00	0.00
2,288.9	5.00	335.00	2,283.0	129.5	-60.4	141.9	0.00	0.00	0.00
Ojo Alamo									
2,300.0	5.00	335.00	2,294.0	130.3	-60.8	142.9	0.00	0.00	0.00
2,400.0	5.00	335.00	2,393.7	138.2	-64.5	151.5	0.00	0.00	0.00
2,451.5	5.00	335.00	2,445.0	142.3	-66.4	156.0	0.00	0.00	0.00
Kirtland									
2,500.0	5.00	335.00	2,493.3	146.1	-68.1	160.2	0.00	0.00	0.00
2,557.9	5.00	335.00	2,551.0	150.7	-70.3	165.2	0.00	0.00	0.00
Fruitland									
2,600.0	5.00	335.00	2,592.9	154.0	-71.8	168.8	0.00	0.00	0.00
2,700.0	5.00	335.00	2,692.5	161.9	-75.5	177.5	0.00	0.00	0.00
2,800.0	5.00	335.00	2,792.1	169.8	-79.2	186.2	0.00	0.00	0.00
2,900.0	5.00	335.00	2,891.8	177.7	-82.9	194.8	0.00	0.00	0.00
2,969.5	5.00	335.00	2,961.0	183.2	-85.4	200.8	0.00	0.00	0.00
Pictured Cliffs									
3,000.0	5.00	335.00	2,991.4	185.6	-86.6	203.5	0.00	0.00	0.00
3,038.0	5.00	335.00	3,029.2	188.6	-88.0	206.8	0.00	0.00	0.00
3,059.8	4.78	335.00	3,051.0	190.3	-88.8	208.6	1.00	-1.00	0.00
Lewis									
3,100.0	4.38	335.00	3,091.0	193.2	-90.1	211.8	1.00	-1.00	0.00
3,200.0	3.38	335.00	3,190.8	199.4	-93.0	218.5	1.00	-1.00	0.00
3,300.0	2.38	335.00	3,290.7	203.9	-95.1	223.5	1.00	-1.00	0.00
3,384.4	1.54	335.00	3,375.0	206.5	-96.3	226.4	1.00	-1.00	0.00
Huerfano Bentonite									
3,400.0	1.38	335.00	3,390.6	206.9	-96.5	226.8	1.00	-1.00	0.00
3,500.0	0.38	335.00	3,490.6	208.3	-97.1	228.3	1.00	-1.00	0.00
3,538.0	0.00	0.00	3,528.6	208.4	-97.2	228.4	1.00	-1.00	0.00

Database: EDM 2003 21 Single User Db
Company: ConocoPhillips
Project: SJB (NM Central)
Site: SEC 21-T26N-R6W
Well: Federal #13N
Wellbore: OH
Design: Plan 4

