

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

CONFIDENTIAL

☐ AMENDED REPORT

☒ As-Drilled

RCVD OCT 22 '12

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-043-21130		*Pool Code 42289		*Pool Name Lybrook Gallup		OIL CONS. DIV. DIST. 3	
*Property Code 39285		*Property Name LYBROOK A03-2206				*Well Number 01H	
*GRID No. 282327		*Operator Name ENCANA OIL & GAS (USA) INC.				*Elevation 6989'	

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
A	3	22N	6W	1	827	NORTH	432	EAST	SANDOVAL

¹¹ Bottom Hole Location If Different From Surface

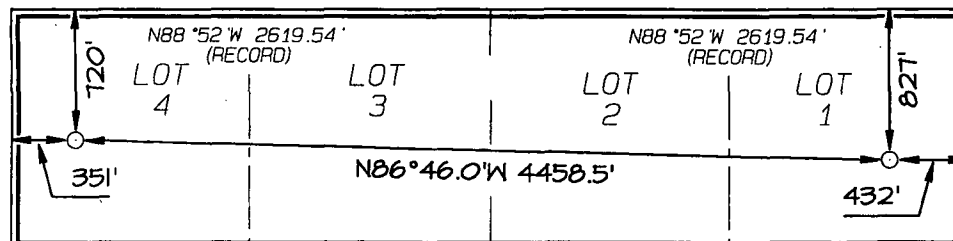
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	3	22N	6W	4	720	NORTH	351	WEST	SANDOVAL

¹² Dedicated Acres 163.08 Acres - (N/2 N/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

N88°07'56"W 5239.61' (MEASURED)



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.

Signature: *Brenda R. Linster* Date: 10-17-12

Brenda R. Linster, Regulatory Lead

Printed Name
brenda.linster@encana.com

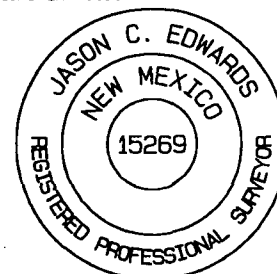
E-mail Address

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.

Survey Date: JANUARY 2, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

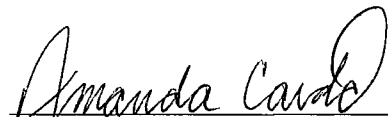
Certificate Number 15269

DEVIATION SURVEYS

MD (Feet)	Inclination (Degree)
250	1
515	0.75
1035	0.75
1524	0.25
2028	0.75
2473	0.75
2952	1
3494	0.25
3994	1
4629	0.25
5041	0.25
5630	0.75

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.


Amanda Cavoto, Engineering Technologist

10/18/12

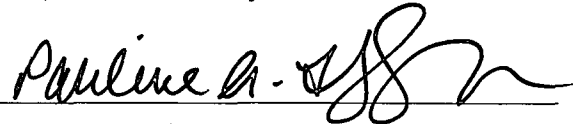
ACKNOWLEDGMENT

State of Colorado
City and County of Denver

This instrument was acknowledged before me on this 18th day of October, 2012 by Amanda Cavoto as Attorney in Fact of Encana Oil & Gas (USA) Inc., on behalf of said corporation.

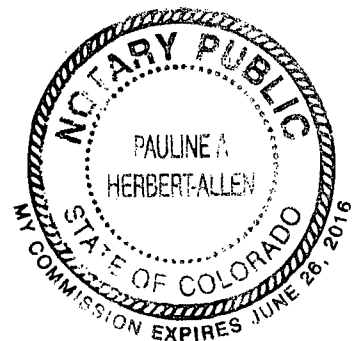
In witness whereof, I hereunto set my hand and official seal.

Notary Public:



