

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

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

5. Lease Serial No.
NMNM048989A

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

RCUD SEP 15 '14

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

SEP 12 2014

7. If Unit of CA/Agreement, Name and/or No.
Pending

OIL CONS. DIV.

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

Farmington Field Office
Bureau of Land Management

8. Well Name and No.
Lybrook O35-2308 01H

9. API Well No.
30-045-35525

DIST. 3

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

3b. Phone No. (include area code)
720-876-5867

10. Field and Pool or Exploratory Area
Alamito-Gallup

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL: 273 FSL and 1391 FEL Section 35, T23N, R8W
BHL: 330 FSL and 1720 FEL Section 2, T22N, R8W

11. County or Parish, State
San Juan, NM

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

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

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

Encana Oil & Gas (USA) Inc. (Encana) wishes to modify the drilling plan for the Lybrook O35-2308 01H well to cement the 4 1/2" production liner, instead of running open hole swell packers, as previously planned. Attached is an updated Directional Drilling Plan, 10-Point Drilling Plan and Wellbore Diagram that reflect this change. Please note, the 7" ICP was also moved from approximately 72 degrees to approximately 55 degrees.

CONDITIONS OF APPROVAL

here to previously issued stipulations

BLM'S APPROVAL OR ACCEPTANCE OF THIS
ACTION DOES NOT RELIEVE THE LESSEE AND
OPERATOR FROM OBTAINING ANY OTHER
AUTHORIZATION REQUIRED FOR OPERATIONS
ON FEDERAL AND INDIAN LANDS

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Cristi Bauer

Title Operations Technician

Signature

Cristi Bauer

Date

9/10/14

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

William Tambekou

Title

Petroleum Engineer

Date

9/12/2014

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

Office

FFO

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCDFV

Lybrook O35-2308 01H

SHL: SW/4 SE/4 Sec 35 T23N R8W, 273 FSL, 1391' FEL

BHL: SW/4 SE/4 Sec 2 T22N R8W, 330' FSL, 1720' FEL

San Juan, New Mexico

**Encana Oil & Gas (USA) Inc.
Drilling Plan**

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS (TVD)

The estimated tops of important geologic markers are as follows:

Formation	Depth (TVD) units = feet
Nacimiento Fn.	0
Ojo Alamo Ss.	597
Kirtland Shale	806
Fruitland Coal	1,116
Pictured Cliffs Ss.	1,278
Lewis Shale	1,374
Cliffhouse Ss.	1,993
Menefee Fn.	2,723
Point Lookout Ss.	3,656
Mancos Shale	3,803
Mancos Silt	4,312
Gallup Fn.	4,578
Horizontal Target	4,878

The referenced surface elevation is 6860', KB 6876'

**2. ESTIMATED DEPTH OF POTENTIAL WATER, OIL, GAS,
& OTHER MINERAL BEARING FORMATIONS**

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,116
Oil/Gas	Pictured Cliffs Ss.	1,278
Oil/Gas	Cliffhouse Ss.	1,993
Gas	Menefee Fn.	2,723
Oil/Gas	Point Lookout Ss.	3,656
Oil/Gas	Mancos Shale	3,803
Oil/Gas	Mancos Silt	4,312
Oil/Gas	Gallup Fn.	4,578

All shows of fresh water and minerals will be reported and protected.

Lybrook O35-2308 01H

SHL: SW/4 SE/4 Sec 35 T23N R8W, 273 FSL, 1391' FEL

BHL: SW/4 SE/4 Sec 2 T22N R8W, 330' FSL, 1720' FEL

San Juan, New Mexico

3. PRESSURE CONTROL

- a) Pressure control equipment and configuration will be designed to meet 2M standards.
- b) Working pressure on rams and BOPE will be 3,000 psi.
- c) Function test and visual inspection of the BOP will be conducted daily and noted in the IADC Daily Drilling Report.
- d) The Annular BOP will be pressure tested to a minimum of 50 percent of its rated working pressure.
- e) Blind and Pipe Rams/BOP will be tested against a test plug to 100 percent of rated working pressure.
- f) Pressure tests are required before drilling out from under all casing strings set and cemented in place.
- g) BOP controls must be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned.
- h) BOP testing procedures and testing frequency will conform to Onshore Order No. 2.
- i) BOP remote controls shall be located on the rig floor at a location readily accessible to the driller. Master controls shall be on the ground at the accumulator and shall have the capability to function all preventers.
- j) The kill line shall be 2-inch minimum and contain two kill line valves, one of which shall be a check valve.
- k) The choke line shall be a 2-inch minimum and contain two choke line valves (2-inch minimum).
- l) The choke and manifold shall contain two adjustable chokes.
- m) Hand wheels shall be installed on all ram preventers.
- n) Safety valves and wrenches (with subs for drill string connections) shall be available on the rig floor at all times.
- o) Inside BOP or float sub shall also be available on the rig floor at all times.

