

District I1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720**District II**811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720**District III**1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170**District IV**1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

Permit 197838

OIL CONS. DIV DIST. 3

JAN 14 2015

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address BURLINGTON RESOURCES OIL & GAS COMPANY LP 3401 E. 30TH STREET FARMINGTON, NM 87402		2. OGRID Number 14538
4. Property Code 6881		3. API Number 30-045-35630
5. Property Name CALLOWAY		6. Well No. 001M

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	Co
G	27	31N	11W		1818	N	1788	E	San Juan

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	Co
J	27	31N	11W	J	2420	S	1930	E	San Juan

9. Pool Information

BLANCO-MESAVERDE (PRORATED GAS)	72319
BASIN DAKOTA (PRORATED GAS)	71599

Additional Well Information

11. Work Type New Well	12. Well Type GAS	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 5732
16. Multiple Y	17. Proposed Depth 6877	18. Formation Dakota Formation	19. Contractor	20. Spud Date 2/16/2015
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	32.3	200	121	
Int1	8.75	7	23	4295	1002	
Prod	6.25	4.5	11.6	6877	343	

Casing/Cement Program: Additional Comments

This is a Type #3 as indicated in the BR/COPC Master Drilling Plan. Cement volumes are indicated in cubic feet instead of sacks of cement. The DHC will be submitted after the APD is approved. A Closed Loop System will be utilized. A copy of the Project Proposal and the C-102 plat will be sent today.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	2000	2000	SCHAFER

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
 I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature: *Dollie L. Busse* 1-12-15Printed Name: **Dollie L. Busse**Title: **Staff Regulatory Technician**Email Address: **dollie.l.busse@cop.com****OIL CONSERVATION DIVISION***Charles L...*

Approved By:

Title: **SUPERVISOR DISTRICT #3**Approved Date: **JAN 15 2015**Expiration Date: **JAN 15 2017**
 SEE ATTACHED NMOC
 CONDITIONS OF APPROVAL

JAN 14 2015

DISTRICT I

1825 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II

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DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, N.M. 87605
Phone: (505) 476-3460 Fax: (505) 476-3462State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, N.M. 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045 35630	*Pool Code 71599/72319	*Pool Name BLANCO MESA VERDE / BASIN DAKOTA
*Property Code 6881	*Property Name CALLOWAY	*Well Number 1M
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY LP	*Elevation 5732

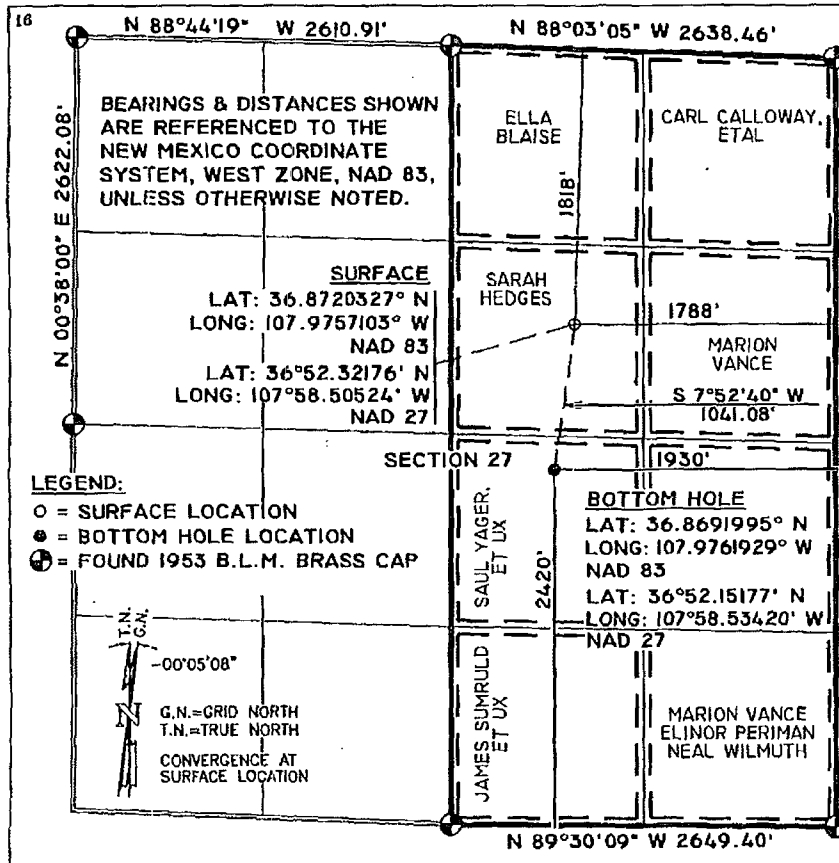
10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	27	31 N	11 W		1818	NORTH	1788	EAST	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
J	27	31 N	11 W		2420	SOUTH	1930	EAST	SAN JUAN