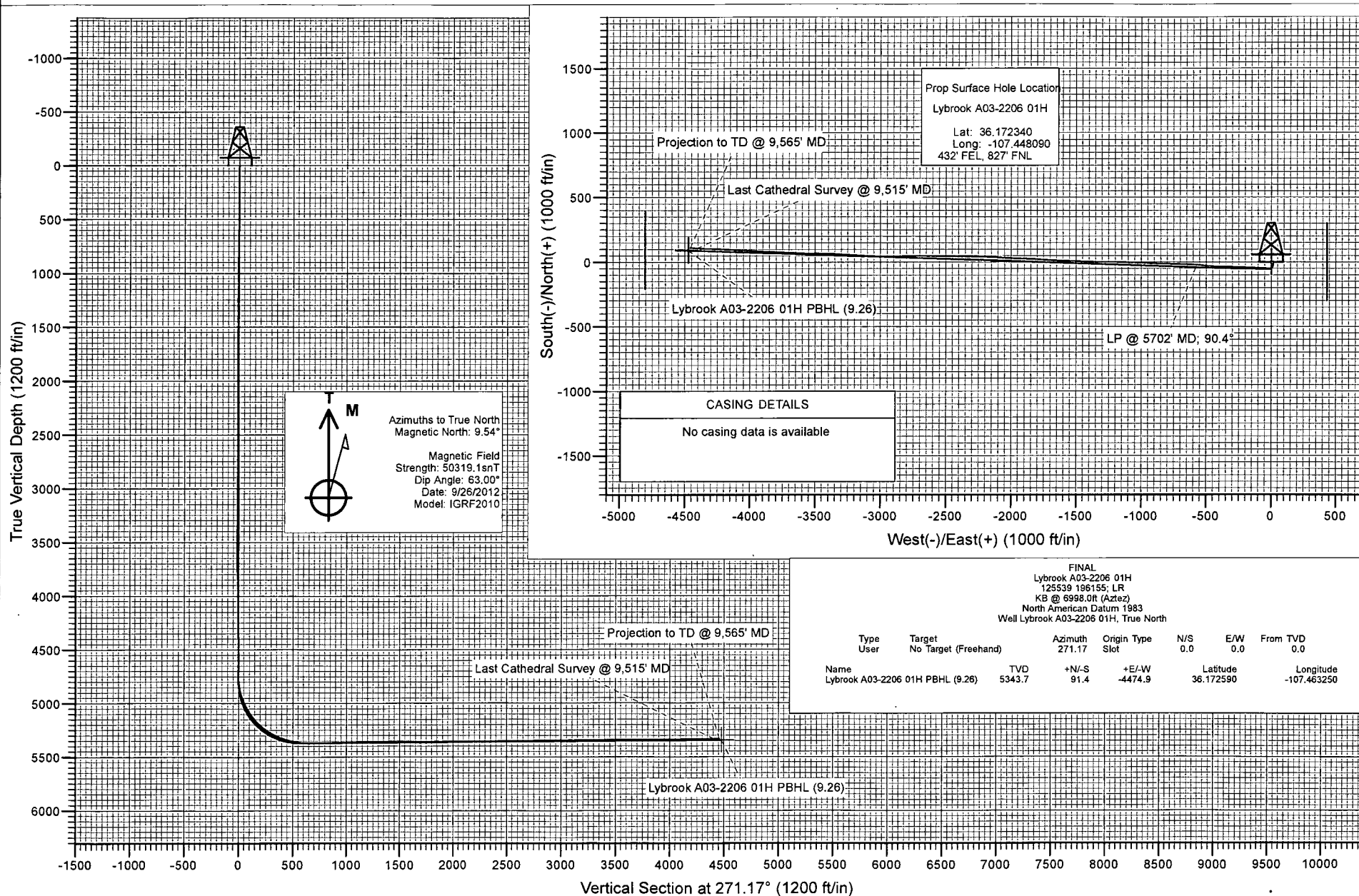
My Commission Expires:

