

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Tony Delfin
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 9/23/2015

Well information:

Operator Encana, Well Name and Number Lybrook D34-2307 # 01 H

API# 30-043-21277, Section 34, Township 23 N/S, Range 07 E/W

Conditions of Approval: (See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ Hold C-104 for directional survey & "As Drilled" Plat
- ☒ Hold C-104 for NSL, NSI, DHC
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☐ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☒ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☒ Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Chad Herin
NMOCD Approved by Signature

5-26-2016
Date LC

MAY 20 2016

RECEIVED

SEP 30 2015

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFarmington Field Office
Bureau of Land Management

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 016586	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name N/A	
1c. Type of Completion: <input checked="" type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No. N/A	
2. Name of Operator Encana Oil & Gas (USA) Inc.		8. Lease Name and Well No. Lybrook D34-2307 01H	
3a. Address 370 17th Street, Suite 1700, Denver, CO 80202		9. API Well No. 30-043-21277	
3b. Phone No. (include area code) 720-876-5919		10. Field and Pool, or Exploratory Alamito-Gallup and Basin Mancos	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1,131' FNL, 316' FWL, Section 34, T23N, R7W At proposed prod. zone 640' FNL, 330' FWL, Section 33, T23N, R7W		11. Sec., T. R. M. or Blk. and Survey or Area Section 34, T23N, R7W NMPM	
14. Distance in miles and direction from nearest town or post office* +/- 51 miles south from the intersection of US HWY 64 & US HWY 550 in Bloomfield, NM		12. County or Parish Sandoval	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) BHL is 330' FWL Section 33, T23N, R7W	16. No of acres in lease NMNM 16586: 1,120 acres	17. Spacing Unit dedicated to this well 160 acres- N/2 N/2 of Sec. 33, T23N, R7W	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL is +/- 537' SW of the Federal B5	19. Proposed Depth 5,142' TVD; 10, 232' MD	20. BLM/BIA Bond No. in file COB-000235	
21. Elevations (Show whether DF, KDB, RT, GL., etc.) 6920' GL; 6936' KB	22. Approximate date work will start* 04/15/2016	23. Estimated duration 20 days	
24. Attachments			

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM. |

25. Signature <i>Jillian McGrath</i>	Name (Printed/Typed) Jillian McGrath	Date 9/29/15
Title Regulatory Analyst		
Approved by (Signature) <i>D. Manley</i>	Name (Printed/Typed) D. Manley	Date 5/18/16
Title AFM		
Office FEO		

Application approval 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.

Conditions of approval, if any, are attached.

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.

**DRILLING OPERATIONS
AUTHORIZED ARE SUBJECT TO
COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"**

**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**

NMOCDFN

**This action is subject to technical
and procedural review pursuant to
43 CFR 3165.3 and appeal
pursuant to 43 CFR 3165.4**

DISTRICT I

1625 N. French Dr., Hobbs, N.M. 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II

811 S. First St., Artesia, N.M. 88210
Phone: (505) 748-1283 Fax: (505) 748-0720

DISTRICT III

1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV

1220 S. St. Francis Dr., 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 Dr.
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21277	² Pool Code 1039 / 97232	³ Pool Name ALAMITO-GALLUP / BASIN MANCOS
⁴ Property Code 316260	⁵ Property Name LYBROOK D34-2307	⁶ Well Number 01H
⁷ GRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.	⁹ Elevation 6920.0'

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
D	34	23N	7W		1131'	NORTH	316'	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
D	33	23N	7W		640'	NORTH	330'	WEST	SANDOVAL

¹² Dedicated Acres PROJECT AREA ALAMITO GALLUP 80 AC. - E/2 N/2 N/2 SEC. 33 BASIN MANCOS 80 AC. - W/2 N/2 N/2 SEC. 33	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16

<p>BOTTOM HOLE LAT. 36.188800° N (NAD83) LONG. 107.587691° W (NAD83) LAT. 36.188786° N (NAD27) LONG. 107.587083° W (NAD27)</p> <p>ENTRY POINT LAT. 36.188770° N (NAD83) LONG. 107.572144° W (NAD83) LAT. 36.188756° N (NAD27) LONG. 107.571537° W (NAD27)</p> <p>WELL FLAG LAT. 36.187403° N (NAD83) LONG. 107.569950° W (NAD83) LAT. 36.187389° N (NAD27) LONG. 107.569343° W (NAD27)</p>	<p>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.</p> <p>Signature: <i>Jillian McGrath</i> Date: <i>9/29/15</i> Printed Name: <i>Jillian McGrath</i> E-mail Address: <i>Jillian.McGrath@encana.com</i></p>
<p>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.</p> <p>JANUARY 26, 2015</p> <p>De: <i>Henry P. Broadhurst</i> Jr. St: <i>11393</i></p> <p>Certificate Number: <i>11393</i></p>	<p>19</p>

