State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
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: 3-2-15
Well information;
Operator Encana, Well Name and Number Lybrook H03 2308 #1H
API# 30-045-35660, Section 3, Township 23 (N)/S, Range 8 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, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o 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
- o 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
- ✓ 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.

NMOCD Approved by Signature

Date 4-24-2015 KC

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3460 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

Form 3160-3
(March 2012)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED
MAR 03 2015
Farmington Field Office
Bureau of Land Management

5. Lease Serial No. NMNM 120374	
6. If Indian, Allotee or Tribe Name N/A	
1a. Type of work: ☑ DRILL ☐ REENTER	7. If Unit or CA Agreement, Name and No. N/A
1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. Lybrook H03-2308 01H
2. Name of Operator Encana Oil & Gas (USA) Inc.	9. API Well No. 30-045-35660
3a. Address 370 17th Street, Suite 1700 Denver, CO 80202	3b. Phone No. *(include area code)* 720-876-3740
	10. Field and Pool, or Exploratory Basin Mancos Gas
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface H 1560' FNL and 348' FEL Section 3, T23N, R8W SENE SHL	11. Sec., T. R. M. or Blk. and Survey or Area Section 3, T23N, R8W NMPM
At proposed prod. zone A 400' FNL and 330' FEL Section 2, T23N, R8W NENE BHL Sec 2, T23N, R8W	
14. Distance in miles and direction from nearest town or post office* +/- 41 miles south on HWY 550 from Bloomfield, NM	12. County or Parish San Juan County / 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' FEL Section 2, T23N, R8W	16. No. of acres in lease NMNM 120374- 483.44 acres	17. Spacing Unit dedicated to this well 323.44 acers- N/2 of Section 2
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Well Pad is +/- 30' N of Lybrook H03-2308 02H	19. Proposed Depth 5,436' TVD;10,729' MD	20. BLM/BIA Bond No. on file COB-000235
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,892' GL; 6,908' KB	22. Approximate date work will start* 09/02/2015	23. Estimated duration 20 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Rosalie Thim	Name *(Printed/Typed)* Rosalie Thim	Date 03/02/2015
Title Regulatory Analyst		
Approved by *(Signature)* /s/ Mancieloz	Name *(Printed/Typed)*	Date 4/16/15
Title AFM	Office FFO	

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.

NOTICE OF 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

(Continued on page 2)

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

*(Instructions on page 2)

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

NMOCD

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

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

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

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-35660	97232	BASIN MANCOS GAS

[4] Property Code	[5] Property Name	[6] Well Number
314772	LYBROOK H03-2308	01H

[7] OGRID No.	[8] Operator Name	[9] Elevation
282327	ENCANA OIL & GAS (USA) INC.	6892.3'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	WEST/West line	County
H	3	23N	8W		1560'	NORTH	348'	EAST	SAN JUAN

[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	WEST/West line	County
A	2	23N	8W	1	400'	NORTH	330'	EAST	SAN JUAN

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
PROJECT AREA 323.44 ACRES N/2 SEC. 2			

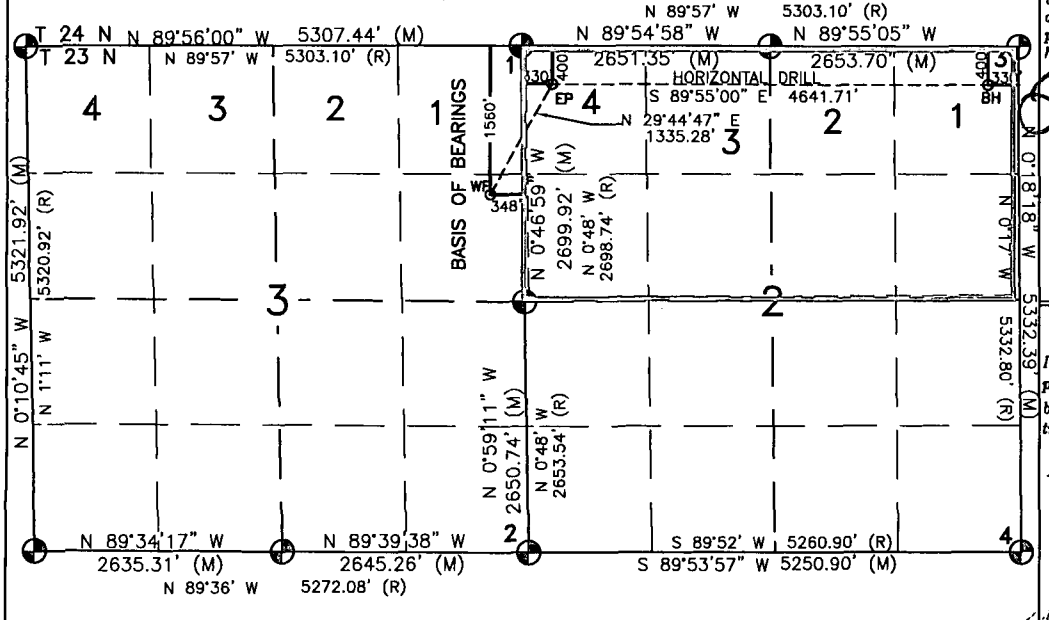
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16