Proposed BOP and choke manifold arrangements are attached.

4. CASING & CEMENTING PROGRAM

The proposed casing and cementing program has been designed to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water shall be reported.

- a) The proposed casing design is as follows:

Casing	Depth (MD)	Hole Size	Csg Size	Weight	Grade
Conductor	0'-60'	26"	16"	42.09#	
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-4857'	8 3/4"	7"	26#	J55, LTC New
Production Liner	4757'-9977'	6 1/8"	4 1/2"	11.6#	B80*, LTC New

Casing String				Casing Strength Properties			Minimum Design Factors		
Size	Weight (ppf)	Grade	Connection	Collapse (psi)	Burst (psi)	Tensile (1000lbs)	Collapse	Burst	Tension
9 5/8"	36	J55	STC	2020	3520	394	1.125	1.1	1.5
7"	26	J55	LTC	4320	4980	367	1.125	1.1	1.5
4.5"	11.6	B80	LTC	6350	7780	201	1.125	1.1	1.5

*B80 pipe specifications are attached

Casing design is subject to revision based on geologic conditions encountered

Lybrook O35-2308 01H

SHL: SW/4 SE/4 Sec 35 T23N R8W, 273 FSL, 1391' FEL

BHL: SW/4 SE/4 Sec 2 T22N R8W, 330' FSL, 1720' FEL

San Juan, New Mexico

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1,500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.

b) The proposed cementing program is as follows

Casing	Depth (MD)	Cement Volume (sacks)	Cement Type & Yield	Designed TOC	Centralizers
Conductor	0'-60'	100 sks	Type I Neat 16 ppg	Surface	None
Surface	0'-500'	276 sks	Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water 1.38	Surface	1 per joint on bottom 3 joints
Intermediate	0'-4857'	100% open hole excess Stage 1 Lead: 378 sks Stage 1 Tail: 319 sks	Lead: PremLite + 3% CaCl + 0.25lb/sk CelloFlake + 5lb/sk LCM, 12.1ppg 2.13cuft/sk Tail: Type III Cmt + 1% CaCl + 0.25lb/sk Cello Flake 14.5ppg 1.38cuft/sk	Surface	1 every 3 joints through water bearing zones
Production Liner	4757'-9977'	50% OH excess Stage 1 Blend Total: 279sks	Blend: Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwoc Potassium Chloride + 0.25lbs/sack Cello Flake + 0.5% bwoc CD-32 + 1.15% bwoc FL- 52A + 60 lbs/sack Calcium Carbonate + 124.4% Fresh Water.	Liner Hanger 2.63	N/A

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and New Mexico Oil Conservation Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

5. WELL PLAN & DIRECTIONAL DRILLING PROGRAM

The proposed horizontal well will have a kick off point of 4171'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	4804'/9977'	Gallup

Lybrook O35-2308 01H

SHL: SW/4 SE/4 Sec 35 T23N R8W, 273 FSL, 1391' FEL

BHL: SW/4 SE/4 Sec 2 T22N R8W, 330' FSL, 1720' FEL

San Juan, New Mexico

6. DRILLING FLUIDS PROGRAM

a) Surface through Intermediate Casing Point:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
30"	0-60'/60'	Fresh Water	8.3-9.2	38-100	4-28
12 1/4"	0'-500'/500'	Fresh Water	8.3-10	60-70	NC
8 3/4"	500'/500'-4742'/4857'	Fresh Water LSND	8.3-10	40-50	8-10

b) Intermediate Casing Point to TD:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	4742'/4857'- 4804'/9977'	Fresh Water LSND	8.3-10	15-25	<15

- c) There will be sufficient mud on location to control a blowout should one occur. Mud flow and volume will be monitored both visually and with electronic pit volume totalizers. Mud tests shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.
- d) A closed-loop system will be used to recover drilling fluid and dry cuttings in both phases of the well and on all hole intervals. Above-ground tanks will be utilized to hold cuttings and fluids for rig operations. A frac tank will be on location to store fresh water. Waste will be disposed of properly at an EPA-approved hazardous waste facility. Fresh water cuttings will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystems, Inc. The location will be lined in accordance with the Surface Use Plan of Operations.

7. TESTING, CORING, & LOGGING

- a) Drill Stem Testing - None anticipated.
- b) Coring - None anticipated.
- c) Mudd Logging - Mud loggers will be on location from kick off point to TD.
- d) Logging - See below

Cased Hole:

CBL/CCL/GR/VDL will be run as needed for perforating control

8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

The anticipated bottom hole pressure is +/- 2283 psi based on a 9.0 ppg at 4878' TVD of the horizontal lateral target. No abnormal pressure or temperatures are anticipated.

No hydrogen sulfide gas is anticipated, however, if H₂S is encountered, the guidelines in Onshore Order No. 6 will be followed.

