

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-103
Revised August 1, 2011

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	7. Lease Name or Unit Agreement Name Lybrook M31-2306
2. Name of Operator Encana Oil & Gas (USA) Inc.	8. Well Number 02H
3. Address of Operator 370 17 th Street, Suite 1700 Denver, CO 80202	9. OGRID Number 282327
4. Well Location SHL: Unit Letter M: 1224 feet from the <u>SOUTH</u> line and 437 feet from the <u>WEST</u> line, Sec 31, T23N, R6W, Sandoval County BHL: Unit Letter L: 1920 feet from the <u>SOUTH</u> line and 330 feet from the <u>WEST</u> line, Sec 36, T23N, R7W, Sandoval County	10. Pool name or Wildcat Lybrook Gallup
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 7173' GR	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: Vertical Hole Size ☐
RCUD MAY 17 '13
OIL CONS. DIV.
DIST. 3

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Encana Oil & Gas (USA) Inc. (Encana) would like to revise the Bottom Hole Location for the Lybrook M31-2306 02H well. Encana would like to change the Bottom Hole Location from original 1700' FSL, 330' FWL to 1920' FSL, 330' FWL. This will change the depth of the well from 10625' MD/5459' TVD to 10771' MD/5459' TVD. Please see attached wellbore diagram. Estimated spud date is July 3, 2013.

CONFIDENTIAL

Hold C104
for Directional Survey
and "As Drilled" plat

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

SIGNATURE Catherine Anadu TITLE Regulatory Analyst DATE May 15, 2013
Type or print name Catherine Anadu E-mail address: catherine.anadu@encana.com PHONE: 720-876-3567

For State Use Only

APPROVED BY: Charles TITLE SUPERVISOR DISTRICT # 3 DATE JUN 07 2013
Conditions of Approval (if any): AV

Hold C104
for Directional Survey
and "As Drilled" plat

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

CONFIDENTIAL

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-043-21146		*Pool Code 42289	*Pool Name LYBROOK GALLUP
*Property Code	*Property Name LYBROOK M31-2306		*Well Number 02H
*GRID No 282327	*Operator Name ENCANA OIL & GAS (USA) INC.		*Elevation 7173'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	31	23N	6W	4	1224	SOUTH	437	WEST	SANDOVAL

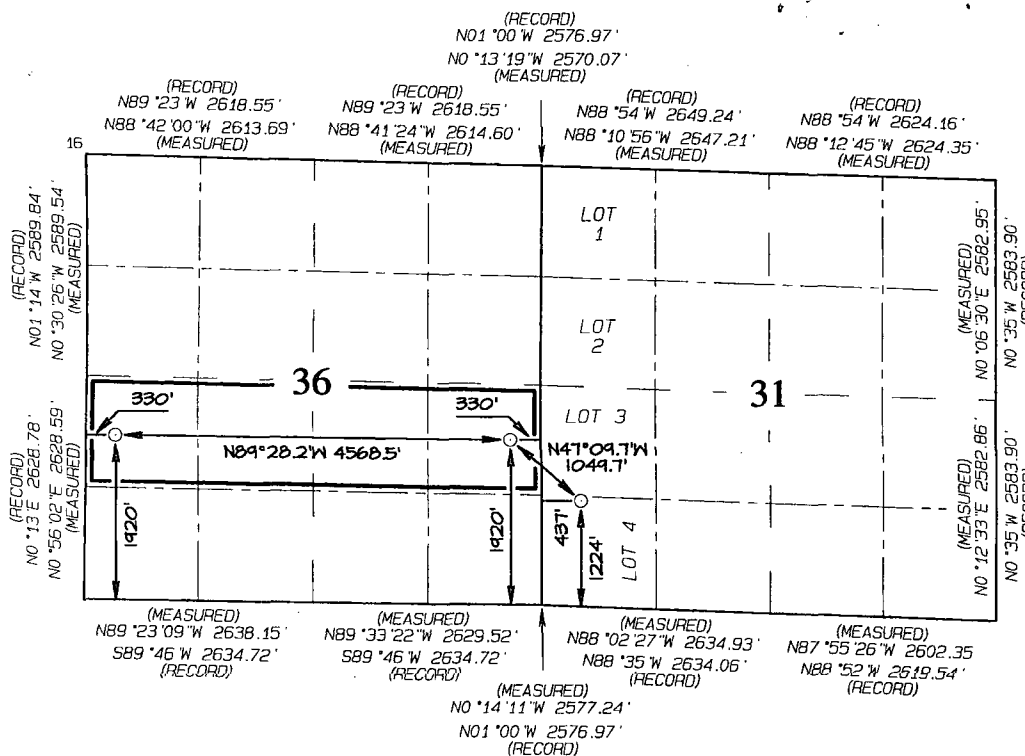
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	36	23N	7W		1920	SOUTH	330	WEST	SANDOVAL