*Dedicated Acres 320 (MV) E 1/2 320 (DK) E 1/2	*Joint or Infill	*Consolidation Code	*Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unless 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.

Dollie L. Busse 7-22-14
Signature Date
Dollie L. Busse
Printed Name
dollie.l.busse@cop.com
E-mail Address

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.

06/27/14

Date of Survey

Signature and Seal of Professional Surveyor

MARSHALL W. LINDEEN
NEW MEXICO
17078
PROFESSIONAL SURVEYOR

17078
Certificate Number

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

CALLOWAY 1M

DEVELOPMENT

Lease:		AFE #: WAN.CDR.3054				AFE \$:	
Field Name: SAN JUAN		Rig: 2016 Pushing Rig		State: NM	County: SAN JUAN		API #:
Geologist:		Phone:		Geophysicist:		Phone:	
Geoscientist:		Phone:		Prod. Engineer:		Phone:	
Res. Engineer:		Phone:		Proj. Field Lead:		Phone:	
Primary Objective (Zones):							
Zone	Zone Name						
FRR	BASIN DAKOTA (PRORATED GAS)						
RON	BLANCO MESAVERDE (PRORATED GAS)						
OIL CONS. DIV DIST. 3 JAN 14 2015							
Location: Surface Datum Code: NAD 27 Directional							
Latitude: 36.872029		Longitude: -107.975087		X:	Y:	Section: 27	Range: 011W
Footage X: 1788 FEL		Footage Y: 1818 FNL		Elevation: 5732 (FT)		Township: 031N	
Tolerance:							
Location: Bottom Hole Datum Code: NAD 27 Directional							
Latitude: 36.869196		Longitude: -107.975570		X:	Y:	Section: 27	Range: 011W
Footage X: 1930 FEL		Footage Y: 2420 FSL		Elevation: (FT)		Township: 031N	
Tolerance:							
Location Type: Year Round		Start Date (Est.): 1/1/2016		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 5747 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	MD (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
NACIMIENTO	0	5747		☐			Surface geology
Surface Casing	200	5547		☐			12-1/4 hole. 200' 9 5/8" 32.3 ppf, H-40, STC casing. Cement with 121 cuft. Circulate cement to surface.
OJO ALAMO	858	4889		☐			
KIRTLAND	918	4829		☐			
FRUITLAND	1749	3998		☐			Possible Gas
PICTURED CLIFFS	2337	3410		☐			
LEWIS	2537	3210		☐			
HUERFANITO BENTONITE	3064	2683		☐			
CHACRA	3401	2346		☐			
MASSIVE CLIFF HOUSE	3935	1812		☐	538		
MENEFEE	4145	1602		☐			
Intermediate Casing	4295	1452		☐			145 8 3/4" Hole. 7", 23 ppf, J-55, LTC Casing. Cement with 1002 cuft. Circulate cement to surface.
POINT LOOKOUT	4584	1163		☐			
MANCOS	4941	806		☐			
UPPER GALLUP	5901	-154		☐			Calloway 1B, NE27-31N-11W, got wet in the Gallup.
GREENHORN	6623	-876		☐			
GRANEROS	6677	-930		☐			
TWO WELLS	6732	-985		☐	2539		Gas
PAGUATE	6810	-1063		☐			
CUBERO	6847	-1100		☐			

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

CALLOWAY 1M

DEVELOPMENT

Total Depth	6877	-1130	☐	200	6-1/4" hole, 4-1/2" 11.6 ppf, N/L-80, LTC/BTC casing. Cement w/ 343 cuft. Circulate cement a minimum of 100' inside the previous casing string.
ENCINAL	6897	-1150	☐		TD 3' 0" below the top of Cubero. Est bottom perf 15' from TD.

