State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

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: _3/13/2015_
Well information;
Operator: Encana Oil & Gas (USA) Inc.
Well Name and Number: Lybrook E12-2208 01H

API#30-045-35664, Section 12, Township 22N, Range 8W

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

- **X** Notify Aztec OCD 24hrs prior to casing & cement.
- **X** Hold C-104 for directional survey & "As Drilled" Plat
- **X** 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.

↓See page 2

✓ Plug pilot hole 50 feet above and below the Mancos and Gallup formation tops, and the Dakota top, if penetrated. Plugs must be WOC'd and tagged. Evaluate formation tops after drilling. Add 100% excess cement for open hole plugs.

NMOCD Approved by Signature

9-4-2015
Date

KC

OIL CONS. DIV DIST. 3
AUG 31 2015

RECEIVED
MAR 16 2015
Farmington Field Office
Bureau of Land Management

CONFIDENTIAL

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

5. Lease Serial No. NMNM 48989A 048989A	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 E12-2208 01H
2. Name of Operator Encana Oil & Gas (USA) Inc.	9. API Well No. 30-045-35664
3a. Address 370 17th Street, Suite 1700 Denver, CO 80202 / 3b. Phone No. (include area code) 720-876-5919	10. Field and Pool, or Exploratory Basin Mancos Gas Pool
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface 2014' FNL, 637' FWL, Section 12, T22N, R8W (E) At proposed prod. zone 1980' FNL, 330' FWL, Section 11, T22N, R8W (E)	11. Sec., T. R. M. or Blk. and Survey or Area Section 12, T22N, R8W NMPM
14. Distance in miles and direction from nearest town or post office* +/- 46 miles South from the intersection of HWY 64 & US HWY 550 in Bloomfield, NM	12. County or Parish San Juan / 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 11, T22N, R8W	16. No. of acres in lease NMNM 48989A- 1,123.20 acres	17. Spacing Unit dedicated to this well 320 acres- N/2 of Sec.11, T22N, R8W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL is +/- 30' North of Lybrook E12-2208 02H	19. Proposed Depth 4663' TVD, 9701' MD	20. BLM/BIA Bond No. on file COB-000235
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6794' GL; 6810' KB	22. Approximate date work will start* 09/12/2015	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 *Jillian McGrath*	Name (Printed/Typed) Jillian McGrath	Date 3/13/15
Title Regulatory Analyst		
Approved by (Signature) *[signature]*	Name (Printed/Typed)	Date 8/27/15
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.

(Continued on page 2)

*(Instructions on page 2)

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

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

NMOCD

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

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

RECEIVED
MAR 16 2015
Farmington Field Office
Bureau of Land Management

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
30-045-35664	97232	BASIN MANCOS

[4] Property Code	[5] Property Name	[6] Well Number
315238	LYBROOK E12-2208	01H

[7] OGRID No.	[8] Operator Name	[9] Elevation
282327	ENCANA OIL & GAS (USA) INC.	6794.1'

[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
E	12	22N	8W		2014'	NORTH	637'	WEST	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	East/West line	County
E	11	22N	8W		1980'	NORTH	330'	WEST	SAN JUAN

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
PROJECT AREA 320.00 ACRES N/2 SEC. 11			