June 26, 2016



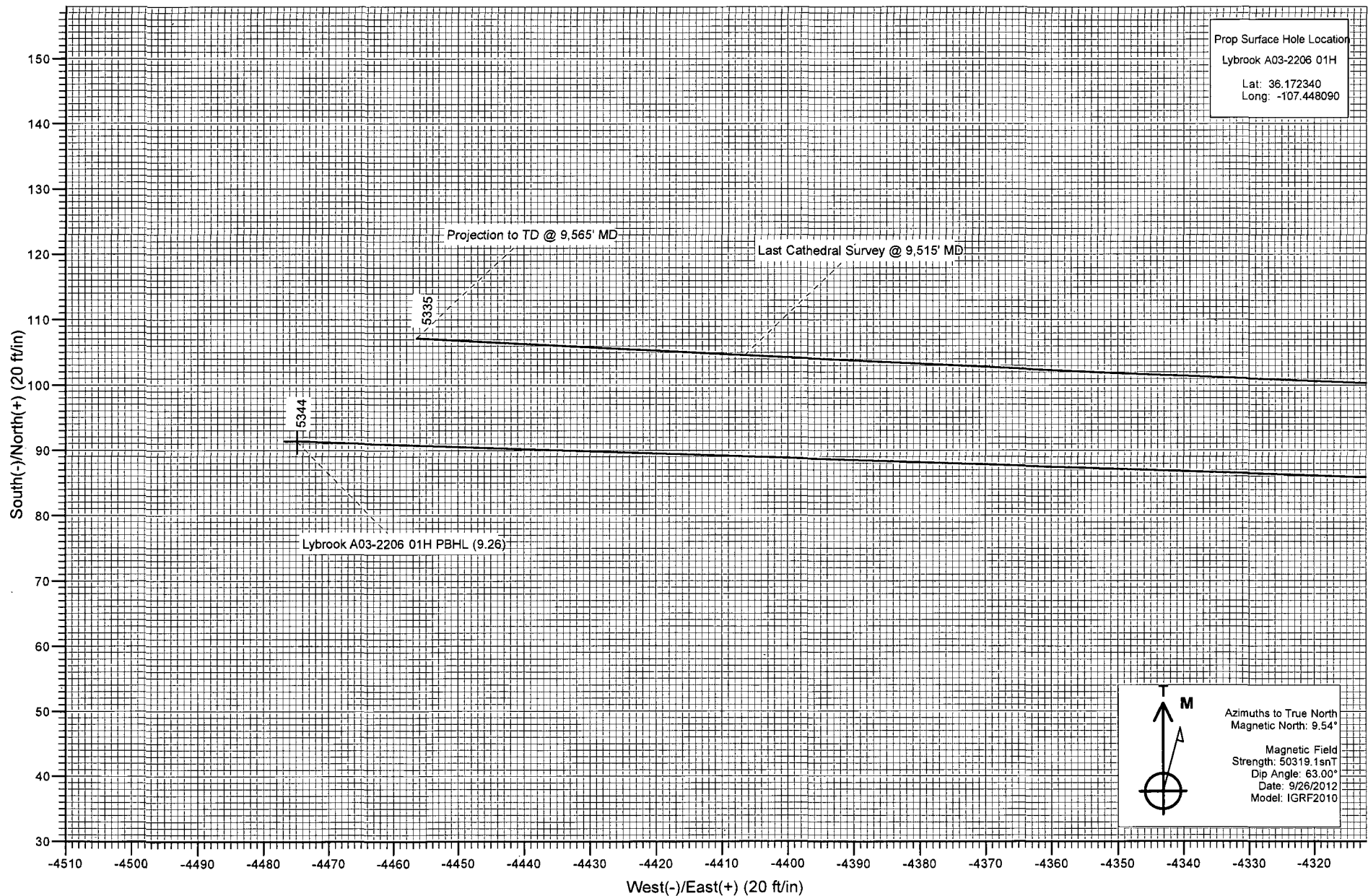


Project: Sandoval County, NM
 Site: Lybrook
 Well: Lybrook A03-2206 01H
 Wellbore: Hz
 Design: FINAL





Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook A03-2206 01H
Wellbore: Hz
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook A03-2206 01H
Project:	Sandoval County, NM	TVD Reference:	KB @ 6998.0ft (Aztez)
Site:	Lybrook	MD Reference:	KB @ 6998.0ft (Aztez)
Well:	Lybrook A03-2206 01H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

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

Well	Lybrook A03-2206 01H		
Well Position	+N/-S	0.0 ft	Northing: 1,884,183.35 ft
	+E/-W	0.0 ft	Easting: 1,286,810.00 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	36.172340
		Longitude:	-107.448090
		Ground Level:	6,985.0 ft

Wellbore	Hz		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	9/26/2012	9.54
			(°)
			63.00
			50,319

Design	FINAL		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			271.17

Survey Program	Date	10/12/2012		
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
510.0	4,680.0	Survey #1 (Hz)	MWD	Geolink MWD
4,726.0	9,565.0	Survey #2 (Hz)	MWD	Geolink MWD