12 Dedicated Acres 160.0 Acres N/2 S/2 - Section 36	13 Joint or Infill	14 Consolidation Code	15 Order No. RCVD MAY 22 '13 OIL CONS. DIV.
---	--------------------	-----------------------	---

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE
BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

DIST. 3



END-OF-LATERAL
1920' FSL 330' FWL
SECTION 36, T23N, R7W
LAT: 36.18097°N
LONG: 107.53368°W
DATUM: NAD1927

LAT: 36.18099°N
LONG: 107.53429°W
DATUM: NAD1983

POINT-OF-ENTRY
1920' FSL 330' FEL
SECTION 36, T23N, R7W
LAT: 36.18102°N
LONG: 107.51820°W
DATUM: NAD1927

LAT: 36.18104°N
LONG: 107.51881°W
DATUM: NAD1983

SURFACE LOCATION
1224' FSL 437' FWL
SECTION 31, T23N, R6W
LAT: 36.17909°N
LONG: 107.51556°W
DATUM: NAD1927

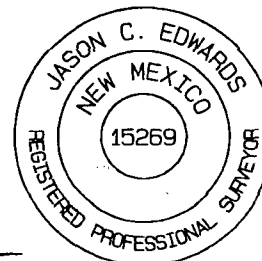
LAT: 36.17910°N
LONG: 107.51617°W
DATUM: NAD1983

17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to 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.

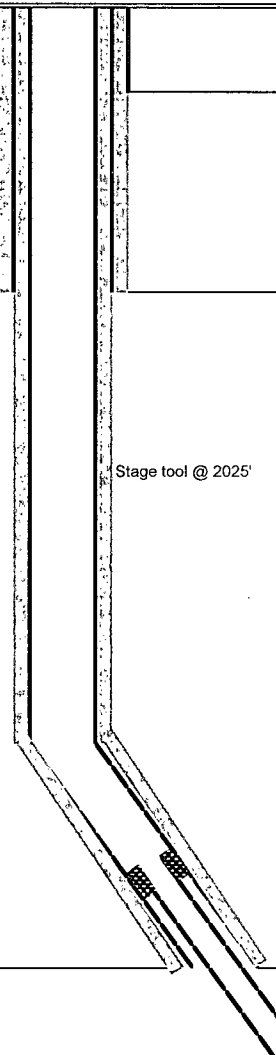
Signature: *Holly Hill* Date: *05.20.2013*
Printed Name: *Holly Hill*
E-mail Address: *Holly.Hill@encana.com*

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: MAY 6, 2013
Date of Survey: MARCH 23, 2012
Signature and Seal of Professional Surveyor

