

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) 476-3450 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

OIL CONS. DIV DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-043-21183		*Pool Code 42289	*Pool Name LYBROOK GALLUP	JUN 23 2014
*Property Code 40218	*Property Name LYBROOK H36A-2307		*Well Number 01H	
*GRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.		*Elevation 7263'	

¹⁰ Surface Location

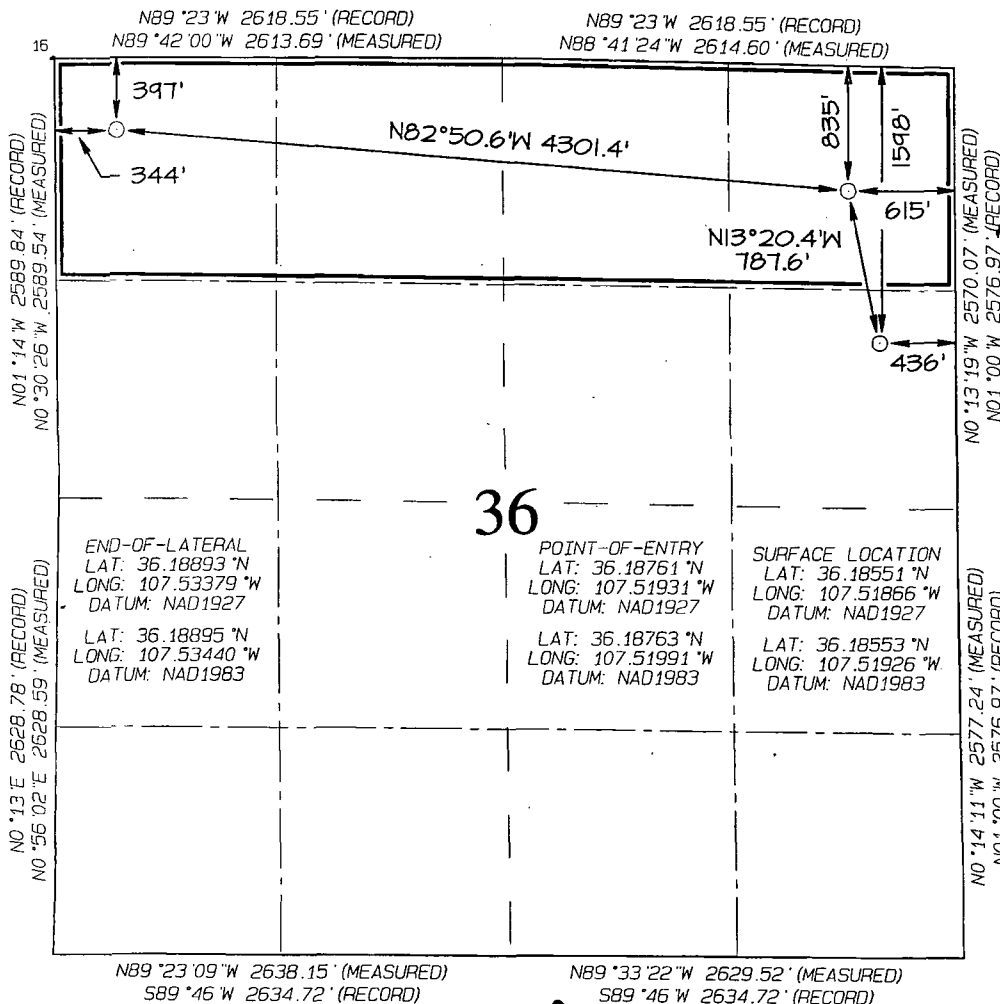
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	36	23N	7W		1598	NORTH	436	EAST	SANDOVAL

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	36	23N	7W		397	NORTH	344	WEST	SANDOVAL

¹² Dedicated Acres 160.0 Acres - (N/2 N/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--	-------------------------------	----------------------------------	-------------------------

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 a 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*
Printed Name: **Brenda R. Linster**
E-mail Address: **brenda.linster@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: JUNE 12, 2014
Survey Date: OCTOBER 4, 2013

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
15269
REGISTERED PROFESSIONAL SURVEYOR
NEW MEXICO

JASON C. EDWARDS
Certificate Number 15269

AV

**DEVIATION SURVEYS
Lybrook H36A-2307 01H**

CONFIDENTIAL

MD (Feet)	Inclination (Degree)
778'	0.10
1094'	0.50
1410'	0.20
1726'	0.60
2054'	0.50
2370'	1.8
2687'	0.40
3037'	0.90
3353'	1.00
3669'	1.40
3983'	1.10
4299'	0.30
4614'	0.70
4836'	1.40
4994'	14.90

OIL CONS. DIV DIST. 3
JUN 23 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 Technologist

6/19/14

6/19/14

ACKNOWLEDGMENT

State of Colorado
City and County of Denver

This instrument was acknowledged before me on this 28th day of March, 2013 by Robynn Haden as Attorney in Fact of Encana Oil & Gas (USA) Inc., on behalf of said corporation.

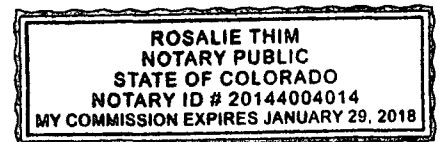
In witness whereof, I hereunto set my hand and official seal.

Notary Public:

Rosalie Thim

My Commission Expires:

1/29/18



encana™

natural gas

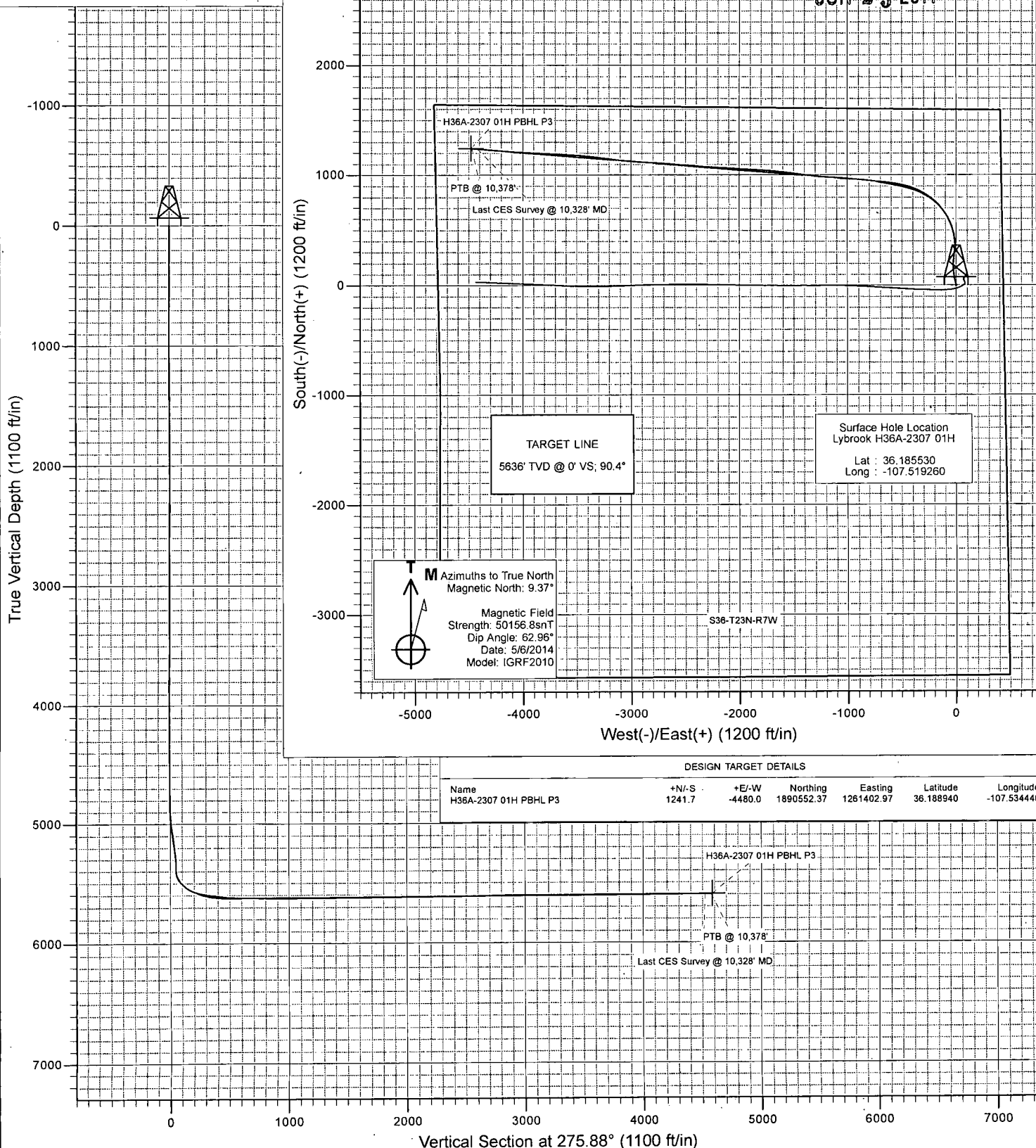
Project: Sandoval County, NM
 Site: Lybrook
 Well: Lybrook H36A-2307 01H
 Wellbore: HZ
 Design: FINAL

