

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

☐ AMENDED REPORT
☒ As-Drilled

CONFIDENTIAL

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35328		*Pool Code 97232	*Pool Name BASIN MANCOS
*Property Code 39160	*Property Name LYBROOK H04-2208		*Well Number 01H
*GRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.		*Elevation 6850'

¹⁰ Surface Location

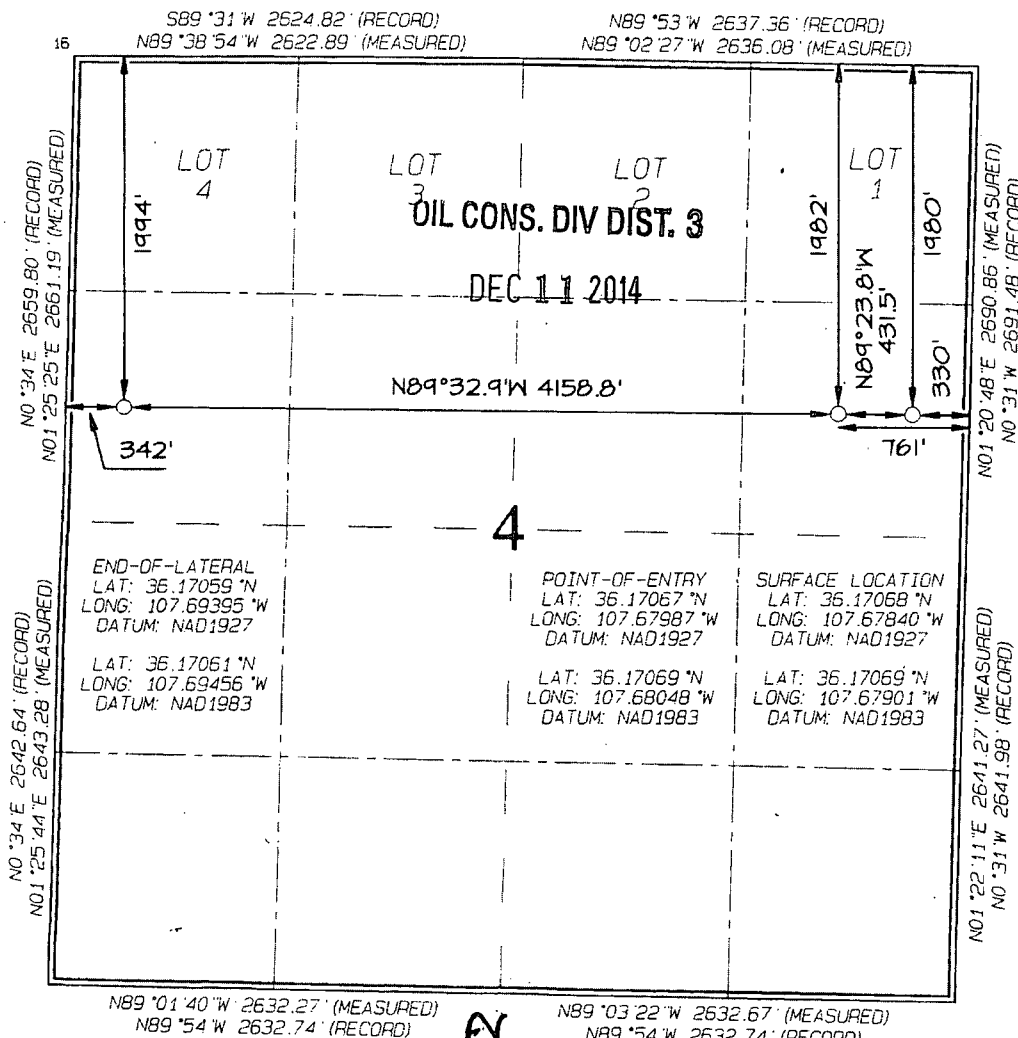
UL or lot no.	Section	Township	Range	Lot Idh	Feet from the	North/South line	Feet from the	East/West line	County
H	4	22N	8W		1980	NORTH	330	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idh	Feet from the	North/South line	Feet from the	East/West line	County
E	4	22N	8W		1994	NORTH	342	WEST	SAN JUAN

¹² Dedicated Acres 644.03 Acres Entire Section 4	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



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: Holly Hill Date: 12/8/14
Printed Name: Holly Hill
E-mail Address: holly-hill@encana.com

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: DECEMBER 4, 2014
Date of Survey: APRIL 4, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

CONFIDENTIAL

DEVIATION SURVEYS
Lybrook H04-2208 01H
30-045-35328

MD (Feet)	Inclination (Degree)
799'	0.30
1115'	0.20
1431'	0.20
1747'	0.40
2063'	0.70
2379'	1.70
2695'	0.70
3028'	3.30
3313'	8.0
3629'	0.90
3945'	1.10
4166'	12.50

OIL CONS. DIV DIST. 3

DEC 11 2014

OPERATOR CERTIFICATION

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

Cristi Bauer

Cristi Bauer, Operations Technician

12/9/14

Date

ACKNOWLEDGMENT

State of Colorado
City and County of Denver

This instrument was acknowledged before me on this 9th day of December, 2014 by Cristi Bauer as Operations Technician of Encana Oil & Gas (USA) Inc., authorized agent for Encana Oil & Gas (USA) Inc., on behalf of said corporation.

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

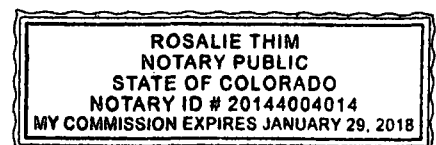
Notary Public

Rosalie Thim

My Commission Expires:

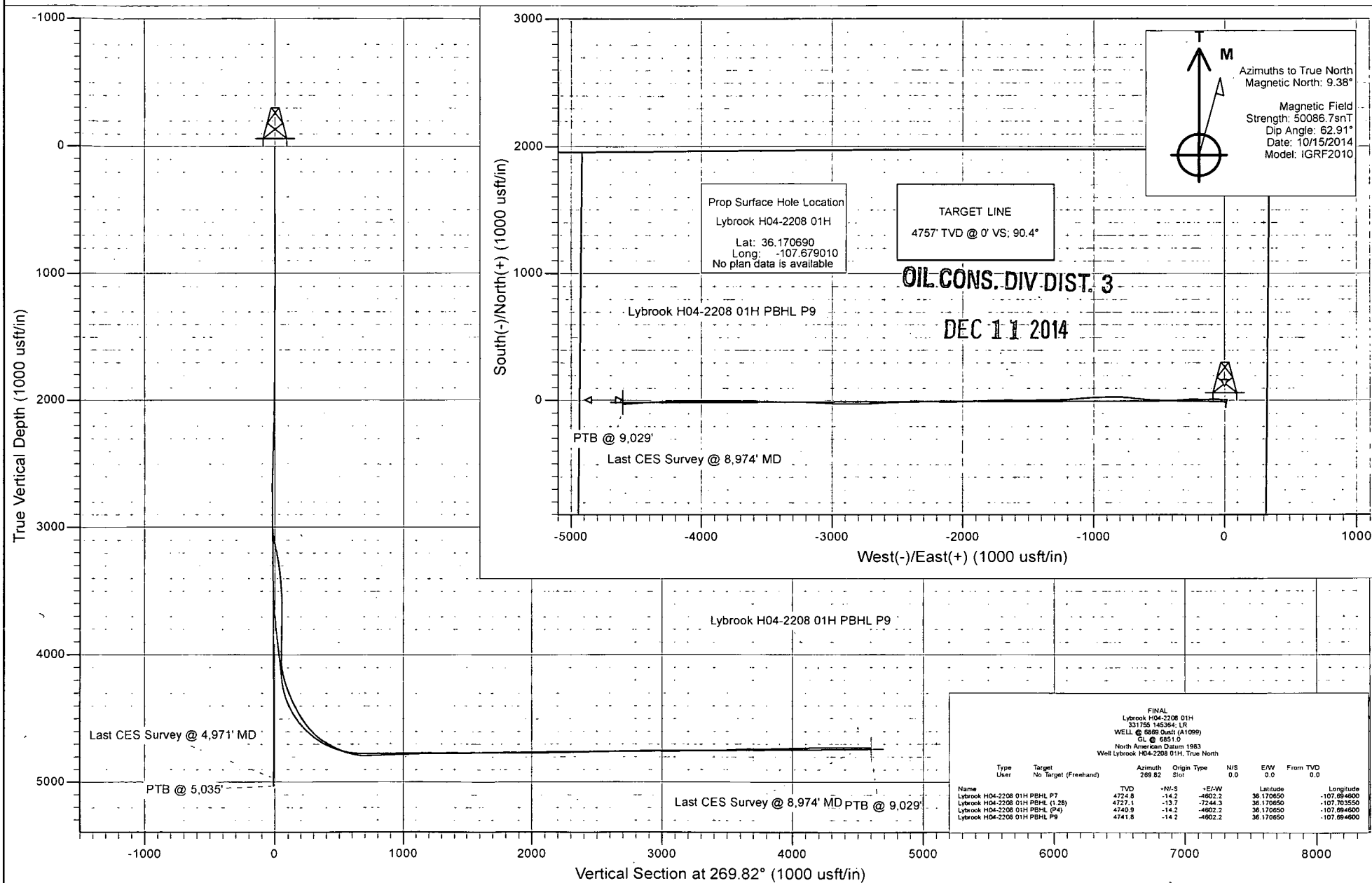
1/29/18

AV





Project: San Juan County, NM CZ
 Site: S4-T22N-R8W (Lybrook)
 Well: Lybrook H04-2208 01H
 Wellbore: Hz
 Design: FINAL



DEC 11 2014

Survey Report

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM CZ
 Site: S4-T22N-R8W (Lybrook)
 Well: Lybrook H04-2208 01H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Lybrook H04-2208 01H
 TVD Reference: WELL @ 6869.0usft (A1099)
 MD Reference: WELL @ 6869.0usft (A1099)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: USA EDM 5000 Multi Users DB

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

Site	S4-T22N-R8W (Lybrook)		
Site Position:		Northing:	1,884,501.33 usft
From:	Lat/Long	Easting:	1,218,639.92 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	36.170690
		Longitude:	-107.679010
		Grid Convergence:	-0.84 °

Well	Lybrook H04-2208 01H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	36.170690
		Longitude:	-107.679010
		Ground Level:	6,851.0 usft

Wellbore	Hz		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	10/15/2014	(°)
			9.39
			Dip Angle
			(°)
			62.91
			Field Strength
			(nT)
			50,087

Design	FINAL		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	2,948.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			269.82

Survey Program	Date 10/29/2014		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
609.0	2,948.0	Survey #1 (Pilot Hole)	Geolink MWD
3,028.0	9,029.0	Survey #1 (Hz)	Geolink MWD
			Description
			Geolink MWD
			Geolink MWD

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Formations /
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Comments
(usft)			(usft)			(usft)	(°/100usf	(°/100u	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
609.0	0.50	328.70	609.0	2.3	-1.4	1.4	0.08	0.08	
672.0	0.50	348.60	672.0	2.8	-1.6	1.6	0.27	0.00	
736.0	0.50	350.70	736.0	3.3	-1.7	1.7	0.03	0.00	
799.0	0.30	21.50	799.0	3.7	-1.7	1.7	0.46	-0.32	
862.0	0.70	42.20	862.0	4.2	-1.3	1.3	0.69	0.63	
925.0	0.40	9.80	925.0	4.7	-1.0	1.0	0.67	-0.48	
989.0	0.40	22.10	989.0	5.1	-0.9	0.9	0.13	0.00	
1,052.0	0.40	43.70	1,052.0	5.5	-0.7	0.7	0.24	0.00	
1,115.0	0.20	63.30	1,115.0	5.7	-0.4	0.4	0.35	-0.32	
1,178.0	0.50	95.40	1,178.0	5.7	-0.1	0.1	0.55	0.48	
1,241.0	0.80	57.30	1,241.0	5.9	0.6	-0.6	0.81	0.48	