Reference Type			Well Name			Comments		
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Logging Program:								
Intermediate Logs: ☐ Log only if show ☐ GR/ILD ☐ Triple Combo								

TD Logs:	☐ Triple Combo	☐ Dipmeter	☐ RFT	☐ Sonic	☐ VSP	☐ TDT	☒ Other
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Mud log from 400' above the Upper Gallup to TD. Mud loggers will call final TD. Est bottom perf 15' from TD.

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

ConocoPhillips SJB

San Juan Basin - New Mexico West Wells

Other Named Wells

Calloway 1M

Wellbore #1

Plan: Design #1

Standard Planning Report

05 August, 2014

OIL CONS. DIV DIST. 3

JAN 14 2015

ConocoPhillips
Planning Report

OIL CONS. DIV DIST. 3

JAN 14 2015

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Calloway 1M
Company:	ConocoPhillips SJB	TVD Reference:	WELL @ 5747.0usft (Original Wellbore)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	WELL @ 5747.0usft (Original Wellbore)
Site:	Other Named Wells	North Reference:	Grid
Well:	Calloway 1M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project:	San Juan Basin - New Mexico West Wells - New Mexico Directional "S"		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		Using geodetic scale factor

Site:	Other Named Wells			
Site Position:		Northing:	2,108,178.26 usft	Latitude: 36° 47' 33.793 N
From:	Lat/Long	Easting:	643,887.63 usft	Longitude: 107° 20' 30.932 W
Position Uncertainty:	15.0 usft	Slot Radius:	6-1/8"	Grid Convergence: 0.29 °

Well:	Calloway 1M			
Well Position	+N/-S	0.0 usft	Northing:	2,136,711.92 usft
	+E/-W	0.0 usft	Easting:	458,536.40 usft
Position Uncertainty	2.5 usft		Wellhead Elevation:	usft
			Ground Level:	5,732.0 usft

Wellbore:	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	BGGM2013	3/4/2014	9.72	63.48	50,449

Design:	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	187.88

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,188.5	17.77	187.88	1,174.3	-135.4	-18.7	2.00	2.00	0.00	187.88	
3,853.4	17.77	187.88	3,712.1	-941.0	-130.2	0.00	0.00	0.00	0.00	
4,445.8	0.00	0.00	4,295.0	-1,031.3	-142.7	3.00	-3.00	0.00	180.00	
7,027.8	0.00	0.00	6,877.0	-1,031.3	-142.7	0.00	0.00	0.00	0.00	Calloway 1M BHL