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Formations /	
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Comments	
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	Lybrook A03-2206 01H W HL - Lybrook A03-2206	
510.0	0.82	110.27	510.0	-1.3	3.4	-3.4	0.16	0.16		
540.0	0.97	105.06	540.0	-1.4	3.9	-3.9	0.57	0.50		
570.0	0.81	118.84	570.0	-1.6	4.3	-4.3	0.89	-0.53		
600.0	0.71	127.93	600.0	-1.8	4.6	-4.7	0.52	-0.33		
630.0	0.96	120.42	630.0	-2.0	5.0	-5.0	0.91	0.83		
660.0	0.62	120.46	660.0	-2.2	5.4	-5.4	1.13	-1.13		
690.0	0.63	127.35	690.0	-2.4	5.6	-5.7	0.25	0.03		
720.0	0.41	120.72	720.0	-2.6	5.8	-5.9	0.76	-0.73		
750.0	0.56	109.87	750.0	-2.7	6.1	-6.1	0.58	0.50		
780.0	0.52	99.77	780.0	-2.8	6.3	-6.4	0.34	-0.13		
810.0	0.87	123.98	810.0	-2.9	6.7	-6.7	1.50	1.17		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook A03-2206 01H
Project:	Sandoval County, NM	TVD Reference:	KB @ 6998.0ft (Aztez)
Site:	Lybrook	MD Reference:	KB @ 6998.0ft (Aztez)
Well:	Lybrook A03-2206 01H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
840.0	0.62	137.01	840.0	-3.2	7.0	-7.0	1.00	-0.83	
870.0	0.68	124.01	870.0	-3.4	7.2	-7.3	0.53	0.20	
900.0	0.68	130.26	900.0	-3.6	7.5	-7.6	0.25	0.00	
930.0	0.67	135.79	930.0	-3.8	7.8	-7.8	0.22	-0.03	
960.0	0.58	136.45	959.9	-4.1	8.0	-8.1	0.30	-0.30	
990.0	0.56	134.76	989.9	-4.3	8.2	-8.3	0.09	-0.07	
1,020.0	0.69	140.85	1,019.9	-4.5	8.4	-8.5	0.49	0.43	
1,050.0	0.55	121.55	1,049.9	-4.7	8.7	-8.8	0.83	-0.47	
1,080.0	0.52	124.58	1,079.9	-4.9	8.9	-9.0	0.14	-0.10	
1,110.0	0.77	105.70	1,109.9	-5.0	9.2	-9.3	1.08	0.83	
1,140.0	1.00	124.06	1,139.9	-5.2	9.6	-9.7	1.21	0.77	
1,170.0	0.91	126.15	1,169.9	-5.5	10.0	-10.1	0.32	-0.30	
1,200.0	0.67	137.75	1,199.9	-5.8	10.3	-10.4	0.96	-0.80	
1,230.0	0.54	124.15	1,229.9	-6.0	10.6	-10.7	0.64	-0.43	
1,260.0	0.58	120.76	1,259.9	-6.1	10.8	-10.9	0.17	0.13	
1,290.0	0.64	119.61	1,289.9	-6.3	11.1	-11.2	0.20	0.20	
1,320.0	0.60	138.03	1,319.9	-6.5	11.3	-11.5	0.67	-0.13	
1,350.0	0.47	146.67	1,349.9	-6.7	11.5	-11.7	0.51	-0.43	
1,380.0	0.52	164.17	1,379.9	-7.0	11.6	-11.8	0.53	0.17	
1,410.0	0.41	171.47	1,409.9	-7.2	11.7	-11.8	0.42	-0.37	
1,440.0	0.40	155.49	1,439.9	-7.4	11.7	-11.9	0.38	-0.03	
1,470.0	0.46	128.39	1,469.9	-7.6	11.9	-12.0	0.70	0.20	
1,500.0	0.66	108.15	1,499.9	-7.7	12.1	-12.3	0.93	0.67	
1,530.0	0.81	134.18	1,529.9	-7.9	12.4	-12.6	1.21	0.50	
1,560.0	0.75	147.03	1,559.9	-8.2	12.7	-12.9	0.61	-0.20	
1,590.0	0.66	151.82	1,589.9	-8.5	12.9	-13.1	0.36	-0.30	
1,620.0	0.63	150.20	1,619.9	-8.8	13.1	-13.2	0.12	-0.10	
1,650.0	0.58	146.50	1,649.9	-9.1	13.2	-13.4	0.21	-0.17	
1,680.0	0.50	148.92	1,679.9	-9.3	13.4	-13.6	0.28	-0.27	
1,710.0	0.57	156.11	1,709.9	-9.6	13.5	-13.7	0.32	0.23	
1,740.0	0.55	149.25	1,739.9	-9.8	13.6	-13.8	0.23	-0.07	
1,770.0	0.47	156.95	1,769.9	-10.1	13.8	-14.0	0.35	-0.27	
1,800.0	0.42	167.98	1,799.9	-10.3	13.8	-14.0	0.33	-0.17	
1,830.0	0.37	168.05	1,829.9	-10.5	13.9	-14.1	0.17	-0.17	
1,860.0	0.46	161.42	1,859.9	-10.7	13.9	-14.1	0.34	0.30	
1,890.0	0.53	165.08	1,889.9	-11.0	14.0	-14.2	0.26	0.23	
1,920.0	0.58	155.62	1,919.9	-11.2	14.1	-14.3	0.35	0.17	
1,950.0	0.75	163.18	1,949.9	-11.6	14.2	-14.5	0.64	0.57	
1,980.0	0.72	163.46	1,979.9	-11.9	14.3	-14.6	0.10	-0.10	
2,010.0	0.57	170.05	2,009.9	-12.2	14.4	-14.7	0.56	-0.50	
2,040.0	0.66	179.50	2,039.9	-12.6	14.4	-14.7	0.45	0.30	
2,070.0	0.52	168.45	2,069.9	-12.9	14.5	-14.7	0.60	-0.47	
2,100.0	0.72	180.53	2,099.9	-13.2	14.5	-14.8	0.79	0.67	
2,130.0	0.82	185.31	2,129.9	-13.6	14.5	-14.7	0.40	0.33	
2,160.0	0.84	183.93	2,159.9	-14.0	14.4	-14.7	0.09	0.07	
2,190.0	0.76	182.10	2,189.9	-14.5	14.4	-14.7	0.28	-0.27	
2,220.0	0.80	179.10	2,219.9	-14.9	14.4	-14.7	0.19	0.13	
2,250.0	0.82	178.45	2,249.9	-15.3	14.4	-14.7	0.07	0.07	
2,280.0	0.85	185.21	2,279.9	-15.7	14.4	-14.7	0.34	0.10	
2,310.0	0.89	182.92	2,309.9	-16.2	14.4	-14.7	0.18	0.13	
2,340.0	0.86	190.26	2,339.9	-16.6	14.3	-14.7	0.39	-0.10	
2,370.0	0.86	184.11	2,369.9	-17.1	14.3	-14.6	0.31	0.00	
2,400.0	0.90	178.82	2,399.9	-17.5	14.3	-14.6	0.30	0.13	