Survey Report

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Project: San Juan County, NM CZ
Site: S4-T22N-R8W (Lybrook)
Well: Lybrook H04-2208 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Lybrook H04-2208 01H
TVD Reference: WELL @ 6869.0usft (A1099)
MD Reference: WELL @ 6869.0usft (A1099)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
1,305.0	0.40	35.00	1,305.0	6.3	1.1	-1.1	0.71	-0.62	
1,368.0	0.50	32.60	1,368.0	6.8	1.4	-1.4	0.16	0.16	
1,431.0	0.20	9.20	1,431.0	7.1	1.5	-1.5	0.52	-0.48	
1,494.0	0.40	95.90	1,494.0	7.2	1.8	-1.8	0.69	0.32	
1,558.0	0.00	0.00	1,558.0	7.2	2.0	-2.0	0.62	-0.62	
1,621.0	0.20	136.60	1,621.0	7.1	2.1	-2.1	0.32	0.32	
1,684.0	0.30	108.00	1,684.0	7.0	2.3	-2.3	0.25	0.16	
1,747.0	0.40	99.40	1,747.0	6.9	2.7	-2.7	0.18	0.16	
1,811.0	0.40	39.70	1,811.0	7.0	3.0	-3.0	0.62	0.00	
1,874.0	0.70	54.70	1,874.0	7.4	3.5	-3.5	0.52	0.48	
1,937.0	0.40	91.20	1,937.0	7.6	4.0	-4.0	0.71	-0.48	
2,000.0	1.00	99.40	1,999.9	7.5	4.8	-4.8	0.96	0.95	
2,063.0	0.70	110.40	2,062.9	7.3	5.7	-5.7	0.54	-0.48	
2,126.0	1.20	91.70	2,125.9	7.1	6.7	-6.7	0.92	0.79	
2,190.0	0.90	102.50	2,189.9	7.0	7.9	-7.9	0.56	-0.47	
2,253.0	1.40	78.80	2,252.9	7.1	9.1	-9.1	1.08	0.79	
2,316.0	1.50	103.30	2,315.9	7.0	10.7	-10.7	0.99	0.16	
2,379.0	1.70	83.40	2,378.9	6.9	12.4	-12.4	0.93	0.32	
2,443.0	1.80	102.80	2,442.8	6.8	14.3	-14.3	0.93	0.16	
2,506.0	1.60	93.80	2,505.8	6.5	16.1	-16.2	0.53	-0.32	
2,569.0	2.20	99.40	2,568.8	6.3	18.2	-18.2	1.00	0.95	
2,632.0	0.80	117.60	2,631.7	5.9	19.8	-19.8	2.32	-2.22	
2,695.0	0.70	193.90	2,694.7	5.3	20.1	-20.1	1.48	-0.16	
2,759.0	1.10	185.50	2,758.7	4.3	19.9	-20.0	0.66	0.63	
2,822.0	1.10	186.00	2,821.7	3.1	19.8	-19.8	0.02	0.00	
2,885.0	1.10	207.10	2,884.7	2.0	19.5	-19.5	0.64	0.00	
2,948.0	1.40	347.10	2,947.7	2.2	19.0	-19.0	3.73	0.48	
3,028.0	3.30	251.60	3,027.7	2.4	16.6	-16.6	4.63	2.38	
3,060.0	7.20	265.50	3,059.5	2.0	13.8	-13.8	12.73	12.19	
3,123.0	12.00	281.80	3,121.6	3.0	3.4	-3.4	8.68	7.62	
3,186.0	12.10	280.50	3,183.2	5.5	-9.5	9.5	0.46	0.16	
3,249.0	10.80	273.50	3,245.0	7.1	-21.9	21.9	3.02	-2.06	
3,313.0	8.00	273.70	3,308.1	7.7	-32.3	32.3	4.38	-4.38	
3,376.0	5.40	281.20	3,370.7	8.6	-39.6	39.6	4.35	-4.13	
3,439.0	5.10	274.50	3,433.4	9.4	-45.3	45.3	1.08	-0.48	
3,502.0	4.10	258.90	3,496.2	9.2	-50.3	50.3	2.53	-1.59	
3,565.0	3.00	234.40	3,559.1	7.8	-53.8	53.8	2.94	-1.75	
3,629.0	0.90	193.60	3,623.1	6.3	-55.3	55.3	3.74	-3.28	
3,692.0	1.20	65.10	3,686.1	6.1	-54.8	54.8	3.01	0.48	
3,755.0	1.00	56.50	3,749.0	6.7	-53.8	53.8	0.41	-0.32	
3,818.0	1.20	59.80	3,812.0	7.3	-52.8	52.7	0.33	0.32	
3,881.0	1.00	46.10	3,875.0	8.1	-51.8	51.8	0.52	-0.32	
3,945.0	1.10	54.60	3,939.0	8.8	-50.9	50.9	0.29	0.16	
4,008.0	0.70	51.50	4,002.0	9.4	-50.1	50.1	0.64	-0.63	
4,071.0	1.70	274.90	4,065.0	9.7	-50.7	50.7	3.59	1.59	
4,103.0	6.60	267.10	4,096.9	9.7	-53.0	53.0	15.38	15.31	
4,134.0	10.20	271.00	4,127.6	9.6	-57.6	57.5	11.75	11.61	
4,166.0	12.50	268.10	4,158.9	9.6	-63.9	63.8	7.40	7.19	
4,198.0	14.40	266.10	4,190.1	9.2	-71.3	71.3	6.11	5.94	
4,229.0	16.80	270.90	4,219.9	9.0	-79.6	79.6	8.78	7.74	
4,261.0	19.20	270.20	4,250.3	9.1	-89.5	89.5	7.53	7.50	
4,292.0	20.40	269.30	4,279.5	9.0	-100.0	100.0	3.99	3.87	
4,324.0	21.00	266.20	4,309.4	8.6	-111.3	111.3	3.90	1.88	