WELL FLAG
LAT. 36.259266° N (NAD83)
LONG. 107.661353° W (NAD83)
LAT. 36.259253° N (NAD27)
LONG. 107.660074° W (NAD27)

ENTRY POINT
LAT. 36.262453° N (NAD83)
LONG. 107.659106° W (NAD83)
LAT. 36.262440° N (NAD27)
LONG. 107.658496° W (NAD27)

BOTTOM HOLE
LAT. 36.262431° N (NAD83)
LONG. 107.643368° W (NAD83)
LAT. 36.262418° N (NAD27)
LONG. 107.642758° W (NAD27)



1 LAT. 36.263553° N (NAD83)
LONG. 107.660244° W (NAD83)
LAT. 36.263540° N (NAD27)
LONG. 107.659634° W (NAD27)

2 LAT. 36.248862° N (NAD83)
LONG. 107.659966° W (NAD83)
LAT. 36.248849° N (NAD27)
LONG. 107.659355° W (NAD27)

3 LAT. 36.263528° N (NAD83)
LONG. 107.642256° W (NAD83)
LAT. 36.263515° N (NAD27)
LONG. 107.641646° W (NAD27)

4 LAT. 36.248886° N (NAD83)
LONG. 107.642165° W (NAD83)
LAT. 36.248873° N (NAD27)
LONG. 107.641555° W (NAD27)

ALL CORNERS FND 2½" BC GLO 1947

SHEET A

16

[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 Date 3/2/15

Rosalie Thim
Printed Name

rosalie.thim@encana.com
E-mail Address

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.

JANUARY 28, 2014
Date of Survey

Signature and Seal of Professional Surveyor:

DAVID R. RUSSELL NEW MEXICO 10201 REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID RUSSELL
Certificate Number 10201

Lybrook H03-2308 01H
SHL: 1560' FNL, 348' FEL Sec 3, T23N, R8W
BHL: 400' FNL, 330' FEL Sec 2, T23N, R8W
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
San Jose Fn.	n/a
Nacimiento Fn.	surface
Ojo Alamo Ss.	1,033
Kirtland Shale	1,206
Fruitland Coal	1,522
Pictured Cliffs Ss.	1,742
Lewis Shale	1,839
Cliffhouse Ss.	2,575
Menefee Fn.	3,281
Point Lookout Ss.	4,025
Mancos Shale	4,333
Mancos Silt	4,901
Gallup Fn.	5,147
Base Gallup	5,512

The referenced surface elevation is 6892', KB 6908'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,522
Oil/Gas	Pictured Cliffs Ss.	1,742
Oil/Gas	Cliffhouse Ss.	2,575
Gas	Menefee Fn.	3,281
Oil/Gas	Point Lookout Ss.	4,025
Oil/Gas	Mancos Shale	4,333
Oil/Gas	Mancos Silt	4,901
Oil/Gas	Gallup Fn.	5,147

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

Lybrook H03-2308 01H
SHL: 1560' FNL, 348' FEL Sec 3, T23N, R8W
BHL: 400' FNL, 330' FEL Sec 2, T23N, R8W
San Juan, New Mexico

3. PRESSURE CONTROL

a) Pressure contol 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'-5623'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5523'-10729'	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 H03-2308 01H
SHL: 1560' FNL, 348' FEL Sec 3, T23N, R8W
BHL: 400' FNL, 330' FEL Sec 2, T23N, R8W
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'	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'-5623'	100% open hole excess Stage 1 Lead: 524 sks Stage 1 Tail: 399 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	5523'-10729'	50% OH excess Stage 1 Blend Total: 295sks	Blend: Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwow 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 2700'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5436'/10729'	Gallup

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'-5304'/5623'	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"	5304'/5623'-5436'/10729'	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 +/- 2548 psi based on a 9.0 ppg at 5445' TVD of the horizontal lateral target. No abnormal pressure or temperatures are anticipated.

