

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

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

Jami Bailey, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-4 or 3160-5 form.

Operator Signature Date:

Application Type:

☐ P&A ☒ Drilling/Casing Change ☐ Recomplete/DHC
☐ Location Change ☒ Other: New directional plan & C-102,

Well information:

Encana Oil & Gas
Lybrook M27-2306 #4H
30-043-21151
S27 T23N R06W

Conditions of Approval: .

NSL, Hold C104 for Directional Survey and "As drilled Plat"

Notify NMOCD 24hrs prior to beginning operations.

OCT 04 2013

NMOCD Approved by Signature

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

FC-111 APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMNM 112953

6. If Indian, Allottee or Tribe Name
N/A

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

SEP 06 2013

2. Name of Operator
Encana Oil & Gas (USA) Inc.

Farmington Field Office
Bureau of Land Management

8. Well Name and No.
Lybrook M27-2306 04H

9. API Well No.

30-043-21151

3a. Address
370 17th Street, Suite 1700
Denver, CO 80202

ATTN: KATIE WEGNER

3b. Phone No. (include area code)
720-876-3533

10. Field and Pool or Exploratory Area
Counselors Gallup-Dakota

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SHL: 901' FSL and 173' FWL Section 27, T23N, R6W
BHL: 550' FSL and 330' FWL Section 28, T23N, R6W

11. Country or Parish, State
Sandoval, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Replace C-102 & directional plan
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Encana Oil & Gas (USA) Inc. would like to replace the C-102 & directional plan for the Lybrook M27-2306 04H well. The BHL lat/long was incorrect on the C-102 and directional plan that were submitted with the APD on May 16, 2013. Please see attached directional plan and C-102, which reflects the correct BHL lat/long.

RCVD SEP 30 '13

OIL CONS. DIV.
DIST. 3

ACCEPTED FOR RECORD

SEP 23 2013

FARMINGTON FIELD OFFICE
BY William Tambekou

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

Name (Printed/Typed)

Katie Wegner

Title Regulatory Analyst

Signature

Date

9/5/13

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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 representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOC
AV

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

Submit one copy to
Appropriate District Office

AMENDED REPORT
RECEIVED

SEP 06 2013

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-043-21151	*Pool Code 13379	*Pool Name COUNSELORS GALLUP Bureau of Land Management	*Well Number 04H
*Property Code 40082	*Property Name LYBROOK M27-2306	*Operator Name ENCANA OIL & GAS (USA) INC.	*Elevation 7132'
*GRID No. 282327			

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	27	23N	6W		901	SOUTH	173	WEST	SANDOVAL

¹¹ Bottom Hole Location If Different From Surface

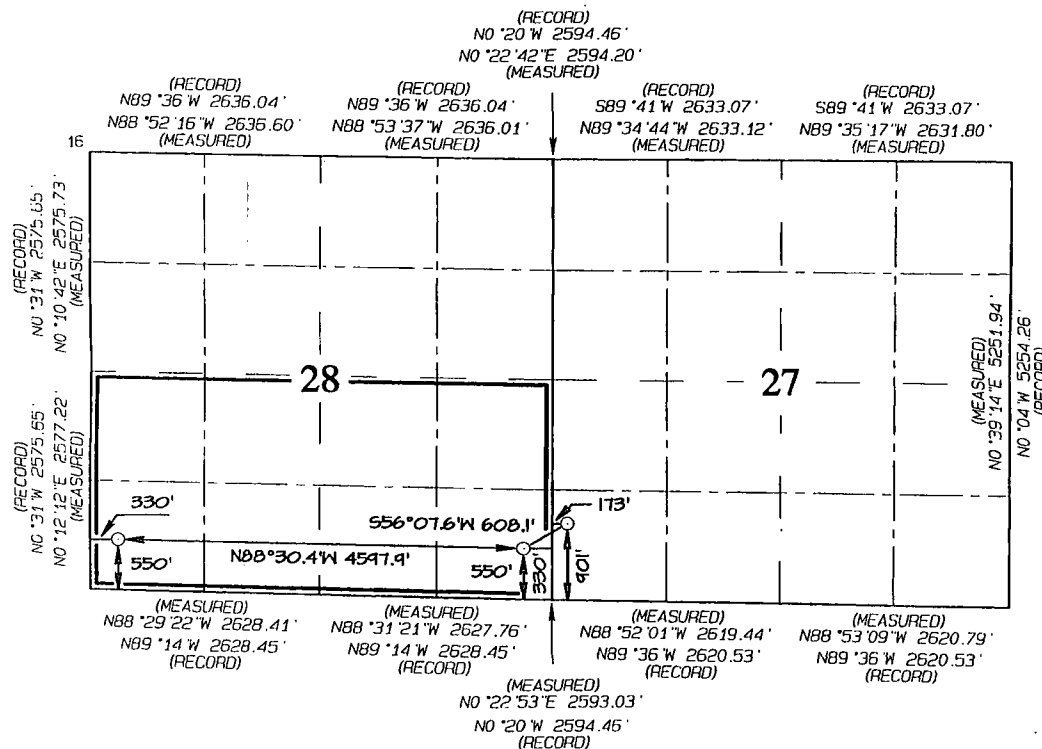
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	28	23N	6W		550	SOUTH	330	WEST	SANDOVAL

