

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FEB 24 2010

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

Bureau of Land Management
Farmington Field Office

RCVD MAR 16 10
OIL CONS. DIV.
DIST. 3

1a. Type of Work DRILL	5. Lease Number NM 33056 NM 5079013 Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator BURLINGTON RESOURCES Oil & Gas Company, LP	7. Unit Agreement Name
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Rattlesnake Canyon 9. Well Number 3A
4. Location of Well Surf: Unit H (SENE), 1582' FNL & 684' FEL Bottomhole: Unit A (NENE), 710' FNL & 710' FEL Surf: Latitude: 36.9725510° N (NAD83) Longitude: 107.6916535° W Bottomhole: Latitude: 36.9749493° N (NAD83) Longitude: 107.6917105° W	10. Field, Pool, Wildcat Blanco MV / Basin DK 11. Sec., Twn, Rge, Mer. (NMPM) H Sec. 20, T32N, R8W API # 30-045- 35108
14. Distance in Miles from Nearest Town 24 miles / Navajo Dam	12. County San Juan
15. Distance from Proposed Location to Nearest Property or Lease Line 710'	13. State NM
16. Acres in Lease 200.00 1720.00	17. Acres Assigned to Well 320.00 E/2 - MV/DK
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 72' from Trail Canyon 102S (FC)	
19. Proposed Depth 8461'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6802' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Crystal Tafoya</u> Crystal Tafoya (Regulatory Tech)	Date <u>2/24/2010</u>

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY [Signature] TITLE AFM DATE 3/17/2010

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.

Example Master Plan Type 3 **Bond Numbers NMB-000015 and NMB-000089**

This action is subject to technical and procedural review pursuant to 43 CFR 3165.5 and appeal pursuant to 43 CFR 3165.4

Hold C104 for Directional Survey and "As Drilled" plat

Hold C104 for Directional Survey and "As Drilled" plat

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

NOTIFY AZTEC OCD 24 HRS. PRIOR TO CASING & CEMENT

MAR 17 2010

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

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

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

FEB 24 2010

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

Bureau of Land Management

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35108	² Pool Code 72319/71599	³ Pool Name BLANCO MESA VERDE / DAKOTA
⁴ Property Code 18605	⁵ Property Name RATTLESNAKE CANYON	⁶ Well Number 3A
⁷ GRID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY LP	⁹ Elevation 6802

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
H	20	32 N	8 W		1582	NORTH	684	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
A	20	32 N	8 W		710	NORTH	710	EAST	SAN JUAN

¹² Dedicated Acres 320 (E/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

¹⁶ S 88°46'22" E 2590.77'	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 released 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. Signature: Ethel Tally Date: 9/17/09 Printed Name: Ethel Tally
¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey: 8/27/09 Signature and Seal: [Seal of Marshall W. Linden, Professional Surveyor, License No. 17078] Certificate Number: 17078	

SECTION 20

USA SF-079013

USA NM-33056

USA SF-079013

NOTE: BEARINGS & DISTANCES SHOWN ARE REFERENCED TO THE NEW MEXICO COORDINATE SYSTEM, WEST ZONE, NAD 83.

○ = SURFACE LOCATION
● = BOTTOM HOLE LOCATION

N 88°44' W (R)