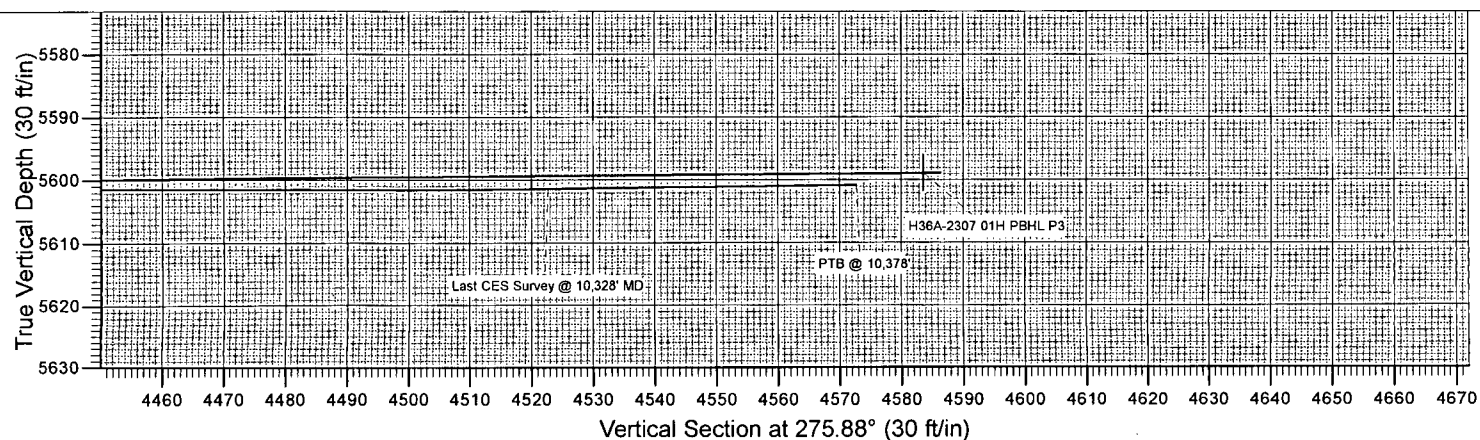
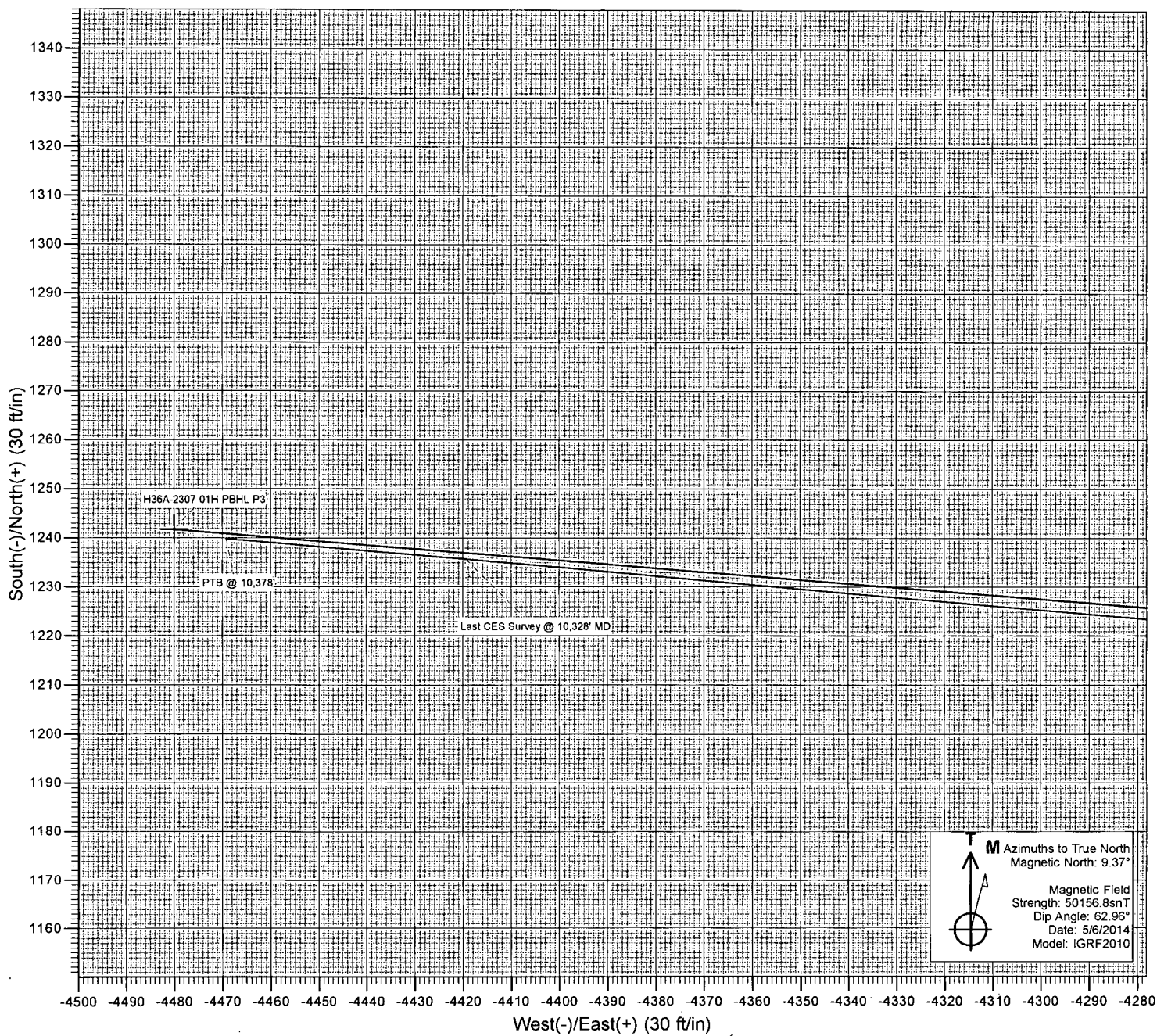


FINAL
 Lybrook H36A-2307 01H
 15' KB @ 7278.0ft (Aztec 777)
 Ground Elevation @ 7263.0
 North American Datum 1983
 Well Lybrook H36A-2307 01H, True North

OIL CONS. DIV DIST. 3

JUN 23 2014





Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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	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 H36A-2307 01H					
Well Position	+N/-S	0.0 ft	Northing:	1,889,252.17 ft	Latitude:	36.185530
	+E/-W	0.0 ft	Easting:	1,265,866.33 ft	Longitude:	-107.519260
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,263.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/6/2014	9.37	62.96	50,157