Lybrook D34-2307 01H
SHL: 1131' FNL, 316' FWL SEC. 34, T23N R07W
BHL: 640' FNL, 330' FWL SEC. 33 T23N R07W
Sandoval, 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
Ojo Alamo Ss.	1,033
Kirtland Shale	1,220
Fruitland Coal	1,459
Pictured Cliffs Ss.	1,591
Lewis Shale	1,706
Cliffhouse Ss.	2,407
Menefee Fn.	3,093
Point Lookout Ss.	3,978
Mancos Shale	4,157
Mancos Silt	4,689
Gallup Fn.	4,949
Payzone Top	5,192
Horizontal Target	5,206
Payzone Base	5,208
Base Gallup	5,284

The reference surface elevation is 6920', KB 6936'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,459
Oil/Gas	Pictured Cliffs Ss.	1,591
Oil/Gas	Cliffhouse Ss.	2,407
Gas	Menefee Fn.	3,093
Oil/Gas	Point Lookout Ss.	3,978
Oil/Gas	Mancos Shale	4,157
Oil/Gas	Mancos Silt	4,689
Oil/Gas	Gallup Fn.	4,949

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

Lybrook D34-2307 01H

SHL: 1131' FNL, 316' FWL SEC. 34, T23N R07W

BHL: 640' FNL, 330' FWL SEC. 33 T23N R07W

Sandoval, 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'-5643'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5543'-10232'	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 D34-2307 01H

SHL: 1131' FNL, 316' FWL SEC. 34, T23N R07W

BHL: 640' FNL, 330' FWL SEC. 33 T23N R07W

Sandoval, 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'	228 sks	Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water	Surface	1 per joint on bottom 3 joints
Intermediate	0'-5643'	100% open hole excess Stage 1 Lead: 526 sks Stage 1 Tail: 400 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	5543'- 10232'	50% OH excess Stage 1 Blend Total: 267sks	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. Yield 2.63 cuft/sk	Liner Hanger	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 600'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5142'/10232'	Gallup

Lybrook D34-2307 01H
SHL: 1131' FNL, 316' FWL SEC. 34, T23N R07W
BHL: 640' FNL, 330' FWL SEC. 33 T23N R07W
Sandoval, 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'-5198'/5643'	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"	5198'/5643'- 5142'/10232'	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 +/- 2436 psi based on a 9.0 ppg at 5206' 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 April 15, 2015. 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: 1131' FNL, 316' FWL Sec. 34, T23N, R7W County: Sandoval WELL: Lybrook D34-2307 01H			Encana Natural Gas WELL SUMMARY				ENG: 0 RIG: Unassigned GLE: 0 RKBE: 0		9/29/15	
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION	
			TVD	MD						
			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.	0				12 1/4	9 5/8" 36ppf J55 LTC TOC Surface with 100% OH Excess: 228 sks Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water.	Fresh wtr 8.3-10	Vertical <1"
		Nacimiento Fn. 9 5/8" Csg	surface 500	500.00						
Survey Every 60'-120', updating anticollision report after surveys. Stop operations and contact drilling engineer if separation factor approaches 1.5	No OH logs	Ojo Alamo Ss. Kirtland Shale	1,033 1,220			8 3/4	7" 26ppf J55 LTC TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 927sks Stage 1 Lead: 526 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.	Fresh Wtr 8.3-10	Vertical <1"	
		Fruitland Coal	1,459							
		Pictured Cliffs Ss. Lewis Shale	1,591 1,706							
		Cliffhouse Ss. Menefee Fn.	2,407 3,093							
		Point Lookout Ss. Mancos Shale	3,978 4,157							
		KOP	600	600						
Surveys every 30' through the curve	Mud logger onsite	Mancos Silt	4,689				Stage 1 Tail: 400 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.			
		Gallup Fn.	4,949							
		7" Csg	5,198	5,643'						
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD	5,206 5,142	10,232		6 1/8	100' overlap at liner top		Horz Inc/TVD deg/Pilot Hole TD (TVD):ft TD = 10232.4 MD	
		Base Gallup	5,284				4590' Drilled Lateral			
MWD Gamma Directional							4 1/2" 11.6ppf SB80 LTC TOC @ hanger (50% OH excess) Stage 1 Total: 267sks Stage 1 Blend: 267 sks 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. 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 600', 8 3/4 inch holesize
- 5) Start curve at 10deg/100' build rate
- 6) Drill to csg point of 5643' MD
- 7) R&C 7" csg, circ cmt to surface
- 8) Land at ~55 deg, drill lateral to 10232' run 4 1/2 inch cemented liner