No hydrogen sulfide gas is anticipated, however, if H_2S 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 September 2, 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: 1560' FNL, 348' FEL Sec 3, T23N, R8W County: San Juan WELL: Lybrook H03-2308 01H	Encana Natural Gas WELL SUMMARY		ENG: Michael Sanch 2/27/15 RIG: Aztec 950 GLE: 6892 RKBE: 6908

MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH TVD	DEPTH MD	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.	0		12 1/4	**9 5/8" 36ppf J55 STC** 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.	surface					
		9 5/8" Csg	**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.	1,033		8 3/4	**7" 26ppf J55 LTC** TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 923sks Stage 1 Lead: 524 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: 399 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°
		Kirtland Shale	1,206					
		Fruitland Coal	1,522					
		Pictured Cliffs Ss.	1,742					
		Lewis Shale	1,839					
		Cliffhouse Ss.	2,575					
		Menefee Fn.	3,281					
		Point Lookout Ss.	4,025					
		Mancos Shale	4,333					
	Mud logger onsite	**KOP**	**2,700**	**2,700**				
Surveys every 30' through the curve		Mancos Silt	4,901					
		Gallup Fn.	5,147					
		7" Csg	**5,304**	**5,623'**				
Surveys every stand to TD unless directed otherwise by Geologist MWD Gamma Directional	No OH Logs	Horizontal Target	5,445		6 1/8	100' overlap at liner top		Horz Inc/TVD 90.1deg/5445ft
		TD	**5,436**	**10,729**		5106' Drilled Lateral		TD = 10728.7 MD
		Base Gallup	5,512			**4 1/2" 11.6ppf SB80 LTC** TOC @ hanger (50% OH excess) Stage 1 Total: 295sks Stage 1 Blend: 295 sks Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwow 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 2700', 8 3/4 inch holesize
5) Start curve at 10deg/100' build rate
6) Drill to csg point of 5623' MD
7) R&C 7" csg, circ cmt to surface
8) Land at ~90 deg, drill lateral to 10729' run 4 1/2 inch cemented liner