12 Dedicated Acres	320.00 Acres S/2 - Section 28	13 Joint or Infill	14 Consolidation Code	15 Order No.
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RCVD SEP 30 1983
 OIL CONS. DIV.

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

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END-OF-LATERAL
550' FSL 330' FWL
SECTION 28, T23N, R6W
LAT: 36.19080°N
LONG: 107.48053°W
DATUM: NAD1927

LAT: 36.19082 °N
LONG: 107.48113 °W
DATUM: NAD1983

POINT-OF-ENTRY
550' FSL 330' FEL
SECTION 28, T23N, R6W
LAT: 36.19063°N
LONG: 107.46495°W
DATUM: NAD1927

LAT: 36.19065 °N
LONG: 107.46555 °W
DATUM: NAD1983

SURFACE LOCATION
901' FSL 173' FWL
SECTION 27, T23N, R6W
LAT: 36.19158°N
LONG: 107.46325°W
DATUM: NAD1927

LAT: 36.19160 °N
LONG: 107.46386 °W
DATUM: NAD1983

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 an agreement, whether written or oral, a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature _____ Date 9/3/13
 Printed Name _____
 E-mail Address Katie.wegner@encana.w

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 Revised: AUGUST 30, 2013
Survey Date: DECEMBER 5, 2012