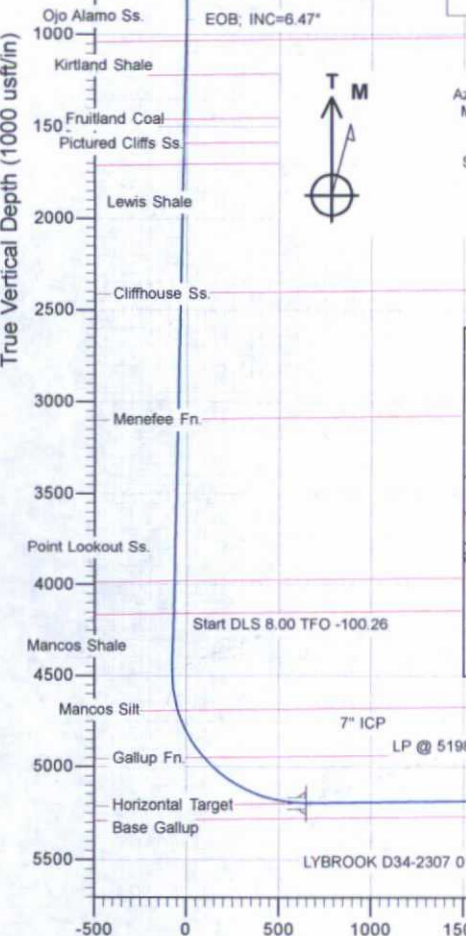
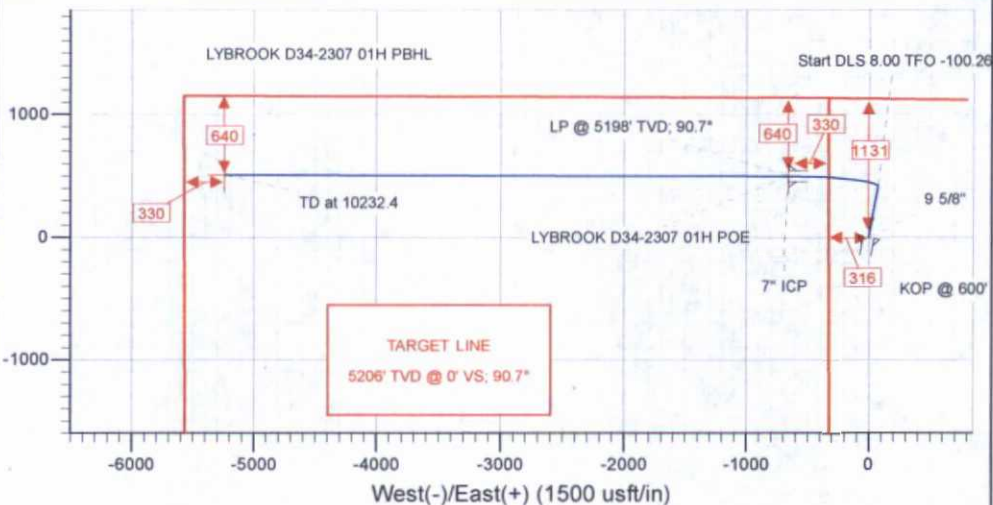
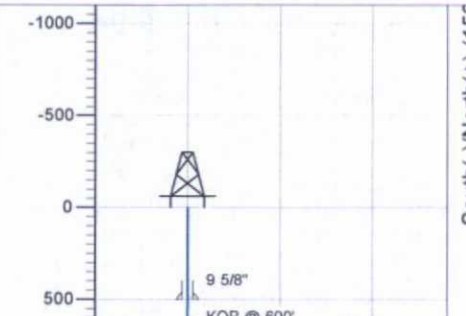


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	923.7	6.47	10.54	923.0	18.0	3.3	2.00	10.54	-3.3	
4	4495.4	6.47	10.54	4472.0	413.9	77.0	0.00	0.00	-76.0	
5	5643.7	90.70	270.14	5198.1	497.7	-647.5	8.00	-100.26	648.7	LYBROOK D34-2307 01H POE
6	10232.4	90.70	270.14	5142.0	509.1	-5235.9	0.00	0.00	5237.1	LYBROOK D34-2307 01H PBHL

PLAN #1
LYBROOK D34-2307 01H
15500. LF
10' KB @ 6936.0usft
Ground Level @ 6920.0
North American Datum 1983
Well LYBROOK D34-2307 01H, True North