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

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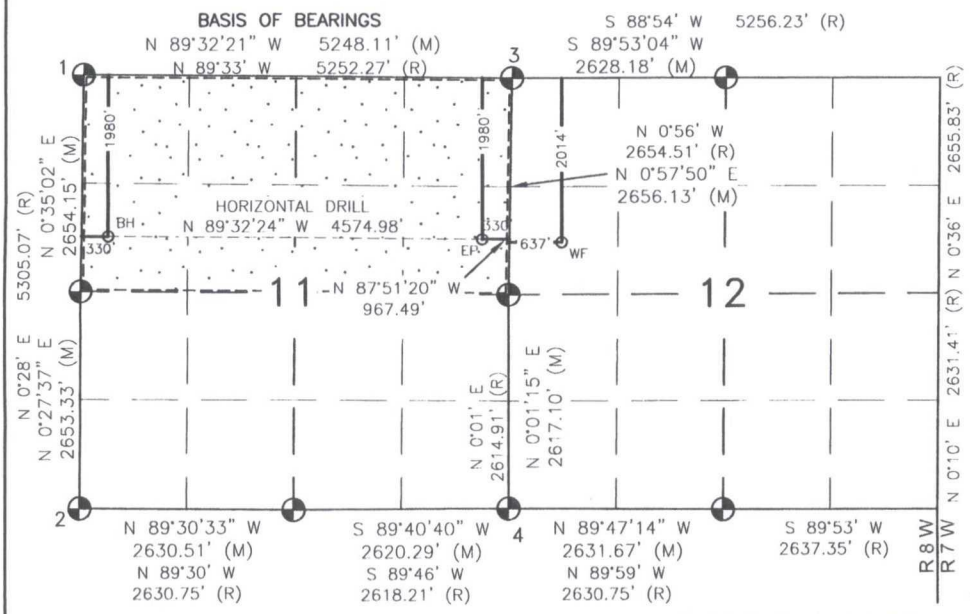
BOTTOM HOLE
LAT. 36.156097° N (NAD83)
LONG. 107.659081° W (NAD83)
LAT. 36.156083° N (NAD27)
LONG. 107.658471° W (NAD27)

ENTRY POINT
LAT. 36.155993° N (NAD83)
LONG. 107.643590° W (NAD83)
LAT. 36.155978° N (NAD27)
LONG. 107.642980° W (NAD27)

WELL FLAG
LAT. 36.155893° N (NAD83)
LONG. 107.640316° W (NAD83)
LAT. 36.155878° N (NAD27)
LONG. 107.639706° W (NAD27)



1. LAT. 36.161541° N (NAD83)
LONG. 107.660129° W (NAD83)
LAT. 36.161527° N (NAD27)
LONG. 107.659518° W (NAD27)

2. LAT. 36.146968° N (NAD83)
LONG. 107.660295° W (NAD83)
LAT. 36.146953° N (NAD27)
LONG. 107.659685° W (NAD27)

ALL CORNERS
FND 2½" BC
GLO 1947

3. LAT. 36.161422° N (NAD83)
LONG. 107.642358° W (NAD83)
LAT. 36.161408° N (NAD27)
LONG. 107.641748° W (NAD27)

4. LAT. 36.146943° N (NAD83)
LONG. 107.642518° W (NAD83)
LAT. 36.146928° N (NAD27)
LONG. 107.641908° W (NAD27)

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[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.

Jillian McGrath 3/13/15
Signature Date

Jillian McGrath
Printed Name

Jillian.McGrath@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.

APRIL 21, 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

Sheet A

Lybrook E12-2208 01H
SHL: 2014' FNL, 637' FWL Sec 12 T22N R08W
BHL: 1980' FNL, 330' FWL Sec 11 T22N R08W
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.	436
Kirtland Shale	645
Fruitland Coal	950
Pictured Cliffs Ss.	1,117
Lewis Shale	1,213
Cliffhouse Ss.	1,832
Menefee Fn.	2,562
Point Lookout Ss.	3,495
Mancos Shale	3,642
Mancos Silt	4,152
Gallup Fn.	4,419
Base Gallup	4,797

The referenced surface elevation is 6794', KB 6810'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	950
Oil/Gas	Pictured Cliffs Ss.	1,117
Oil/Gas	Cliffhouse Ss.	1,832
Gas	Menefee Fn.	2,562
Oil/Gas	Point Lookout Ss.	3,495
Oil/Gas	Mancos Shale	3,642
Oil/Gas	Mancos Silt	4,152
Oil/Gas	Gallup Fn.	4,419