ConocoPhillips
Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Calloway 1M
Company:	ConocoPhillips SJB	TVD Reference:	WELL @ 5747.0usft (Original Wellbore)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	WELL @ 5747.0usft (Original Wellbore)
Site:	Other Named Wells:	North Reference:	Grid
Well:	Calloway 1M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
NACIMIENTO									
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 9-5/8"									
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	2.00	187.88	400.0	-1.7	-0.2	1.7	2.00	2.00	0.00
500.0	4.00	187.88	499.8	-6.9	-1.0	7.0	2.00	2.00	0.00
600.0	6.00	187.88	599.5	-15.5	-2.2	15.7	2.00	2.00	0.00
700.0	8.00	187.88	698.7	-27.6	-3.8	27.9	2.00	2.00	0.00
800.0	10.00	187.88	797.5	-43.1	-6.0	43.5	2.00	2.00	0.00
861.6	11.23	187.88	858.0	-54.4	-7.5	54.9	2.00	2.00	0.00
OJO ALAMO									
900.0	12.00	187.88	895.6	-62.0	-8.6	62.6	2.00	2.00	0.00
922.9	12.46	187.88	918.0	-66.8	-9.2	67.5	2.00	2.00	0.00
KIRTLAND									
1,000.0	14.00	187.88	993.1	-84.3	-11.7	85.1	2.00	2.00	0.00
1,100.0	16.00	187.88	1,089.6	-109.9	-15.2	111.0	2.00	2.00	0.00
1,188.5	17.77	187.88	1,174.3	-135.4	-18.7	136.7	2.00	2.00	0.00
1,200.0	17.77	187.88	1,185.3	-138.9	-19.2	140.2	0.00	0.00	0.00
1,300.0	17.77	187.88	1,280.5	-169.1	-23.4	170.7	0.00	0.00	0.00
1,400.0	17.77	187.88	1,375.7	-199.3	-27.6	201.2	0.00	0.00	0.00
1,500.0	17.77	187.88	1,471.0	-229.6	-31.8	231.7	0.00	0.00	0.00
1,600.0	17.77	187.88	1,566.2	-259.8	-36.0	262.3	0.00	0.00	0.00
1,700.0	17.77	187.88	1,661.4	-290.0	-40.1	292.8	0.00	0.00	0.00
1,792.0	17.77	187.88	1,749.0	-317.8	-44.0	320.9	0.00	0.00	0.00
FRUITLAND									
1,800.0	17.77	187.88	1,756.6	-320.3	-44.3	323.3	0.00	0.00	0.00
1,900.0	17.77	187.88	1,851.9	-350.5	-48.5	353.8	0.00	0.00	0.00
2,000.0	17.77	187.88	1,947.1	-380.7	-52.7	384.3	0.00	0.00	0.00
2,100.0	17.77	187.88	2,042.3	-410.9	-56.9	414.9	0.00	0.00	0.00
2,200.0	17.77	187.88	2,137.6	-441.2	-61.1	445.4	0.00	0.00	0.00
2,300.0	17.77	187.88	2,232.8	-471.4	-65.2	475.9	0.00	0.00	0.00
2,400.0	17.77	187.88	2,328.0	-501.6	-69.4	506.4	0.00	0.00	0.00
2,409.4	17.77	187.88	2,337.0	-504.5	-69.8	509.3	0.00	0.00	0.00
PICTURED CLIFFS									
2,500.0	17.77	187.88	2,423.3	-531.9	-73.6	536.9	0.00	0.00	0.00
2,600.0	17.77	187.88	2,518.5	-562.1	-77.8	567.5	0.00	0.00	0.00
2,619.4	17.77	187.88	2,537.0	-568.0	-78.6	573.4	0.00	0.00	0.00
LEWIS									
2,700.0	17.77	187.88	2,613.7	-592.3	-82.0	598.0	0.00	0.00	0.00
2,800.0	17.77	187.88	2,708.9	-622.6	-86.2	628.5	0.00	0.00	0.00
2,900.0	17.77	187.88	2,804.2	-652.8	-90.3	659.0	0.00	0.00	0.00
3,000.0	17.77	187.88	2,899.4	-683.0	-94.5	689.5	0.00	0.00	0.00
3,100.0	17.77	187.88	2,994.6	-713.3	-98.7	720.1	0.00	0.00	0.00
3,172.8	17.77	187.88	3,064.0	-735.3	-101.8	742.3	0.00	0.00	0.00
HUÉRFANITO BENTONITE									
3,200.0	17.77	187.88	3,089.9	-743.5	-102.9	750.6	0.00	0.00	0.00
3,300.0	17.77	187.88	3,185.1	-773.7	-107.1	781.1	0.00	0.00	0.00
3,400.0	17.77	187.88	3,280.3	-804.0	-111.3	811.6	0.00	0.00	0.00
3,500.0	17.77	187.88	3,375.5	-834.2	-115.5	842.1	0.00	0.00	0.00
3,526.7	17.77	187.88	3,401.0	-842.3	-116.6	850.3	0.00	0.00	0.00
CHACRA									