Design	FINAL			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	275.88

Survey Program		Date	6/2/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
589.0	10,378.0	Survey #1 (HZ)	Geolink MWD	Geolink MWD	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
589.0	0.00	5.40	589.0	0.0	0.0	0.0	0.00	0.00	
651.0	0.10	188.10	651.0	-0.1	0.0	0.0	0.16	0.16	
715.0	0.20	138.60	715.0	-0.2	0.1	-0.1	0.24	0.16	
778.0	0.10	171.80	778.0	-0.3	0.1	-0.2	0.20	-0.16	
841.0	0.50	186.70	841.0	-0.7	0.1	-0.2	0.64	0.63	
904.0	0.20	175.40	904.0	-1.0	0.1	-0.2	0.49	-0.48	
968.0	0.40	182.30	968.0	-1.4	0.1	-0.2	0.32	0.31	
1,031.0	0.40	211.60	1,031.0	-1.8	0.0	-0.2	0.32	0.00	
1,094.0	0.50	209.90	1,094.0	-2.2	-0.3	0.1	0.16	0.16	
1,157.0	0.40	229.50	1,157.0	-2.6	-0.6	0.3	0.29	-0.16	
1,220.0	0.40	235.80	1,220.0	-2.9	-0.9	0.6	0.07	0.00	
1,284.0	0.30	208.70	1,284.0	-3.1	-1.2	0.9	0.30	-0.16	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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
1,347.0	0.30	221.50	1,347.0	-3.4	-1.4	1.0	0.11	0.00	
1,410.0	0.20	216.30	1,410.0	-3.6	-1.6	1.2	0.16	-0.16	
1,474.0	0.30	238.50	1,474.0	-3.8	-1.8	1.4	0.21	0.16	
1,537.0	0.40	251.30	1,537.0	-3.9	-2.1	1.7	0.20	0.16	
1,600.0	0.30	241.70	1,600.0	-4.1	-2.5	2.0	0.18	-0.16	
1,663.0	0.60	232.60	1,663.0	-4.4	-2.9	2.4	0.49	0.48	
1,726.0	0.60	236.80	1,726.0	-4.7	-3.4	2.9	0.07	0.00	
1,789.0	0.10	24.80	1,789.0	-4.9	-3.7	3.2	1.09	-0.79	
1,852.0	0.60	300.20	1,852.0	-4.7	-3.9	3.4	0.95	0.79	
1,915.0	0.60	267.60	1,915.0	-4.5	-4.6	4.1	0.53	0.00	
1,991.0	0.50	242.20	1,991.0	-4.7	-5.2	4.7	0.34	-0.13	
2,054.0	0.50	242.90	2,054.0	-4.9	-5.7	5.2	0.01	0.00	
2,118.0	0.30	249.80	2,118.0	-5.1	-6.1	5.6	0.32	-0.31	
2,181.0	1.40	42.40	2,181.0	-4.6	-5.8	5.3	2.65	1.75	
2,244.0	1.80	42.00	2,243.9	-3.3	-4.6	4.2	0.64	0.63	
2,307.0	1.80	34.50	2,306.9	-1.8	-3.4	3.2	0.37	0.00	
2,370.0	1.80	38.10	2,369.9	-0.2	-2.2	2.2	0.18	0.00	
2,434.0	1.40	19.10	2,433.9	1.4	-1.3	1.5	1.03	-0.62	
2,497.0	1.10	13.80	2,496.8	2.7	-0.9	1.2	0.51	-0.48	
2,560.0	1.50	23.70	2,559.8	4.0	-0.5	0.9	0.73	0.63	
2,624.0	1.30	23.20	2,623.8	5.5	0.2	0.4	0.31	-0.31	
2,687.0	0.40	339.30	2,686.8	6.3	0.4	0.3	1.67	-1.43	
2,750.0	0.60	227.30	2,749.8	6.3	0.1	0.6	1.33	0.32	
2,813.0	0.70	209.90	2,812.8	5.7	-0.4	1.0	0.35	0.16	
2,876.0	0.70	191.10	2,875.8	5.0	-0.6	1.2	0.36	0.00	
2,940.0	0.80	190.60	2,939.8	4.2	-0.8	1.2	0.16	0.16	
3,037.0	0.90	191.40	3,036.8	2.8	-1.1	1.4	0.10	0.10	
3,100.0	0.70	196.10	3,099.8	1.9	-1.3	1.5	0.33	-0.32	
3,164.0	0.90	190.70	3,163.8	1.1	-1.5	1.6	0.33	0.31	
3,227.0	0.80	183.00	3,226.7	0.1	-1.6	1.6	0.24	-0.16	
3,290.0	1.10	202.70	3,289.7	-0.8	-1.9	1.8	0.70	0.48	
3,353.0	1.00	198.40	3,352.7	-1.9	-2.3	2.1	0.20	-0.16	
3,416.0	1.10	87.90	3,415.7	-2.4	-1.8	1.6	2.74	0.16	
3,479.0	1.20	96.50	3,478.7	-2.5	-0.6	0.3	0.32	0.16	
3,542.0	1.10	103.70	3,541.7	-2.7	0.7	-0.9	0.28	-0.16	
3,605.0	1.10	103.90	3,604.7	-3.0	1.8	-2.1	0.01	0.00	
3,669.0	1.40	103.90	3,668.7	-3.3	3.2	-3.5	0.47	0.47	
3,732.0	0.70	158.70	3,731.7	-3.9	4.1	-4.5	1.82	-1.11	
3,794.0	0.90	160.00	3,793.7	-4.7	4.4	-4.8	0.32	0.32	
3,857.0	1.20	244.50	3,856.6	-5.4	4.0	-4.5	2.27	0.48	
3,920.0	1.30	241.00	3,919.6	-6.1	2.7	-3.4	0.20	0.16	
3,983.0	1.10	249.70	3,982.6	-6.6	1.6	-2.2	0.43	-0.32	
4,046.0	0.70	14.60	4,045.6	-6.4	1.1	-1.7	2.55	-0.63	
4,110.0	0.80	37.90	4,109.6	-5.7	1.5	-2.0	0.50	0.16	
4,173.0	0.40	33.50	4,172.6	-5.2	1.8	-2.4	0.64	-0.63	
4,236.0	0.10	33.50	4,235.6	-5.0	2.0	-2.5	0.48	-0.48	
4,299.0	0.30	132.40	4,298.6	-5.0	2.2	-2.7	0.52	0.32	
4,362.0	0.60	146.70	4,361.6	-5.4	2.5	-3.0	0.50	0.48	
4,425.0	0.80	172.90	4,424.6	-6.1	2.7	-3.3	0.59	0.32	
4,488.0	1.00	181.10	4,487.6	-7.1	2.7	-3.4	0.38	0.32	
4,551.0	0.80	178.90	4,550.6	-8.1	2.7	-3.5	0.32	-0.32	
4,614.0	0.70	200.10	4,613.6	-8.9	2.6	-3.5	0.46	-0.16	
4,677.0	0.70	227.10	4,676.6	-9.5	2.2	-3.2	0.52	0.00	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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
4,741.0	0.60	233.90	4,740.6	-10.0	1.6	-2.7	0.20	-0.16	
4,773.0	0.50	222.90	4,772.6	-10.2	1.4	-2.4	0.45	-0.31	
4,804.0	0.60	235.20	4,803.6	-10.4	1.2	-2.2	0.50	0.32	
4,836.0	1.40	11.70	4,835.6	-10.1	1.1	-2.2	5.88	2.50	
4,867.0	4.40	352.00	4,866.5	-8.5	1.0	-1.9	10.06	9.68	
4,899.0	7.50	346.30	4,898.3	-5.3	0.4	-0.9	9.85	9.69	
4,931.0	11.10	343.70	4,929.9	-0.3	-1.0	1.0	11.32	11.25	
4,962.0	13.10	342.50	4,960.2	5.9	-2.9	3.5	6.50	6.45	
4,994.0	14.90	346.00	4,991.3	13.4	-5.0	6.3	6.21	5.62	
5,025.0	18.10	347.40	5,021.0	21.9	-7.0	9.2	10.40	10.32	
5,057.0	21.10	346.60	5,051.1	32.4	-9.4	12.7	9.41	9.37	
5,089.0	24.10	345.50	5,080.7	44.3	-12.4	16.9	9.47	9.37	
5,120.0	27.20	347.90	5,108.6	57.4	-15.4	21.2	10.54	10.00	
5,152.0	29.50	351.50	5,136.8	72.3	-18.1	25.5	8.95	7.19	
5,184.0	32.20	353.40	5,164.3	88.6	-20.3	29.3	8.97	8.44	
5,215.0	34.70	353.80	5,190.1	105.6	-22.2	32.9	8.10	8.06	
5,247.0	37.60	355.00	5,216.0	124.3	-24.0	36.6	9.33	9.06	
5,279.0	40.00	356.90	5,240.9	144.3	-25.4	40.1	8.37	7.50	
5,310.0	42.70	359.20	5,264.2	164.8	-26.1	42.9	9.99	8.71	
5,342.0	45.10	0.60	5,287.2	187.0	-26.2	45.2	8.09	7.50	
5,374.0	47.90	2.90	5,309.2	210.2	-25.4	46.8	10.18	8.75	
5,405.0	50.60	5.00	5,329.5	233.6	-23.8	47.6	10.11	8.71	
5,437.0	53.00	7.30	5,349.3	258.6	-21.1	47.5	9.39	7.50	
5,469.0	54.80	6.50	5,368.1	284.3	-18.0	47.0	5.98	5.62	
5,500.0	57.30	5.10	5,385.4	309.9	-15.4	47.1	8.89	8.06	
5,532.0	59.80	3.50	5,402.1	337.1	-13.4	47.8	8.90	7.81	
5,563.0	60.60	0.70	5,417.5	364.0	-12.4	49.6	8.25	2.58	
5,595.0	61.60	356.40	5,433.0	392.0	-13.1	53.2	12.17	3.12	
5,627.0	61.80	352.50	5,448.2	420.0	-15.8	58.8	10.75	0.62	
5,658.0	62.00	349.20	5,462.8	447.0	-20.2	65.9	9.41	0.65	
5,689.0	63.20	347.10	5,477.1	473.9	-25.8	74.2	7.15	3.87	
5,722.0	65.40	343.80	5,491.4	502.7	-33.3	84.6	11.20	6.66	
5,753.0	65.20	340.80	5,504.3	529.5	-41.9	95.9	8.82	-0.65	