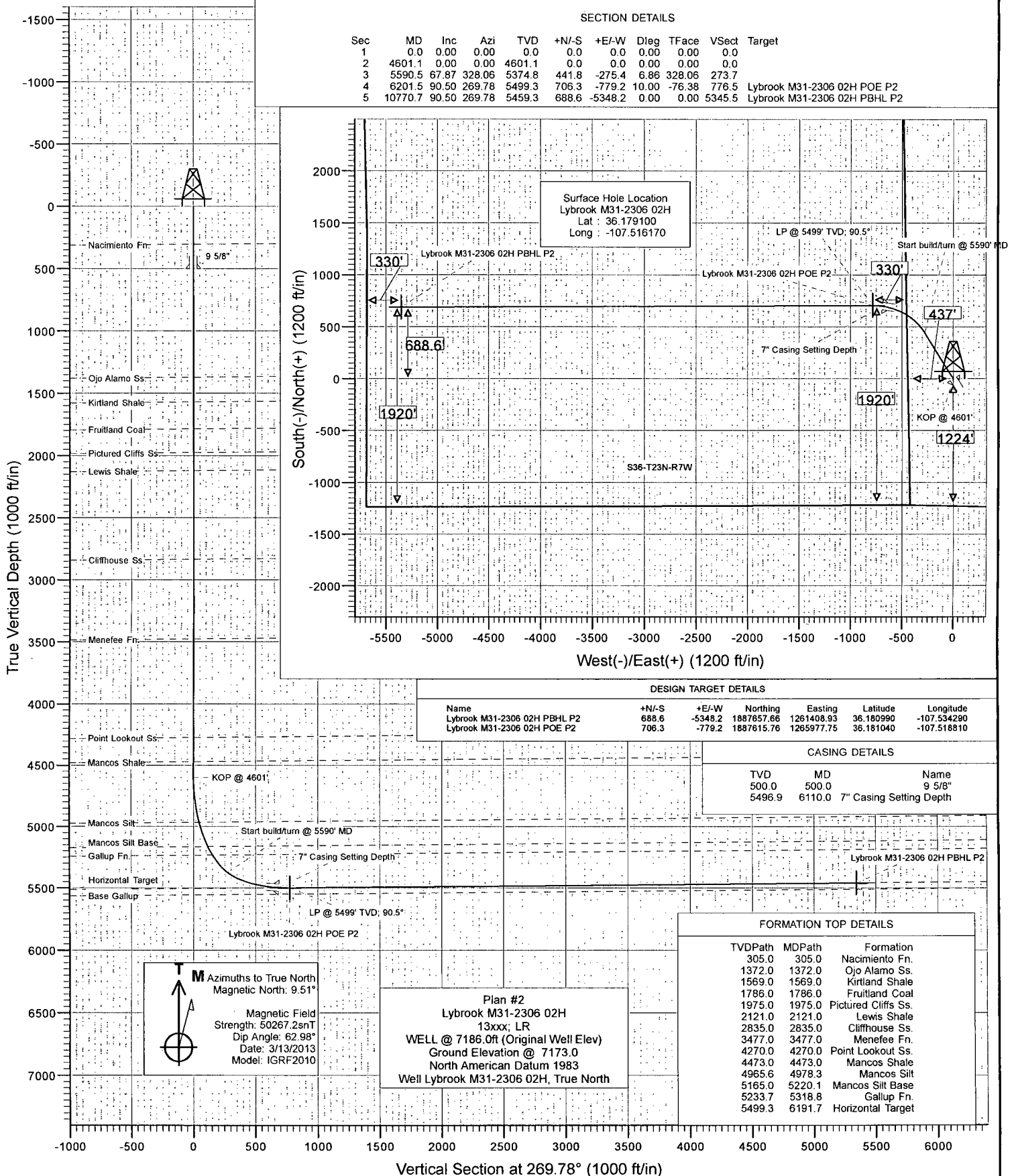


JASON C. EDWARDS
Certificate Number 15269

LOC: Sec 31-T23N-R6W County: Sandoval WELL: Lybrook M31-2306 02H			Encana Natural Gas WELL SUMMARY			encana™ natural gas		ENG: 5/15/13 RIG: GLE: 7173 RKBE: 7186	
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
			TVD	MD					
			60	60'		30	20" 94# 100sx Type I Neat 48.8ppg cmt	Fresh wtr 8.3-9.2	
Surveys After csg is run	None					12 1/4	9 5/8" 36ppf J55 STC TOC @ surface 178 sks Type III Cmt	Fresh wtr 8.4-8.6	Vertical <1°
Surveys every 500'	No OH logs	Ojo Alamo Kirtland Fruitland Coal Pictured Cliffs Ss Lewis Shale Cliffhouse Ss Menefee Fn	1372 1569 1786 1975 2121 2835 3477			8 3/4	7" 26ppf J55 LTC TOC @ surface 30% OH excess: 621 sksTotal. Stage 1 Lead: 262sks Stage 1 Tail: 180sks. Stage 2 Lead: 179sks	Fresh Wtr 8.5-8.8	Vertical <1°
	Mud logger onsite	Point Lookout Ss Mancos Sh KICK OFF PT Mancos Silt Gallup Top 7" csg depth	4270 4473 4601 4966 5235 5497	6110					KOP 4601 10 deg/100'
Surveys every 500' Gyro at CP MWD Gamma Directional	No OH Logs	horz target Base Gallup	5499 5558	6205		6 1/8	200' overlap at liner top 4566' Lateral 4 1/2" 11.6ppf SB80 LTC Running external swellable csg packers for isolation of prod string Plan on setting top packer within 100' of intermediate casing shoe	8.6-9.0 OBM Switch to OBM 8.6-9.0	.25deg updip 5459'TVD TD = 10771' MD

NOTES:

- 1) Drill with 30" bit to 60', set 20" 94# conductor pipe
- 2) Drill surface to 500', R&C 9 5/8" casing
- 3) N/U BOP and surface equipment
- 4) Drill to KOP of 4601', 8 3/4" hole size,
- 5) PU directional tools and start curve at 6.86deg/100' build rate
- 6) Drill to casing point of 6110' MD
- 7) R&C 7" casing, circ cmt to surface, switch to OBM
- 8) Land at 90deg, drill 4566' lateral to 10771', run 4 1/2" liner with external swellable csg packers



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook M31-2306 02H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7186.0ft (Original Well Elev)
Project:	Sandoval County, NM	MD Reference:	WELL @ 7186.0ft (Original Well Elev)
Site:	Lybrook	North Reference:	True
Well:	Lybrook M31-2306 02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

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 M31-2306 02H					
Well Position	+N/-S	0.0 ft	Northing:	1,886,899.35 ft	Latitude:	36.179100
	+E/-W	0.0 ft	Easting:	1,266,747.68 ft	Longitude:	-107.516170
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,173.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/13/2013	9.51	62.98	50,267

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	269.78

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,601.1	0.00	0.00	4,601.1	0.0	0.0	0.00	0.00	0.00	0.00	
5,590.5	67.87	328.06	5,374.8	441.8	-275.4	6.86	6.86	0.00	328.06	
6,201.5	90.50	269.78	5,499.3	706.3	-779.2	10.00	3.70	-9.54	-76.38	Lybrook M31-2306 02
10,770.7	90.50	269.78	5,459.3	688.6	-5,348.2	0.00	0.00	0.00	0.00	Lybrook M31-2306 02

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook M31-2306 02H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7186.0ft (Original Well Elev)
Project:	Sandoval County, NM	MD Reference:	WELL @ 7186.0ft (Original Well Elev)
Site:	Lybrook	North Reference:	True
Well:	Lybrook M31-2306 02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
305.0	0.00	0.00	305.0	0.0	0.0	0.0	0.00	0.00	Nacimiento Fn.
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	9 5/8"
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,372.0	0.00	0.00	1,372.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,569.0	0.00	0.00	1,569.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,786.0	0.00	0.00	1,786.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
1,975.0	0.00	0.00	1,975.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,121.0	0.00	0.00	2,121.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,835.0	0.00	0.00	2,835.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	
3,477.0	0.00	0.00	3,477.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	
4,270.0	0.00	0.00	4,270.0	0.0	0.0	0.0	0.00	0.00	Point Lookout Ss.

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook M31-2306 02H
Wellbore: Hz
Design: Plan #2