Type	Target	Asimuth	Origin	Type	N/S	E/W	From
User	No Target (Freehand)	270.14	Stn		0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude		
LYBROOK D34-2307 01H PBHL	509.1	509.1	5235.9	36.188800	-107.567891		
LYBROOK D34-2307 01H PBHL	497.7	497.7	447.5	36.188770	-107.572140		

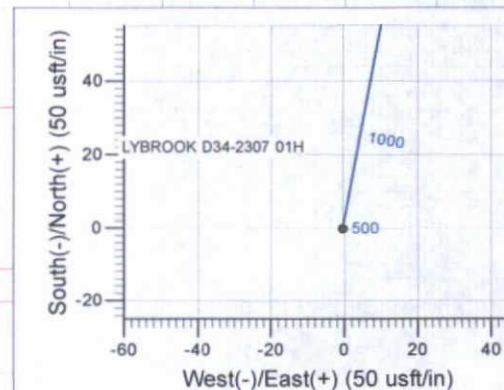


Azimuths to True North
Magnetic North: 9.08°
Magnetic Field
Strength: 49775.1nT
Dip Angle: 62.90°
Date: 9/9/2015
Model: HDGM

Project: Sandoval County, NM
Site: S34-T23N-R7W
Well: LYBROOK D34-2307 01H
Wellbore: OH
Design: PLAN #1

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1033.1	1034.5	Ojo Alamo Ss.
1220.1	1222.7	Kirtland Shale
1459.2	1463.3	Fruitland Coal
1591.2	1596.2	Pictured Cliffs Ss.
1706.2	1711.9	Lewis Shale
2407.4	2417.6	Cliffhouse Ss.
3093.6	3108.2	Menefee Fn.
3978.8	3999.1	Point Lookout Ss.
4157.8	4179.3	Mancos Shale
4689.6	4717.3	Mancos Silt
4947.8	5015.1	Gallup Fn.



Vertical Section at 270.14° (1000 usft/in)

WELL DETAILS: LYBROOK D34-2307 01H

+N/-S	+E/-W	North	East	Latitude	Longitude
0.0	0.0	1890129.71	1250913.89	36.187403	-107.569950



Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: S34-T23N-R7W
Well: LYBROOK D34-2307 01H
Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference: Well LYBROOK D34-2307 01H
TVD Reference: 16' KB @ 6936.0usft
MD Reference: 16' KB @ 6936.0usft
North Reference: True
Survey Calculation Method: Minimum Curvature

Project Sandoval County, NM

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Central Zone
System Datum: Mean Sea Level

Site S34-T23N-R7W

Site Position:
From: Lat/Long
Position Uncertainty: 0.0 usft
Northing: 1,887,400.91 usft
Easting: 1,251,354.09 usft
Slot Radius: 13-3/16"
Latitude: 36.179925
Longitude: -107.568333
Grid Convergence: -0.78 °

Well LYBROOK D34-2307 01H

Well Position +N/-S 0.0 usft
Well Position +E/-W 0.0 usft
Position Uncertainty 0.0 usft
Northing: 1,890,129.71 usft
Easting: 1,250,913.89 usft
Wellhead Elevation: 0.0 usft
Latitude: 36.187403
Longitude: -107.569950
Ground Level: 6,920.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/9/2015	9.08	62.90	49,775

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	270.14

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
923.7	6.47	10.54	923.0	18.0	3.3	2.00	2.00	0.00	10.54	
4,495.4	6.47	10.54	4,472.0	413.9	77.0	0.00	0.00	0.00	0.00	
5,643.7	90.70	270.14	5,198.1	497.7	-647.5	8.00	7.34	-8.74	-100.26	LYBROOK D34-2307
10,232.4	90.70	270.14	5,142.0	509.1	-5,235.9	0.00	0.00	0.00	0.00	LYBROOK D34-2307

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: S34-T23N-R7W
Well: LYBROOK D34-2307 01H
Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference: Well LYBROOK D34-2307 01H
TVD Reference: 16' KB @ 6936.0usft
MD Reference: 16' KB @ 6936.0usft
North Reference: True
Survey Calculation Method: Minimum Curvature