5,784.0	64.50	336.50	5,517.5	555.7	-52.1	108.7	12.76	-2.26	
5,816.0	65.70	333.10	5,531.0	581.9	-64.4	123.7	10.34	3.75	
5,848.0	68.80	331.40	5,543.4	608.0	-78.2	140.1	10.86	9.69	
5,879.0	71.60	329.20	5,553.9	633.3	-92.6	157.0	11.23	9.03	
5,911.0	73.30	326.20	5,563.5	659.1	-108.9	175.9	10.40	5.31	
5,943.0	75.30	323.10	5,572.2	684.2	-126.8	196.2	11.23	6.25	
5,974.0	77.10	322.70	5,579.6	708.3	-144.9	216.7	5.94	5.81	
5,997.0	78.10	316.10	5,584.5	725.3	-159.5	233.0	28.38	4.35	
6,028.0	80.10	314.70	5,590.4	747.0	-180.9	256.5	7.83	6.45	
6,060.0	81.30	310.90	5,595.5	768.4	-204.1	281.7	12.30	3.75	
6,092.0	81.60	306.30	5,600.3	788.2	-228.8	308.3	14.25	0.94	
6,123.0	83.10	303.50	5,604.4	805.7	-254.0	335.2	10.18	4.84	
6,155.0	83.50	302.40	5,608.2	823.0	-280.7	363.5	3.64	1.25	
6,186.0	83.80	299.80	5,611.6	838.9	-307.0	391.4	8.39	0.97	
6,218.0	83.80	296.70	5,615.0	854.0	-335.0	420.8	9.63	0.00	
6,250.0	84.60	293.80	5,618.3	867.6	-363.8	450.8	9.36	2.50	
6,281.0	85.50	289.90	5,621.0	879.1	-392.5	480.5	12.87	2.90	
6,313.0	86.20	287.10	5,623.3	889.2	-422.8	511.6	9.00	2.19	
6,345.0	87.60	285.00	5,625.0	898.0	-453.5	543.1	7.88	4.37	
6,376.0	88.50	282.20	5,626.1	905.3	-483.6	573.8	9.48	2.90	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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
6,408.0	89.60	280.70	5,626.6	911.6	-514.9	605.6	5.81	3.44	
6,439.0	90.00	280.00	5,626.7	917.2	-545.4	636.5	2.60	1.29	
6,471.0	90.50	280.40	5,626.6	922.9	-576.9	668.4	2.00	1.56	
6,502.0	89.90	278.70	5,626.5	928.0	-607.5	699.4	5.82	-1.94	
6,566.0	87.90	275.80	5,627.7	936.1	-671.0	763.3	5.50	-3.12	
6,629.0	88.70	275.90	5,629.6	942.5	-733.6	826.3	1.28	1.27	
6,692.0	89.90	275.90	5,630.3	949.0	-796.3	889.3	1.90	1.90	
6,755.0	90.40	275.90	5,630.2	955.5	-858.9	952.3	0.79	0.79	
6,818.0	90.80	274.10	5,629.5	961.0	-921.7	1,015.3	2.93	0.63	
6,879.0	89.50	274.50	5,629.3	965.5	-982.5	1,076.3	2.23	-2.13	
6,940.0	90.00	275.10	5,629.6	970.6	-1,043.3	1,137.2	1.28	0.82	
7,001.0	90.60	273.80	5,629.3	975.4	-1,104.1	1,198.2	2.35	0.98	
7,062.0	91.20	272.50	5,628.3	978.7	-1,165.0	1,259.1	2.35	0.98	
7,123.0	91.10	273.80	5,627.1	982.1	-1,225.9	1,320.1	2.14	-0.16	
7,184.0	91.10	275.70	5,625.9	987.1	-1,286.7	1,381.0	3.11	0.00	
7,245.0	89.80	278.10	5,625.4	994.5	-1,347.2	1,442.0	4.47	-2.13	
7,306.0	89.80	277.30	5,625.7	1,002.6	-1,407.7	1,503.0	1.31	0.00	
7,367.0	90.30	276.90	5,625.6	1,010.2	-1,468.2	1,564.0	1.05	0.82	
7,428.0	91.20	276.50	5,624.8	1,017.3	-1,528.8	1,625.0	1.61	1.48	
7,489.0	90.00	276.30	5,624.2	1,024.1	-1,589.4	1,686.0	1.99	-1.97	
7,550.0	90.40	276.40	5,624.0	1,030.8	-1,650.0	1,747.0	0.68	0.66	
7,610.0	91.30	275.80	5,623.1	1,037.2	-1,709.7	1,806.9	1.80	1.50	
7,672.0	91.50	274.20	5,621.6	1,042.6	-1,771.4	1,868.9	2.60	0.32	
7,733.0	89.80	273.10	5,620.9	1,046.5	-1,832.3	1,929.9	3.32	-2.79	
7,793.0	90.30	273.10	5,620.8	1,049.7	-1,892.2	1,989.8	0.83	0.83	
7,854.0	91.20	272.10	5,620.0	1,052.5	-1,953.1	2,050.7	2.21	1.48	
7,915.0	91.00	273.40	5,618.8	1,055.4	-2,014.1	2,111.6	2.16	-0.33	
7,976.0	89.70	273.70	5,618.5	1,059.2	-2,074.9	2,172.5	2.19	-2.13	
8,037.0	89.80	272.90	5,618.7	1,062.7	-2,135.8	2,233.5	1.32	0.16	
8,100.0	90.40	272.90	5,618.6	1,065.9	-2,198.8	2,296.4	0.95	0.95	
8,163.0	91.20	272.90	5,617.7	1,069.1	-2,261.7	2,359.3	1.27	1.27	
8,226.0	91.80	275.10	5,616.1	1,073.5	-2,324.5	2,422.2	3.62	0.95	
8,289.0	90.50	275.70	5,614.8	1,079.4	-2,387.2	2,485.2	2.27	-2.06	
8,352.0	90.90	275.00	5,614.1	1,085.3	-2,449.9	2,548.2	1.28	0.63	
8,415.0	91.40	274.00	5,612.8	1,090.2	-2,512.7	2,611.2	1.77	0.79	
8,478.0	92.10	273.90	5,610.9	1,094.6	-2,575.5	2,674.1	1.12	1.11	
8,541.0	90.60	274.40	5,609.4	1,099.1	-2,638.4	2,737.1	2.51	-2.38	
8,604.0	90.40	273.30	5,608.8	1,103.3	-2,701.2	2,800.0	1.77	-0.32	
8,667.0	90.80	273.00	5,608.2	1,106.8	-2,764.1	2,863.0	0.79	0.63	
8,730.0	89.70	273.80	5,607.9	1,110.5	-2,827.0	2,925.9	2.16	-1.75	
8,793.0	90.30	273.70	5,607.9	1,114.7	-2,889.9	2,988.9	0.97	0.95	
8,855.0	90.80	273.30	5,607.3	1,118.5	-2,951.7	3,050.8	1.03	0.81	
8,919.0	91.10	275.50	5,606.2	1,123.4	-3,015.5	3,114.8	3.47	0.47	
8,982.0	90.40	276.60	5,605.4	1,130.0	-3,078.2	3,177.8	2.07	-1.11	
9,045.0	90.60	277.80	5,604.9	1,137.9	-3,140.7	3,240.7	1.93	0.32	
9,109.0	89.60	276.70	5,604.8	1,146.0	-3,204.2	3,304.7	2.32	-1.56	
9,172.0	90.10	276.20	5,604.9	1,153.0	-3,266.8	3,367.7	1.12	0.79	
9,235.0	91.00	277.30	5,604.3	1,160.5	-3,329.3	3,430.7	2.26	1.43	
9,298.0	90.30	275.90	5,603.6	1,167.7	-3,391.9	3,493.7	2.48	-1.11	
9,361.0	90.60	275.50	5,603.1	1,173.9	-3,454.6	3,556.7	0.79	0.48	
9,425.0	90.70	274.70	5,602.4	1,179.6	-3,518.3	3,620.7	1.26	0.16	
9,488.0	89.30	273.50	5,602.4	1,184.1	-3,581.2	3,683.6	2.93	-2.22	
9,551.0	89.60	272.40	5,603.0	1,187.4	-3,644.1	3,746.6	1.81	0.48	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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
9,614.0	90.70	272.40	5,602.8	1,190.0	-3,707.0	3,809.4	1.75	1.75	
9,677.0	89.90	273.50	5,602.5	1,193.3	-3,769.9	3,872.4	2.16	-1.27	
9,741.0	89.30	272.70	5,602.9	1,196.7	-3,833.9	3,936.3	1.56	-0.94	
9,804.0	89.80	272.20	5,603.4	1,199.4	-3,896.8	3,999.2	1.12	0.79	
9,867.0	90.80	272.90	5,603.1	1,202.2	-3,959.7	4,062.1	1.94	1.59	
9,930.0	91.80	272.20	5,601.7	1,205.0	-4,022.6	4,124.9	1.94	1.59	
9,994.0	90.60	273.40	5,600.3	1,208.2	-4,086.6	4,188.8	2.65	-1.87	
10,057.0	89.20	275.10	5,600.4	1,212.8	-4,149.4	4,251.8	3.50	-2.22	
10,120.0	89.60	274.60	5,601.1	1,218.1	-4,212.1	4,314.8	1.02	0.63	
10,184.0	90.30	274.50	5,601.2	1,223.2	-4,275.9	4,378.8	1.10	1.09	
10,247.0	89.30	275.20	5,601.4	1,228.5	-4,338.7	4,441.8	1.94	-1.59	
10,310.0	90.30	275.00	5,601.6	1,234.1	-4,401.5	4,504.7	1.62	1.59	
10,328.0	90.70	274.70	5,601.4	1,235.7	-4,419.4	4,522.7	2.78	2.22	Last CES Survey @ 10,328' MD
10,378.0	90.70	274.70	5,600.8	1,239.8	-4,469.2	4,572.7	0.00	0.00	PTB @ 10,378'