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

RATTLESNAKE CANYON 3A

DEVELOPMENT

Lease:		AFE #: WAN.CDR.9345				AFE \$: 1,665,919.64	
Field Name: SAN JUAN		Rig: XXX 2011 Holding Rig #2		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						
RON	BLANCO MESAVERDE (PRORATED GAS)						
FRR	BASIN DAKOTA (PRORATED GAS)						
Location: Surface		Datum Code: NAD 27				Directional	
Latitude: 36.972548	Longitude: -107.691039	X:	Y:	Section: 20		Range: 008W	
Footage X: 684 FEL	Footage Y: 1582 FNL	Elevation: 6802	(FT)	Township: 032N			
Tolerance:							
Location: Bottom Hole		Datum Code: NAD 27				Directional	
Latitude: 36.974946	Longitude: -107.691096	X:	Y:	Section: 20		Range: 008W	
Footage X: 710 FEL	Footage Y: 710 FNL	Elevation:	(FT)	Township: 032N			
Tolerance:							
Location Type: Restricted		Start Date (Est.): 1/1/2011		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 6817 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks	
Surface Casing	201	6616	☐			12-1/4 hole. 200' 9 5/8" 32.3 ppf, H-40, STC casing. Cement with 121 cuft. Circulate cement to surface.	
NACIMIENTO	980	5837	☐				
OJO ALAMO	2377	4440	☐				
KIRTLAND	2429	4388	☐				
FRUITLAND	3110	3707	☐			Possible Gas	
PICTURED CLIFFS	3747	3070	☐				
LEWIS	3855	2962	☐				
Intermediate Casing	3955	2862	☐			8 3/4" Hole. 7", 23 ppf, J-55, LTC Casing. Cement with 917 cuft. Circulate cement to surface.	
HUERFANITO BENTONITE	4525	2292	☐				
CHACRA	4977	1840	☐				
UPPER CLIFF HOUSE	5813	1004	☐			Gas; Est. Top Perf - 5814 (1002)	
MASSIVE CLIFF HOUSE	5817	1000	☐	964		Gas	
MENEFEE	5851	966	☐				
POINT LOOKOUT	6109	708	☐				
MANCOS	6491	326	☐				
UPPER GALLUP	7411	-594	☐				
GREENHORN	8170	-1353	☐				
GRANEROS	8220	-1403	☐				
TWO WELLS	8283	-1466	☐	3478		Gas	
PAGUATE	8335	-1518	☐				
UPPER CUBERO	8347	-1530	☐				
LOWER CUBERO	8376	-1559	☐			Est. Btm Perf - 8445 (-1629) based on offset wells	

PROJECT PROPOSAL - New Drill / Sidetrack

RATTLESNAKE CANYON 3A

DEVELOPMENT

ENCINAL	8431	-1614	☐	TD - 30' below T/ENCN
Total Depth	8461	-1644	☐	6-1/4" hole, 4-1/2" 11.6 ppf, L-80, BTC/LTC casing. Cement w/ 613 cuft. Circulate cement a minimum of 100' inside the previous casing string.

Reference Wells:		
Reference Type	Well Name	Comments
Production	Rattlesnake Canyon 1	32N 8W 20 SW NE SE
Production	Trail Canyon 1	32N 8W 21 NE SW SW
Production	Susco 16 State 1	32N 8W 16 NE SW SW
Production	Rattlesnake Canyon 105S	32N 8W 20 SW NE SE

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 GRHN to TD - mudlogger will call TD.	

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

ConocoPhillips or its affiliates
Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Rattlesnake Canyon 3A
Company:	ConocoPhillips SJB	TVD Reference:	WELL @ 6817 0ft (Original Well Elev)
Project:	San Juan Basin - New Mexico Wells	MD Reference:	WELL @ 6817 0ft (Original Well Elev)
Site:	Other Named Wells	North Reference:	True
Well:	Rattlesnake Canyon 3A	Survey Calculation Method:	Minimum Curvature
Wellbore:	Rattlesnake Canyon 3A		
Design:	Plan #1		

Formations							
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)		
8,463.3	8,346.0	Upper Cubero		0.00			
985 0	979 0	Nacimiento		0.00			
4,641 3	4,524.0	Huerfano Bentonite		0 00			
7,527.3	7,410 0	Gallup		0.00			
2,495 2	2,428.0	Kirtland		0.00			
3,862.9	3,746.0	Pictured Cliffs		0.00			
3,205.7	3,109.0	Fruitland		0 00			
8,577.3	8,460.0	Total Depth		0 00			
8,451 3	8,334 0	Paguate		0 00			
5,929.3	5,812 0	Upper Cliffhouse		0 00			
6,225.3	6,108 0	Pt. Lookout		0 00			
8,286.3	8,169.0	Greenhorn		0.00			
2,441 0	2,376 0	Ojo Alamo		0.00			
8,399.3	8,282.0	Two Wells		0.00			
6,607.3	6,490 0	Mancos Shale		0.00			
8,492 3	8,375.0	Lower Cubero		0.00			
3,971.2	3,854.0	Lewis		0.00			
8,336 3	8,219 0	Graneros Two Wells Paguate Graneros		0 00			
8,547.3	8,430.0	Encinal		0 00			
5,093.3	4,976 0	Chacra		0.00			
5,967 3	5,850.0	Menefee		0 00			