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM CZ
Site: S4-T22N-R8W (Lybrook)
Well: Lybrook H04-2208 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Lybrook H04-2208 01H
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North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
4,356.0	22.50	268.00	4,339.2	8.0	-123.1	123.1	5.13	4.69	
4,387.0	25.30	267.40	4,367.5	7.5	-135.7	135.7	9.07	9.03	
4,419.0	26.30	268.30	4,396.3	6.9	-149.6	149.6	3.36	3.13	
4,450.0	28.00	270.40	4,423.9	6.8	-163.8	163.7	6.29	5.48	
4,482.0	30.20	273.80	4,451.9	7.4	-179.3	179.3	8.60	6.88	
4,514.0	31.30	274.90	4,479.4	8.6	-195.6	195.6	3.86	3.44	
4,545.0	32.90	274.80	4,505.6	10.0	-212.0	212.0	5.16	5.16	
4,577.0	34.90	271.30	4,532.2	10.9	-229.8	229.8	8.73	6.25	
4,609.0	38.10	265.80	4,557.9	10.4	-248.8	248.8	14.29	10.00	
4,640.0	41.20	265.10	4,581.8	8.9	-268.6	268.5	10.10	10.00	
4,672.0	43.50	264.80	4,605.4	7.0	-290.0	290.0	7.22	7.19	
4,703.0	46.50	264.40	4,627.3	4.9	-311.9	311.8	9.72	9.68	
4,735.0	51.60	265.10	4,648.3	2.7	-335.9	335.9	16.02	15.94	
4,767.0	56.10	265.10	4,667.2	0.5	-361.7	361.6	14.06	14.06	
4,798.0	59.80	267.30	4,683.6	-1.2	-387.9	387.9	13.36	11.94	
4,830.0	58.60	270.50	4,700.0	-1.8	-415.3	415.3	9.37	-3.75	
4,840.0	58.90	272.30	4,705.2	-1.6	-423.9	423.9	15.68	3.00	
4,895.0	63.60	272.50	4,731.7	0.5	-472.0	472.0	8.55	8.55	
4,927.0	65.40	272.10	4,745.4	1.6	-500.9	500.9	5.74	5.63	
4,957.0	69.50	271.60	4,756.9	2.5	-528.6	528.6	13.75	13.67	
4,988.0	71.90	273.60	4,767.2	3.8	-557.8	557.8	9.85	7.74	
5,018.0	75.10	275.90	4,775.7	6.2	-586.5	586.5	12.95	10.67	
5,049.0	78.60	275.40	4,782.7	9.2	-616.5	616.5	11.40	11.29	
5,080.0	82.40	276.30	4,787.9	12.3	-646.9	646.9	12.59	12.26	
5,111.0	86.20	276.40	4,790.9	15.7	-677.6	677.5	12.26	12.26	
5,141.0	90.50	276.70	4,791.8	19.1	-707.4	707.3	14.37	14.33	
5,172.0	92.60	275.40	4,791.0	22.4	-738.2	738.1	7.97	6.77	
5,233.0	90.30	273.00	4,789.4	26.9	-799.0	798.9	5.45	-3.77	
5,295.0	92.00	268.90	4,788.2	27.9	-860.9	860.9	7.16	2.74	
5,357.0	92.20	267.30	4,785.9	25.8	-922.9	922.8	2.60	0.32	
5,418.0	92.20	267.00	4,783.6	22.8	-983.7	983.7	0.49	0.00	
5,480.0	92.20	266.20	4,781.2	19.1	-1,045.6	1,045.5	1.29	0.00	
5,541.0	93.00	265.40	4,778.4	14.7	-1,106.4	1,106.3	1.85	1.31	
5,603.0	92.00	265.90	4,775.7	10.0	-1,168.1	1,168.1	1.80	-1.61	
5,664.0	91.20	267.20	4,774.0	6.3	-1,229.0	1,229.0	2.50	-1.31	
5,725.0	90.30	269.60	4,773.2	4.6	-1,290.0	1,289.9	4.20	-1.48	
5,786.0	90.40	269.40	4,772.8	4.1	-1,350.9	1,350.9	0.37	0.16	
5,847.0	89.30	268.10	4,773.0	2.7	-1,411.9	1,411.9	2.79	-1.80	
5,909.0	90.00	269.00	4,773.4	1.2	-1,473.9	1,473.9	1.84	1.13	
5,969.0	92.10	270.70	4,772.3	1.0	-1,533.9	1,533.9	4.50	3.50	
6,031.0	92.50	271.10	4,769.8	2.0	-1,595.8	1,595.8	0.91	0.65	
6,092.0	91.30	269.70	4,767.8	2.4	-1,656.8	1,656.8	3.02	-1.97	
6,153.0	89.30	268.60	4,767.4	1.5	-1,717.8	1,717.8	3.74	-3.28	
6,216.0	89.00	267.90	4,768.4	-0.4	-1,780.7	1,780.7	1.21	-0.48	
6,279.0	89.10	267.50	4,769.4	-2.9	-1,843.7	1,843.7	0.65	0.16	
6,343.0	89.30	266.80	4,770.3	-6.1	-1,907.6	1,907.6	1.14	0.31	
6,406.0	88.90	268.10	4,771.3	-8.9	-1,970.5	1,970.6	2.16	-0.63	
6,469.0	89.20	268.70	4,772.4	-10.7	-2,033.5	2,033.5	1.06	0.48	
6,532.0	90.70	270.00	4,772.4	-11.4	-2,096.5	2,096.5	3.15	2.38	
6,595.0	92.10	271.10	4,770.9	-10.8	-2,159.5	2,159.5	2.83	2.22	
6,659.0	91.10	270.30	4,769.1	-10.0	-2,223.4	2,223.5	2.00	-1.56	
6,722.0	90.90	269.70	4,768.0	-10.0	-2,286.4	2,286.4	1.00	-0.32	
6,785.0	91.70	269.70	4,766.6	-10.3	-2,349.4	2,349.4	1.27	1.27	

Survey Report

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Project: San Juan County, NM CZ
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Well: Lybrook H04-2208 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Lybrook H04-2208 01H
TVD Reference: WELL @ 6869.0usft (A1099)
MD Reference: WELL @ 6869.0usft (A1099)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
6,848.0	91.70	268.70	4,764.7	-11.2	-2,412.4	2,412.4	1.59	0.00	
6,911.0	91.30	267.60	4,763.0	-13.3	-2,475.3	2,475.3	1.86	-0.63	
6,974.0	91.80	267.20	4,761.3	-16.1	-2,538.2	2,538.3	1.02	0.79	
7,038.0	92.20	266.60	4,759.1	-19.6	-2,602.1	2,602.1	1.13	0.63	
7,101.0	90.80	267.20	4,757.5	-23.0	-2,665.0	2,665.0	2.42	-2.22	
7,164.0	90.30	268.20	4,756.8	-25.5	-2,727.9	2,728.0	1.77	-0.79	
7,227.0	91.30	270.10	4,756.0	-26.4	-2,790.9	2,791.0	3.41	1.59	
7,291.0	91.50	270.20	4,754.4	-26.3	-2,854.9	2,855.0	0.35	0.31	
7,354.0	90.50	270.30	4,753.3	-26.0	-2,917.9	2,917.9	1.60	-1.59	
7,417.0	90.40	272.30	4,752.8	-24.6	-2,980.9	2,980.9	3.18	-0.16	
7,480.0	90.70	273.00	4,752.2	-21.7	-3,043.8	3,043.8	1.21	0.48	
7,543.0	91.10	272.70	4,751.2	-18.5	-3,106.7	3,106.7	0.79	0.63	
7,607.0	91.20	272.30	4,749.9	-15.7	-3,170.6	3,170.7	0.64	0.16	
7,670.0	89.70	271.00	4,749.4	-13.9	-3,233.6	3,233.6	3.15	-2.38	
7,733.0	89.30	269.70	4,750.0	-13.5	-3,296.6	3,296.6	2.16	-0.63	
7,796.0	89.50	270.30	4,750.6	-13.5	-3,359.6	3,359.6	1.00	0.32	
7,859.0	90.40	271.60	4,750.7	-12.5	-3,422.6	3,422.6	2.51	1.43	
7,923.0	92.20	271.90	4,749.2	-10.5	-3,486.5	3,486.5	2.85	2.81	
7,986.0	92.60	272.50	4,746.6	-8.1	-3,549.4	3,549.4	1.14	0.63	
8,049.0	92.60	271.70	4,743.8	-5.8	-3,612.3	3,612.3	1.27	0.00	
8,112.0	91.40	271.30	4,741.6	-4.2	-3,675.3	3,675.2	2.01	-1.90	
8,176.0	90.60	270.20	4,740.4	-3.3	-3,739.2	3,739.2	2.13	-1.25	
8,239.0	90.10	269.10	4,740.1	-3.7	-3,802.2	3,802.2	1.92	-0.79	
8,302.0	91.20	270.30	4,739.3	-4.0	-3,865.2	3,865.2	2.58	1.75	
8,366.0	91.30	270.20	4,737.9	-3.8	-3,929.2	3,929.2	0.22	0.16	
8,429.0	91.10	270.10	4,736.6	-3.6	-3,992.2	3,992.2	0.35	-0.32	
8,492.0	91.10	269.60	4,735.4	-3.8	-4,055.2	4,055.2	0.79	0.00	
8,555.0	91.50	269.10	4,734.0	-4.5	-4,118.2	4,118.2	1.02	0.63	
8,618.0	90.50	268.50	4,732.9	-5.8	-4,181.1	4,181.1	1.85	-1.59	
8,682.0	90.40	268.00	4,732.4	-7.8	-4,245.1	4,245.1	0.80	-0.16	
8,745.0	90.50	267.60	4,731.9	-10.2	-4,308.1	4,308.1	0.65	0.16	
8,808.0	90.60	267.20	4,731.3	-13.0	-4,371.0	4,371.0	0.65	0.16	
8,871.0	90.60	266.40	4,730.6	-16.5	-4,433.9	4,433.9	1.27	0.00	
8,935.0	90.20	265.20	4,730.2	-21.2	-4,497.7	4,497.8	1.98	-0.63	
8,974.0	90.30	264.80	4,730.0	-24.6	-4,536.6	4,536.6	1.06	0.26	Last CES Survey @ 8,974' MD
9,029.0	90.30	264.80	4,729.7	-29.6	-4,591.3	4,591.4	0.00	0.00	PTB @ 9,029'