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
H36A-2307 01H PBHL	0.00	0.00	5,627.0	1,241.7	-4,480.0	1,890,552.37	1,261,402.97	36.188940	-107.534440
- actual wellpath misses target center by 28.4ft at 10378.0ft MD (5600.8 TVD, 1239.8 N, -4469.2 E)									
- Point									
H36A-2307 01H PBHL F	0.00	0.00	5,603.9	1,241.7	-4,480.0	1,890,552.37	1,261,402.97	36.188940	-107.534440
- actual wellpath misses target center by 11.4ft at 10378.0ft MD (5600.8 TVD, 1239.8 N, -4469.2 E)									
- Point									
H36A-2307 01H PBHL F	0.00	0.00	5,598.9	1,241.7	-4,480.0	1,890,552.37	1,261,402.97	36.188940	-107.534440
- actual wellpath misses target center by 11.1ft at 10378.0ft MD (5600.8 TVD, 1239.8 N, -4469.2 E)									
- Point									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates	Comment
		+N/-S (ft)	+E/-W (ft)
10,328.0	5,601.4	1,235.7	-4,419.4
10,378.0	5,600.8	1,239.8	-4,469.2
			Last CES Survey @ 10,328' MD
			PTB @ 10,378'

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------

EnCana Oil & Gas (USA) Inc

Sandoval County, NM

Lybrook

Lybrook H36A-2307 01H

HZ

Design: FINAL

Survey Report - Geographic

02 June, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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	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 H36A-2307 01H					
Well Position	+N/-S	0.0 ft	Northing:	1,889,252.17 ft	Latitude:	36.185530
	+E/-W	0.0 ft	Easting:	1,265,866.33 ft	Longitude:	-107.519260
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,263.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/6/2014	9.37	62.96	50,157

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	275.88	

Survey Program	Date 6/2/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
589.0	10,378.0	Survey #1 (HZ)	Geolink MWD	Geolink MWD

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,889,252.17	1,265,866.33	36.185530	-107.519260	
589.0	0.00	5.40	589.0	0.0	0.0	1,889,252.17	1,265,866.33	36.185530	-107.519260	
651.0	0.10	188.10	651.0	-0.1	0.0	1,889,252.12	1,265,866.32	36.185530	-107.519260	
715.0	0.20	138.60	715.0	-0.2	0.1	1,889,251.98	1,265,866.38	36.185530	-107.519260	
778.0	0.10	171.80	778.0	-0.3	0.1	1,889,251.84	1,265,866.46	36.185530	-107.519260	
841.0	0.50	186.70	841.0	-0.7	0.1	1,889,251.52	1,265,866.43	36.185529	-107.519260	
904.0	0.20	175.40	904.0	-1.0	0.1	1,889,251.13	1,265,866.40	36.185528	-107.519260	
968.0	0.40	182.30	968.0	-1.4	0.1	1,889,250.80	1,265,866.40	36.185527	-107.519260	
1,031.0	0.40	211.60	1,031.0	-1.8	0.0	1,889,250.39	1,265,866.27	36.185526	-107.519260	
1,094.0	0.50	209.90	1,094.0	-2.2	-0.3	1,889,249.97	1,265,866.01	36.185524	-107.519261	
1,157.0	0.40	229.50	1,157.0	-2.6	-0.6	1,889,249.59	1,265,865.70	36.185523	-107.519262	
1,220.0	0.40	235.80	1,220.0	-2.9	-0.9	1,889,249.33	1,265,865.35	36.185523	-107.519263	