9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

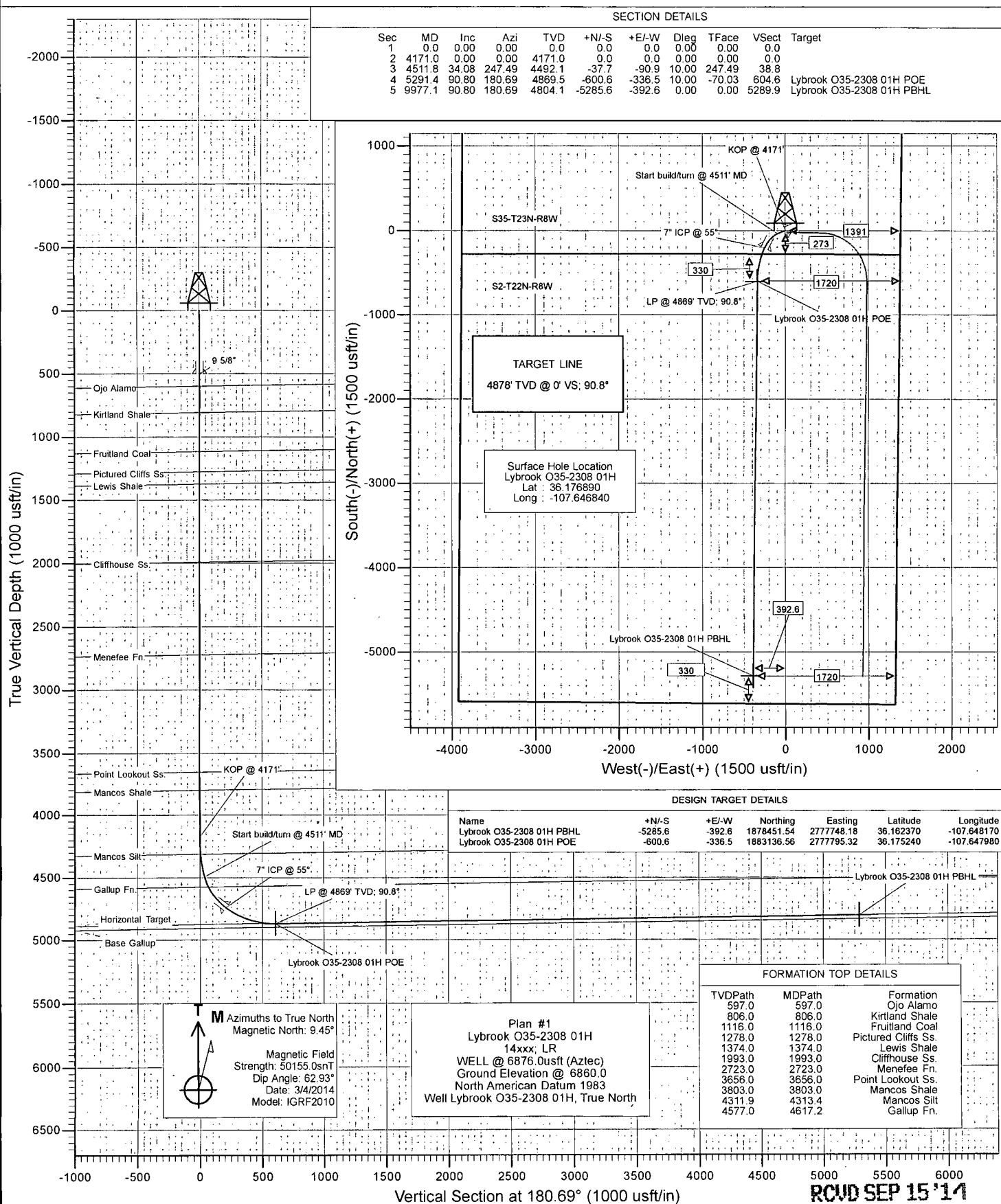
Drilling is estimated to commence on October 15, 2014. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

It is anticipated that the drilling of this well will take approximately 20 days.