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"
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
700.0	2.00	10.54	700.0	1.7	0.3	-0.3	2.00	2.00	
800.0	4.00	10.54	799.8	6.9	1.3	-1.3	2.00	2.00	
900.0	6.00	10.54	899.5	15.4	2.9	-2.8	2.00	2.00	
923.7	6.47	10.54	923.0	18.0	3.3	-3.3	2.00	2.00	EOB; INC=6.47°
1,000.0	6.47	10.54	998.8	26.4	4.9	-4.9	0.00	0.00	
1,034.5	6.47	10.54	1,033.1	30.2	5.6	-5.6	0.00	0.00	Ojo Alamo Ss.
1,100.0	6.47	10.54	1,098.2	37.5	7.0	-6.9	0.00	0.00	
1,200.0	6.47	10.54	1,197.5	48.6	9.0	-8.9	0.00	0.00	
1,222.7	6.47	10.54	1,220.1	51.1	9.5	-9.4	0.00	0.00	Kirtland Shale
1,300.0	6.47	10.54	1,296.9	59.7	11.1	-11.0	0.00	0.00	
1,400.0	6.47	10.54	1,396.3	70.8	13.2	-13.0	0.00	0.00	
1,463.3	6.47	10.54	1,459.2	77.8	14.5	-14.3	0.00	0.00	Fruitland Coal
1,500.0	6.47	10.54	1,495.6	81.8	15.2	-15.0	0.00	0.00	
1,596.2	6.47	10.54	1,591.2	92.5	17.2	-17.0	0.00	0.00	Pictured Cliffs Ss.
1,600.0	6.47	10.54	1,595.0	92.9	17.3	-17.1	0.00	0.00	
1,700.0	6.47	10.54	1,694.4	104.0	19.4	-19.1	0.00	0.00	
1,711.9	6.47	10.54	1,706.2	105.3	19.6	-19.3	0.00	0.00	Lewis Shale
1,800.0	6.47	10.54	1,793.7	115.1	21.4	-21.1	0.00	0.00	
1,900.0	6.47	10.54	1,893.1	126.2	23.5	-23.2	0.00	0.00	
2,000.0	6.47	10.54	1,992.4	137.3	25.5	-25.2	0.00	0.00	
2,100.0	6.47	10.54	2,091.8	148.3	27.6	-27.2	0.00	0.00	
2,200.0	6.47	10.54	2,191.2	159.4	29.7	-29.3	0.00	0.00	
2,300.0	6.47	10.54	2,290.5	170.5	31.7	-31.3	0.00	0.00	
2,400.0	6.47	10.54	2,389.9	181.6	33.8	-33.4	0.00	0.00	
2,417.6	6.47	10.54	2,407.4	183.5	34.2	-33.7	0.00	0.00	Cliffhouse Ss.
2,500.0	6.47	10.54	2,489.3	192.7	35.9	-35.4	0.00	0.00	
2,600.0	6.47	10.54	2,588.6	203.8	37.9	-37.4	0.00	0.00	
2,700.0	6.47	10.54	2,688.0	214.8	40.0	-39.5	0.00	0.00	
2,800.0	6.47	10.54	2,787.3	225.9	42.1	-41.5	0.00	0.00	
2,900.0	6.47	10.54	2,886.7	237.0	44.1	-43.5	0.00	0.00	
3,000.0	6.47	10.54	2,986.1	248.1	46.2	-45.6	0.00	0.00	
3,100.0	6.47	10.54	3,085.4	259.2	48.2	-47.6	0.00	0.00	
3,108.2	6.47	10.54	3,093.6	260.1	48.4	-47.8	0.00	0.00	Menefee Fn.
3,200.0	6.47	10.54	3,184.8	270.3	50.3	-49.6	0.00	0.00	
3,300.0	6.47	10.54	3,284.2	281.4	52.4	-51.7	0.00	0.00	
3,400.0	6.47	10.54	3,383.5	292.4	54.4	-53.7	0.00	0.00	
3,500.0	6.47	10.54	3,482.9	303.5	56.5	-55.8	0.00	0.00	
3,600.0	6.47	10.54	3,582.2	314.6	58.6	-57.8	0.00	0.00	
3,700.0	6.47	10.54	3,681.6	325.7	60.6	-59.8	0.00	0.00	
3,800.0	6.47	10.54	3,781.0	336.8	62.7	-61.9	0.00	0.00	
3,900.0	6.47	10.54	3,880.3	347.9	64.7	-63.9	0.00	0.00	
3,999.1	6.47	10.54	3,978.8	358.8	66.8	-65.9	0.00	0.00	Point Lookout Ss.
4,000.0	6.47	10.54	3,979.7	358.9	66.8	-65.9	0.00	0.00	
4,100.0	6.47	10.54	4,079.1	370.0	68.9	-68.0	0.00	0.00	
4,179.3	6.47	10.54	4,157.8	378.8	70.5	-69.6	0.00	0.00	Mancos Shale

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: Sandoval County, NM
 Site: S34-T23N-R7W
 Well: LYBROOK D34-2307 01H
 Wellbore: OH
 Design: PLAN #1