Local Co-ordinate Reference: Well Federal #13N
TVD Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
MD Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,600.0	0.00	0.00	3,590.6	208.4	-97.2	228.4	0.00	0.00	0.00
3,700.0	0.00	0.00	3,690.6	208.4	-97.2	228.4	0.00	0.00	0.00
3,800.0	0.00	0.00	3,790.6	208.4	-97.2	228.4	0.00	0.00	0.00
3,820.4	0.00	0.00	3,811.0	208.4	-97.2	228.4	0.00	0.00	0.00
Chacra									
3,900.0	0.00	0.00	3,890.6	208.4	-97.2	228.4	0.00	0.00	0.00
4,000.0	0.00	0.00	3,990.6	208.4	-97.2	228.4	0.00	0.00	0.00
4,009.4	0.00	0.00	4,000.0	208.4	-97.2	228.4	0.00	0.00	0.00
4,100.0	0.91	90.00	4,090.6	208.4	-96.5	228.2	1.00	1.00	0.00
4,200.0	1.91	90.00	4,190.6	208.4	-94.0	227.4	1.00	1.00	0.00
4,300.0	2.91	90.00	4,290.5	208.4	-89.8	226.1	1.00	1.00	0.00
4,400.0	3.91	90.00	4,390.3	208.4	-83.9	224.2	1.00	1.00	0.00
4,409.4	4.00	90.00	4,399.7	208.4	-83.2	224.0	1.00	1.00	0.00
4,500.0	3.09	90.00	4,490.1	208.4	-77.6	222.2	1.00	-1.00	0.00
4,558.0	2.51	90.00	4,548.0	208.4	-74.8	221.3	1.00	-1.00	0.00
Upper Cliff House									
4,600.0	2.09	90.00	4,590.0	208.4	-73.1	220.8	1.00	-1.00	0.00
4,623.0	1.86	90.00	4,613.0	208.4	-72.3	220.6	1.00	-1.00	0.00
Massive Cliff House									
4,661.0	1.48	90.00	4,651.0	208.4	-71.2	220.2	1.00	-1.00	0.00
Menefee									
4,700.0	1.09	90.00	4,690.0	208.4	-70.3	219.9	1.00	-1.00	0.00
4,800.0	0.09	90.00	4,789.9	208.4	-69.3	219.6	1.00	-1.00	0.00
4,809.4	0.00	90.00	4,799.4	208.4	-69.3	219.6	1.00	-1.00	0.00
4,811.1	0.00	90.00	4,801.0	208.4	-69.3	219.6	0.00	0.00	0.00
Intermediate Casing									
4,900.0	0.00	90.00	4,889.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,000.0	0.00	90.00	4,989.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,100.0	0.00	90.00	5,089.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,195.1	0.00	90.00	5,185.0	208.4	-69.3	219.6	0.00	0.00	0.00
Point Lookout									
5,200.0	0.00	90.00	5,189.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,300.0	0.00	90.00	5,289.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,400.0	0.00	90.00	5,389.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,500.0	0.00	90.00	5,489.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,530.1	0.00	90.00	5,520.0	208.4	-69.3	219.6	0.00	0.00	0.00
Mancos									
5,600.0	0.00	90.00	5,589.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,700.0	0.00	90.00	5,689.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,800.0	0.00	90.00	5,789.9	208.4	-69.3	219.6	0.00	0.00	0.00
5,900.0	0.00	90.00	5,889.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,000.0	0.00	90.00	5,989.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,100.0	0.00	90.00	6,089.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,200.0	0.00	90.00	6,189.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,271.1	0.00	90.00	6,261.0	208.4	-69.3	219.6	0.00	0.00	0.00
Upper Gallup									
6,300.0	0.00	90.00	6,289.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,400.0	0.00	90.00	6,389.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,500.0	0.00	90.00	6,489.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,600.0	0.00	90.00	6,589.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,700.0	0.00	90.00	6,689.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,800.0	0.00	90.00	6,789.9	208.4	-69.3	219.6	0.00	0.00	0.00
6,900.0	0.00	90.00	6,889.9	208.4	-69.3	219.6	0.00	0.00	0.00

Database: EDM 2003 21 Single User Db
Company: ConocoPhillips
Project: SJB (NM Central)
Site: SEC 21-T26N-R6W
Well: Federal #13N
Wellbore: OH
Design: Plan 4