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM CZ
Site: S4-T22N-R8W (Lybrook)
Well: Lybrook H04-2208 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Lybrook H04-2208 01H
TVD Reference: WELL @ 6869.0usft (A1099)
MD Reference: WELL @ 6869.0usft (A1099)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Lybrook H04-2208 01H I - actual wellpath misses target center by 2653.0usft at 9029.0usft MD (4729.7 TVD, -29.6 N, -4591.3 E) - Point	0.00	0.00	4,727.1	-13.7	-7,244.3	1,884,594.33	1,211,396.17	36.170650	-107.703550
Lybrook H04-2208 01H I - actual wellpath misses target center by 21.9usft at 9029.0usft MD (4729.7 TVD, -29.6 N, -4591.3 E) - Point	0.00	0.00	4,740.9	-14.2	-4,602.2	1,884,554.89	1,214,037.97	36.170650	-107.694600
Lybrook H04-2208 01H I - actual wellpath misses target center by 19.5usft at 9029.0usft MD (4729.7 TVD, -29.6 N, -4591.3 E) - Point	0.00	0.00	4,724.8	-14.2	-4,602.2	1,884,554.89	1,214,037.97	36.170650	-107.694600
Lybrook H04-2208 01H I - actual wellpath misses target center by 22.4usft at 9029.0usft MD (4729.7 TVD, -29.6 N, -4591.3 E) - Point	0.00	0.00	4,741.8	-14.2	-4,602.2	1,884,554.89	1,214,037.97	36.170650	-107.694600

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,974.0	4,730.0	-24.6	-4,536.6	Last CES Survey @ 8,974' MD
9,029.0	4,729.7	-29.6	-4,591.3	PTB @ 9,029'

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

San Juan County, NM CZ

S4-T22N-R8W (Lybrook)

Lybrook H04-2208 01H

Hz

Design: FINAL

Survey Report - Geographic

08 December, 2014

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H04-2208 01H
Project:	San Juan County, NM CZ	TVD Reference:	WELL @ 6869.0usft (A1099)
Site:	S4-T22N-R8W (Lybrook)	MD Reference:	WELL @ 6869.0usft (A1099)
Well:	Lybrook H04-2208 01H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

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

Site	S4-T22N-R8W (Lybrook)				
Site Position:		Northing:	1,884,501.33 usft	Latitude:	36.170690
From:	Lat/Long	Easting:	1,218,639.92 usft	Longitude:	-107.679010
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.84 °

Well	Lybrook H04-2208 01H					
Well Position	+N/-S	0.0 usft	Northing:	1,884,501.33 usft	Latitude:	36.170690
	+E/-W	0.0 usft	Easting:	1,218,639.92 usft	Longitude:	-107.679010
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,851.0 usft	

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/15/2014	9.39	62.91	50,087

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	2,948.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	269.82	

Survey Program	Date	10/29/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
609.0	2,948.0	Survey #1 (Pilot Hole)	Geolink MWD	Geolink MWD
3,028.0	9,029.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,884,501.33	1,218,639.92	36.170690	-107.679010
609.0	0.50	328.70	609.0	2.3	-1.4	1,884,503.62	1,218,638.57	36.170696	-107.679015
672.0	0.50	348.60	672.0	2.8	-1.6	1,884,504.13	1,218,638.38	36.170698	-107.679016
736.0	0.50	350.70	736.0	3.3	-1.7	1,884,504.68	1,218,638.29	36.170699	-107.679016
799.0	0.30	21.50	799.0	3.7	-1.7	1,884,505.11	1,218,638.31	36.170700	-107.679016
862.0	0.70	42.20	862.0	4.2	-1.3	1,884,505.54	1,218,638.64	36.170702	-107.679015
925.0	0.40	9.80	925.0	4.7	-1.0	1,884,506.04	1,218,638.94	36.170703	-107.679014
989.0	0.40	22.10	989.0	5.1	-0.9	1,884,506.46	1,218,639.07	36.170704	-107.679013
1,052.0	0.40	43.70	1,052.0	5.5	-0.7	1,884,506.82	1,218,639.31	36.170705	-107.679013
1,115.0	0.20	63.30	1,115.0	5.7	-0.4	1,884,507.03	1,218,639.56	36.170706	-107.679012
1,178.0	0.50	95.40	1,178.0	5.7	-0.1	1,884,507.05	1,218,639.93	36.170706	-107.679011