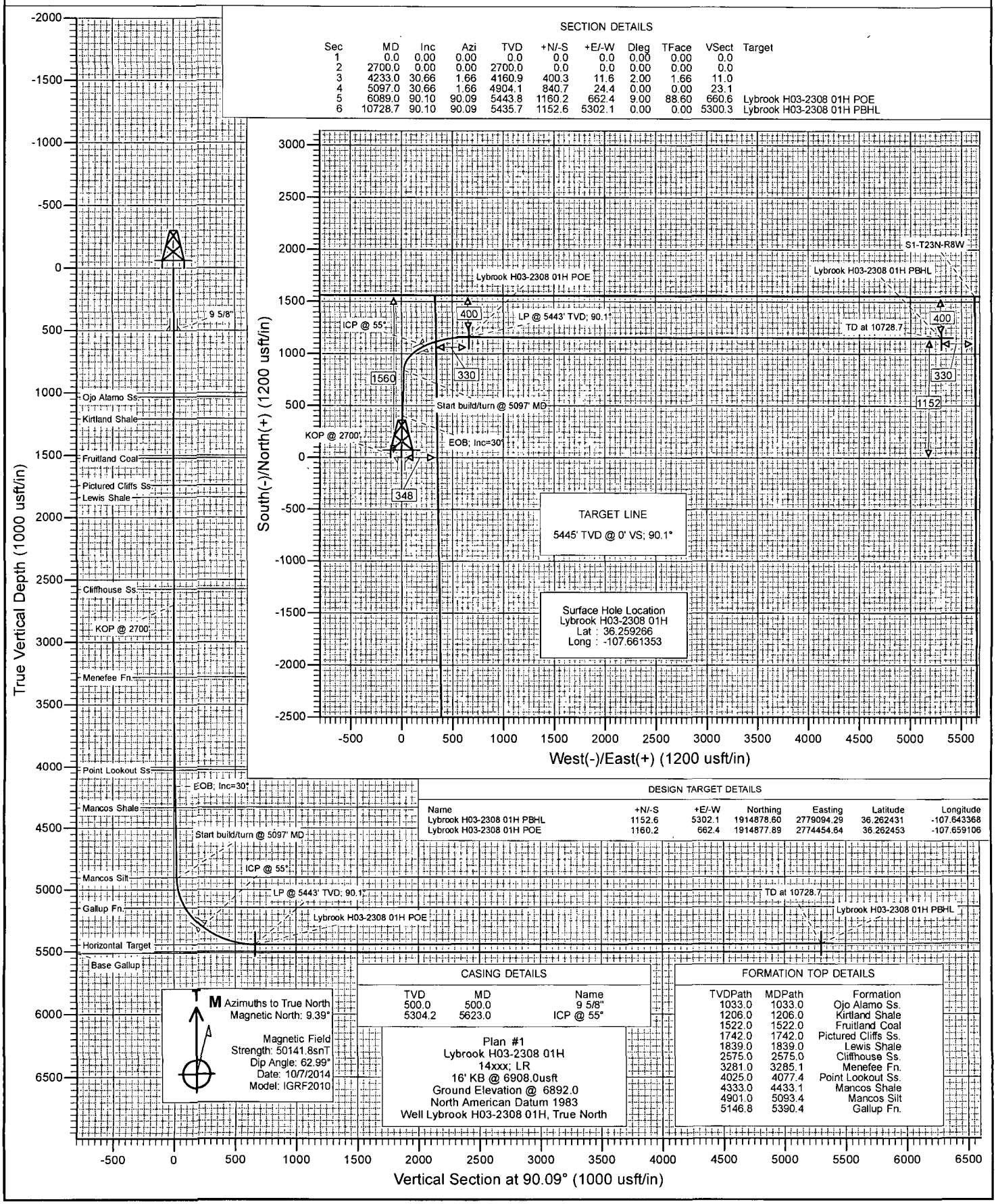
encana natural gas

Project: San Juan County, NM
Site: S3-T23N-R8W
Well: Lybrook H03-2308 01H
Wellbore: HZ
Design: Plan #1

CATHEDRAL

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	2700.0	0.00	0.00	2700.0	0.0	0.0	0.00	0.00	0.0	
3	4233.0	30.66	1.66	4160.9	400.3	11.6	2.00	1.66	11.0	
4	5097.0	30.66	1.66	4904.1	840.7	24.4	0.00	0.00	23.1	
5	6089.0	90.10	90.09	5443.8	1160.2	662.4	9.00	88.60	660.6	Lybrook H03-2308 01H POE
6	10728.7	90.10	90.09	5435.7	1152.6	5302.1	0.00	0.00	5300.3	Lybrook H03-2308 01H PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Lybrook H03-2308 01H PBHL	1152.6	5302.1	1914878.60	2779094.29	36.262431	-107.643368
Lybrook H03-2308 01H POE	1160.2	662.4	1914877.89	2774454.64	36.262453	-107.659106

CASING DETAILS

TVD	MD	Name
500.0	500.0	9 5/8"
5304.2	5623.0	ICP @ 55°

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1033.0	1033.0	Ojo Alamo Ss.
1206.0	1206.0	Kirtland Shale
1522.0	1522.0	Fruitland Coal
1742.0	1742.0	Pictured Cliffs Ss.
1839.0	1839.0	Lewis Shale
2575.0	2575.0	Cliffhouse Ss.
3281.0	3285.1	Menefee Fn.
4025.0	4077.4	Point Lookout Ss.
4333.0	4433.1	Mancos Shale
4901.0	5093.4	Mancos Silt
5146.8	5390.4	Gallup Fn.

M Azimuths to True North
Magnetic North: 9.39°

Magnetic Field
Strength: 50141.8snT
Dip Angle: 62.99°
Date: 10/7/2014
Model: IGRF2010

Plan #1
Lybrook H03-2308 01H
14xxx; LR
16' KB @ 6908.0usft
Ground Elevation @ 6892.0
North American Datum 1983
Well Lybrook H03-2308 01H, True North

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook H03-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6908.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6908.0usft
Site:	S3-T23N-R8W	**North Reference:**	True
Well:	Lybrook H03-2308 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	S3-T23N-R8W				
Site Position:		**Northing:**	1,913,716.56 usft	**Latitude:**	36.259266
From:	Lat/Long	**Easting:**	2,773,794.27 usft	**Longitude:**	-107.661353
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.10 °

Well	Lybrook H03-2308 01H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	1,913,716.56 usft	**Latitude:**	36.259266
	+E/-W	0.0 usft	**Easting:**	2,773,794.27 usft	**Longitude:**	-107.661353
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	6,892.0 usft