Cathedral Energy Services

Survey Report

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Project:	Sandoval County, NM	TVD Reference:	KB @ 6998.0ft (Aztez)
Site:	Lybrook	MD Reference:	KB @ 6998.0ft (Aztez)
Well:	Lybrook A03-2206 01H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
2,430.0	1.00	178.37	2,429.8	-18.0	14.3	-14.6	0.33	0.33	
2,460.0	0.99	181.54	2,459.8	-18.6	14.3	-14.6	0.19	-0.03	
2,490.0	0.91	187.63	2,489.8	-19.0	14.2	-14.6	0.43	-0.27	
2,520.0	0.87	184.28	2,519.8	-19.5	14.2	-14.6	0.22	-0.13	
2,550.0	0.90	181.58	2,549.8	-20.0	14.2	-14.6	0.17	0.10	
2,580.0	0.93	178.89	2,579.8	-20.5	14.2	-14.6	0.17	0.10	
2,610.0	0.85	184.07	2,609.8	-20.9	14.1	-14.6	0.38	-0.27	
2,640.0	0.90	182.98	2,639.8	-21.4	14.1	-14.5	0.18	0.17	
2,670.0	0.81	186.63	2,669.8	-21.8	14.1	-14.5	0.35	-0.30	
2,700.0	0.83	189.51	2,699.8	-22.2	14.0	-14.5	0.15	0.07	
2,730.0	0.84	188.85	2,729.8	-22.7	13.9	-14.4	0.05	0.03	
2,760.0	0.86	184.73	2,759.8	-23.1	13.9	-14.4	0.21	0.07	
2,790.0	0.93	184.86	2,789.8	-23.6	13.9	-14.3	0.23	0.23	
2,820.0	0.97	181.15	2,819.8	-24.1	13.8	-14.3	0.24	0.13	
2,850.0	1.01	177.02	2,849.8	-24.6	13.8	-14.3	0.27	0.13	
2,880.0	0.90	188.16	2,879.8	-25.1	13.8	-14.3	0.72	-0.37	
2,910.0	1.01	180.02	2,909.8	-25.6	13.8	-14.3	0.58	0.37	
2,940.0	0.97	181.91	2,939.8	-26.1	13.8	-14.3	0.17	-0.13	
2,970.0	1.05	181.18	2,969.8	-26.6	13.8	-14.3	0.27	0.27	
3,000.0	0.90	182.41	2,999.8	-27.2	13.7	-14.3	0.50	-0.50	
3,030.0	1.04	186.64	3,029.8	-27.7	13.7	-14.3	0.52	0.47	
3,060.0	1.00	190.94	3,059.8	-28.2	13.6	-14.2	0.29	-0.13	
3,090.0	0.98	193.59	3,089.8	-28.7	13.5	-14.1	0.17	-0.07	
3,120.0	0.96	197.51	3,119.8	-29.2	13.4	-14.0	0.23	-0.07	
3,150.0	1.04	195.49	3,149.8	-29.7	13.2	-13.8	0.29	0.27	
3,180.0	0.97	195.21	3,179.7	-30.2	13.1	-13.7	0.23	-0.23	
3,210.0	1.10	195.40	3,209.7	-30.7	12.9	-13.6	0.43	0.43	
3,240.0	1.09	194.51	3,239.7	-31.3	12.8	-13.4	0.07	-0.03	
3,270.0	1.07	196.09	3,269.7	-31.8	12.7	-13.3	0.12	-0.07	
3,300.0	1.12	196.16	3,299.7	-32.4	12.5	-13.1	0.17	0.17	
3,330.0	1.19	191.07	3,329.7	-33.0	12.3	-13.0	0.41	0.23	
3,360.0	1.09	195.96	3,359.7	-33.5	12.2	-12.9	0.46	-0.33	
3,390.0	1.05	186.07	3,389.7	-34.1	12.1	-12.8	0.63	-0.13	
3,420.0	0.82	191.86	3,419.7	-34.6	12.0	-12.7	0.83	-0.77	
3,450.0	0.85	190.00	3,449.7	-35.0	11.9	-12.7	0.13	0.10	
3,480.0	0.65	197.88	3,479.7	-35.4	11.9	-12.6	0.75	-0.67	
3,510.0	0.55	203.95	3,509.7	-35.7	11.7	-12.5	0.39	-0.33	
3,540.0	0.63	193.64	3,539.7	-36.0	11.6	-12.4	0.44	0.27	
3,570.0	0.56	207.58	3,569.7	-36.2	11.5	-12.3	0.53	-0.23	
3,600.0	0.53	208.13	3,599.7	-36.5	11.4	-12.2	0.10	-0.10	
3,630.0	0.66	211.88	3,629.7	-36.8	11.3	-12.0	0.45	0.43	
3,660.0	0.67	213.64	3,659.7	-37.1	11.1	-11.8	0.08	0.03	
3,690.0	0.69	213.93	3,689.7	-37.4	10.9	-11.6	0.07	0.07	
3,720.0	0.71	208.91	3,719.7	-37.7	10.7	-11.4	0.21	0.07	
3,750.0	0.67	216.39	3,749.7	-38.0	10.5	-11.3	0.33	-0.13	
3,780.0	0.69	216.31	3,779.7	-38.3	10.3	-11.0	0.07	0.07	
3,810.0	0.71	214.27	3,809.7	-38.6	10.1	-10.8	0.11	0.07	
3,840.0	0.79	217.15	3,839.7	-38.9	9.8	-10.6	0.29	0.27	
3,870.0	0.93	209.76	3,869.7	-39.3	9.6	-10.4	0.59	0.47	
3,900.0	0.91	213.00	3,899.7	-39.7	9.3	-10.1	0.19	-0.07	
3,930.0	0.96	214.04	3,929.7	-40.1	9.1	-9.9	0.18	0.17	
3,960.0	1.03	213.68	3,959.7	-40.5	8.8	-9.6	0.23	0.23	
3,990.0	0.98	214.39	3,989.7	-40.9	8.5	-9.3	0.17	-0.17	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook A03-2206 01H
Project:	Sandoval County, NM	TVD Reference:	KB @ 6998.0ft (Aztez)
Site:	Lybrook	MD Reference:	KB @ 6998.0ft (Aztez)
Well:	Lybrook A03-2206 01H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
4,020.0	1.10	217.93	4,019.7	-41.4	8.2	-9.0	0.45	0.40	
4,050.0	1.19	222.43	4,049.6	-41.8	7.8	-8.6	0.42	0.30	
4,080.0	1.26	222.85	4,079.6	-42.3	7.3	-8.2	0.24	0.23	