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
1,284.0	0.30	208.70	1,284.0	-3.1	-1.2	1,889,249.06	1,265,865.08	36.185522	-107.519264
1,347.0	0.30	221.50	1,347.0	-3.4	-1.4	1,889,248.80	1,265,864.89	36.185521	-107.519265
1,410.0	0.20	216.30	1,410.0	-3.6	-1.6	1,889,248.59	1,265,864.71	36.185521	-107.519266
1,474.0	0.30	238.50	1,474.0	-3.8	-1.8	1,889,248.41	1,265,864.50	36.185520	-107.519266
1,537.0	0.40	251.30	1,537.0	-3.9	-2.1	1,889,248.26	1,265,864.15	36.185520	-107.519267
1,600.0	0.30	241.70	1,600.0	-4.1	-2.5	1,889,248.12	1,265,863.80	36.185519	-107.519269
1,663.0	0.60	232.60	1,663.0	-4.4	-2.9	1,889,247.84	1,265,863.38	36.185518	-107.519270
1,726.0	0.60	236.80	1,726.0	-4.7	-3.4	1,889,247.47	1,265,862.84	36.185517	-107.519272
1,789.0	0.10	24.80	1,789.0	-4.9	-3.7	1,889,247.34	1,265,862.59	36.185517	-107.519273
1,852.0	0.60	300.20	1,852.0	-4.7	-3.9	1,889,247.56	1,265,862.33	36.185518	-107.519274
1,915.0	0.60	267.60	1,915.0	-4.5	-4.6	1,889,247.72	1,265,861.72	36.185518	-107.519276
1,991.0	0.50	242.20	1,991.0	-4.7	-5.2	1,889,247.56	1,265,861.02	36.185518	-107.519278
2,054.0	0.50	242.90	2,054.0	-4.9	-5.7	1,889,247.31	1,265,860.53	36.185517	-107.519280
2,118.0	0.30	249.80	2,118.0	-5.1	-6.1	1,889,247.13	1,265,860.12	36.185516	-107.519281
2,181.0	1.40	42.40	2,181.0	-4.6	-5.8	1,889,247.64	1,265,860.49	36.185518	-107.519280
2,244.0	1.80	42.00	2,243.9	-3.3	-4.6	1,889,248.93	1,265,861.69	36.185521	-107.519276
2,307.0	1.80	34.50	2,306.9	-1.8	-3.4	1,889,250.46	1,265,862.93	36.185526	-107.519272
2,370.0	1.80	38.10	2,369.9	-0.2	-2.2	1,889,252.04	1,265,864.13	36.185530	-107.519268
2,434.0	1.40	19.10	2,433.9	1.4	-1.3	1,889,253.56	1,265,865.02	36.185534	-107.519265
2,497.0	1.10	13.80	2,496.8	2.7	-0.9	1,889,254.87	1,265,865.44	36.185538	-107.519263
2,560.0	1.50	23.70	2,559.8	4.0	-0.5	1,889,256.20	1,265,865.93	36.185542	-107.519262
2,624.0	1.30	23.20	2,623.8	5.5	0.2	1,889,257.63	1,265,866.57	36.185545	-107.519260
2,687.0	0.40	339.30	2,686.8	6.3	0.4	1,889,258.49	1,265,866.79	36.185548	-107.519259
2,750.0	0.60	227.30	2,749.8	6.3	0.1	1,889,258.48	1,265,866.46	36.185548	-107.519260
2,813.0	0.70	209.90	2,812.8	5.7	-0.4	1,889,257.92	1,265,866.02	36.185546	-107.519262
2,876.0	0.70	191.10	2,875.8	5.0	-0.6	1,889,257.22	1,265,865.75	36.185544	-107.519262
2,940.0	0.80	190.60	2,939.8	4.2	-0.8	1,889,256.40	1,265,865.58	36.185542	-107.519263
3,037.0	0.90	191.40	3,036.8	2.8	-1.1	1,889,254.99	1,265,865.29	36.185538	-107.519264
3,100.0	0.70	196.10	3,099.8	1.9	-1.3	1,889,254.14	1,265,865.07	36.185536	-107.519265
3,164.0	0.90	190.70	3,163.8	1.1	-1.5	1,889,253.27	1,265,864.86	36.185533	-107.519265
3,227.0	0.80	183.00	3,226.7	0.1	-1.6	1,889,252.34	1,265,864.73	36.185531	-107.519266
3,290.0	1.10	202.70	3,289.7	-0.8	-1.9	1,889,251.35	1,265,864.46	36.185528	-107.519267
3,353.0	1.00	198.40	3,352.7	-1.9	-2.3	1,889,250.28	1,265,864.04	36.185525	-107.519268
3,416.0	1.10	87.90	3,415.7	-2.4	-1.8	1,889,249.77	1,265,864.46	36.185524	-107.519266
3,479.0	1.20	96.50	3,478.7	-2.5	-0.6	1,889,249.70	1,265,865.72	36.185524	-107.519262
3,542.0	1.10	103.70	3,541.7	-2.7	0.7	1,889,249.47	1,265,866.96	36.185523	-107.519258
3,605.0	1.10	103.90	3,604.7	-3.0	1.8	1,889,249.16	1,265,868.13	36.185522	-107.519254
3,669.0	1.40	103.90	3,668.7	-3.3	3.2	1,889,248.81	1,265,869.48	36.185521	-107.519249
3,732.0	0.70	158.70	3,731.7	-3.9	4.1	1,889,248.26	1,265,870.36	36.185520	-107.519246
3,794.0	0.90	160.00	3,793.7	-4.7	4.4	1,889,247.44	1,265,870.66	36.185518	-107.519245
3,857.0	1.20	244.50	3,856.6	-5.4	4.0	1,889,246.70	1,265,870.22	36.185516	-107.519247
3,920.0	1.30	241.00	3,919.6	-6.1	2.7	1,889,246.08	1,265,868.99	36.185514	-107.519251
3,983.0	1.10	249.70	3,982.6	-6.6	1.6	1,889,245.54	1,265,867.79	36.185512	-107.519255
4,046.0	0.70	14.60	4,045.6	-6.4	1.1	1,889,245.71	1,265,867.33	36.185513	-107.519257
4,110.0	0.80	37.90	4,109.6	-5.7	1.5	1,889,246.44	1,265,867.71	36.185515	-107.519255
4,173.0	0.40	33.50	4,172.6	-5.2	1.8	1,889,246.96	1,265,868.11	36.185516	-107.519254
4,236.0	0.10	33.50	4,235.6	-5.0	2.0	1,889,247.19	1,265,868.26	36.185517	-107.519253
4,299.0	0.30	132.40	4,298.6	-5.0	2.2	1,889,247.12	1,265,868.41	36.185517	-107.519253
4,362.0	0.60	146.70	4,361.6	-5.4	2.5	1,889,246.73	1,265,868.71	36.185516	-107.519252
4,425.0	0.80	172.90	4,424.6	-6.1	2.7	1,889,246.02	1,265,868.94	36.185514	-107.519251
4,488.0	1.00	181.10	4,487.6	-7.1	2.7	1,889,245.03	1,265,868.97	36.185511	-107.519251
4,551.0	0.80	178.90	4,550.6	-8.1	2.7	1,889,244.04	1,265,868.95	36.185508	-107.519251
4,614.0	0.70	200.10	4,613.6	-8.9	2.6	1,889,243.24	1,265,868.82	36.185506	-107.519251
4,677.0	0.70	227.10	4,676.6	-9.5	2.2	1,889,242.62	1,265,868.40	36.185504	-107.519253
4,741.0	0.60	233.90	4,740.6	-10.0	1.6	1,889,242.17	1,265,867.83	36.185503	-107.519255