REFERENCE INFORMATION

WELL @ 6817.0ft (Original Well Elev)
Ground Elevation 6802.0
Reference Lat: 36° 58' 21.173 N
Reference Long: 107° 41' 27.740 W

Project: San Juan Basin - New Mexico Wells

Site: Other Named Wells

Well: Rattlesnake Canyon 3A

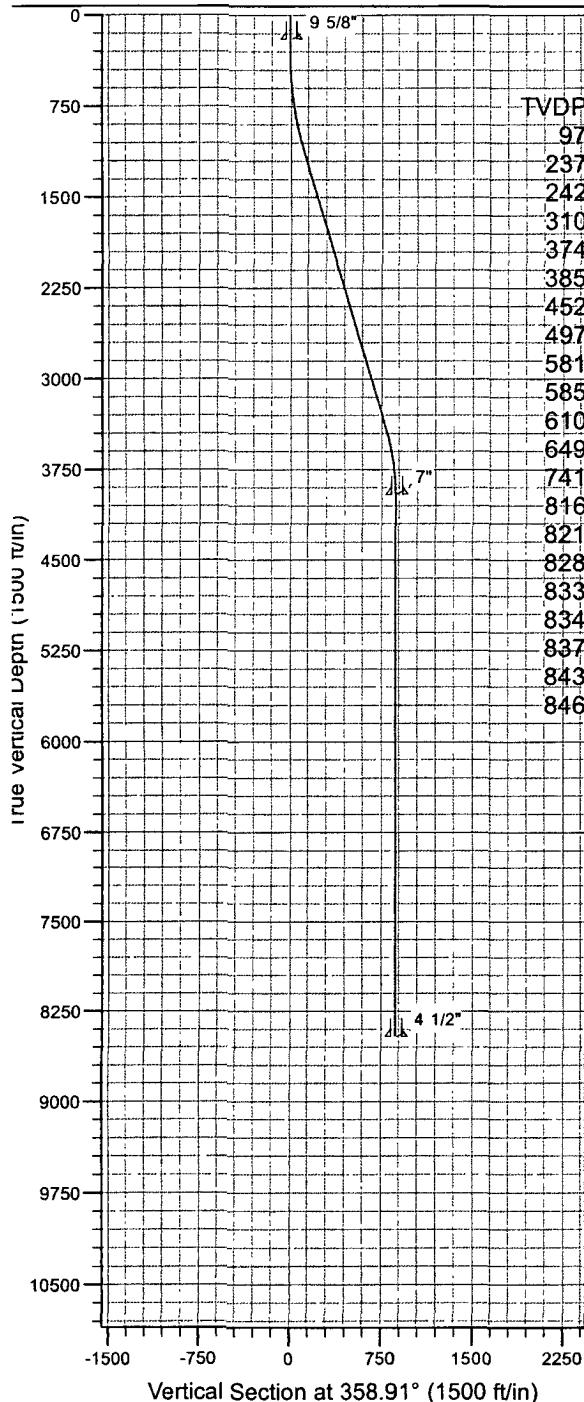
Wellbore: Rattlesnake Canyon 3A

Design: Plan #1



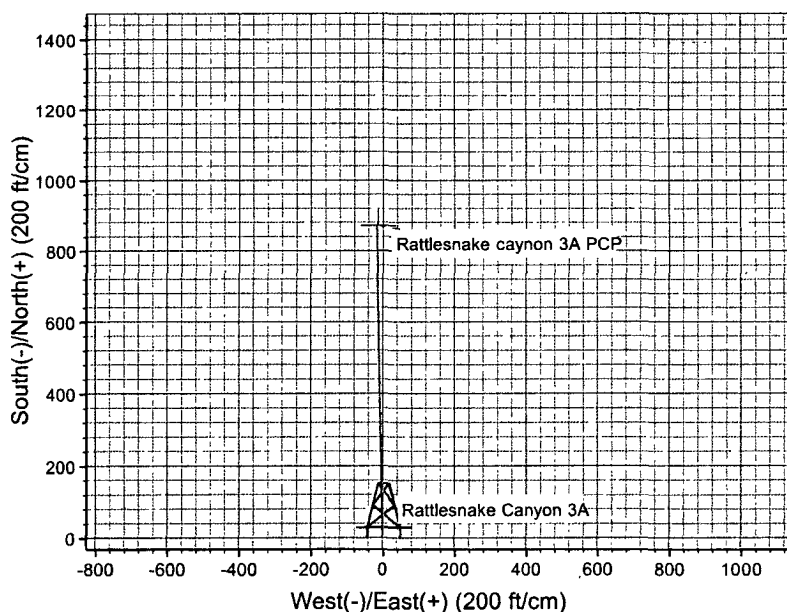
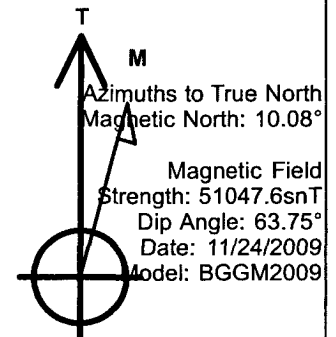
SECTION DETAILS