4,110.0	1.26	223.46	4,109.6	-42.8	6.9	-7.8	0.04	0.00	
4,140.0	1.33	222.65	4,139.6	-43.3	6.4	-7.3	0.24	0.23	
4,170.0	1.34	224.91	4,169.6	-43.8	5.9	-6.8	0.18	0.03	
4,200.0	1.28	222.25	4,199.6	-44.3	5.5	-6.4	0.28	-0.20	
4,230.0	1.28	222.19	4,229.6	-44.8	5.0	-5.9	0.00	0.00	
4,260.0	1.19	220.88	4,259.6	-45.3	4.6	-5.5	0.31	-0.30	
4,290.0	1.10	221.45	4,289.6	-45.7	4.2	-5.1	0.30	-0.30	
4,320.0	1.03	219.39	4,319.6	-46.1	3.8	-4.8	0.27	-0.23	
4,350.0	0.97	217.51	4,349.6	-46.6	3.5	-4.5	0.23	-0.20	
4,380.0	0.92	221.21	4,379.6	-46.9	3.2	-4.1	0.26	-0.17	
4,410.0	1.00	218.56	4,409.6	-47.3	2.9	-3.8	0.30	0.27	
4,440.0	0.99	218.92	4,439.6	-47.7	2.5	-3.5	0.04	-0.03	
4,470.0	0.98	217.44	4,469.6	-48.1	2.2	-3.2	0.09	-0.03	
4,500.0	0.94	217.19	4,499.6	-48.5	1.9	-2.9	0.13	-0.13	
4,530.0	0.91	215.10	4,529.6	-48.9	1.6	-2.6	0.15	-0.10	
4,560.0	0.91	214.46	4,559.5	-49.3	1.4	-2.4	0.03	0.00	
4,590.0	0.87	213.13	4,589.5	-49.7	1.1	-2.1	0.15	-0.13	
4,620.0	0.84	210.41	4,619.5	-50.1	0.9	-1.9	0.17	-0.10	
4,650.0	0.83	208.77	4,649.5	-50.5	0.6	-1.7	0.09	-0.03	
4,680.0	0.84	208.83	4,679.5	-50.8	0.4	-1.5	0.03	0.03	
4,726.0	0.80	207.40	4,725.5	-51.4	0.1	-1.2	0.10	-0.09	
4,755.0	1.10	228.00	4,754.5	-51.8	-0.2	-0.9	1.55	1.03	
4,788.0	1.70	248.40	4,787.5	-52.2	-0.9	-0.2	2.34	1.82	
4,821.0	5.20	264.10	4,820.5	-52.5	-2.8	1.7	10.89	10.61	
4,852.0	8.90	268.10	4,851.2	-52.7	-6.6	5.5	12.03	11.94	
4,884.0	12.70	273.00	4,882.6	-52.6	-12.6	11.5	12.21	11.87	
4,915.0	15.80	272.70	4,912.7	-52.3	-20.2	19.1	10.00	10.00	
4,947.0	19.30	272.30	4,943.2	-51.8	-29.8	28.8	10.94	10.94	
4,978.0	22.50	269.90	4,972.1	-51.7	-40.9	39.8	10.68	10.32	
5,010.0	25.30	270.90	5,001.4	-51.6	-53.9	52.8	8.84	8.75	
5,042.0	27.20	274.10	5,030.1	-50.9	-68.0	67.0	7.40	5.94	
5,073.0	29.20	275.90	5,057.4	-49.6	-82.6	81.6	7.01	6.45	
5,105.0	32.00	275.20	5,085.0	-48.1	-98.8	97.8	8.82	8.75	
5,136.0	35.00	273.40	5,110.8	-46.8	-115.9	114.9	10.19	9.68	
5,169.0	37.50	271.40	5,137.4	-46.0	-135.4	134.4	8.38	7.58	
5,200.0	40.40	272.10	5,161.5	-45.4	-154.8	153.9	9.46	9.35	
5,232.0	44.20	273.00	5,185.2	-44.4	-176.3	175.4	12.02	11.87	
5,264.0	47.80	272.90	5,207.4	-43.2	-199.3	198.4	11.25	11.25	
5,295.0	51.30	272.10	5,227.5	-42.2	-222.9	222.0	11.46	11.29	
5,327.0	54.50	272.30	5,246.8	-41.2	-248.4	247.5	10.01	10.00	
5,359.0	57.50	272.30	5,264.7	-40.2	-274.9	274.0	9.37	9.37	
5,390.0	60.00	269.00	5,280.8	-39.9	-301.4	300.5	12.16	8.07	
5,421.0	63.20	269.80	5,295.5	-40.2	-328.6	327.8	10.57	10.32	
5,452.0	66.10	270.80	5,308.8	-40.0	-356.7	355.8	9.80	9.35	
5,484.0	68.80	271.80	5,321.1	-39.3	-386.2	385.3	8.92	8.44	
5,516.0	71.00	272.60	5,332.1	-38.2	-416.2	415.4	7.26	6.87	
5,547.0	72.80	272.50	5,341.7	-36.9	-445.7	444.8	5.81	5.81	
5,579.0	75.50	274.60	5,350.5	-35.0	-476.4	475.6	10.54	8.44	
5,611.0	78.30	274.80	5,357.7	-32.4	-507.4	506.7	8.77	8.75	
5,656.0	83.10	276.30	5,365.0	-28.1	-551.6	550.9	11.16	10.67	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook A03-2206 01H
Project:	Sandoval County, NM	TVD Reference:	KB @ 6998.0ft (Aztez)
Site:	Lybrook	MD Reference:	KB @ 6998.0ft (Aztez)
Well:	Lybrook A03-2206 01H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
5,687.0	86.20	275.10	5,367.9	-25.1	-582.3	581.7	10.71	10.00	
5,718.0	87.60	274.40	5,369.5	-22.5	-613.2	612.6	5.05	4.52	
5,748.0	88.70	273.00	5,370.5	-20.6	-643.1	642.6	5.93	3.67	
5,779.0	90.90	271.60	5,370.6	-19.3	-674.1	673.6	8.41	7.10	
5,840.0	89.90	270.80	5,370.2	-18.0	-735.1	734.5	2.10	-1.64	
5,904.0	89.60	270.00	5,370.5	-17.6	-799.1	798.5	1.33	-0.47	
5,967.0	90.50	271.30	5,370.4	-16.9	-862.1	861.5	2.51	1.43	
6,030.0	90.80	272.10	5,369.7	-15.0	-925.0	924.5	1.36	0.48	
6,094.0	91.10	272.80	5,368.6	-12.3	-989.0	988.5	1.19	0.47	
6,157.0	91.20	272.90	5,367.4	-9.1	-1,051.9	1,051.5	0.22	0.16	