ConocoPhillips

Planning Report

Database:	EDM/Central Planning	Local Co-ordinate Reference:	Well Calloway 1M
Company:	ConocoPhillips SJBU	TVD Reference:	WELL @ 5747.0usft (Original Wellbore)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	WELL @ 5747.0usft (Original Wellbore)
Site:	Other Named Wells	North Reference:	Grid
Well:	Calloway 1M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,600.0	17.77	187.88	3,470.8	-864.4	-119.6	872.7	0.00	0.00	0.00
3,700.0	17.77	187.88	3,566.0	-894.6	-123.8	903.2	0.00	0.00	0.00
3,800.0	17.77	187.88	3,661.2	-924.9	-128.0	933.7	0.00	0.00	0.00
3,853.4	17.77	187.88	3,712.1	-941.0	-130.2	950.0	0.00	0.00	0.00
3,900.0	16.37	187.88	3,756.6	-954.6	-132.1	963.7	3.00	-3.00	0.00
4,000.0	13.37	187.88	3,853.3	-980.0	-135.6	989.3	3.00	-3.00	0.00
4,083.6	10.86	187.88	3,935.0	-997.4	-138.0	1,006.9	3.00	-3.00	0.00
MASSIVE CLIFF HOUSE									
4,100.0	10.37	187.88	3,951.1	-1,000.4	-138.5	1,009.9	3.00	-3.00	0.00
4,200.0	7.37	187.88	4,049.9	-1,015.7	-140.6	1,025.3	3.00	-3.00	0.00
4,295.6	4.50	187.88	4,145.0	-1,025.4	-141.9	1,035.2	3.00	-3.00	0.00
MENESEE									
4,300.0	4.37	187.88	4,149.4	-1,025.8	-142.0	1,035.6	3.00	-3.00	0.00
4,400.0	1.37	187.88	4,249.2	-1,030.7	-142.7	1,040.6	3.00	-3.00	0.00
4,445.8	0.00	0.00	4,295.0	-1,031.3	-142.7	1,041.1	3.00	-3.00	0.00
Intermediate 7"									
4,500.0	0.00	0.00	4,349.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
4,600.0	0.00	0.00	4,449.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
4,700.0	0.00	0.00	4,549.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
4,734.8	0.00	0.00	4,584.0	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
POINT LOOKOUT									
4,800.0	0.00	0.00	4,649.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
4,900.0	0.00	0.00	4,749.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,000.0	0.00	0.00	4,849.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,091.8	0.00	0.00	4,941.0	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
MANCOS									
5,100.0	0.00	0.00	4,949.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,200.0	0.00	0.00	5,049.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,300.0	0.00	0.00	5,149.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,400.0	0.00	0.00	5,249.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,500.0	0.00	0.00	5,349.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,600.0	0.00	0.00	5,449.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,700.0	0.00	0.00	5,549.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,800.0	0.00	0.00	5,649.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
5,900.0	0.00	0.00	5,749.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,000.0	0.00	0.00	5,849.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,051.8	0.00	0.00	5,901.0	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
UPPER GALLUP									
6,100.0	0.00	0.00	5,949.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,200.0	0.00	0.00	6,049.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,300.0	0.00	0.00	6,149.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,400.0	0.00	0.00	6,249.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,500.0	0.00	0.00	6,349.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,600.0	0.00	0.00	6,449.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,700.0	0.00	0.00	6,549.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,773.8	0.00	0.00	6,623.0	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
GREENHORN									
6,800.0	0.00	0.00	6,649.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,827.8	0.00	0.00	6,677.0	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
GRANEROS									
6,882.8	0.00	0.00	6,732.0	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
TWO WELLS									

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Calloway 1M
Company:	ConocoPhillips SJB	TVD Reference:	WELL @ 5747.0usft (Original Wellbore)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	WELL @ 5747.0usft (Original Wellbore)
Site:	Other Named Wells	North Reference:	Grid
Well:	Calloway 1M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,900.0	0.00	0.00	6,749.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
6,960.8	0.00	0.00	6,810.0	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
PAGUATE									
6,997.8	0.00	0.00	6,847.0	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
CUBERO									
7,000.0	0.00	0.00	6,849.2	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00
7,027.8	0.00	0.00	6,877.0	-1,031.3	-142.7	1,041.1	0.00	0.00	0.00

Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude Longitude
Calloway 1M BHL	- plan hits target center	0.00	0.00	6,877.0	-1,031.3	-142.7	2,135,680.71	458,393.68	36° 52' 9.106 N 107° 58' 32.052 W
	- Point								

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
200.0	200.0	Surface 9-5/8"	9-5/8	12-1/4	
4,445.8	4,295.0	Intermediate 7"	7	8-3/4	
7,027.8	6,877.0	Production 4-1/2"	4-1/2	6-1/4	

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well: Calloway 1M
Company:	ConocoPhillips SJB	TVD Reference:	WELL @ 5747.0usft (Original Wellbore)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	WELL @ 5747.0usft (Original Wellbore)
Site:	Other Named Wells	North Reference:	Grid
Well:	Calloway 1M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,827.8	6,677.0	GRANEROS		0.00	
922.9	918.0	KIRTLAND		0.00	
3,526.7	3,401.0	CHACRA		0.00	
0.0	0.0	NACIMIENTO		0.00	
6,882.8	6,732.0	TWO WELLS		0.00	
6,997.8	6,847.0	CUBERO		0.00	
861.6	858.0	OJO ALAMO		0.00	
4,734.8	4,584.0	POINT LOOKOUT		0.00	
6,960.8	6,810.0	PAGUATE		0.00	
4,083.6	3,935.0	MASSIVE CLIFF HOUSE		0.00	
1,792.0	1,749.0	FRUITLAND		0.00	
3,172.8	3,064.0	HUERFANITO BENTONITE		0.00	
6,051.8	5,901.0	UPPER GALLUP		0.00	
5,091.8	4,941.0	MANCOS		0.00	
2,619.4	2,537.0	LEWIS		0.00	
6,773.8	6,623.0	GREENHORN		0.00	
2,409.4	2,337.0	PICTURED CLIFFS		0.00	
4,295.6	4,145.0	MENEFEE		0.00	