Local Co-ordinate Reference: Well Lybrook M31-2306 02H
TVD Reference: WELL @ 7186.0ft (Original Well Elev)
MD Reference: WELL @ 7186.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	
4,473.0	0.00	0.00	4,473.0	0.0	0.0	0.0	0.00	0.00	Mancos Shale
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	
4,601.1	0.00	0.00	4,601.1	0.0	0.0	0.0	0.00	0.00	KOP @ 4601'
4,700.0	6.78	328.06	4,699.8	5.0	-3.1	3.1	6.86	6.86	
4,800.0	13.64	328.06	4,798.1	20.0	-12.5	12.4	6.86	6.86	
4,900.0	20.50	328.06	4,893.7	44.9	-28.0	27.8	6.86	6.86	
4,978.3	25.88	328.06	4,965.6	71.1	-44.3	44.0	6.86	6.86	Mancos Silt
5,000.0	27.36	328.06	4,985.0	79.3	-49.4	49.1	6.86	6.86	
5,100.0	34.22	328.06	5,070.9	122.7	-76.5	76.0	6.86	6.86	
5,200.0	41.08	328.06	5,150.0	174.5	-108.8	108.1	6.86	6.86	
5,220.1	42.46	328.06	5,165.0	185.9	-115.9	115.2	6.86	6.86	Mancos Silt Base
5,300.0	47.94	328.06	5,221.3	234.0	-145.9	145.0	6.86	6.86	
5,318.8	49.23	328.06	5,233.7	245.9	-153.3	152.4	6.86	6.86	Gallup Fn.
5,400.0	54.80	328.06	5,283.6	300.3	-187.2	186.0	6.86	6.86	
5,500.0	61.66	328.06	5,336.3	372.4	-232.1	230.7	6.86	6.86	
5,590.5	67.87	328.06	5,374.8	441.8	-275.4	273.7	6.86	6.86	Start build/turn @ 5590' MD
5,600.0	68.10	327.07	5,378.4	449.2	-280.1	278.4	10.00	2.39	
5,700.0	70.82	316.80	5,413.6	522.8	-337.8	335.8	10.00	2.73	
5,800.0	74.10	306.89	5,443.7	586.2	-408.8	406.5	10.00	3.28	
5,900.0	77.82	297.32	5,468.0	637.7	-490.9	488.4	10.00	3.72	
6,000.0	81.86	288.03	5,485.7	675.5	-581.6	579.0	10.00	4.03	
6,100.0	86.10	278.92	5,496.2	698.6	-678.2	675.5	10.00	4.24	
6,110.0	86.53	278.02	5,496.9	700.1	-688.0	685.3	10.00	4.31	7" Casing Setting Depth
6,191.7	90.07	270.66	5,499.3	706.3	-769.4	766.7	10.00	4.34	Horizontal Target
6,200.0	90.44	269.91	5,499.3	706.3	-777.7	775.0	10.00	4.35	
6,201.5	90.50	269.78	5,499.3	706.3	-779.2	776.5	10.00	4.35	LP @ 5499' TVD; 90.5° - Lybrook M31-2306 02
6,300.0	90.50	269.78	5,498.4	705.9	-877.7	875.0	0.00	0.00	
6,400.0	90.50	269.78	5,497.5	705.5	-977.7	975.0	0.00	0.00	
6,500.0	90.50	269.78	5,496.7	705.2	-1,077.7	1,075.0	0.00	0.00	
6,600.0	90.50	269.78	5,495.8	704.8	-1,177.7	1,175.0	0.00	0.00	
6,700.0	90.50	269.78	5,494.9	704.4	-1,277.7	1,275.0	0.00	0.00	
6,800.0	90.50	269.78	5,494.0	704.0	-1,377.7	1,375.0	0.00	0.00	
6,900.0	90.50	269.78	5,493.2	703.6	-1,477.7	1,475.0	0.00	0.00	
7,000.0	90.50	269.78	5,492.3	703.2	-1,577.7	1,575.0	0.00	0.00	
7,100.0	90.50	269.78	5,491.4	702.8	-1,677.7	1,674.9	0.00	0.00	
7,200.0	90.50	269.78	5,490.5	702.4	-1,777.7	1,774.9	0.00	0.00	
7,300.0	90.50	269.78	5,489.7	702.0	-1,877.6	1,874.9	0.00	0.00	
7,400.0	90.50	269.78	5,488.8	701.7	-1,977.6	1,974.9	0.00	0.00	
7,500.0	90.50	269.78	5,487.9	701.3	-2,077.6	2,074.9	0.00	0.00	
7,600.0	90.50	269.78	5,487.0	700.9	-2,177.6	2,174.9	0.00	0.00	
7,700.0	90.50	269.78	5,486.2	700.5	-2,277.6	2,274.9	0.00	0.00	
7,800.0	90.50	269.78	5,485.3	700.1	-2,377.6	2,374.9	0.00	0.00	
7,900.0	90.50	269.78	5,484.4	699.7	-2,477.6	2,474.9	0.00	0.00	
8,000.0	90.50	269.78	5,483.5	699.3	-2,577.6	2,574.9	0.00	0.00	
8,100.0	90.50	269.78	5,482.7	698.9	-2,677.6	2,674.9	0.00	0.00	
8,200.0	90.50	269.78	5,481.8	698.6	-2,777.6	2,774.9	0.00	0.00	
8,300.0	90.50	269.78	5,480.9	698.2	-2,877.6	2,874.9	0.00	0.00	
8,400.0	90.50	269.78	5,480.1	697.8	-2,977.6	2,974.9	0.00	0.00	
8,500.0	90.50	269.78	5,479.2	697.4	-3,077.6	3,074.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook M31-2306 02H
Wellbore: Hz
Design: Plan #2