Wellbore	HZ			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	10/7/2014	9.39	62.99	50,142

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	90.09	

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	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,233.0	30.66	1.66	4,160.9	400.3	11.6	2.00	2.00	0.00	1.66	
5,097.0	30.66	1.66	4,904.1	840.7	24.4	0.00	0.00	0.00	0.00	
6,089.0	90.10	90.09	5,443.8	1,160.2	662.4	9.00	5.99	8.91	88.60	Lybrook H03-2308 01
10,728.7	90.10	90.09	5,435.7	1,152.6	5,302.1	0.00	0.00	0.00	0.00	Lybrook H03-2308 01

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook H03-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6908.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6908.0usft
Site:	S3-T23N-R8W	**North Reference:**	True
Well:	Lybrook H03-2308 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"
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	
1,033.0	0.00	0.00	1,033.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
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	
1,206.0	0.00	0.00	1,206.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
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	
1,522.0	0.00	0.00	1,522.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
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	
1,742.0	0.00	0.00	1,742.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,839.0	0.00	0.00	1,839.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
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	
2,575.0	0.00	0.00	2,575.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
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	KOP @ 2700'
2,800.0	2.00	1.66	2,800.0	1.7	0.1	0.0	2.00	2.00	
2,900.0	4.00	1.66	2,899.8	7.0	0.2	0.2	2.00	2.00	
3,000.0	6.00	1.66	2,999.4	15.7	0.5	0.4	2.00	2.00	
3,100.0	8.00	1.66	3,098.7	27.9	0.8	0.8	2.00	2.00	
3,200.0	10.00	1.66	3,197.5	43.5	1.3	1.2	2.00	2.00	
3,285.1	11.70	1.66	3,281.0	59.5	1.7	1.6	2.00	2.00	Menefee Fn.
3,300.0	12.00	1.66	3,295.6	62.6	1.8	1.7	2.00	2.00	
3,400.0	14.00	1.66	3,393.0	85.1	2.5	2.3	2.00	2.00	
3,500.0	16.00	1.66	3,489.6	110.9	3.2	3.0	2.00	2.00	
3,600.0	18.00	1.66	3,585.3	140.2	4.1	3.8	2.00	2.00	
3,700.0	20.00	1.66	3,679.8	172.7	5.0	4.7	2.00	2.00	
3,800.0	22.00	1.66	3,773.2	208.5	6.1	5.7	2.00	2.00	
3,900.0	24.00	1.66	3,865.2	247.6	7.2	6.8	2.00	2.00	
4,000.0	26.00	1.66	3,955.8	289.8	8.4	8.0	2.00	2.00	
4,077.4	27.55	1.66	4,025.0	324.7	9.4	8.9	2.00	2.00	Point Lookout Ss.
4,100.0	28.00	1.66	4,044.9	335.2	9.7	9.2	2.00	2.00	
4,200.0	30.00	1.66	4,132.4	383.6	11.1	10.5	2.00	2.00	
4,233.0	30.66	1.66	4,160.9	400.3	11.6	11.0	2.00	2.00	EOB; Inc=30°