Local Co-ordinate Reference: Well LYBROOK D34-2307 01H
 TVD Reference: 16' KB @ 6936.0usft
 MD Reference: 16' KB @ 6936.0usft
 North Reference: True
 Survey Calculation Method: Minimum Curvature

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	6.47	10.54	4,178.4	381.1	70.9	-70.0	0.00	0.00	
4,300.0	6.47	10.54	4,277.8	392.2	73.0	-72.0	0.00	0.00	
4,400.0	6.47	10.54	4,377.1	403.3	75.1	-74.1	0.00	0.00	
4,495.4	6.47	10.54	4,472.0	413.9	77.0	-76.0	0.00	0.00	Start DLS 8.00 TFO -100.26
4,500.0	6.42	7.32	4,476.5	414.4	77.1	-76.1	8.00	-1.20	
4,600.0	9.61	311.48	4,575.7	425.5	71.6	-70.5	8.00	3.19	
4,700.0	16.46	292.42	4,673.1	436.4	52.2	-51.1	8.00	6.85	
4,717.3	17.74	290.65	4,689.6	438.3	47.5	-46.4	8.00	7.41	Mancos Silt
4,800.0	24.02	284.73	4,766.8	447.0	19.3	-18.3	8.00	7.59	
4,900.0	31.79	280.60	4,855.2	457.0	-26.3	27.4	8.00	7.77	
5,000.0	39.64	277.96	4,936.3	466.3	-83.9	85.0	8.00	7.85	
5,015.1	40.83	277.64	4,947.8	467.6	-93.6	94.7	8.00	7.88	Gallup Fn.
5,100.0	47.54	276.08	5,008.7	474.7	-152.3	153.4	8.00	7.90	
5,200.0	55.45	274.63	5,070.9	481.9	-230.1	231.3	8.00	7.92	
5,300.0	63.39	273.43	5,121.7	487.9	-315.9	317.1	8.00	7.93	
5,400.0	71.33	272.38	5,160.2	492.5	-408.0	409.2	8.00	7.94	
5,500.0	79.28	271.43	5,185.5	495.8	-504.6	505.8	8.00	7.95	
5,600.0	87.23	270.53	5,197.3	497.4	-603.8	605.0	8.00	7.95	
5,642.7	90.62	270.15	5,198.1	497.7	-646.5	647.7	8.00	7.95	7" ICP
5,643.7	90.70	270.14	5,198.1	497.7	-647.5	648.7	8.00	7.95	LP @ 5198' TVD; 90.7°
5,700.0	90.70	270.14	5,197.4	497.8	-703.8	705.0	0.00	0.00	
5,800.0	90.70	270.14	5,196.1	498.1	-803.8	805.0	0.00	0.00	
5,900.0	90.70	270.14	5,194.9	498.3	-903.8	905.0	0.00	0.00	
6,000.0	90.70	270.14	5,193.7	498.6	-1,003.8	1,005.0	0.00	0.00	
6,100.0	90.70	270.14	5,192.5	498.8	-1,103.8	1,105.0	0.00	0.00	
6,200.0	90.70	270.14	5,191.3	499.1	-1,203.8	1,205.0	0.00	0.00	
6,300.0	90.70	270.14	5,190.0	499.3	-1,303.8	1,305.0	0.00	0.00	
6,400.0	90.70	270.14	5,188.8	499.6	-1,403.8	1,405.0	0.00	0.00	
6,500.0	90.70	270.14	5,187.6	499.8	-1,503.7	1,505.0	0.00	0.00	
6,600.0	90.70	270.14	5,186.4	500.1	-1,603.7	1,605.0	0.00	0.00	
6,700.0	90.70	270.14	5,185.2	500.3	-1,703.7	1,705.0	0.00	0.00	
6,800.0	90.70	270.14	5,183.9	500.6	-1,803.7	1,804.9	0.00	0.00	
6,900.0	90.70	270.14	5,182.7	500.8	-1,903.7	1,904.9	0.00	0.00	
7,000.0	90.70	270.14	5,181.5	501.1	-2,003.7	2,004.9	0.00	0.00	
7,100.0	90.70	270.14	5,180.3	501.3	-2,103.7	2,104.9	0.00	0.00	
7,200.0	90.70	270.14	5,179.0	501.6	-2,203.7	2,204.9	0.00	0.00	
7,300.0	90.70	270.14	5,177.8	501.8	-2,303.7	2,304.9	0.00	0.00	
7,400.0	90.70	270.14	5,176.6	502.1	-2,403.7	2,404.9	0.00	0.00	
7,500.0	90.70	270.14	5,175.4	502.3	-2,503.7	2,504.9	0.00	0.00	
7,600.0	90.70	270.14	5,174.2	502.6	-2,603.7	2,604.9	0.00	0.00	
7,700.0	90.70	270.14	5,172.9	502.8	-2,703.7	2,704.9	0.00	0.00	
7,800.0	90.70	270.14	5,171.7	503.1	-2,803.6	2,804.9	0.00	0.00	
7,900.0	90.70	270.14	5,170.5	503.3	-2,903.6	2,904.9	0.00	0.00	
8,000.0	90.70	270.14	5,169.3	503.5	-3,003.6	3,004.9	0.00	0.00	
8,100.0	90.70	270.14	5,168.0	503.8	-3,103.6	3,104.8	0.00	0.00	
8,200.0	90.70	270.14	5,166.8	504.0	-3,203.6	3,204.8	0.00	0.00	
8,300.0	90.70	270.14	5,165.6	504.3	-3,303.6	3,304.8	0.00	0.00	
8,400.0	90.70	270.14	5,164.4	504.5	-3,403.6	3,404.8	0.00	0.00	
8,500.0	90.70	270.14	5,163.2	504.8	-3,503.6	3,504.8	0.00	0.00	
8,600.0	90.70	270.14	5,161.9	505.0	-3,603.6	3,604.8	0.00	0.00	
8,700.0	90.70	270.14	5,160.7	505.3	-3,703.6	3,704.8	0.00	0.00	
8,800.0	90.70	270.14	5,159.5	505.5	-3,803.6	3,804.8	0.00	0.00	