Loc: Lybrook 035-2308 01H County: San Juan WELL: Lybrook 035-2308 01H			Encana Natural Gas WELL SUMMARY				ENG: Michael Sanet 9/10/14 RIG: Artec 950 GLE: 6860 RKBE: 6876		
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH TVDMD			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
			60	60'		26	16" 42.09# 100sx Type I Neat 16.0ppg cmt	Fresh wtr 8.3-9.2	
Multi-Well pad take survey every stand and run anti- collision report prior to spud	None	San Jose Fn. Nacimiento Fn. 9 5/8" Csg	0 0 500			12 1/4	9 5/8" 36ppf J55 STC TOC Surface with 100% OH Excess: 278 sks Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water. Yield 1.38 cuft/sk.	Fresh wtr 8.3-10	Vertical <1"
Survey Every 60'-120', updating anticollision report after surveys. Stop operations and contact drilling engineer if separation factor approaches 1.5	No OH logs	Cyn Alamo Ss Kirtland Shale Fruitland Coal Pictured Cliffs Ss. Lewis Chale Cliffhouse Ss. Mereflow Fn. Point Lookout Ss. Mancos Shale	597 806 1,116 1,278 1,374 1,993 2,723 3,656 3,803			8 3/4	7" 26ppf J55 LTC TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 697sks Stage 1 Lead: 378 sks Premium Lite FM + 3% CaCl2 + 0.25/sk Cello Flake + 5#/sk LCM-1 + 8% Bentonite + 0.4% FL-52A + 0.4% Sodium Metasilicate. Mixed at 12.1 ppg. Yield 2.13 cuft/sk. Stage 1 Tail: 319 sks Type III Cement + 1% CaCl2 + 0.25#/sk Cello Flake + 0.2% FL-52A. Mixed at 14.6 ppg. Yield 1.38 cuft/sk.	Fresh Wtr 8.3-10	Vertical <1"
Surveys every 30' through the curve	Mud logger onsite	KOP Mancos Sil Gallup Fn. 7" Csg	4,171 4,312 4,578 4,742	4,171					
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD Base Gallup	4,878 4,804 4,910	9,977		6 1/8	100' overlap at liner top 5120' Drilled Lateral		Horz Inc/TVD 90.8 degdeg/4878ft TD = 9977.1 MD
MWD Gamma Directional							4 1/2" 11.6ppf SB80 LTC TOC @ hanger (50% OH excess) Stage 1 Total: 279sks Stage 1 Blend: 279 sks Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwoc Potassium Chloride + 0.25lbs/sack Cello Flake + 0.5% bwoc CU-32 + 1.15% bwoc FL- 52A + 60 lbs/sack Calcium Carbonate + 124.4% Fresh Water. Yield 2.63 cuft/sk.	WBM 8.3-10	

NOTES:

- 1) Drill with 26" bit to 60', set 16" 42.09ppf 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 4171', 8 3/4 inch holesize
- 5) Start curve at 10deg/100' build rate
- 6) Drill to csg point of 4857' MD
- 7) R&C 7" csg, circ cmt to surface
- 8) Land at -90 deg, drill lateral to 9977' run 4 1/2 inch cemented liner



RCVD SEP 15 '14
OIL CONS. DIV.

DIST. 3

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook O35-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6876.0usft (Aztec)
Project:	San Juan County, NM	MD Reference:	WELL @ 6876.0usft (Aztec)
Site:	S35-T23N-R8W	North Reference:	True
Well:	Lybrook O35-2308 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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

Site	S35-T23N-R8W			
Site Position:		Northing:	1,883,780.33 usft	Latitude: 36.177020
From:	Lat/Long	Easting:	2,775,554.08 usft	Longitude: -107.655570
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence: 0.10 °

Well	Lybrook O35-2308 01H			
Well Position	+N/-S	0.0 usft	Northing:	1,883,737.84 usft
	+E/-W	0.0 usft	Easting:	2,778,130.62 usft
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft
			Ground Level:	6,860.0 usft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/4/2014	9.45	62.93	50,155

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	180.69

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,171.0	0.00	0.00	4,171.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,511.8	34.08	247.49	4,492.1	-37.7	-90.9	10.00	10.00	0.00	247.49	
5,291.4	90.80	180.69	4,869.5	-600.6	-336.5	10.00	7.28	-8.57	-70.03	Lybrook O35-2308 01
9,977.1	90.80	180.69	4,804.1	-5,285.6	-392.6	0.00	0.00	0.00	0.00	Lybrook O35-2308 01

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook O35-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6876.0usft (Aztec)
Project:	San Juan County, NM	MD Reference:	WELL @ 6876.0usft (Aztec)
Site:	S35-T23N-R8W	North Reference:	True
Well:	Lybrook O35-2308 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	9 5/8"
597.0	0.00	0.00	597.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo
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	
806.0	0.00	0.00	806.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
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	
1,116.0	0.00	0.00	1,116.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,278.0	0.00	0.00	1,278.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,374.0	0.00	0.00	1,374.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
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	
1,600.0	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	
1,800.0	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	
1,993.0	0.00	0.00	1,993.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse 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	
2,200.0	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	
2,723.0	0.00	0.00	2,723.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,656.0	0.00	0.00	3,656.0	0.0	0.0	0.0	0.00	0.00	Point Lookout Ss.
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	
3,803.0	0.00	0.00	3,803.0	0.0	0.0	0.0	0.00	0.00	Mancos Shale
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	
4,171.0	0.00	0.00	4,171.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4171'