Signature and Seal of Professional Surveyor

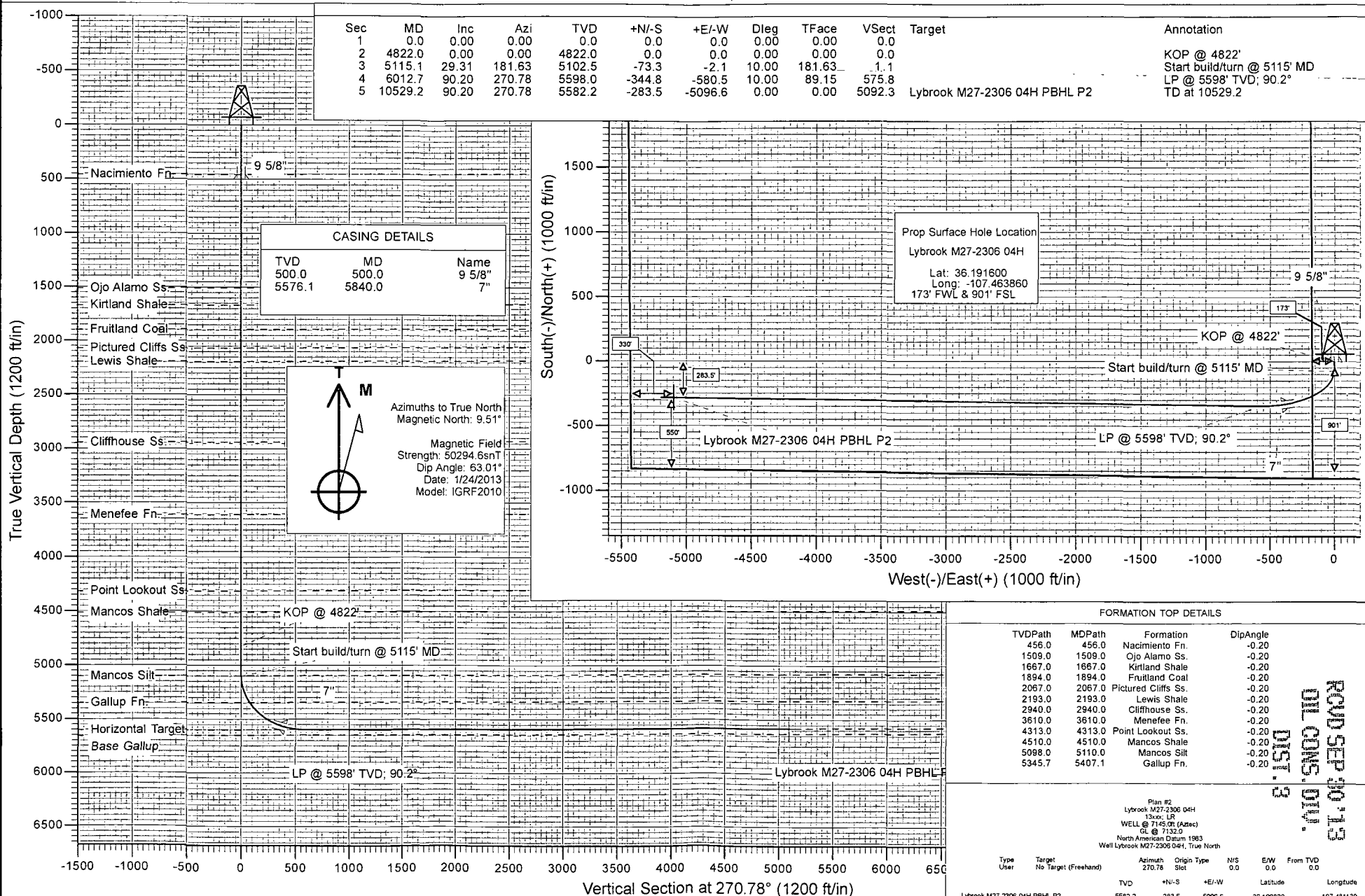


JASON C. EDWARDS
Certificate Number 15269

encana™

natural gas

Project: Sandoval County, NM
 Site: Lybrook
 Well: Lybrook M27-2306 04H
 Wellbore: Hz
 Design: Plan #2



Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook M27-2306 04H
Wellbore: Hz
Design: Plan #2

Local Co-ordinate Reference: Well Lybrook M27-2306 04H
TVD Reference: WELL @ 7145.0ft (Aztec)
MD Reference: WELL @ 7145.0ft (Aztec)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	Sandoval County, NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	Lybrook				
Site Position:		Northing:	1,882,676.45 ft	Latitude:	36.168210
From:	Lat/Long	Easting:	1,287,068.90 ft	Longitude:	-107.447150
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-0.71 °

Well	Lybrook M27-2306 04H					
Well Position	+N/-S	0.0 ft	Northing:	1,891,252.56 ft	Latitude:	36.191600
	+E/-W	0.0 ft	Easting:	1,282,243.06 ft	Longitude:	-107.463860
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,132.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/24/2013	9.51	63.01	50,295

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	270.78

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	
4,822.0	0.00	0.00	4,822.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,115.1	29.31	181.63	5,102.5	-73.3	-2.1	10.00	10.00	0.00	181.63	
6,012.7	90.20	270.78	5,598.0	-344.8	-580.5	10.00	6.78	9.93	89.15	
10,529.2	90.20	270.78	5,582.2	-283.5	-5,096.6	0.00	0.00	0.00	0.00	Lybrook M27-2306 04

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook M27-2306 04H
Wellbore: Hz
Design: Plan #2

Local Co-ordinate Reference: Well Lybrook M27-2306 04H
TVD Reference: WELL @ 7145.0ft (Aztec)
MD Reference: WELL @ 7145.0ft (Aztec)
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)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
456.0	0.00	0.00	456.0	0.0	0.0	0.0	0.00	0.00	Nacimiento Fn.
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	9 5/8"
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,509.0	0.00	0.00	1,509.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,667.0	0.00	0.00	1,667.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,894.0	0.00	0.00	1,894.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,067.0	0.00	0.00	2,067.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,193.0	0.00	0.00	2,193.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
2,940.0	0.00	0.00	2,940.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,610.0	0.00	0.00	3,610.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook M27-2306 04H
Wellbore: Hz
Design: Plan #2