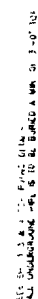
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	320.0	0.00	0.00	320.0	0.0	0.0	0.00	0.00	0.0	
3	1147.2	16.54	358.91	1135.7	118.6	-2.3	2.00	358.91	118.6	
4	3519.9	16.54	358.91	3410.2	794.0	-15.1	0.00	0.00	794.2	
5	4071.3	0.00	0.00	3954.0	873.1	-16.7	3.00	180.00	873.2	Rattlesnake caynon 3A ICP
6	8577.3	0.00	0.00	8460.0	873.1	-16.7	0.00	0.00	873.2	Rattlesnake caynon 3A PCP



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
979.0	985.0	Nacimiento
2376.0	2441.0	Ojo Alamo
2428.0	2495.2	Kirtland
3109.0	3205.7	Fruitland
3746.0	3862.9	Pictured Cliffs
3854.0	3971.2	Lewis
4524.0	4641.3	Huerfano Bentonite
4976.0	5093.3	Chacra
5812.0	5929.3	Upper Cliffhouse
5850.0	5967.3	Menefee
6108.0	6225.3	Pt. Lookout
6490.0	6607.3	Mancos Shale
7410.0	7527.3	Gallup
8169.0	8286.3	Greenhorn
8219.0	8336.3	Graneros Two Wells Paguate Graneros Two Wells
8282.0	8399.3	Two Wells
8334.0	8451.3	Paguate
8346.0	8463.3	Upper Cubero
8375.0	8492.3	Lower Cubero
8430.0	8547.3	Encinal
8460.0	8577.3	Total Depth



103

BURLINGTON RESOURCES OIL & GAS COMPANY LP

RATTLESNAKE CANYON 3A

1582' FNL & 684' FEL (SURFACE LOCATION)

710' FNL & 710' FEL (BOTTOM HOLE LOCATION)

LATITUDE: 36.9725510° N

LONGITUDE: 107.6916535° W

NAD 83

SECTION 20, T-32-N, R-8-W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

FROM THE INTERSECTION OF N.M. HIGHWAY 511 AND
N.M. HIGHWAY 539 AT THE NAVAJO DAM SPILLWAY.

TRAVEL NORTHERLY 14.8 MILES ON N.M. HIGHWAY 511.

TURN LEFT OFF N.M. HIGHWAY 511 AND CONTINUE
NORTHERLY 0.5 MILE.

TURN LEFT AT FORK IN ROAD AND TRAVEL
WESTERLY 1.8 MILES AROUND NORTH EDGE OF RATTLESNAKE CANYON.

TURN RIGHT AT FORK IN ROAD AND TRAVEL
SOUTHWESTERLY 0.8 MILE.

CONTINUE FORWARD PAST A TEE INTERSECTION, TRAVELLING
SOUTHWESTERLY 0.5 MILE.

TURN LEFT AT A TEE INTERSECTION AND CONTINUE FOLLOWING ROAD,
LOOPING AROUND MESA AND HEADING TOWARDS RATTLESNAKE
CANYON SOUTHEASTERLY AND THEN SOUTHWESTERLY 1.5 MILES TO
EXISTING RATTLESNAKE CANYON 105 WELL LOCATION & PROPOSED
RATTLESNAKE CANYON 3A WELL LOCATION.