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook H03-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6908.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6908.0usft
Site:	S3-T23N-R8W	**North Reference:**	True
Well:	Lybrook H03-2308 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
4,300.0	30.66	1.66	4,218.5	434.5	12.6	11.9	0.00	0.00	
4,400.0	30.66	1.66	4,304.5	485.4	14.1	13.3	0.00	0.00	
4,433.1	30.66	1.66	4,333.0	502.3	14.6	13.8	0.00	0.00	Mancos Shale
4,500.0	30.66	1.66	4,390.5	536.4	15.6	14.7	0.00	0.00	
4,600.0	30.66	1.66	4,476.6	587.4	17.0	16.1	0.00	0.00	
4,700.0	30.66	1.66	4,562.6	638.3	18.5	17.5	0.00	0.00	
4,800.0	30.66	1.66	4,648.6	689.3	20.0	18.9	0.00	0.00	
4,900.0	30.66	1.66	4,734.6	740.3	21.5	20.3	0.00	0.00	
5,000.0	30.66	1.66	4,820.6	791.3	23.0	21.7	0.00	0.00	
5,093.4	30.66	1.66	4,901.0	838.9	24.3	23.0	0.00	0.00	Mancos Silt
5,097.0	30.66	1.66	4,904.1	840.7	24.4	23.1	0.00	0.00	Start build/turn @ 5097' MD
5,100.0	30.67	2.20	4,906.7	842.2	24.4	23.1	9.00	0.26	
5,200.0	32.12	19.30	4,992.2	892.9	34.2	32.8	9.00	1.45	
5,300.0	35.62	34.23	5,075.4	942.2	59.4	58.0	9.00	3.50	
5,390.4	40.11	45.32	5,146.8	984.5	95.0	93.5	9.00	4.96	Gallup Fn.
5,400.0	40.64	46.36	5,154.1	988.8	99.5	97.9	9.00	5.55	
5,500.0	46.68	56.05	5,226.5	1,031.7	153.3	151.7	9.00	6.04	
5,600.0	53.38	63.90	5,290.8	1,069.7	219.7	218.0	9.00	6.71	
5,623.0	54.99	65.51	5,304.2	1,077.7	236.5	234.9	9.00	7.00	ICP @ 55°
5,700.0	60.52	70.46	5,345.3	1,102.0	296.9	295.2	9.00	7.18	
5,800.0	67.93	76.13	5,388.8	1,127.7	383.1	381.3	9.00	7.41	
5,900.0	75.52	81.23	5,420.2	1,146.3	476.1	474.3	9.00	7.59	
6,000.0	83.21	85.99	5,438.6	1,157.1	573.7	571.9	9.00	7.69	
6,089.0	90.10	90.09	5,443.8	1,160.2	662.4	660.6	9.00	7.74	LP @ 5443' TVD; 90.1°
6,100.0	90.10	90.09	5,443.8	1,160.1	673.4	671.6	0.00	0.00	
6,200.0	90.10	90.09	5,443.6	1,160.0	773.4	771.6	0.00	0.00	
6,300.0	90.10	90.09	5,443.4	1,159.8	873.4	871.6	0.00	0.00	
6,400.0	90.10	90.09	5,443.3	1,159.6	973.4	971.6	0.00	0.00	
6,500.0	90.10	90.09	5,443.1	1,159.5	1,073.4	1,071.6	0.00	0.00	
6,600.0	90.10	90.09	5,442.9	1,159.3	1,173.4	1,171.6	0.00	0.00	
6,700.0	90.10	90.09	5,442.7	1,159.2	1,273.4	1,271.6	0.00	0.00	
6,800.0	90.10	90.09	5,442.6	1,159.0	1,373.4	1,371.6	0.00	0.00	
6,900.0	90.10	90.09	5,442.4	1,158.8	1,473.4	1,471.6	0.00	0.00	
7,000.0	90.10	90.09	5,442.2	1,158.7	1,573.4	1,571.6	0.00	0.00	
7,100.0	90.10	90.09	5,442.0	1,158.5	1,673.4	1,671.6	0.00	0.00	
7,200.0	90.10	90.09	5,441.9	1,158.4	1,773.4	1,771.6	0.00	0.00	
7,300.0	90.10	90.09	5,441.7	1,158.2	1,873.4	1,871.6	0.00	0.00	
7,400.0	90.10	90.09	5,441.5	1,158.0	1,973.4	1,971.6	0.00	0.00	
7,500.0	90.10	90.09	5,441.3	1,157.9	2,073.4	2,071.6	0.00	0.00	
7,600.0	90.10	90.09	5,441.2	1,157.7	2,173.4	2,171.6	0.00	0.00	
7,700.0	90.10	90.09	5,441.0	1,157.5	2,273.4	2,271.6	0.00	0.00	
7,800.0	90.10	90.09	5,440.8	1,157.4	2,373.4	2,371.6	0.00	0.00	
7,900.0	90.10	90.09	5,440.6	1,157.2	2,473.4	2,471.6	0.00	0.00	
8,000.0	90.10	90.09	5,440.5	1,157.1	2,573.4	2,571.6	0.00	0.00	
8,100.0	90.10	90.09	5,440.3	1,156.9	2,673.4	2,671.6	0.00	0.00	
8,200.0	90.10	90.09	5,440.1	1,156.7	2,773.4	2,771.6	0.00	0.00	
8,300.0	90.10	90.09	5,439.9	1,156.6	2,873.4	2,871.6	0.00	0.00	
8,400.0	90.10	90.09	5,439.8	1,156.4	2,973.4	2,971.6	0.00	0.00	
8,500.0	90.10	90.09	5,439.6	1,156.2	3,073.4	3,071.6	0.00	0.00	
8,600.0	90.10	90.09	5,439.4	1,156.1	3,173.4	3,171.6	0.00	0.00	
8,700.0	90.10	90.09	5,439.2	1,155.9	3,273.4	3,271.6	0.00	0.00	
8,800.0	90.10	90.09	5,439.1	1,155.8	3,373.4	3,371.6	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook H03-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6908.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6908.0usft
Site:	S3-T23N-R8W	**North Reference:**	True
Well:	Lybrook H03-2308 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	90.10	90.09	5,438.9	1,155.6	3,473.4	3,471.6	0.00	0.00	
9,000.0	90.10	90.09	5,438.7	1,155.4	3,573.4	3,571.6	0.00	0.00	
9,100.0	90.10	90.09	5,438.5	1,155.3	3,673.4	3,671.6	0.00	0.00	
9,200.0	90.10	90.09	5,438.4	1,155.1	3,773.4	3,771.6	0.00	0.00	
9,300.0	90.10	90.09	5,438.2	1,154.9	3,873.4	3,871.6	0.00	0.00	
9,400.0	90.10	90.09	5,438.0	1,154.8	3,973.4	3,971.6	0.00	0.00	
9,500.0	90.10	90.09	5,437.8	1,154.6	4,073.4	4,071.6	0.00	0.00	
9,600.0	90.10	90.09	5,437.7	1,154.5	4,173.4	4,171.6	0.00	0.00	
9,700.0	90.10	90.09	5,437.5	1,154.3	4,273.4	4,271.6	0.00	0.00	
9,800.0	90.10	90.09	5,437.3	1,154.1	4,373.4	4,371.6	0.00	0.00	
9,900.0	90.10	90.09	5,437.1	1,154.0	4,473.4	4,471.6	0.00	0.00	
10,000.0	90.10	90.09	5,437.0	1,153.8	4,573.4	4,571.6	0.00	0.00	
10,100.0	90.10	90.09	5,436.8	1,153.6	4,673.4	4,671.6	0.00	0.00	
10,200.0	90.10	90.09	5,436.6	1,153.5	4,773.4	4,771.6	0.00	0.00	
10,300.0	90.10	90.09	5,436.4	1,153.3	4,873.4	4,871.6	0.00	0.00	
10,400.0	90.10	90.09	5,436.3	1,153.2	4,973.4	4,971.6	0.00	0.00	
10,500.0	90.10	90.09	5,436.1	1,153.0	5,073.4	5,071.6	0.00	0.00	
10,600.0	90.10	90.09	5,435.9	1,152.8	5,173.4	5,171.6	0.00	0.00	
10,700.0	90.10	90.09	5,435.8	1,152.7	5,273.4	5,271.6	0.00	0.00	
10,728.7	90.10	90.09	5,435.7	1,152.6	5,302.1	5,300.3	0.00	0.00	TD at 10728.7