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook O35-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6876.0usft (Aztec)
Project:	San Juan County, NM	MD Reference:	WELL @ 6876.0usft (Aztec)
Site:	S35-T23N-R8W	North Reference:	True
Well:	Lybrook O35-2308 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
4,200.0	2.90	247.49	4,200.0	-0.3	-0.7	0.3	10.00	10.00	
4,300.0	12.90	247.49	4,298.9	-5.5	-13.4	5.7	10.00	10.00	
4,313.4	14.24	247.49	4,311.9	-6.7	-16.3	6.9	10.00	10.00	Mancos Silt
4,400.0	22.90	247.49	4,394.0	-17.3	-41.7	17.8	10.00	10.00	
4,500.0	32.90	247.49	4,482.2	-35.2	-84.9	36.2	10.00	10.00	
4,511.8	34.08	247.49	4,492.1	-37.7	-90.9	38.8	10.00	10.00	Start build/turn @ 4511' MD
4,600.0	37.90	233.93	4,563.5	-63.1	-135.7	64.8	10.00	4.33	
4,617.2	38.80	231.58	4,577.0	-69.6	-144.2	71.3	10.00	5.28	Gallup Fn.
4,700.0	43.76	221.50	4,639.3	-107.2	-183.6	109.4	10.00	5.98	
4,800.0	50.69	211.66	4,707.2	-166.2	-226.9	168.9	10.00	6.93	
4,857.4	54.99	206.90	4,741.9	-206.1	-249.2	209.1	10.00	7.50	7" ICP @ 55°
4,900.0	58.30	203.68	4,765.3	-238.3	-264.4	241.4	10.00	7.76	
5,000.0	66.32	196.94	4,811.8	-321.2	-294.9	324.8	10.00	8.03	
5,100.0	74.61	191.00	4,845.2	-412.6	-317.5	416.4	10.00	8.28	
5,200.0	83.04	185.52	4,864.6	-509.6	-331.5	513.5	10.00	8.43	
5,291.4	90.80	180.69	4,869.5	-600.6	-336.5	604.6	10.00	8.49	LP @ 4869' TVD; 90.8°
5,300.0	90.80	180.69	4,869.4	-609.2	-336.6	613.2	0.00	0.00	
5,400.0	90.80	180.69	4,868.0	-709.2	-337.8	713.2	0.00	0.00	
5,500.0	90.80	180.69	4,866.6	-809.2	-339.0	813.2	0.00	0.00	
5,600.0	90.80	180.69	4,865.2	-909.2	-340.1	913.2	0.00	0.00	
5,700.0	90.80	180.69	4,863.8	-1,009.1	-341.3	1,013.2	0.00	0.00	
5,800.0	90.80	180.69	4,862.4	-1,109.1	-342.5	1,113.2	0.00	0.00	
5,900.0	90.80	180.69	4,861.0	-1,209.1	-343.7	1,213.2	0.00	0.00	
6,000.0	90.80	180.69	4,859.6	-1,309.1	-344.9	1,313.1	0.00	0.00	
6,100.0	90.80	180.69	4,858.3	-1,409.1	-346.1	1,413.1	0.00	0.00	
6,200.0	90.80	180.69	4,856.9	-1,509.1	-347.3	1,513.1	0.00	0.00	
6,300.0	90.80	180.69	4,855.5	-1,609.0	-348.5	1,613.1	0.00	0.00	
6,400.0	90.80	180.69	4,854.1	-1,709.0	-349.7	1,713.1	0.00	0.00	
6,500.0	90.80	180.69	4,852.7	-1,809.0	-350.9	1,813.1	0.00	0.00	
6,600.0	90.80	180.69	4,851.3	-1,909.0	-352.1	1,913.1	0.00	0.00	
6,700.0	90.80	180.69	4,849.9	-2,009.0	-353.3	2,013.1	0.00	0.00	
6,800.0	90.80	180.69	4,848.5	-2,109.0	-354.5	2,113.1	0.00	0.00	
6,900.0	90.80	180.69	4,847.1	-2,208.9	-355.7	2,213.1	0.00	0.00	
7,000.0	90.80	180.69	4,845.7	-2,308.9	-356.9	2,313.0	0.00	0.00	
7,100.0	90.80	180.69	4,844.3	-2,408.9	-358.1	2,413.0	0.00	0.00	
7,200.0	90.80	180.69	4,842.9	-2,508.9	-359.3	2,513.0	0.00	0.00	
7,300.0	90.80	180.69	4,841.5	-2,608.9	-360.5	2,613.0	0.00	0.00	
7,400.0	90.80	180.69	4,840.1	-2,708.9	-361.7	2,713.0	0.00	0.00	
7,500.0	90.80	180.69	4,838.7	-2,808.8	-362.9	2,813.0	0.00	0.00	
7,600.0	90.80	180.69	4,837.3	-2,908.8	-364.1	2,913.0	0.00	0.00	
7,700.0	90.80	180.69	4,835.9	-3,008.8	-365.3	3,013.0	0.00	0.00	
7,800.0	90.80	180.69	4,834.5	-3,108.8	-366.5	3,113.0	0.00	0.00	
7,900.0	90.80	180.69	4,833.1	-3,208.8	-367.7	3,213.0	0.00	0.00	
8,000.0	90.80	180.69	4,831.7	-3,308.7	-368.9	3,313.0	0.00	0.00	
8,100.0	90.80	180.69	4,830.3	-3,408.7	-370.1	3,412.9	0.00	0.00	
8,200.0	90.80	180.69	4,828.9	-3,508.7	-371.3	3,512.9	0.00	0.00	
8,300.0	90.80	180.69	4,827.5	-3,608.7	-372.5	3,612.9	0.00	0.00	
8,400.0	90.80	180.69	4,826.1	-3,708.7	-373.7	3,712.9	0.00	0.00	
8,500.0	90.80	180.69	4,824.7	-3,808.7	-374.9	3,812.9	0.00	0.00	
8,600.0	90.80	180.69	4,823.3	-3,908.6	-376.1	3,912.9	0.00	0.00	
8,700.0	90.80	180.69	4,822.0	-4,008.6	-377.3	4,012.9	0.00	0.00	
8,800.0	90.80	180.69	4,820.6	-4,108.6	-378.5	4,112.9	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook O35-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6876.0usft (Aztec)
Project:	San Juan County, NM	MD Reference:	WELL @ 6876.0usft (Aztec)
Site:	S35-T23N-R8W	North Reference:	True
Well:	Lybrook O35-2308 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
8,900.0	90.80	180.69	4,819.2	-4,208.6	-379.7	4,212.9	0.00	0.00	
9,000.0	90.80	180.69	4,817.8	-4,308.6	-380.9	4,312.9	0.00	0.00	
9,100.0	90.80	180.69	4,816.4	-4,408.6	-382.1	4,412.8	0.00	0.00	
9,200.0	90.80	180.69	4,815.0	-4,508.5	-383.3	4,512.8	0.00	0.00	
9,300.0	90.80	180.69	4,813.6	-4,608.5	-384.5	4,612.8	0.00	0.00	
9,400.0	90.80	180.69	4,812.2	-4,708.5	-385.7	4,712.8	0.00	0.00	
9,500.0	90.80	180.69	4,810.8	-4,808.5	-386.9	4,812.8	0.00	0.00	
9,600.0	90.80	180.69	4,809.4	-4,908.5	-388.1	4,912.8	0.00	0.00	
9,700.0	90.80	180.69	4,808.0	-5,008.5	-389.3	5,012.8	0.00	0.00	
9,800.0	90.80	180.69	4,806.6	-5,108.4	-390.5	5,112.8	0.00	0.00	
9,900.0	90.80	180.69	4,805.2	-5,208.4	-391.7	5,212.8	0.00	0.00	
9,977.1	90.80	180.69	4,804.1	-5,285.6	-392.6	5,289.9	0.00	0.00	TD at 9977.2