Local Co-ordinate Reference: Well Federal #13N
TVD Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
MD Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,000.0	0.00	90.00	6,989.9	208.4	-69.3	219.6	0.00	0.00	0.00
7,100.0	0.00	90.00	7,089.9	208.4	-69.3	219.6	0.00	0.00	0.00
7,105.1	0.00	90.00	7,095.0	208.4	-69.3	219.6	0.00	0.00	0.00
Greenhorn									
7,161.1	0.00	90.00	7,151.0	208.4	-69.3	219.6	0.00	0.00	0.00
Graneros									
7,200.0	0.00	90.00	7,189.9	208.4	-69.3	219.6	0.00	0.00	0.00
7,217.1	0.00	90.00	7,207.0	208.4	-69.3	219.6	0.00	0.00	0.00
Two Wells									
7,265.1	0.00	90.00	7,255.0	208.4	-69.3	219.6	0.00	0.00	0.00
Paguate									
7,300.0	0.00	90.00	7,289.9	208.4	-69.3	219.6	0.00	0.00	0.00
7,319.1	0.00	90.00	7,309.0	208.4	-69.3	219.6	0.00	0.00	0.00
Upper Cubero									
7,349.1	0.00	90.00	7,339.0	208.4	-69.3	219.6	0.00	0.00	0.00
Lower Cubero									
7,391.1	0.00	90.00	7,381.0	208.4	-69.3	219.6	0.00	0.00	0.00
Oak Canyon									
7,400.0	0.00	90.00	7,389.9	208.4	-69.3	219.6	0.00	0.00	0.00
7,420.1	0.00	90.00	7,410.0	208.4	-69.3	219.6	0.00	0.00	0.00
Encinal									
7,450.1	0.00	90.00	7,440.0	208.4	-69.3	219.6	0.00	0.00	0.00
Production Casing									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Federal 13N ICP	0.00	0.00	4,801.0	208.5	-97.2	1,991,674.68	138,494.13	36° 28' 2.861 N	107° 28' 45.989 W
- plan misses target center by 27.9ft at 4811.1ft MD (4801.0 TVD, 208.4 N, -69.3 E)									
- Point									
Federal 13N ICP2	0.00	0.00	4,801.0	208.4	-69.3	1,991,674.27	138,522.03	36° 28' 2.861 N	107° 28' 45.647 W
- plan hits target center									
- Point									
Federal 13N PCP2	0.00	0.00	7,440.0	208.5	-69.0	1,991,674.32	138,522.34	36° 28' 2.861 N	107° 28' 45.644 W
- plan misses target center by 0.3ft at 7450.1ft MD (7440.0 TVD, 208.4 N, -69.3 E)									
- Point									
Federal 13N PCP	0.00	0.00	7,440.0	208.4	-97.2	1,991,674.67	138,494.13	36° 28' 2.861 N	107° 28' 45.989 W
- plan misses target center by 27.9ft at 7450.1ft MD (7440.0 TVD, 208.4 N, -69.3 E)									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,450.1	7,440.0	Production Casing	4-1/2	6-1/4
200.0	200.0	Surface Casing	9-5/8	12-1/4
4,811.1	4,801.0	Intermediate Casing	7	8-3/4

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MD Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
965.9	965.0	Nacimiento		0.00	
2,288.9	2,283.0	Ojo Alamo		0.00	
2,451.5	2,445.0	Kirtland		0.00	
2,557.9	2,551.0	Fruitland		0.00	
2,969.5	2,961.0	Pictured Cliffs		0.00	
3,059.8	3,051.0	Lewis		0.00	
3,384.4	3,375.0	Huerfanto Bentonite		0.00	
3,820.4	3,811.0	Chacra		0.00	
4,558.0	4,548.0	Upper Cliff House		0.00	
4,623.0	4,613.0	Massive Cliff House		0.00	
4,661.0	4,651.0	Menefee		0.00	
5,195.1	5,185.0	Point Lookout		0.00	
5,530.1	5,520.0	Mancos		0.00	
6,271.1	6,261.0	Upper Gallup		0.00	
7,105.1	7,095.0	Greenhorn		0.00	
7,161.1	7,151.0	Graneros		0.00	
7,217.1	7,207.0	Two Wells		0.00	
7,265.1	7,255.0	Paguate		0.00	
7,319.1	7,309.0	Upper Cubero		0.00	
7,349.1	7,339.0	Lower Cubero		0.00	
7,391.1	7,381.0	Oak Canyon		0.00	
7,420.1	7,410.0	Encinal		0.00	