6,221.0	91.40	273.40	5,365.9	-5.6	-1,115.8	1,115.4	0.84	0.31	
6,285.0	90.30	271.20	5,365.0	-3.0	-1,179.7	1,179.4	3.84	-1.72	
6,349.0	89.00	269.20	5,365.4	-2.8	-1,243.7	1,243.4	3.73	-2.03	
6,412.0	89.70	270.40	5,366.1	-3.0	-1,306.7	1,306.3	2.21	1.11	
6,475.0	90.50	272.70	5,366.0	-1.3	-1,369.7	1,369.3	3.87	1.27	
6,539.0	89.40	272.00	5,366.0	1.3	-1,433.6	1,433.3	2.04	-1.72	
6,602.0	89.80	271.90	5,366.5	3.4	-1,496.6	1,496.3	0.65	0.63	
6,666.0	90.60	271.60	5,366.2	5.4	-1,560.5	1,560.3	1.33	1.25	
6,730.0	90.60	272.20	5,365.6	7.5	-1,624.5	1,624.3	0.94	0.00	
6,793.0	90.70	273.20	5,364.9	10.5	-1,687.4	1,687.3	1.60	0.16	
6,856.0	91.30	274.50	5,363.8	14.7	-1,750.3	1,750.2	2.27	0.95	
6,920.0	90.40	274.00	5,362.8	19.4	-1,814.1	1,814.1	1.61	-1.41	
6,983.0	90.20	272.30	5,362.5	22.9	-1,877.0	1,877.1	2.72	-0.32	
7,047.0	91.20	273.10	5,361.7	25.9	-1,940.9	1,941.0	2.00	1.56	
7,110.0	90.70	273.10	5,360.7	29.3	-2,003.8	2,004.0	0.79	-0.79	
7,173.0	89.60	271.70	5,360.5	32.0	-2,066.7	2,067.0	2.83	-1.75	
7,237.0	92.00	274.60	5,359.6	35.5	-2,130.6	2,130.9	5.88	3.75	
7,300.0	91.50	273.00	5,357.7	39.6	-2,193.4	2,193.8	2.66	-0.79	
7,364.0	90.30	270.30	5,356.7	41.5	-2,257.4	2,257.8	4.62	-1.87	
7,428.0	90.10	270.00	5,356.4	41.7	-2,321.4	2,321.8	0.56	-0.31	
7,491.0	90.60	270.40	5,356.1	41.9	-2,384.4	2,384.8	1.02	0.79	
7,554.0	90.70	270.90	5,355.3	42.6	-2,447.4	2,447.8	0.81	0.16	
7,618.0	90.60	270.80	5,354.6	43.5	-2,511.4	2,511.7	0.22	-0.16	
7,681.0	90.80	271.20	5,353.9	44.6	-2,574.4	2,574.7	0.71	0.32	
7,745.0	91.40	271.50	5,352.6	46.2	-2,638.3	2,638.7	1.05	0.94	
7,809.0	89.90	268.00	5,351.9	45.9	-2,702.3	2,702.7	5.95	-2.34	
7,872.0	90.10	267.90	5,351.9	43.6	-2,765.3	2,765.6	0.35	0.32	
7,935.0	90.40	269.30	5,351.6	42.1	-2,828.3	2,828.5	2.27	0.48	
7,999.0	91.80	269.70	5,350.4	41.5	-2,892.2	2,892.5	2.27	2.19	
8,062.0	91.50	270.30	5,348.6	41.5	-2,955.2	2,955.5	1.06	-0.48	
8,126.0	91.20	270.00	5,347.1	41.7	-3,019.2	3,019.4	0.66	-0.47	
8,189.0	90.90	272.70	5,345.9	43.2	-3,082.2	3,082.4	4.31	-0.48	
8,252.0	90.30	274.40	5,345.3	47.1	-3,145.0	3,145.3	2.86	-0.95	
8,316.0	90.40	274.70	5,344.9	52.1	-3,208.8	3,209.2	0.49	0.16	
8,379.0	90.70	273.70	5,344.3	56.8	-3,271.7	3,272.1	1.66	0.48	
8,442.0	90.00	272.00	5,343.9	59.9	-3,334.6	3,335.1	2.92	-1.11	
8,506.0	89.70	271.70	5,344.0	62.0	-3,398.5	3,399.1	0.66	-0.47	
8,569.0	90.00	271.20	5,344.2	63.6	-3,461.5	3,462.1	0.93	0.48	
8,633.0	90.70	271.40	5,343.8	65.0	-3,525.5	3,526.1	1.14	1.09	
8,697.0	90.40	271.80	5,343.2	66.8	-3,589.5	3,590.1	0.78	-0.47	
8,760.0	90.80	272.10	5,342.5	68.9	-3,652.4	3,653.1	0.79	0.63	
8,823.0	90.70	272.60	5,341.7	71.5	-3,715.4	3,716.1	0.81	-0.16	
8,887.0	90.90	273.20	5,340.8	74.8	-3,779.3	3,780.0	0.99	0.31	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook A03-2206 01H
Project:	Sandoval County, NM	TVD Reference:	KB @ 6998.0ft (Aztez)
Site:	Lybrook	MD Reference:	KB @ 6998.0ft (Aztez)
Well:	Lybrook A03-2206 01H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
8,950.0	90.40	273.00	5,340.1	78.2	-3,842.2	3,843.0	0.85	-0.79	
9,014.0	90.00	273.10	5,339.9	81.6	-3,906.1	3,907.0	0.64	-0.62	
9,077.0	90.10	273.10	5,339.8	85.0	-3,969.0	3,969.9	0.16	0.16	
9,141.0	90.00	273.00	5,339.8	88.4	-4,032.9	4,033.9	0.22	-0.16	
9,205.0	90.70	273.00	5,339.4	91.7	-4,096.8	4,097.9	1.09	1.09	
9,268.0	90.30	272.30	5,338.8	94.6	-4,159.8	4,160.8	1.28	-0.63	
9,332.0	90.70	272.00	5,338.3	97.0	-4,223.7	4,224.8	0.78	0.62	
9,395.0	90.80	272.00	5,337.5	99.2	-4,286.7	4,287.8	0.16	0.16	
9,459.0	90.90	272.60	5,336.5	101.8	-4,350.6	4,351.8	0.95	0.16	
9,515.0	91.00	273.00	5,335.6	104.5	-4,406.5	4,407.8	0.74	0.18	Last Cathedral Survey @ 9,515' MD
9,565.0	91.00	273.00	5,334.7	107.2	-4,456.5	4,457.7	0.00	0.00	Projection to TD @ 9,565' MD - Lybrook A03-2206