REFERENCE INFORMATION

WELL @ 5747.0usft (Original Wellbore)
Ground Elevation 5732.0
Reference Lat: 36° 52' 19.306 N
Reference Long: 107° 58' 30.314 W

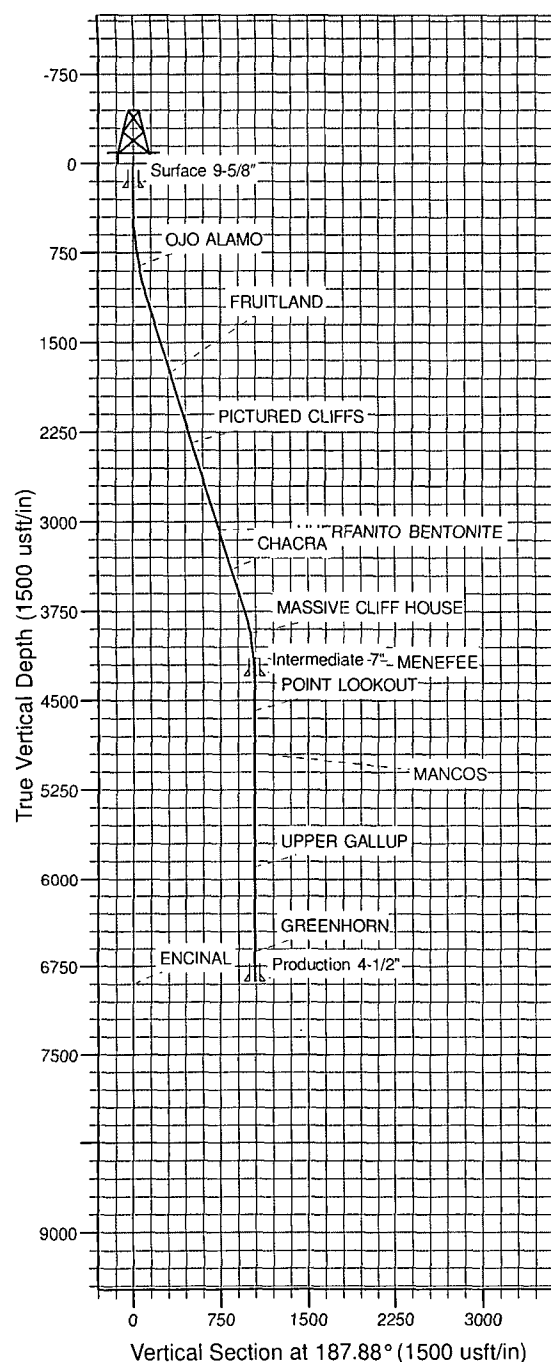
Project: San Juan Basin - New Mexico West V
Other Named Wells
Well: Calloway 1M

Design #1

ConocoPhillips

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	1188.5	17.77	187.88	1174.3	-135.4	-18.7	2.00	187.88	136.7	
4	3853.4	17.77	187.88	3712.1	-941.0	-130.2	0.00	0.00	950.0	
5	4445.8	0.00	0.00	4295.0	-1031.3	-142.7	3.00	180.00	1041.1	
6	7027.8	0.00	0.00	6877.0	-1031.3	-142.7	0.00	0.00	1041.1	Calloway 1M BHL