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

FEDERAL 13N

DEVELOPMENT

Lease:		AFE #: WAN.CDR.0061				AFE \$: 1,627,396.49	
Field Name: SAN JUAN		Rig: Aztec Rig 711		State: NM	County: RIO ARRIBA		API #: 3003931033
Geologist:		Phone:		Geophysicist:		Phone:	
Geoscientist:		Phone:		Prod. Engineer:		Phone:	
Res. Engineer:		Phone:		Proj. Field Lead:		Phone:	
Primary Objective (Zones):							
Zone	Zone Name						
RON	BLANCO MESAVERDE (PRORATED GAS)						
FRR	BASIN DAKOTA (PRORATED GAS)						
Location: Surface Datum Code: NAD 27 Straight Hole							
Latitude: 36.466889		Longitude: -107.479110		X:	Y:	Section: 21	Range: 006W
Footage X: 777 FWL		Footage Y: 711 FSL		Elevation: 6688 (FT)		Township: 026N	
Tolerance:							
Location Type: Restricted		Start Date (Est.): 1/1/2012		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 6703 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	MD (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	200	6503		☐			12-1/4 hole. 200' 9 5/8" 32.3 ppf, H-40, STC casing. Cement with 121 cuft. Circulate cement to surface.
NACIMIENTO	965	5738		☐			
OJO ALAMO	2283	4420		☐			
KIRTLAND	2445	4258		☐			
FRUITLAND	2551	4152		☐			Possible Gas
PICTURED CLIFFS	2961	3742		☐			
LEWIS	3051	3652		☐			
HUERFANITO BENTONITE	3375	3328		☐			
CHACRA	3811	2892		☐			
UPPER CLIFF HOUSE	4548	2155		☐			Gas; Cliffhouse is wet
MASSIVE CLIFF HOUSE	4613	2090		☐	487		Gas
MENELEE	4651	2052		☐			Est. Top Perf - 4851 (1852)
Intermediate Casing	4801	1902		☐		134	8 3/4" Hole. 7", 20/23 ppf, J-55, STC/LTC Casing. Cement with 1084 cuft. Circulate cement to surface.
POINT LOOKOUT	5185	1518		☐			
MANCOS	5520	1183		☐			
UPPER GALLUP	6261	442		☐			
GREENHORN	7095	-392		☐			
GRANEROS	7151	-448		☐			
TWO WELLS	7207	-504		☐	2580		Gas
PAGUATE	7255	-552		☐			
UPPER CUBERO	7309	-606		☐			
LOWER CUBERO	7339	-636		☐			
OAK CANYON	7381	-678		☐			Est. Btm Perf - 7401 (- 698) based on offset wells.
ENCINAL	7410	-707		☐			TD - 30' below T/ENCN

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

FEDERAL 13N

DEVELOPMENT

Total Depth 7440 -737 ☐ 184 6-1/4" hole, 4-1/2" 11.6 ppf, L-80, LTC casing. Cement w/ 364 cuft. Circulate cement a minimum of 100' inside the previous casing string.

Reference Wells:

Reference Type	Well Name	Comments
Production	Federal 13R	26N 6W 21 SE
Production	Vaughn 30E	26N 6W 28 SE NW NW
Production	Vaughn 13	26N 6W 21 SW NE SW
Production	Vaugh 31	26N 6W 29 SE NW NE

Logging Program:

Intermediate Logs: ☐ Log only if show ☐ GR/ILD ☐ Triple Combo

TD Logs: ☐ Triple Combo ☐ Dipmeter ☐ RFT ☐ Sonic ☐ VSP ☐ TDT ☒ Other

Cased Hole GR / CBL

Mudlog from 100' above top of GLLP to TD - mudlogger will call TD.

Evaluation of gas show in the Encinal to determine if bottom perf needs to be adjusted.

Additional Information:

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