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Lybrook O35-2308 01H - hit/miss target - Shape - Point	0.00	0.00	4,804.1	-5,285.6	-392.6	1,878,451.54	2,777,748.18	36.162370	-107.648170
Lybrook O35-2308 01H - plan hits target center - Point	0.00	0.00	4,869.5	-600.6	-336.5	1,883,136.56	2,777,795.32	36.175240	-107.647980

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
500.0	500.0	9 5/8"	0	0	
4,857.4	4,741.9	7" ICP @ 55°	0	0	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook O35-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6876.0usft (Aztec)
Project:	San Juan County, NM	MD Reference:	WELL @ 6876.0usft (Aztec)
Site:	S35-T23N-R8W	North Reference:	True
Well:	Lybrook O35-2308 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")
597.0	597.0	Ojo Alamo		-0.80	180.69
806.0	806.0	Kirtland Shale		-0.80	180.69
1,116.0	1,116.0	Fruitland Coal		-0.80	180.69
1,278.0	1,278.0	Pictured Cliffs Ss.		-0.80	180.69
1,374.0	1,374.0	Lewis Shale		-0.80	180.69
1,993.0	1,993.0	Cliffhouse Ss.		-0.80	180.69
2,723.0	2,723.0	Menefee Fn.		-0.80	180.69
3,656.0	3,656.0	Point Lookout Ss.		-0.80	180.69
3,803.0	3,803.0	Mancos Shale		-0.80	180.69
4,313.4	4,312.0	Mancos Silt		-0.80	180.69
4,617.2	4,578.0	Gallup Fn.		-0.80	180.69

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,171.0	4,171.0	0.0	0.0	KOP @ 4171'
4,511.8	4,492.1	-37.7	-90.9	Start build/turn @ 4511' MD
5,291.4	4,869.5	-600.6	-336.5	LP @ 4869' TVD; 90.8°
9,977.1	4,804.1	-5,285.6	-392.6	TD at 9977.2