Local Co-ordinate Reference: Well Lybrook M27-2306 04H
TVD Reference: WELL @ 7145.0ft (Aztec)
MD Reference: WELL @ 7145.0ft (Aztec)
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)	Comments / Formations
4,313.0	0.00	0.00	4,313.0	0.0	0.0	0.0	0.00	0.00	Point Lookout Ss.
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	
4,510.0	0.00	0.00	4,510.0	0.0	0.0	0.0	0.00	0.00	Mancos Shale
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	
4,822.0	0.00	0.00	4,822.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4822'
4,900.0	7.80	181.63	4,899.8	-5.3	-0.2	0.1	10.00	10.00	
5,000.0	17.80	181.63	4,997.2	-27.4	-0.8	0.4	10.00	10.00	
5,100.0	27.80	181.63	5,089.2	-66.1	-1.9	1.0	10.00	10.00	
5,110.0	28.80	181.63	5,098.0	-70.8	-2.0	1.1	10.00	10.00	Mancos Silt
5,115.1	29.31	181.63	5,102.5	-73.3	-2.1	1.1	10.00	10.00	Start build/turn @ 5115' MD
5,200.0	30.53	198.53	5,176.2	-114.6	-9.6	8.0	10.00	1.44	
5,300.0	34.44	215.74	5,260.7	-161.8	-34.2	32.0	10.00	3.91	
5,400.0	40.28	229.18	5,340.3	-206.0	-75.3	72.5	10.00	5.83	
5,407.1	40.74	230.01	5,345.7	-209.0	-78.8	76.0	10.00	6.57	Gallup Fn.
5,500.0	47.31	239.48	5,412.5	-245.9	-131.5	128.2	10.00	7.07	
5,600.0	55.07	247.59	5,475.2	-280.2	-201.3	197.5	10.00	7.76	
5,700.0	63.28	254.25	5,526.5	-308.1	-282.4	278.2	10.00	8.21	
5,800.0	71.76	260.00	5,564.7	-328.5	-372.4	367.8	10.00	8.48	
5,840.0	75.20	262.13	5,576.1	-334.4	-410.2	405.6	10.00	8.60	7"
5,900.0	80.39	265.21	5,588.7	-340.9	-468.5	463.8	10.00	8.65	
6,000.0	89.09	270.16	5,597.9	-344.9	-567.9	563.1	10.00	8.71	
6,012.7	90.20	270.78	5,598.0	-344.8	-580.5	575.8	10.00	8.72	LP @ 5598' TVD; 90.2°
6,100.0	90.20	270.78	5,597.7	-343.6	-667.9	663.1	0.00	0.00	
6,200.0	90.20	270.78	5,597.3	-342.2	-767.8	763.1	0.00	0.00	
6,300.0	90.20	270.78	5,597.0	-340.9	-867.8	863.1	0.00	0.00	
6,400.0	90.20	270.78	5,596.6	-339.5	-967.8	963.1	0.00	0.00	
6,500.0	90.20	270.78	5,596.3	-338.1	-1,067.8	1,063.1	0.00	0.00	
6,600.0	90.20	270.78	5,595.9	-336.8	-1,167.8	1,163.1	0.00	0.00	
6,700.0	90.20	270.78	5,595.6	-335.4	-1,267.8	1,263.1	0.00	0.00	
6,800.0	90.20	270.78	5,595.2	-334.1	-1,367.8	1,363.1	0.00	0.00	
6,900.0	90.20	270.78	5,594.9	-332.7	-1,467.8	1,463.1	0.00	0.00	
7,000.0	90.20	270.78	5,594.5	-331.4	-1,567.8	1,563.1	0.00	0.00	
7,100.0	90.20	270.78	5,594.2	-330.0	-1,667.8	1,663.1	0.00	0.00	
7,200.0	90.20	270.78	5,593.8	-328.7	-1,767.7	1,763.1	0.00	0.00	
7,300.0	90.20	270.78	5,593.5	-327.3	-1,867.7	1,863.1	0.00	0.00	
7,400.0	90.20	270.78	5,593.1	-325.9	-1,967.7	1,963.1	0.00	0.00	
7,500.0	90.20	270.78	5,592.8	-324.6	-2,067.7	2,063.1	0.00	0.00	
7,600.0	90.20	270.78	5,592.4	-323.2	-2,167.7	2,163.1	0.00	0.00	
7,700.0	90.20	270.78	5,592.1	-321.9	-2,267.7	2,263.1	0.00	0.00	
7,800.0	90.20	270.78	5,591.7	-320.5	-2,367.7	2,363.1	0.00	0.00	
7,900.0	90.20	270.78	5,591.4	-319.2	-2,467.7	2,463.1	0.00	0.00	
8,000.0	90.20	270.78	5,591.0	-317.8	-2,567.7	2,563.1	0.00	0.00	
8,100.0	90.20	270.78	5,590.7	-316.5	-2,667.7	2,663.1	0.00	0.00	
8,200.0	90.20	270.78	5,590.3	-315.1	-2,767.6	2,763.1	0.00	0.00	
8,300.0	90.20	270.78	5,590.0	-313.7	-2,867.6	2,863.1	0.00	0.00	
8,400.0	90.20	270.78	5,589.6	-312.4	-2,967.6	2,963.1	0.00	0.00	
8,500.0	90.20	270.78	5,589.3	-311.0	-3,067.6	3,063.1	0.00	0.00	
8,600.0	90.20	270.78	5,588.9	-309.7	-3,167.6	3,163.1	0.00	0.00	
8,700.0	90.20	270.78	5,588.6	-308.3	-3,267.6	3,263.1	0.00	0.00	