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Lybrook H03-2308 01H I - plan hits target center - Point	0.00	0.00	5,435.7	1,152.6	5,302.1	1,914,878.60	2,779,094.29	36.262431	-107.643368
Lybrook H03-2308 01H I - plan hits target center - Point	0.00	0.00	5,443.8	1,160.2	662.4	1,914,877.89	2,774,454.64	36.262453	-107.659106

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
500.0	500.0	9 5/8"	0	0
5,623.0	5,304.2	ICP @ 55°	0	0

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook H03-2308 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6908.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6908.0usft
Site:	S3-T23N-R8W	**North Reference:**	True
Well:	Lybrook H03-2308 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,033.0	1,033.0	Ojo Alamo Ss.		-0.10	90.09
1,206.0	1,206.0	Kirtland Shale		-0.10	90.09
1,522.0	1,522.0	Fruitland Coal		-0.10	90.09
1,742.0	1,742.0	Pictured Cliffs Ss.		-0.10	90.09
1,839.0	1,839.0	Lewis Shale		-0.10	90.09
2,575.0	2,575.0	Cliffhouse Ss.		-0.10	90.09
3,285.1	3,281.0	Menefee Fn.		-0.10	90.09
4,077.4	4,025.0	Point Lookout Ss.		-0.10	90.09
4,433.1	4,333.0	Mancos Shale		-0.10	90.09
5,093.4	4,901.0	Mancos Silt		-0.10	90.09
5,390.4	5,147.0	Gallup Fn.		-0.10	90.09

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,700.0	2,700.0	0.0	0.0	KOP @ 2700'
4,233.0	4,160.9	400.3	11.6	EOB; Inc=30°
5,097.0	4,904.1	840.7	24.4	Start build/turn @ 5097' MD
6,089.0	5,443.8	1,160.2	662.4	LP @ 5443' TVD; 90.1°
10,728.7	5,435.7	1,152.6	5,302.1	TD at 10728.7

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 2 to 4 weeks.