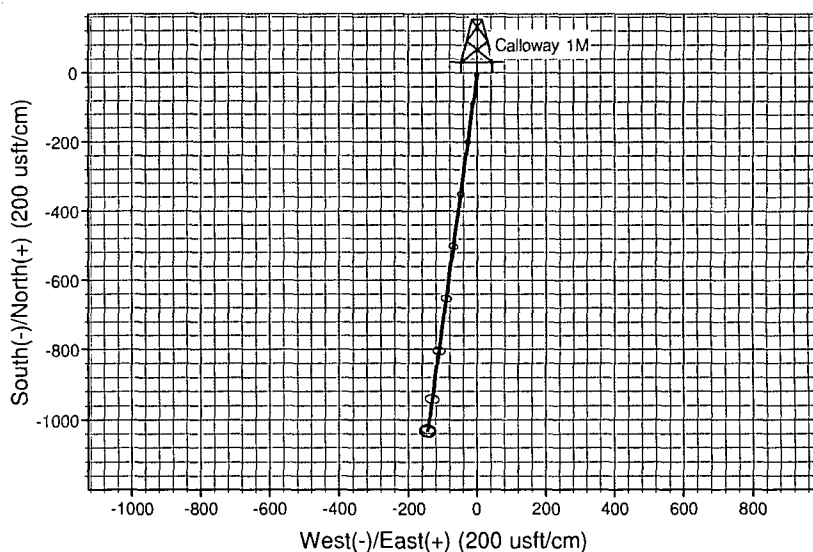
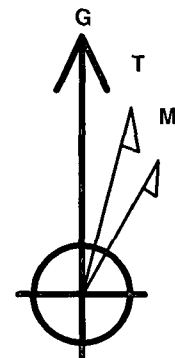


FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
0.0	0.0	NACIMIENTO
858.0	861.6	OJO ALAMO
918.0	922.9	KIRTLAND
1749.0	1792.0	FRUITLAND
2337.0	2409.4	PICTURED CLIFFS
2537.0	2619.4	LEWIS
3064.0	3172.8	HUERFANITO BENT
3401.0	3526.7	CHACRA
3935.0	4083.6	MASSIVE CLIFF HO
4145.0	4295.6	MENEFE
4584.0	4734.8	POINT LOOKOUT
4941.0	5091.8	MANCOS
5901.0	6051.8	UPPER GALLUP
6623.0	6773.8	GREENHORN
6677.0	6827.8	GRANEROS
6732.0	6882.8	TWO WELLS
6810.0	6960.8	PAGUATE
6847.0	6997.8	CUBERO

Azimuths to Grid North
True North: 0.09°
Magnetic North: 9.80°

Magnetic Field
Strength: 50449.2snT
Dip Angle: 63.48°
Date: 3/4/2014
Model: BGGM2013



REFERENCE INFORMATION

WELL @ 5747.0usft (Original Wellbore)
Ground Elevation 5732.0
Reference Lat: 36° 52' 19.306 N
Reference Long: 107° 58' 30.314 W