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM CZ
Site: S4-T22N-R8W (Lybrook)
Well: Lybrook H04-2208 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Lybrook H04-2208 01H
TVD Reference: WELL @ 6869.0usft (A1099)
MD Reference: WELL @ 6869.0usft (A1099)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,241.0	0.80	57.30	1,241.0	5.9	0.6	1,884,507.25	1,218,640.58	36.170706	-107.679008
1,305.0	0.40	35.00	1,305.0	6.3	1.1	1,884,507.66	1,218,641.09	36.170708	-107.679007
1,368.0	0.50	32.60	1,368.0	6.8	1.4	1,884,508.07	1,218,641.37	36.170709	-107.679006
1,431.0	0.20	9.20	1,431.0	7.1	1.5	1,884,508.41	1,218,641.54	36.170710	-107.679005
1,494.0	0.40	95.90	1,494.0	7.2	1.8	1,884,508.49	1,218,641.78	36.170710	-107.679004
1,558.0	0.00	0.00	1,558.0	7.2	2.0	1,884,508.47	1,218,642.00	36.170710	-107.679004
1,621.0	0.20	136.60	1,621.0	7.1	2.1	1,884,508.39	1,218,642.07	36.170710	-107.679003
1,684.0	0.30	108.00	1,684.0	7.0	2.3	1,884,508.25	1,218,642.30	36.170709	-107.679003
1,747.0	0.40	99.40	1,747.0	6.9	2.7	1,884,508.16	1,218,642.68	36.170709	-107.679001
1,811.0	0.40	39.70	1,811.0	7.0	3.0	1,884,508.29	1,218,643.04	36.170709	-107.679000
1,874.0	0.70	54.70	1,874.0	7.4	3.5	1,884,508.67	1,218,643.50	36.170710	-107.678998
1,937.0	0.40	91.20	1,937.0	7.6	4.0	1,884,508.88	1,218,644.04	36.170711	-107.678997
2,000.0	1.00	99.40	1,999.9	7.5	4.8	1,884,508.78	1,218,644.80	36.170711	-107.678994
2,063.0	0.70	110.40	2,062.9	7.3	5.7	1,884,508.54	1,218,645.70	36.170710	-107.678991
2,126.0	1.20	91.70	2,125.9	7.1	6.7	1,884,508.37	1,218,646.72	36.170710	-107.678988
2,190.0	0.90	102.50	2,189.9	7.0	7.9	1,884,508.23	1,218,647.88	36.170709	-107.678984
2,253.0	1.40	78.80	2,252.9	7.1	9.1	1,884,508.25	1,218,649.12	36.170709	-107.678979
2,316.0	1.50	103.30	2,315.9	7.0	10.7	1,884,508.19	1,218,650.67	36.170709	-107.678974
2,379.0	1.70	83.40	2,378.9	6.9	12.4	1,884,508.08	1,218,652.40	36.170709	-107.678968
2,443.0	1.80	102.80	2,442.8	6.8	14.3	1,884,507.94	1,218,654.32	36.170709	-107.678962
2,506.0	1.60	93.80	2,505.8	6.5	16.1	1,884,507.63	1,218,656.16	36.170708	-107.678956
2,569.0	2.20	99.40	2,568.8	6.3	18.2	1,884,507.35	1,218,658.23	36.170707	-107.678949
2,632.0	0.80	117.60	2,631.7	5.9	19.8	1,884,506.92	1,218,659.80	36.170706	-107.678943
2,695.0	0.70	193.90	2,694.7	5.3	20.1	1,884,506.34	1,218,660.09	36.170705	-107.678942
2,759.0	1.10	185.50	2,758.7	4.3	19.9	1,884,505.35	1,218,659.93	36.170702	-107.678943
2,822.0	1.10	186.00	2,821.7	3.1	19.8	1,884,504.15	1,218,659.79	36.170699	-107.678943
2,885.0	1.10	207.10	2,884.7	2.0	19.5	1,884,503.02	1,218,659.43	36.170695	-107.678944
2,948.0	1.40	347.10	2,947.7	2.2	19.0	1,884,503.23	1,218,658.99	36.170696	-107.678946
3,028.0	3.30	251.60	3,027.7	2.4	16.6	1,884,503.50	1,218,656.59	36.170697	-107.678954
3,060.0	7.20	265.50	3,059.5	2.0	13.8	1,884,503.09	1,218,653.71	36.170695	-107.678964
3,123.0	12.00	281.80	3,121.6	3.0	3.4	1,884,504.27	1,218,643.37	36.170698	-107.678999
3,186.0	12.10	280.50	3,183.2	5.5	-9.5	1,884,507.00	1,218,630.50	36.170705	-107.679042
3,249.0	10.80	273.50	3,245.0	7.1	-21.9	1,884,508.75	1,218,618.14	36.170710	-107.679084
3,313.0	8.00	273.70	3,308.1	7.7	-32.3	1,884,509.56	1,218,607.72	36.170711	-107.679120
3,376.0	5.40	281.20	3,370.7	8.6	-39.6	1,884,510.52	1,218,600.45	36.170714	-107.679144
3,439.0	5.10	274.50	3,433.4	9.4	-45.3	1,884,511.40	1,218,594.76	36.170716	-107.679164
3,502.0	4.10	258.90	3,496.2	9.2	-50.3	1,884,511.26	1,218,589.76	36.170715	-107.679181
3,565.0	3.00	234.40	3,559.1	7.8	-53.8	1,884,509.92	1,218,586.19	36.170712	-107.679193
3,629.0	0.90	193.60	3,623.1	6.3	-55.3	1,884,508.48	1,218,584.69	36.170707	-107.679198
3,692.0	1.20	65.10	3,686.1	6.1	-54.8	1,884,508.27	1,218,585.17	36.170707	-107.679196
3,755.0	1.00	56.50	3,749.0	6.7	-53.8	1,884,508.84	1,218,586.23	36.170709	-107.679192
3,818.0	1.20	59.80	3,812.0	7.3	-52.8	1,884,509.46	1,218,587.27	36.170710	-107.679189
3,881.0	1.00	46.10	3,875.0	8.1	-51.8	1,884,510.15	1,218,588.25	36.170712	-107.679186
3,945.0	1.10	54.60	3,939.0	8.8	-50.9	1,884,510.88	1,218,589.16	36.170714	-107.679183
4,008.0	0.70	51.50	4,002.0	9.4	-50.1	1,884,511.46	1,218,589.96	36.170716	-107.679180
4,071.0	1.70	274.90	4,065.0	9.7	-50.7	1,884,511.79	1,218,589.34	36.170717	-107.679182
4,103.0	6.60	267.10	4,096.9	9.7	-53.0	1,884,511.77	1,218,587.03	36.170717	-107.679190
4,134.0	10.20	271.00	4,127.6	9.6	-57.6	1,884,511.80	1,218,582.50	36.170717	-107.679205
4,166.0	12.50	268.10	4,158.9	9.6	-63.9	1,884,511.82	1,218,576.21	36.170716	-107.679227
4,198.0	14.40	266.10	4,190.1	9.2	-71.3	1,884,511.55	1,218,568.77	36.170715	-107.679252
4,229.0	16.80	270.90	4,219.9	9.0	-79.6	1,884,511.48	1,218,560.44	36.170715	-107.679280
4,261.0	19.20	270.20	4,250.3	9.1	-89.5	1,884,511.72	1,218,550.56	36.170715	-107.679313
4,292.0	20.40	269.30	4,279.5	9.0	-100.0	1,884,511.82	1,218,540.06	36.170715	-107.679349
4,324.0	21.00	266.20	4,309.4	8.6	-111.3	1,884,511.54	1,218,528.75	36.170714	-107.679387
4,356.0	22.50	268.00	4,339.2	8.0	-123.1	1,884,511.12	1,218,516.90	36.170712	-107.679427