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: Sandoval County, NM
 Site: S34-T23N-R7W
 Well: LYBROOK D34-2307 01H
 Wellbore: OH
 Design: PLAN #1

Local Co-ordinate Reference: Well LYBROOK D34-2307 01H
 TVD Reference: 16' KB @ 6936.0usft
 MD Reference: 16' KB @ 6936.0usft
 North Reference: True
 Survey Calculation Method: Minimum Curvature

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	90.70	270.14	5,158.3	505.8	-3,903.6	3,904.8	0.00	0.00	
9,000.0	90.70	270.14	5,157.0	506.0	-4,003.6	4,004.8	0.00	0.00	
9,100.0	90.70	270.14	5,155.8	506.3	-4,103.5	4,104.8	0.00	0.00	
9,200.0	90.70	270.14	5,154.6	506.5	-4,203.5	4,204.8	0.00	0.00	
9,300.0	90.70	270.14	5,153.4	506.8	-4,303.5	4,304.8	0.00	0.00	
9,400.0	90.70	270.14	5,152.2	507.0	-4,403.5	4,404.7	0.00	0.00	
9,500.0	90.70	270.14	5,150.9	507.3	-4,503.5	4,504.7	0.00	0.00	
9,600.0	90.70	270.14	5,149.7	507.5	-4,603.5	4,604.7	0.00	0.00	
9,700.0	90.70	270.14	5,148.5	507.8	-4,703.5	4,704.7	0.00	0.00	
9,800.0	90.70	270.14	5,147.3	508.0	-4,803.5	4,804.7	0.00	0.00	
9,900.0	90.70	270.14	5,146.1	508.3	-4,903.5	4,904.7	0.00	0.00	
10,000.0	90.70	270.14	5,144.8	508.5	-5,003.5	5,004.7	0.00	0.00	
10,100.0	90.70	270.14	5,143.6	508.8	-5,103.5	5,104.7	0.00	0.00	
10,200.0	90.70	270.14	5,142.4	509.0	-5,203.5	5,204.7	0.00	0.00	
10,232.4	90.70	270.14	5,142.0	509.1	-5,235.9	5,237.1	0.00	0.00	TD at 10232.4

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LYBROOK D34-2307 01	0.00	0.00	5,198.1	497.7	-647.5	1,890,636.17	1,250,273.21	36.188770	-107.572144
- plan hits target center									
- Point									
LYBROOK D34-2307 01	0.00	0.00	5,142.0	509.1	-5,235.9	1,890,709.98	1,245,685.44	36.188800	-107.587691
- plan hits target center									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
500.0	500.0	9 5/8"	0	0
5,642.7	5,198.1	7" ICP	0	0

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: S34-T23N-R7W
Well: LYBROOK D34-2307 01H
Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference: Well LYBROOK D34-2307 01H
TVD Reference: 16' KB @ 6936.0usft
MD Reference: 16' KB @ 6936.0usft
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,034.5	1,033.0	Ojo Alamo Ss.		-0.70	270.14
1,222.7	1,220.0	Kirtland Shale		-0.70	270.14
1,463.3	1,459.0	Fruitland Coal		-0.70	270.14
1,596.2	1,591.0	Pictured Cliffs Ss.		-0.70	270.14
1,711.9	1,706.0	Lewis Shale		-0.70	270.14
2,417.6	2,407.0	Cliffhouse Ss.		-0.70	270.14
3,108.2	3,093.0	Menefee Fn.		-0.70	270.14
3,999.1	3,978.0	Point Lookout Ss.		-0.70	270.14
4,179.3	4,157.0	Mancos Shale		-0.70	270.14
4,717.3	4,689.0	Mancos Silt		-0.70	270.14
5,015.1	4,949.0	Gallup Fn.		-0.70	270.14