Targets

Target Name	- hit/miss target	- Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Lybrook A03-2206 01H F			0.00	0.00	5,343.7	91.4	-4,474.9	1,884,329.94	1,282,336.54	36.172590	-107.463250
- actual wellpath misses target center by 25.9ft at 9565.0ft MD (5334.7 TVD, 107.2 N, -4456.5 E)											
- Point											
Lybrook A03-2206 01H \			0.00	0.00	-5,461.7	91.4	-4,474.9	1,884,329.94	1,282,336.54	36.172590	-107.463250
- actual wellpath misses target center by 7061.4ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)											
- Polygon											
Point 1					-5,461.7	300.0	-330.0	1,884,633.99	1,282,010.27		
Point 2					-5,461.7	-300.0	-330.0	1,884,034.03	1,282,002.86		
Lybrook A03-2206 01H E			0.00	0.00	-5,461.7	0.0	0.0	1,884,183.35	1,286,810.00	36.172340	-107.448090
- actual wellpath misses target center by 5461.7ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)											
- Polygon											
Point 1					-5,461.7	300.0	432.0	1,884,477.99	1,287,245.67		
Point 2					-5,461.7	-300.0	432.0	1,883,878.04	1,287,238.26		

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
9,515.0	5,335.6	104.5	-4,406.5	Last Cathedral Survey @ 9,515' MD
9,565.0	5,334.7	107.2	-4,456.5	Projection to TD @ 9,565' MD

Checked By: _____ Approved By: _____ Date: _____