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM CZ
Site: S4-T22N-R8W (Lybrook)
Well: Lybrook H04-2208 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Lybrook H04-2208 01H
TVD Reference: WELL @ 6869.0usft (A1099)
MD Reference: WELL @ 6869.0usft (A1099)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,387.0	25.30	267.40	4,367.5	7.5	-135.7	1,884,510.80	1,218,504.35	36.170711	-107.679470
4,419.0	26.30	268.30	4,396.3	6.9	-149.6	1,884,510.48	1,218,490.43	36.170709	-107.679517
4,450.0	28.00	270.40	4,423.9	6.8	-163.8	1,884,510.54	1,218,476.28	36.170709	-107.679565
4,482.0	30.20	273.80	4,451.9	7.4	-179.3	1,884,511.35	1,218,460.75	36.170710	-107.679618
4,514.0	31.30	274.90	4,479.4	8.6	-195.6	1,884,512.84	1,218,444.45	36.170714	-107.679673
4,545.0	32.90	274.80	4,505.6	10.0	-212.0	1,884,514.47	1,218,428.06	36.170718	-107.679729
4,577.0	34.90	271.30	4,532.2	10.9	-229.8	1,884,515.67	1,218,410.26	36.170720	-107.679789
4,609.0	38.10	265.80	4,557.9	10.4	-248.8	1,884,515.43	1,218,391.25	36.170719	-107.679853
4,640.0	41.20	265.10	4,581.8	8.9	-268.6	1,884,514.15	1,218,371.51	36.170714	-107.679920
4,672.0	43.50	264.80	4,605.4	7.0	-290.0	1,884,512.57	1,218,350.02	36.170709	-107.679993
4,703.0	46.50	264.40	4,627.3	4.9	-311.9	1,884,510.82	1,218,328.17	36.170704	-107.680067
4,735.0	51.60	265.10	4,648.3	2.7	-335.9	1,884,508.97	1,218,304.08	36.170697	-107.680148
4,767.0	56.10	265.10	4,667.2	0.5	-361.7	1,884,507.14	1,218,278.31	36.170691	-107.680235
4,798.0	59.80	267.30	4,683.6	-1.2	-387.9	1,884,505.80	1,218,252.08	36.170687	-107.680324
4,830.0	58.60	270.50	4,700.0	-1.8	-415.3	1,884,505.67	1,218,224.60	36.170685	-107.680417
4,840.0	58.90	272.30	4,705.2	-1.6	-423.9	1,884,506.01	1,218,216.05	36.170686	-107.680446
4,895.0	63.60	272.50	4,731.7	0.5	-472.0	1,884,508.74	1,218,167.92	36.170691	-107.680609
4,927.0	65.40	272.10	4,745.4	1.6	-500.9	1,884,510.32	1,218,139.09	36.170695	-107.680707
4,957.0	69.50	271.60	4,756.9	2.5	-528.6	1,884,511.62	1,218,111.42	36.170697	-107.680801
4,988.0	71.90	273.60	4,767.2	3.8	-557.8	1,884,513.38	1,218,082.22	36.170701	-107.680900
5,018.0	75.10	275.90	4,775.7	6.2	-586.5	1,884,516.19	1,218,053.60	36.170707	-107.680997
5,049.0	78.60	275.40	4,782.7	9.2	-616.5	1,884,519.60	1,218,023.61	36.170715	-107.681099
5,080.0	82.40	276.30	4,787.9	12.3	-646.9	1,884,523.17	1,217,993.25	36.170724	-107.681202
5,111.0	86.20	276.40	4,790.9	15.7	-677.6	1,884,527.03	1,217,962.65	36.170733	-107.681306
5,141.0	90.50	276.70	4,791.8	19.1	-707.4	1,884,530.89	1,217,932.92	36.170743	-107.681406
5,172.0	92.60	275.40	4,791.0	22.4	-738.2	1,884,534.60	1,217,902.15	36.170752	-107.681511
5,233.0	90.30	273.00	4,789.4	26.9	-799.0	1,884,539.96	1,217,841.42	36.170764	-107.681717
5,295.0	92.00	268.90	4,788.2	27.9	-860.9	1,884,541.90	1,217,779.48	36.170767	-107.681927
5,357.0	92.20	267.30	4,785.9	25.8	-922.9	1,884,540.76	1,217,717.53	36.170761	-107.682136
5,418.0	92.20	267.00	4,783.6	22.8	-983.7	1,884,538.63	1,217,656.61	36.170753	-107.682343
5,480.0	92.20	266.20	4,781.2	19.1	-1,045.6	1,884,535.87	1,217,594.72	36.170743	-107.682552
5,541.0	93.00	265.40	4,778.4	14.7	-1,106.4	1,884,532.30	1,217,533.89	36.170730	-107.682758
5,603.0	92.00	265.90	4,775.7	10.0	-1,168.1	1,884,528.51	1,217,472.07	36.170717	-107.682967
5,664.0	91.20	267.20	4,774.0	6.3	-1,229.0	1,884,525.74	1,217,411.16	36.170707	-107.683173
5,725.0	90.30	269.60	4,773.2	4.6	-1,290.0	1,884,524.93	1,217,350.17	36.170703	-107.683380
5,786.0	90.40	269.40	4,772.8	4.1	-1,350.9	1,884,525.30	1,217,289.17	36.170701	-107.683587
5,847.0	89.30	268.10	4,773.0	2.7	-1,411.9	1,884,524.86	1,217,228.18	36.170698	-107.683793
5,909.0	90.00	269.00	4,773.4	1.2	-1,473.9	1,884,524.21	1,217,166.18	36.170693	-107.684003
5,969.0	92.10	270.70	4,772.3	1.0	-1,533.9	1,884,524.93	1,217,106.20	36.170693	-107.684206
6,031.0	92.50	271.10	4,769.8	2.0	-1,595.8	1,884,526.82	1,217,044.28	36.170695	-107.684416
6,092.0	91.30	269.70	4,767.8	2.4	-1,656.8	1,884,528.14	1,216,983.33	36.170697	-107.684623
6,153.0	89.30	268.60	4,767.4	1.5	-1,717.8	1,884,528.14	1,216,922.34	36.170694	-107.684829
6,216.0	89.00	267.90	4,768.4	-0.4	-1,780.7	1,884,527.14	1,216,859.35	36.170689	-107.685043
6,279.0	89.10	267.50	4,769.4	-2.9	-1,843.7	1,884,525.54	1,216,796.38	36.170682	-107.685256
6,343.0	89.30	266.80	4,770.3	-6.1	-1,907.6	1,884,523.30	1,216,732.43	36.170673	-107.685472
6,406.0	88.90	268.10	4,771.3	-8.9	-1,970.5	1,884,521.42	1,216,669.47	36.170665	-107.685685
6,469.0	89.20	268.70	4,772.4	-10.7	-2,033.5	1,884,520.59	1,216,606.48	36.170661	-107.685899
6,532.0	90.70	270.00	4,772.4	-11.4	-2,096.5	1,884,520.80	1,216,543.48	36.170659	-107.686112
6,595.0	92.10	271.10	4,770.9	-10.8	-2,159.5	1,884,522.33	1,216,480.52	36.170660	-107.686325
6,659.0	91.10	270.30	4,769.1	-10.0	-2,223.4	1,884,524.06	1,216,416.57	36.170662	-107.686542
6,722.0	90.90	269.70	4,768.0	-10.0	-2,286.4	1,884,524.98	1,216,353.59	36.170662	-107.686756
6,785.0	91.70	269.70	4,766.6	-10.3	-2,349.4	1,884,525.58	1,216,290.61	36.170661	-107.686969
6,848.0	91.70	268.70	4,764.7	-11.2	-2,412.4	1,884,525.63	1,216,227.64	36.170659	-107.687182
6,911.0	91.30	267.60	4,763.0	-13.3	-2,475.3	1,884,524.52	1,216,164.67	36.170653	-107.687395
6,974.0	91.80	267.20	4,761.3	-16.1	-2,538.2	1,884,522.59	1,216,101.73	36.170646	-107.687608