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
600.0	600.0	0.0	0.0	KOP @ 600'
923.7	923.0	18.0	3.3	EOB; INC=6.47"
4,495.4	4,472.0	413.9	77.0	Start DLS 8.00 TFO -100.26
5,643.7	5,198.1	497.7	-647.5	LP @ 5198' TVD; 90.7°
10,232.4	5,142.0	509.1	-5,235.9	TD at 10232.4

Lybrook D34-2307 01H

SHL: NWNW Section 34, T23N, R7W
1,131' FNL and 316' FWL

BHL: NWNW Section 33, T23N, R7W
640' FNL and 330' FWL

Sandoval County, New Mexico

Lease Number: NMNM 016586

Any trees smaller than 3-inches in diameter, slash and brush will be chipped, shredded or mulched and incorporated into the topsoil for later use in interim reclamation.

Remaining brush will be brush-hogged or scalped at ground-level prior to ground disturbance.

2. After removal of vegetation, topsoil will be segregated and windrowed on the edge of the well pad in the construction zone. Topsoil will be defined as the top six (6) inches of soil. The stockpiled topsoil will be free of brush and tree limbs, trunks and root balls, but may include chipped or mulched material so long as it is incorporated into the topsoil stockpile.

Topsoil will be stockpiled separate from subsoil with a noticeable gap left between the stockpiles. Vehicle/equipment traffic will be prevented from crossing topsoil stockpiles.

Topsoil will not be stripped when soils are moisture-saturated or frozen below the stripping depth.

If the location becomes prone to wind or water erosion, Encana will take appropriate measures to prevent topsoil loss from wind. Such measures may include using tackifiers or water to wet the topsoil stockpile so that a crust is created across the exposed soil to prevent soil loss.

3. All construction materials for the well pad will consist of native borrow and subsoil accumulated during well pad construction. If additional fill or surfacing material is required, it will be obtained from existing permitted or private sources and will be hauled in by trucks over existing access roads.

The maximum cut will be approximately 4.5 feet in the northeast corner (corner 6) and the maximum fill will be approximately 6.4 feet southwest corner (corner 3).

4. As determined during the onsite on June 16, 2015, the following best management practices will be implemented:
 - a. One silt trap will be installed on the northern side in the E.O.D. between the two corners.
 - b. One silt trap will be installed in the northwest corner (corner 5).
 - c. One silt trap will be installed on the west side in the E.O.D between the two corners.
5. Construction equipment may include chain saws, a brush hog, scraper, maintainer, excavator, and dozer. Construction for the access road and well pad will take approximately 3 to 4 weeks.

C. Pipeline

See the Plan of Development submitted with the final modifications to the Standard Form 299 application for authorization to construct, maintain and terminate a 1,489 foot, up to 6-inch outside diameter, buried steel well connect pipeline that was submitted to the BLM concurrently with the APD.

7. METHODS FOR HANDLING WASTE

A. Cuttings

1. A closed-loop system will be used. Cuttings will be moved through a shaker system on the drill rig that separates drilling fluids from the cuttings. Cuttings will be stored onsite in above-ground storage tanks. Cuttings will be pulled from the storage tanks, mixed with saw dust or

ENCANA OIL & GAS (USA) INC.

LYBROOK D34-2307 #01H

1131' FNL & 316' FWL

LOCATED IN THE NW/4 NW/4 OF SECTION 34,
T23N, R7W, N.M.P.M.,
SANDOVAL COUNTY, NEW MEXICO

DIRECTIONS

- 1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, GO SOUTH ON HWY 550, 39.0 MILES TO INDIAN ROUTE 7061 (M.P. 112.6).
- 2) TURN RIGHT AND GO 5.4 MILES.
- 3) TURN LEFT AND GO 6.3 MILES.
- 4) TURN LEFT AND GO 0.3 MILES TO WHERE ROAD GOES THROUGH PAD.

WELL FLAG LOCATED AT LAT. 36.187403° N, LONG.107.569950° W (NAD 83).



WELLHEAD BLOWOUT CONTROL SYSTEM

encana

Well Name and Number:
Lyrbook D34-2307 01H