Planning Report

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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)	Comments / Formations
8,800.0	90.20	270.78	5,588.2	-307.0	-3,367.6	3,363.1	0.00	0.00	
8,900.0	90.20	270.78	5,587.9	-305.6	-3,467.6	3,463.1	0.00	0.00	
9,000.0	90.20	270.78	5,587.5	-304.3	-3,567.6	3,563.1	0.00	0.00	
9,100.0	90.20	270.78	5,587.2	-302.9	-3,667.6	3,663.1	0.00	0.00	
9,200.0	90.20	270.78	5,586.8	-301.5	-3,767.5	3,763.1	0.00	0.00	
9,300.0	90.20	270.78	5,586.5	-300.2	-3,867.5	3,863.1	0.00	0.00	
9,400.0	90.20	270.78	5,586.1	-298.8	-3,967.5	3,963.1	0.00	0.00	
9,500.0	90.20	270.78	5,585.8	-297.5	-4,067.5	4,063.1	0.00	0.00	
9,600.0	90.20	270.78	5,585.4	-296.1	-4,167.5	4,163.1	0.00	0.00	
9,700.0	90.20	270.78	5,585.1	-294.8	-4,267.5	4,263.1	0.00	0.00	
9,800.0	90.20	270.78	5,584.7	-293.4	-4,367.5	4,363.1	0.00	0.00	
9,900.0	90.20	270.78	5,584.4	-292.1	-4,467.5	4,463.1	0.00	0.00	
10,000.0	90.20	270.78	5,584.0	-290.7	-4,567.5	4,563.1	0.00	0.00	
10,100.0	90.20	270.78	5,583.7	-289.3	-4,667.5	4,663.1	0.00	0.00	
10,200.0	90.20	270.78	5,583.3	-288.0	-4,767.5	4,763.1	0.00	0.00	
10,300.0	90.20	270.78	5,583.0	-286.6	-4,867.4	4,863.1	0.00	0.00	
10,400.0	90.20	270.78	5,582.6	-285.3	-4,967.4	4,963.1	0.00	0.00	
10,500.0	90.20	270.78	5,582.3	-283.9	-5,067.4	5,063.1	0.00	0.00	
10,529.2	90.20	270.78	5,582.2	-283.5	-5,096.6	5,092.3	0.00	0.00	TD at 10529.2 - Lybrook M27-2306 04H PBHL -

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Lybrook M27-2306 04H	0.00	0.00	5,582.2	-236.2	-5,096.6	1,891,080.15	1,277,143.91	36.190950	-107.481130
- plan misses target center by 47.3ft at 10529.2ft MD (5582.2 TVD, -283.5 N, -5096.6 E)									
- Point									
Lybrook M27-2306 04H	0.00	0.00	5,582.2	-283.5	-5,096.6	1,891,032.82	1,277,143.31	36.190820	-107.481130
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
500.0	500.0	9 5/8"	0.000	0.000
5,840.0	5,576.1	7"	0.000	0.000

Planning Report

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Design: Plan #2

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MD Reference: WELL @ 7145.0ft (Aztec)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
456.0	456.0	Nacimiento Fn.		-0.20	270.78
1,509.0	1,509.0	Ojo Alamo Ss.		-0.20	270.78
1,667.0	1,667.0	Kirtland Shale		-0.20	270.78
1,894.0	1,894.0	Fruitland Coal		-0.20	270.78
2,067.0	2,067.0	Pictured Cliffs Ss.		-0.20	270.78
2,193.0	2,193.0	Lewis Shale		-0.20	270.78
2,940.0	2,940.0	Cliffhouse Ss.		-0.20	270.78
3,610.0	3,610.0	Menefee Fn.		-0.20	270.78
4,313.0	4,313.0	Point Lookout Ss.		-0.20	270.78
4,510.0	4,510.0	Mancos Shale		-0.20	270.78
5,110.0	5,098.0	Mancos Silt		-0.20	270.78
5,407.1	5,346.0	Gallup Fn.		-0.20	270.78

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,822.0	4,822.0	0.0	0.0	KOP @ 4822'
5,115.1	5,102.5	-73.3	-2.1	Start build/turn @ 5115' MD
6,012.7	5,598.0	-344.8	-580.5	LP @ 5598' TVD; 90.2°
10,529.2	5,582.2	-283.5	-5,096.6	TD at 10529.2