C. Pipeline
See the Plan of Development submitted with the final modifications to the Standard SF-299 Application for authorization to construct, operate, maintain and terminate a 1,014 foot (0.19 miles), 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 similar absorbent material, and disposed of at the Envirotech, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.

2. The closed-loop system storage tanks will be adequately sized to ensure confinement of all fluids and will provide sufficient freeboard to prevent uncontrolled releases.

3. A 20-mil liner will be installed under tanks, pumps, ancillary facilities, and truck loading/unloading areas associated with the closed-loop system.

B. Drilling Fluids
1. A closed-loop system will be used. Drilling fluids will be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids will be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. Residual fluids will be vacuumed from the storage tanks and disposed of at Basin Disposal, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.

2. The closed-loop system storage tanks will be adequately sized to ensure confinement of all fluids and will provide sufficient freeboard to prevent uncontrolled releases.

3. The closed-loop system storage tanks will be placed in bermed secondary containment sized to accommodate a minimum of 110 percent of the volume of the largest storage tank.

4. A 20-mil liner will be installed under tanks, pumps, ancillary facilities, and truck loading/unloading areas associated with the closed-loop system.

C. Flowback Water
1. The water-based solution that flows back to the surface during and after completion operations will be placed in storage tanks on the location.

2. Flowback water will be confined to a storage tank for a period not to exceed 90 days after initial production and will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.

D. Spills – any spills of non-freshwater fluids will be immediately cleaned up and removed to an approved disposal site. Encana will also notify the BLM within 24 hours of any spill.

ENCANA OIL & GAS (USA) INC.

LYBROOK H03-2308 #01H
1560' FNL & 348' FEL
LOCATED IN THE SE/4 NE/4 OF SECTION 3,
T23N, R8W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

DIRECTIONS

1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, GO SOUTH ON HWY 550, 41.0 MILES TO M.P. 110.6.
2) TURN LEFT AND GO 0.7 MILES TO WHERE ACCESS IS STAKED.

WELL FLAG LOCATED AT LAT. 36.259266° N, LONG.107.661353° W (NAD 83).

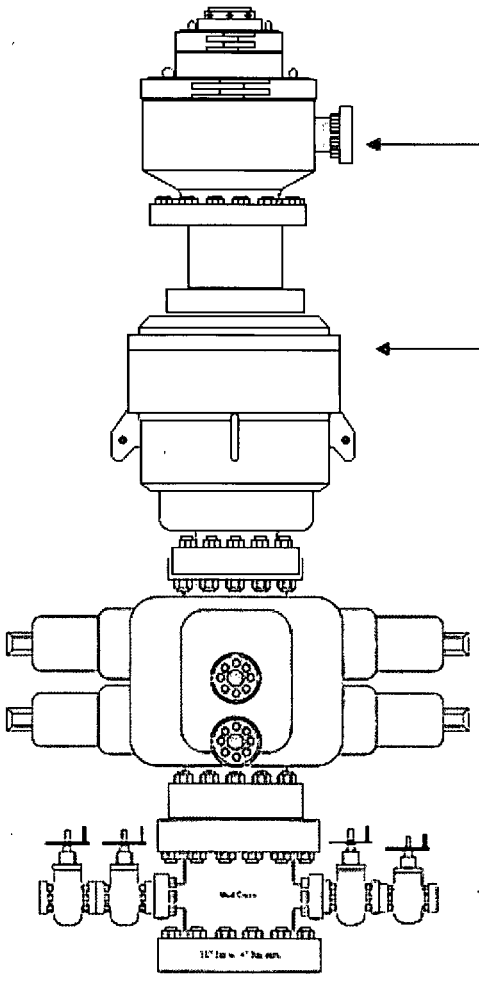
JOB No.: ENC114_REV2
DATE: 08/15/2014

Scorpion Survey & Consulting, L.L.C.
302 S. Ash
Aztec, New Mexico 87410
(505) 334-4007

WELLHEAD BLOWOUT CONTROL SYSTEM

encana

Well Name and Number:
Lybrook H03-2308 01H



11" 3K Rotating Head

11" 3K Annular

3K Double Ram
Top: Pipe Ram
Bottom: Blind Ram
3" Outlets Below Ram

3K Mud Cross 3" gate valves