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
4,773.0	0.50	222.90	4,772.6	-10.2	1.4	1,889,241.97	1,265,867.60	36.185502	-107.519256	
4,804.0	0.60	235.20	4,803.6	-10.4	1.2	1,889,241.78	1,265,867.37	36.185502	-107.519256	
4,836.0	1.40	11.70	4,835.6	-10.1	1.1	1,889,242.07	1,265,867.32	36.185503	-107.519256	
4,867.0	4.40	352.00	4,866.5	-8.5	1.0	1,889,243.62	1,265,867.25	36.185507	-107.519257	
4,899.0	7.50	346.30	4,898.3	-5.3	0.4	1,889,246.87	1,265,866.63	36.185516	-107.519259	
4,931.0	11.10	343.70	4,929.9	-0.3	-1.0	1,889,251.88	1,265,865.33	36.185530	-107.519264	
4,962.0	13.10	342.50	4,960.2	5.9	-2.9	1,889,258.12	1,265,863.52	36.185547	-107.519270	
4,994.0	14.90	346.00	4,991.3	13.4	-5.0	1,889,265.60	1,265,861.53	36.185567	-107.519277	
5,025.0	18.10	347.40	5,021.0	21.9	-7.0	1,889,274.19	1,265,859.63	36.185591	-107.519284	
5,057.0	21.10	346.60	5,051.1	32.4	-9.4	1,889,284.68	1,265,857.34	36.185619	-107.519292	
5,089.0	24.10	345.50	5,080.7	44.3	-12.4	1,889,296.65	1,265,854.53	36.185652	-107.519302	
5,120.0	27.20	347.90	5,108.6	57.4	-15.4	1,889,309.74	1,265,851.63	36.185688	-107.519313	
5,152.0	29.50	351.50	5,136.8	72.3	-18.1	1,889,324.72	1,265,849.13	36.185729	-107.519322	
5,184.0	32.20	353.40	5,164.3	88.6	-20.3	1,889,341.02	1,265,847.20	36.185774	-107.519329	
5,215.0	34.70	353.80	5,190.1	105.6	-22.2	1,889,358.02	1,265,845.52	36.185820	-107.519335	
5,247.0	37.60	355.00	5,216.0	124.3	-24.0	1,889,376.83	1,265,843.93	36.185872	-107.519342	
5,279.0	40.00	356.90	5,240.9	144.3	-25.4	1,889,396.84	1,265,842.78	36.185927	-107.519346	
5,310.0	42.70	359.20	5,264.2	164.8	-26.1	1,889,417.31	1,265,842.36	36.185983	-107.519349	
5,342.0	45.10	0.60	5,287.2	187.0	-26.2	1,889,439.50	1,265,842.62	36.186044	-107.519349	
5,374.0	47.90	2.90	5,309.2	210.2	-25.4	1,889,462.68	1,265,843.64	36.186108	-107.519346	
5,405.0	50.60	5.00	5,329.5	233.6	-23.8	1,889,486.08	1,265,845.58	36.186172	-107.519341	
5,437.0	53.00	7.30	5,349.3	258.6	-21.1	1,889,511.04	1,265,848.60	36.186241	-107.519332	
5,469.0	54.80	6.50	5,368.1	284.3	-18.0	1,889,536.67	1,265,852.04	36.186311	-107.519321	
5,500.0	57.30	5.10	5,385.4	309.9	-15.4	1,889,562.21	1,265,854.97	36.186382	-107.519312	
5,532.0	59.80	3.50	5,402.1	337.1	-13.4	1,889,589.40	1,265,857.37	36.186456	-107.519306	
5,563.0	60.60	0.70	5,417.5	364.0	-12.4	1,889,616.26	1,265,858.70	36.186530	-107.519302	
5,595.0	61.60	356.40	5,433.0	392.0	-13.1	1,889,644.27	1,265,858.36	36.186607	-107.519305	
5,627.0	61.80	352.50	5,448.2	420.0	-15.8	1,889,672.34	1,265,856.00	36.186684	-107.519314	
5,658.0	62.00	349.20	5,462.8	447.0	-20.2	1,889,699.38	1,265,852.00	36.186758	-107.519329	
5,689.0	63.20	347.10	5,477.1	473.9	-25.8	1,889,726.39	1,265,846.70	36.186832	-107.519348	
5,722.0	65.40	343.80	5,491.4	502.7	-33.3	1,889,755.26	1,265,839.60	36.186911	-107.519373	
5,753.0	65.20	340.80	5,504.3	529.5	-41.9	1,889,782.20	1,265,831.39	36.186985	-107.519402	
5,784.0	64.50	336.50	5,517.5	555.7	-52.1	1,889,808.46	1,265,821.52	36.187057	-107.519437	
5,816.0	65.70	333.10	5,531.0	581.9	-64.4	1,889,834.88	1,265,809.51	36.187129	-107.519479	
5,848.0	68.80	331.40	5,543.4	608.0	-78.2	1,889,861.16	1,265,796.11	36.187200	-107.519525	
5,879.0	71.60	329.20	5,553.9	633.3	-92.6	1,889,886.68	1,265,781.99	36.187270	-107.519574	
5,911.0	73.30	326.20	5,563.5	659.1	-108.9	1,889,912.67	1,265,766.02	36.187341	-107.519629	
5,943.0	75.30	323.10	5,572.2	684.2	-126.8	1,889,938.02	1,265,748.53	36.187410	-107.519690	
5,974.0	77.10	322.70	5,579.6	708.3	-144.9	1,889,962.27	1,265,730.69	36.187476	-107.519751	
5,997.0	78.10	316.10	5,584.5	725.3	-159.5	1,889,979.49	1,265,716.31	36.187523	-107.519801	
6,028.0	80.10	314.70	5,590.4	747.0	-180.9	1,890,001.44	1,265,695.22	36.187582	-107.519873	
6,060.0	81.30	310.90	5,595.5	768.4	-204.1	1,890,023.19	1,265,672.33	36.187641	-107.519952	
6,092.0	81.60	306.30	5,600.3	788.2	-228.8	1,890,043.25	1,265,647.87	36.187695	-107.520035	
6,123.0	83.10	303.50	5,604.4	805.7	-254.0	1,890,061.16	1,265,622.91	36.187744	-107.520121	
6,155.0	83.50	302.40	5,608.2	823.0	-280.7	1,890,078.79	1,265,596.47	36.187791	-107.520211	
6,186.0	83.80	299.80	5,611.6	838.9	-307.0	1,890,095.05	1,265,570.30	36.187835	-107.520301	
6,218.0	83.80	296.70	5,615.0	854.0	-335.0	1,890,110.47	1,265,542.48	36.187876	-107.520396	
6,250.0	84.60	293.80	5,618.3	867.6	-363.8	1,890,124.42	1,265,513.87	36.187913	-107.520493	
6,281.0	85.50	289.90	5,621.0	879.1	-392.5	1,890,136.29	1,265,485.36	36.187945	-107.520590	
6,313.0	86.20	287.10	5,623.3	889.2	-422.8	1,890,146.81	1,265,455.23	36.187973	-107.520693	
6,345.0	87.60	285.00	5,625.0	898.0	-453.5	1,890,156.04	1,265,424.64	36.187997	-107.520797	
6,376.0	88.50	282.20	5,626.1	905.3	-483.6	1,890,163.72	1,265,394.63	36.188017	-107.520899	
6,408.0	89.60	280.70	5,626.6	911.6	-514.9	1,890,170.48	1,265,363.36	36.188034	-107.521005	
6,439.0	90.00	280.00	5,626.7	917.2	-545.4	1,890,176.45	1,265,332.94	36.188050	-107.521108	
6,471.0	90.50	280.40	5,626.6	922.9	-576.9	1,890,182.52	1,265,301.52	36.188065	-107.521215	