Local Co-ordinate Reference: Well Lybrook M31-2306 02H
TVD Reference: WELL @ 7186.0ft (Original Well Elev)
MD Reference: WELL @ 7186.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,600.0	90.50	269.78	5,478.3	697.0	-3,177.6	3,174.9	0.00	0.00	
8,700.0	90.50	269.78	5,477.4	696.6	-3,277.6	3,274.9	0.00	0.00	
8,800.0	90.50	269.78	5,476.6	696.2	-3,377.6	3,374.9	0.00	0.00	
8,900.0	90.50	269.78	5,475.7	695.8	-3,477.6	3,474.9	0.00	0.00	
9,000.0	90.50	269.78	5,474.8	695.5	-3,577.6	3,574.9	0.00	0.00	
9,100.0	90.50	269.78	5,473.9	695.1	-3,677.6	3,674.9	0.00	0.00	
9,200.0	90.50	269.78	5,473.1	694.7	-3,777.6	3,774.9	0.00	0.00	
9,300.0	90.50	269.78	5,472.2	694.3	-3,877.6	3,874.9	0.00	0.00	
9,400.0	90.50	269.78	5,471.3	693.9	-3,977.6	3,974.9	0.00	0.00	
9,500.0	90.50	269.78	5,470.4	693.5	-4,077.5	4,074.9	0.00	0.00	
9,600.0	90.50	269.78	5,469.6	693.1	-4,177.5	4,174.9	0.00	0.00	
9,700.0	90.50	269.78	5,468.7	692.7	-4,277.5	4,274.8	0.00	0.00	
9,800.0	90.50	269.78	5,467.8	692.4	-4,377.5	4,374.8	0.00	0.00	
9,900.0	90.50	269.78	5,466.9	692.0	-4,477.5	4,474.8	0.00	0.00	
10,000.0	90.50	269.78	5,466.1	691.6	-4,577.5	4,574.8	0.00	0.00	
10,100.0	90.50	269.78	5,465.2	691.2	-4,677.5	4,674.8	0.00	0.00	
10,200.0	90.50	269.78	5,464.3	690.8	-4,777.5	4,774.8	0.00	0.00	
10,300.0	90.50	269.78	5,463.5	690.4	-4,877.5	4,874.8	0.00	0.00	
10,400.0	90.50	269.78	5,462.6	690.0	-4,977.5	4,974.8	0.00	0.00	
10,500.0	90.50	269.78	5,461.7	689.6	-5,077.5	5,074.8	0.00	0.00	
10,600.0	90.50	269.78	5,460.8	689.3	-5,177.5	5,174.8	0.00	0.00	
10,700.0	90.50	269.78	5,460.0	688.9	-5,277.5	5,274.8	0.00	0.00	
10,770.7	90.50	269.78	5,459.3	688.6	-5,348.2	5,345.5	0.00	0.00	TD at 10770.7 - Lybrook M31-2306 02H PBHL

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 M31-2306 02H - plan hits target center - Point	0.00	0.00	5,499.3	706.3	-779.2	1,887,615.76	1,265,977.75	36.181040	-107.518810
Lybrook M31-2306 02H - plan hits target center - Point	0.00	0.00	5,459.3	688.6	-5,348.2	1,887,657.66	1,261,408.93	36.180990	-107.534290

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
500.0	500.0	9 5/8"	0.000	0.000
6,110.0	5,496.9	7" Casing Setting Depth	0.000	0.000

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook M31-2306 02H
Wellbore: Hz
Design: Plan #2

Local Co-ordinate Reference: Well Lybrook M31-2306 02H
TVD Reference: WELL @ 7186.0ft (Original Well Elev)
MD Reference: WELL @ 7186.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
305.0	305.0	Nacimiento Fn.		-0.50	269.78
1,372.0	1,372.0	Ojo Alamo Ss.		-0.50	269.78
1,569.0	1,569.0	Kirtland Shale		-0.50	269.78
1,786.0	1,786.0	Fruitland Coal		-0.50	269.78
1,975.0	1,975.0	Pictured Cliffs Ss.		-0.50	269.78
2,121.0	2,121.0	Lewis Shale		-0.50	269.78
2,835.0	2,835.0	Cliffhouse Ss.		-0.50	269.78
3,477.0	3,477.0	Menefee Fn.		-0.50	269.78
4,270.0	4,270.0	Point Lookout Ss.		-0.50	269.78
4,473.0	4,473.0	Mancos Shale		-0.50	269.78
4,978.3	4,966.0	Mancos Silt		-0.50	269.78
5,220.1	5,166.0	Mancos Silt Base		-0.50	269.78
5,318.8	5,235.0	Gallup Fn.		-0.50	269.78
6,191.7	5,506.0	Horizontal Target		-0.50	269.78

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,601.1	4,601.1	0.0	0.0	KOP @ 4601'
5,590.5	5,374.8	441.8	-275.4	Start build/turn @ 5590' MD
6,201.5	5,499.3	706.3	-779.2	LP @ 5499' TVD; 90.5°
10,770.7	5,459.3	688.6	-5,348.2	TD at 10770.7