Project: San Juan Basin - New Mexico West V
Other Named Wells
Well: Calloway 1M

ConocoPhillips

Design #1

SECTION DETAILS

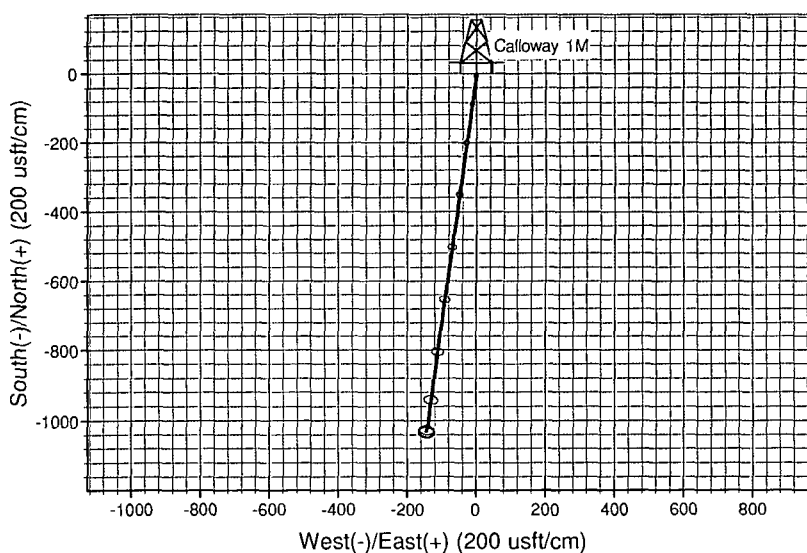
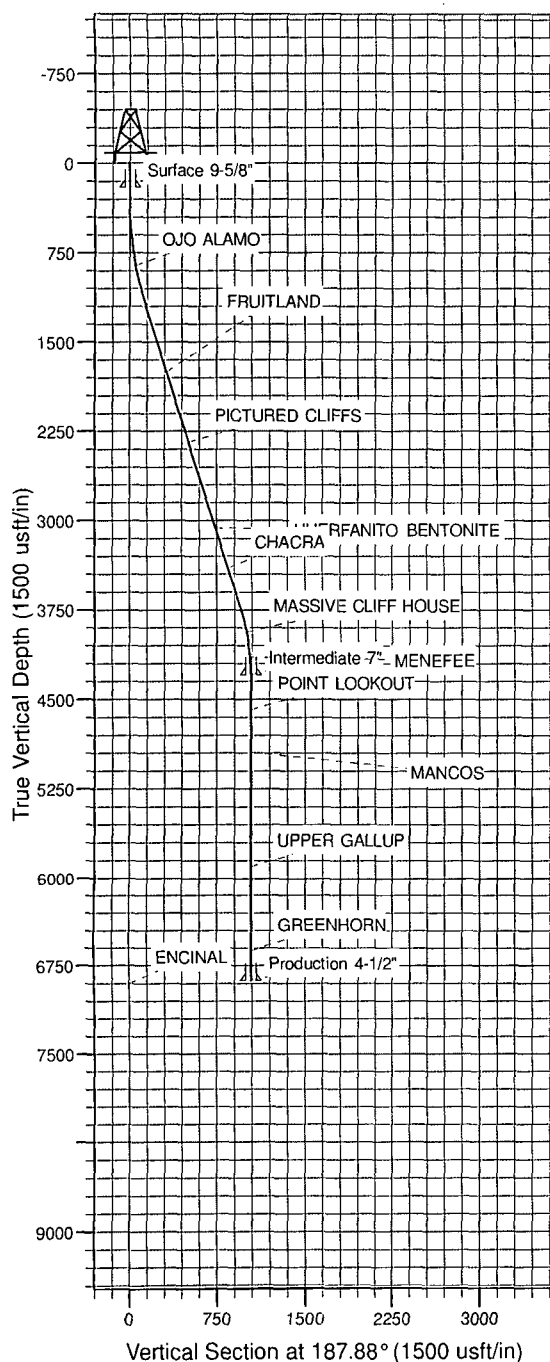
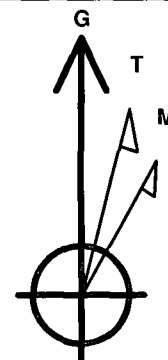
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	1188.5	17.77	187.88	1174.3	-135.4	-18.7	2.00	187.88	136.7	
4	3853.4	17.77	187.88	3712.1	-941.0	-130.2	0.00	0.00	950.0	
5	4445.8	0.00	0.00	4295.0	-1031.3	-142.7	3.00	180.00	1041.1	
6	7027.8	0.00	0.00	6877.0	-1031.3	-142.7	0.00	0.00	1041.1	Calloway 1M BHL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
0.0	0.0	NACIMIENTO
858.0	861.6	OJO ALAMO
918.0	922.9	KIRTLAND
1749.0	1792.0	FRUITLAND
2337.0	2409.4	PICTURED CLIFFS
2537.0	2619.4	LEWIS
3064.0	3172.8	HUERFANITO BENT
3401.0	3526.7	CHACRA
3935.0	4083.6	MASSIVE CLIFF HO
4145.0	4295.6	MENEFEE
4584.0	4734.8	POINT LOOKOUT
4941.0	5091.8	MANCOS
5901.0	6051.8	UPPER GALLUP
6623.0	6773.8	GREENHORN
6677.0	6827.8	GRANEROS
6732.0	6882.8	TWO WELLS
6810.0	6960.8	PAGUATE
6847.0	6997.8	CUBERO

Azimuths to Grid North
True North: 0.09°
Magnetic North: 9.80°

Magnetic Field
Strength: 50449.2snT
Dip Angle: 63.48°
Date: 3/4/2014
Model: BGGM2013



State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

David R. Catanach
Division Director
Oil Conservation Division



**New Mexico Oil Conservation Division Conditions of Approval
(C-101 Application for permit to drill)**

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ Hold C-104 for directional survey & "As Drilled" Plat
 - ☐ Hold C-104 for NSL, NSP, DHC
 - ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
 - ☐ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
 - ☐ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.