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
6,502.0	89.90	278.70	5,626.5	928.0	-607.5	1,890,188.07	1,265,271.02	36.188079	-107.521319
6,566.0	87.90	275.80	5,627.7	936.1	-671.0	1,890,196.97	1,265,207.67	36.188102	-107.521534
6,629.0	88.70	275.90	5,629.6	942.5	-733.6	1,890,204.21	1,265,145.11	36.188119	-107.521746
6,692.0	89.90	275.90	5,630.3	949.0	-796.3	1,890,211.50	1,265,082.54	36.188137	-107.521958
6,755.0	90.40	275.90	5,630.2	955.5	-858.9	1,890,218.80	1,265,019.97	36.188155	-107.522171
6,818.0	90.80	274.10	5,629.5	961.0	-921.7	1,890,225.11	1,264,957.29	36.188170	-107.522383
6,879.0	89.50	274.50	5,629.3	965.5	-982.5	1,890,230.48	1,264,896.53	36.188182	-107.522589
6,940.0	90.00	275.10	5,629.6	970.6	-1,043.3	1,890,236.38	1,264,835.82	36.188196	-107.522795
7,001.0	90.60	273.80	5,629.3	975.4	-1,104.1	1,890,241.90	1,264,775.07	36.188209	-107.523001
7,062.0	91.20	272.50	5,628.3	978.7	-1,165.0	1,890,246.05	1,264,714.22	36.188219	-107.523208
7,123.0	91.10	273.80	5,627.1	982.1	-1,225.9	1,890,250.20	1,264,653.37	36.188228	-107.523414
7,184.0	91.10	275.70	5,625.9	987.1	-1,286.7	1,890,256.04	1,264,592.67	36.188242	-107.523620
7,245.0	89.80	278.10	5,625.4	994.5	-1,347.2	1,890,264.16	1,264,532.22	36.188262	-107.523825
7,306.0	89.80	277.30	5,625.7	1,002.6	-1,407.7	1,890,273.13	1,264,471.88	36.188284	-107.524030
7,367.0	90.30	276.90	5,625.6	1,010.2	-1,468.2	1,890,281.46	1,264,411.45	36.188305	-107.524235
7,428.0	91.20	276.50	5,624.8	1,017.3	-1,528.8	1,890,289.36	1,264,350.97	36.188325	-107.524440
7,489.0	90.00	276.30	5,624.2	1,024.1	-1,589.4	1,890,296.96	1,264,290.45	36.188343	-107.524646
7,550.0	90.40	276.40	5,624.0	1,030.8	-1,650.0	1,890,304.50	1,264,229.92	36.188362	-107.524851
7,610.0	91.30	275.80	5,623.1	1,037.2	-1,709.7	1,890,311.65	1,264,170.36	36.188379	-107.525053
7,672.0	91.50	274.20	5,621.6	1,042.6	-1,771.4	1,890,317.86	1,264,108.69	36.188394	-107.525263
7,733.0	89.80	273.10	5,620.9	1,046.5	-1,832.3	1,890,322.54	1,264,047.88	36.188405	-107.525469
7,793.0	90.30	273.10	5,620.8	1,049.7	-1,892.2	1,890,326.57	1,263,988.01	36.188414	-107.525672
7,854.0	91.20	272.10	5,620.0	1,052.5	-1,953.1	1,890,330.13	1,263,927.12	36.188421	-107.525878
7,915.0	91.00	273.40	5,618.8	1,055.4	-2,014.1	1,890,333.85	1,263,866.25	36.188429	-107.526085
7,976.0	89.70	273.70	5,618.5	1,059.2	-2,074.9	1,890,338.43	1,263,805.42	36.188440	-107.526291
8,037.0	89.80	272.90	5,618.7	1,062.7	-2,135.8	1,890,342.73	1,263,744.58	36.188449	-107.526497
8,100.0	90.40	272.90	5,618.6	1,065.9	-2,198.8	1,890,346.74	1,263,681.70	36.188458	-107.526711
8,163.0	91.20	272.90	5,617.7	1,069.1	-2,261.7	1,890,350.75	1,263,618.84	36.188467	-107.526924
8,226.0	91.80	275.10	5,616.1	1,073.5	-2,324.5	1,890,355.97	1,263,556.06	36.188479	-107.527137
8,289.0	90.50	275.70	5,614.8	1,079.4	-2,387.2	1,890,362.72	1,263,493.44	36.188495	-107.527349
8,352.0	90.90	275.00	5,614.1	1,085.3	-2,449.9	1,890,369.41	1,263,430.80	36.188511	-107.527562
8,415.0	91.40	274.00	5,612.8	1,090.2	-2,512.7	1,890,375.17	1,263,368.08	36.188525	-107.527774
8,478.0	92.10	273.90	5,610.9	1,094.6	-2,575.5	1,890,380.33	1,263,305.32	36.188537	-107.527987
8,541.0	90.60	274.40	5,609.4	1,099.1	-2,638.4	1,890,385.71	1,263,242.57	36.188549	-107.528200
8,604.0	90.40	273.30	5,608.8	1,103.3	-2,701.2	1,890,390.76	1,263,179.78	36.188561	-107.528413
8,667.0	90.80	273.00	5,608.2	1,106.8	-2,764.1	1,890,395.05	1,263,116.93	36.188570	-107.528626
8,730.0	89.70	273.80	5,607.9	1,110.5	-2,827.0	1,890,399.60	1,263,054.09	36.188580	-107.528839
8,793.0	90.30	273.70	5,607.9	1,114.7	-2,889.9	1,890,404.55	1,262,991.29	36.188592	-107.529052
8,855.0	90.80	273.30	5,607.3	1,118.5	-2,951.7	1,890,409.14	1,262,929.46	36.188602	-107.529262
8,919.0	91.10	275.50	5,606.2	1,123.4	-3,015.5	1,890,414.88	1,262,865.73	36.188616	-107.529478
8,982.0	90.40	276.60	5,605.4	1,130.0	-3,078.2	1,890,422.34	1,262,803.18	36.188634	-107.529690
9,045.0	90.60	277.80	5,604.9	1,137.9	-3,140.7	1,890,431.05	1,262,740.79	36.188655	-107.529902
9,109.0	89.60	276.70	5,604.8	1,146.0	-3,204.2	1,890,439.96	1,262,677.42	36.188678	-107.530117
9,172.0	90.10	276.20	5,604.9	1,153.0	-3,266.8	1,890,447.86	1,262,614.91	36.188697	-107.530329
9,235.0	91.00	277.30	5,604.3	1,160.5	-3,329.3	1,890,456.08	1,262,552.46	36.188717	-107.530541
9,298.0	90.30	275.90	5,603.6	1,167.7	-3,391.9	1,890,464.14	1,262,489.98	36.188737	-107.530753
9,361.0	90.60	275.50	5,603.1	1,173.9	-3,454.6	1,890,471.21	1,262,427.38	36.188754	-107.530966
9,425.0	90.70	274.70	5,602.4	1,179.6	-3,518.3	1,890,477.74	1,262,363.72	36.188770	-107.531182
9,488.0	89.30	273.50	5,602.4	1,184.1	-3,581.2	1,890,483.06	1,262,300.95	36.188782	-107.531395
9,551.0	89.60	272.40	5,603.0	1,187.4	-3,644.1	1,890,487.13	1,262,238.08	36.188791	-107.531608
9,614.0	90.70	272.40	5,602.8	1,190.0	-3,707.0	1,890,490.59	1,262,175.18	36.188798	-107.531821
9,677.0	89.90	273.50	5,602.5	1,193.3	-3,769.9	1,890,494.65	1,262,112.31	36.188807	-107.532034
9,741.0	89.30	272.70	5,602.9	1,196.7	-3,833.9	1,890,498.95	1,262,048.46	36.188817	-107.532251
9,804.0	89.80	272.20	5,603.4	1,199.4	-3,896.8	1,890,502.46	1,261,985.56	36.188824	-107.532464
9,867.0	90.80	272.90	5,603.1	1,202.2	-3,959.7	1,890,506.09	1,261,922.66	36.188832	-107.532677

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook H36A-2307 01H
Project:	Sandoval County, NM	TVD Reference:	15' KB @ 7278.0ft (Aztec 777)
Site:	Lybrook	MD Reference:	15' KB @ 7278.0ft (Aztec 777)
Well:	Lybrook H36A-2307 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)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
9,930.0	91.80	272.20	5,601.7	1,205.0	-4,022.6	1,890,509.72	1,261,859.79	36.188840	-107.532891
9,994.0	90.60	273.40	5,600.3	1,208.2	-4,086.6	1,890,513.68	1,261,795.93	36.188848	-107.533107
10,057.0	89.20	275.10	5,600.4	1,212.8	-4,149.4	1,890,519.17	1,261,733.17	36.188861	-107.533320
10,120.0	89.60	274.60	5,601.1	1,218.1	-4,212.1	1,890,525.31	1,261,670.47	36.188875	-107.533533
10,184.0	90.30	274.50	5,601.2	1,223.2	-4,275.9	1,890,531.22	1,261,606.75	36.188889	-107.533749
10,247.0	89.30	275.20	5,601.4	1,228.5	-4,338.7	1,890,537.37	1,261,544.05	36.188904	-107.533962
10,310.0	90.30	275.00	5,601.6	1,234.1	-4,401.5	1,890,543.79	1,261,481.38	36.188919	-107.534174
10,328.0	90.70	274.70	5,601.4	1,235.7	-4,419.4	1,890,545.55	1,261,463.49	36.188924	-107.534235
Last CES Survey @ 10,328' MD									
10,378.0	90.70	274.70	5,600.8	1,239.8	-4,469.2	1,890,550.29	1,261,413.72	36.188935	-107.534404
PTB @ 10,378'									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
H36A-2307 01H PBHL F	0.00	0.00	5,598.9	1,241.7	-4,480.0	1,890,552.38	1,261,402.97	36.188940	-107.534440
- actual wellpath misses target center by 11.1ft at 10378.0ft MD (5600.8 TVD, 1239.8 N, -4469.2 E)									
- Point									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
10,328.0	5,601.4	1,235.7	-4,419.4	Last CES Survey @ 10,328' MD
10,378.0	5,600.8	1,239.8	-4,469.2	PTB @ 10,378'

Checked By: _____ Approved By: _____ Date: _____