EnCana Oil & Gas (USA) Inc

San Juan County, NM

S35-T23N-R8W

Lybrook O35-2308 01H

Hz

Plan #1

Anticollision Report

04 March, 2014

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook O35-2308 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6876.0ft (Aztec)
Reference Site:	S35-T23N-R8W	MD Reference:	WELL @ 6876.0ft (Aztec)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Lybrook O35-2308 01H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,197.7ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	3/4/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	9,976.3	Plan #1 (Hz)	Geolink MWD	Geolink MWD

Summary						
Site Name	Reference Measured Depth	Offset Measured Depth	Distance		Separation	Warning
Offset Well - Wellbore - Design	Depth (ft)	Depth (ft)	Between Centres (ft)	Between Ellipses (ft)	Factor	
S35-T23N-R8W						
Lybrook O35-2308 02H - Hz - Plan #1	4,100.0	4,100.0	29.8	15.6	2.091	CC, ES
Lybrook O35-2308 02H - Hz - Plan #1	4,200.0	4,199.2	30.4	15.8	2.084	SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook O35-2308 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6876.0ft (Aztec)
Reference Site:	S35-T23N-R8W	MD Reference:	WELL @ 6876.0ft (Aztec)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Lybrook O35-2308 01H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S35-T23N-R8W - Lybrook O35-2308 02H - Hz - Plan #1														Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	127.63	-18.2	23.6	29.8						
100.0	100.0	100.0	100.0	0.1	0.1	127.63	-18.2	23.6	29.8	29.5	0.29	101.670			
200.0	200.0	200.0	200.0	0.3	0.3	127.63	-18.2	23.6	29.8	29.2	0.64	46.415			
300.0	300.0	300.0	300.0	0.5	0.5	127.63	-18.2	23.6	29.8	28.8	0.99	30.072			
400.0	400.0	400.0	400.0	0.7	0.7	127.63	-18.2	23.6	29.8	28.5	1.34	22.240			
500.0	500.0	500.0	500.0	0.8	0.8	127.63	-18.2	23.6	29.8	28.1	1.69	17.645			
600.0	600.0	600.0	600.0	1.0	1.0	127.63	-18.2	23.6	29.8	27.8	2.04	14.624			
700.0	700.0	700.0	700.0	1.2	1.2	127.63	-18.2	23.6	29.8	27.4	2.39	12.486			
800.0	800.0	800.0	800.0	1.4	1.4	127.63	-18.2	23.6	29.8	27.1	2.74	10.893			
900.0	900.0	900.0	900.0	1.5	1.5	127.63	-18.2	23.6	29.8	26.7	3.09	9.661			
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	127.63	-18.2	23.6	29.8	26.4	3.43	8.679			
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	127.63	-18.2	23.6	29.8	26.0	3.78	7.879			
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	127.63	-18.2	23.6	29.8	25.7	4.13	7.213			
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	127.63	-18.2	23.6	29.8	25.3	4.48	6.651			
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	127.63	-18.2	23.6	29.8	25.0	4.83	6.171			
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	127.63	-18.2	23.6	29.8	24.6	5.18	5.755			
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	127.63	-18.2	23.6	29.8	24.3	5.53	5.392			
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	127.63	-18.2	23.6	29.8	23.9	5.88	5.071			
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	127.63	-18.2	23.6	29.8	23.6	6.23	4.787			
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	127.63	-18.2	23.6	29.8	23.2	6.58	4.533			
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	127.63	-18.2	23.6	29.8	22.9	6.93	4.305			
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	127.63	-18.2	23.6	29.8	22.5	7.27	4.098			
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	127.63	-18.2	23.6	29.8	22.2	7.62	3.910			
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	127.63	-18.2	23.6	29.8	21.8	7.97	3.739			
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	127.63	-18.2	23.6	29.8	21.5	8.32	3.582			
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	127.63	-18.2	23.6	29.8	21.1	8.67	3.438			
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	127.63	-18.2	23.6	29.8	20.8	9.02	3.305			
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	127.63	-18.2	23.6	29.8	20.4	9.37	3.182			