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM CZ
 Site: S4-T22N-R8W (Lybrook)
 Well: Lybrook H04-2208 01H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Lybrook H04-2208 01H
 TVD Reference: WELL @ 6869.0usft (A1099)
 MD Reference: WELL @ 6869.0usft (A1099)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: USA EDM 5000 Multi Users DB

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
7,038.0	92.20	266.60	4,759.1	-19.6	-2,602.1	1,884,520.08	1,216,037.81	36.170636	-107.687825	
7,101.0	90.80	267.20	4,757.5	-23.0	-2,665.0	1,884,517.60	1,215,974.89	36.170627	-107.688038	
7,164.0	90.30	268.20	4,756.8	-25.5	-2,727.9	1,884,515.99	1,215,911.91	36.170620	-107.688251	
7,227.0	91.30	270.10	4,756.0	-26.4	-2,790.9	1,884,515.99	1,215,848.92	36.170617	-107.688464	
7,291.0	91.50	270.20	4,754.4	-26.3	-2,854.9	1,884,517.10	1,215,784.95	36.170618	-107.688681	
7,354.0	90.50	270.30	4,753.3	-26.0	-2,917.9	1,884,518.30	1,215,721.97	36.170618	-107.688895	
7,417.0	90.40	272.30	4,752.8	-24.6	-2,980.9	1,884,520.66	1,215,659.02	36.170622	-107.689108	
7,480.0	90.70	273.00	4,752.2	-21.7	-3,043.8	1,884,524.49	1,215,596.14	36.170630	-107.689321	
7,543.0	91.10	272.70	4,751.2	-18.5	-3,106.7	1,884,528.55	1,215,533.28	36.170639	-107.689534	
7,607.0	91.20	272.30	4,749.9	-15.7	-3,170.6	1,884,532.28	1,215,469.40	36.170646	-107.689751	
7,670.0	89.70	271.00	4,749.4	-13.9	-3,233.6	1,884,535.02	1,215,406.47	36.170651	-107.689964	
7,733.0	89.30	269.70	4,750.0	-13.5	-3,296.6	1,884,536.34	1,215,343.49	36.170652	-107.690177	
7,796.0	89.50	270.30	4,750.6	-13.5	-3,359.6	1,884,537.26	1,215,280.50	36.170652	-107.690391	
7,859.0	90.40	271.60	4,750.7	-12.5	-3,422.6	1,884,539.24	1,215,217.53	36.170655	-107.690604	
7,923.0	92.20	271.90	4,749.2	-10.5	-3,486.5	1,884,542.13	1,215,153.61	36.170661	-107.690821	
7,986.0	92.60	272.50	4,746.6	-8.1	-3,549.4	1,884,545.47	1,215,090.76	36.170667	-107.691034	
8,049.0	92.60	271.70	4,743.8	-5.8	-3,612.3	1,884,548.70	1,215,027.91	36.170674	-107.691247	
8,112.0	91.40	271.30	4,741.6	-4.2	-3,675.3	1,884,551.28	1,214,965.00	36.170678	-107.691460	
8,176.0	90.60	270.20	4,740.4	-3.3	-3,739.2	1,884,553.06	1,214,901.04	36.170680	-107.691677	
8,239.0	90.10	269.10	4,740.1	-3.7	-3,802.2	1,884,553.60	1,214,838.04	36.170679	-107.691890	
8,302.0	91.20	270.30	4,739.3	-4.0	-3,865.2	1,884,554.20	1,214,775.05	36.170678	-107.692104	
8,366.0	91.30	270.20	4,737.9	-3.8	-3,929.2	1,884,555.42	1,214,711.08	36.170679	-107.692320	
8,429.0	91.10	270.10	4,736.6	-3.6	-3,992.2	1,884,556.51	1,214,648.10	36.170679	-107.692534	
8,492.0	91.10	269.60	4,735.4	-3.8	-4,055.2	1,884,557.27	1,214,585.12	36.170679	-107.692747	
8,555.0	91.50	269.10	4,734.0	-4.5	-4,118.2	1,884,557.49	1,214,522.13	36.170677	-107.692960	
8,618.0	90.50	268.50	4,732.9	-5.8	-4,181.1	1,884,557.10	1,214,459.15	36.170673	-107.693174	
8,682.0	90.40	268.00	4,732.4	-7.8	-4,245.1	1,884,556.08	1,214,395.16	36.170668	-107.693390	
8,745.0	90.50	267.60	4,731.9	-10.2	-4,308.1	1,884,554.59	1,214,332.18	36.170661	-107.693604	
8,808.0	90.60	267.20	4,731.3	-13.0	-4,371.0	1,884,552.66	1,214,269.21	36.170653	-107.693817	
8,871.0	90.60	266.40	4,730.6	-16.5	-4,433.9	1,884,550.07	1,214,206.27	36.170644	-107.694030	
8,935.0	90.20	265.20	4,730.2	-21.2	-4,497.7	1,884,546.32	1,214,142.38	36.170631	-107.694246	
8,974.0	90.30	264.80	4,730.0	-24.6	-4,536.6	1,884,543.50	1,214,103.46	36.170621	-107.694378	
Last CES Survey @ 8,974' MD										
9,029.0	90.30	264.80	4,729.7	-29.6	-4,591.3	1,884,539.32	1,214,048.64	36.170608	-107.694563	
PTB @ 9,029'										

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Lybrook H04-2208 01H I	0.00	0.00	4,741.8	-14.2	-4,602.2	1,884,554.89	1,214,037.97	36.170650	-107.694600
- actual wellpath misses target center by 22.4usft at 9029.0usft MD (4729.7 TVD, -29.6 N, -4591.3 E)									
- Point									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,974.0	4,730.0	-24.6	-4,536.6	Last CES Survey @ 8,974' MD
9,029.0	4,729.7	-29.6	-4,591.3	PTB @ 9,029'

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H04-2208 01H
Project:	San Juan County, NM CZ	TVD Reference:	WELL @ 6869.0usft (A1099)
Site:	S4-T22N-R8W (Lybrook)	MD Reference:	WELL @ 6869.0usft (A1099)
Well:	Lybrook H04-2208 01H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Checked By: _____	Approved By: _____	Date: _____
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