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	127.63	-18.2	23.6	29.8	20.1	9.72	3.068			
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	127.63	-18.2	23.6	29.8	19.7	10.07	2.961			
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	127.63	-18.2	23.6	29.8	19.4	10.42	2.862			
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	127.63	-18.2	23.6	29.8	19.0	10.77	2.769			
3,200.0	3,200.0	3,200.0	3,200.0	5.6	5.6	127.63	-18.2	23.6	29.8	18.7	11.11	2.682			
3,300.0	3,300.0	3,300.0	3,300.0	5.7	5.7	127.63	-18.2	23.6	29.8	18.3	11.46	2.601			
3,400.0	3,400.0	3,400.0	3,400.0	5.9	5.9	127.63	-18.2	23.6	29.8	18.0	11.81	2.524			
3,500.0	3,500.0	3,500.0	3,500.0	6.1	6.1	127.63	-18.2	23.6	29.8	17.6	12.16	2.451			
3,600.0	3,600.0	3,600.0	3,600.0	6.3	6.3	127.63	-18.2	23.6	29.8	17.3	12.51	2.383			
3,700.0	3,700.0	3,700.0	3,700.0	6.4	6.4	127.63	-18.2	23.6	29.8	17.0	12.86	2.318			
3,800.0	3,800.0	3,800.0	3,800.0	6.6	6.6	127.63	-18.2	23.6	29.8	16.6	13.21	2.257			
3,900.0	3,900.0	3,900.0	3,900.0	6.8	6.8	127.63	-18.2	23.6	29.8	16.3	13.56	2.199			
4,000.0	4,000.0	4,000.0	4,000.0	7.0	7.0	127.63	-18.2	23.6	29.8	15.9	13.91	2.144			
4,100.0	4,100.0	4,100.0	4,100.0	7.1	7.1	127.63	-18.2	23.6	29.8	15.6	14.26	2.091 CC, ES			
4,150.8	4,150.8	4,150.8	4,150.8	7.2	7.2	-120.93	-18.2	23.6	30.1	15.7	14.43	2.088			
4,200.0	4,200.0	4,199.2	4,199.2	7.3	7.3	-121.29	-18.2	23.9	30.4	15.8	14.60	2.084 SF			
4,300.0	4,298.9	4,290.4	4,289.7	7.5	7.5	-140.01	-18.4	34.0	49.9	35.1	14.79	3.376			
4,400.0	4,394.0	4,365.5	4,362.3	7.7	7.6	-150.95	-18.8	53.0	99.9	85.2	14.66	6.815			
4,500.0	4,482.2	4,419.6	4,412.8	8.1	7.8	-153.07	-19.2	72.5	172.8	158.5	14.31	12.073			
4,600.0	4,563.5	4,450.0	4,440.2	8.6	7.9	-132.07	-19.4	85.6	257.1	241.9	15.11	17.012			
4,700.0	4,639.3	4,485.9	4,471.8	9.3	8.0	-113.64	-19.8	102.8	343.1	326.8	16.32	21.031			
4,800.0	4,707.2	4,500.0	4,483.8	10.1	8.0	-94.91	-19.9	110.1	430.0	412.3	17.67	24.333			
4,900.0	4,765.3	4,524.1	4,504.0	11.1	8.2	-82.42	-20.2	123.2	515.9	497.2	18.67	27.633			
5,000.0	4,811.8	4,535.8	4,513.5	12.2	8.2	-71.30	-20.3	129.9	600.0	580.8	19.22	31.217			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook O35-2308 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6876.0ft (Aztec)
Reference Site:	S35-T23N-R8W	MD Reference:	WELL @ 6876.0ft (Aztec)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Lybrook O35-2308 01H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S35-T23N-R8W - Lybrook O35-2308 02H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference	Vertical	Offset	Vertical	Semi Major Axis		Highside Toothface (")	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Depth (ft)	Measured Depth (ft)	Depth (ft)	Reference (ft)	Offset (ft)		+N-S (ft)	+E-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	4,845.3	4,550.0	4,525.0	13.4	8.3	-63.78	-20.5	138.3	681.2	661.8	19.45	35.019		
5,200.0	4,864.6	4,550.0	4,525.0	14.7	8.3	-57.05	-20.5	138.3	758.5	739.2	19.26	39.391		
5,300.0	4,869.4	4,550.0	4,525.0	15.9	8.3	-52.99	-20.5	138.3	831.1	812.0	19.10	43.505		
5,400.0	4,868.0	4,550.0	4,525.0	17.3	8.3	-52.99	-20.5	138.3	904.8	884.5	20.28	44.619		
5,500.0	4,866.6	4,550.0	4,525.0	18.7	8.3	-52.99	-20.5	138.3	983.1	961.6	21.49	45.740		
5,600.0	4,865.2	4,550.0	4,525.0	20.2	8.3	-52.99	-20.5	138.3	1,065.1	1,042.3	22.74	46.836		
5,700.0	4,863.8	4,550.0	4,525.0	21.7	8.3	-52.99	-20.5	138.3	1,149.9	1,125.9	24.01	47.888		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Lybrook O35-2308 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6876.0ft (Aztec)
Reference Site:	S35-T23N-R8W	MD Reference:	WELL @ 6876.0ft (Aztec)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Lybrook O35-2308 01H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 6876.0ft (Aztec)
Offset Depths are relative to Offset Datum
Central Meridian is -107.833333 °

Coordinates are relative to: Lybrook O35-2308 01H
Coordinate System is US State Plane 1983, New Mexico Western Zone
Grid Convergence at Surface is: 0.11°