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

Lybrook E12-2208 01H
SHL: 2014' FNL, 637' FWL Sec 12 T22N R08W
BHL: 1980' FNL, 330' FWL Sec 11 T22N R08W
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'-4732'	8 3/4"	7"	26#	J55, LTC New
Production Liner	4632'-9701'	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 E12-2208 01H
SHL: 2014' FNL, 637' FWL Sec 12 T22N R08W
BHL: 1980' FNL, 330' FWL Sec 11 T22N R08W
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	Surface	1 per joint on bottom 3 joints
Intermediate	0'-4732'	100% open hole excess Stage 1 Lead: 611 sks Stage 1 Tail: 474 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	4632'-9701'	50% OH excess Stage 1 Blend Total: 291sks	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 well will be drilled in two phases. A pilot hole will be drilled in the first phase, followed by kicking off a horizontal lateral in the existing wellbore in the second phase. The intent of drilling a pilot hole is to obtain open hole log data. The intent of the second phase of the well is to plug back the pilot hole with cement to the kick off point. After plugging back, the plan is to drill a horizontal lateral from the kick off point in the existing wellbore to the proposed bottom hole location.

Description	Proposed Depth (TVD/MD)	Formation
Vertical Pilot Hole	4997'/4997'	Gallup
Horizontal Lateral TD	4663'/9701'	Gallup

Proposed Plug Back Procedure: KOP 2800'

a. Spot 500' kick plug from 2500' - 3000'
   - 209 sks of Clas A cement with salt (1.3 cuft/sk yield)
   - Spot tuned spacer

Lybrook E12-2208 01H
SHL: 2014' FNL, 637' FWL Sec 12 T22N R08W
BHL: 1980' FNL, 330' FWL Sec 11 T22N R08W
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'-4997'/4997	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)
8 3/4"	2800'/2800'-	Fresh Water LSND	9.5-8.8	40-50	8-10

c) Intermediate Casing Point to TD:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	4596'/4732'-	Fresh Water LSND	8.3-10	15-25	<15

d) 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.

✓ e) 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
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 +/- 2209 psi based on a 9.0 ppg at 4721' 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

9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

Drilling is estimated to commence on September 12, 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: 2014' FNL, 637' FWL Sec 12 T22N R08
County: San Juan
WELL: Lybrook E12-2208 01H

Encana Natural Gas

WELL SUMMARY

ENG: Michael Sanch 3/13/15
RIG: Aztec 950
GLE: 6794
RKBE: 6810

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: 276 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				
		Ojo Alamo Ss.	436					
		Kirtland Shale	645					
	No OH logs	Fruitland Coal	950			7" 26ppf J55 LTC	Fresh Wtr	
Survey Every 60'-120', updating anticollision report after surveys. Stop operations and contact drilling engineer if separation factor approaches 1.5		Pictured Cliffs Ss.	1,117		8 3/4	TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 1085sks	8.3-10	Vertical <1°
		Lewis Shale	1,213					
		Cliffhouse Ss.	1,832					
		Menefee Fn.	2,562			Stage 1 Lead: 611 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.		
		Point Lookout Ss.	3,495					
		Mancos Shale	3,642					
	Mud logger onsite	KOP	2,800	2,800		Stage 1 Tail: 474 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.		
Surveys every 30' through the curve		Mancos Silt	4,152					
		Gallup Fn.	4,419					
		7" Csg	4,596	4,732'				
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target	4,721		6 1/8	100' overlap at liner top		Horz Inc/TVD 90.6deg/4721ft
		TD	4,663	9,701		4969' Drilled Lateral		TD = 9701 MD
		Base Gallup	4,797			4 1/2" 11.6ppf SB80 LTC TOC @ hanger (50% OH excess) Stage 1 Total: 291sks	WBM 8.3-10	
MWD Gamma Directional		Pilot Hole TD	4,997	4997		Stage 1 Blend: 291 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.		

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 2800', 8 3/4 inch holesize
5) Start curve at 10deg/100' build rate
6) Drill to csg point of 4732' MD
7) R&C 7" csg, circ cmt to surface
8) Land at ~90 deg, drill lateral to 9701' run 4 1/2 inch cemented liner

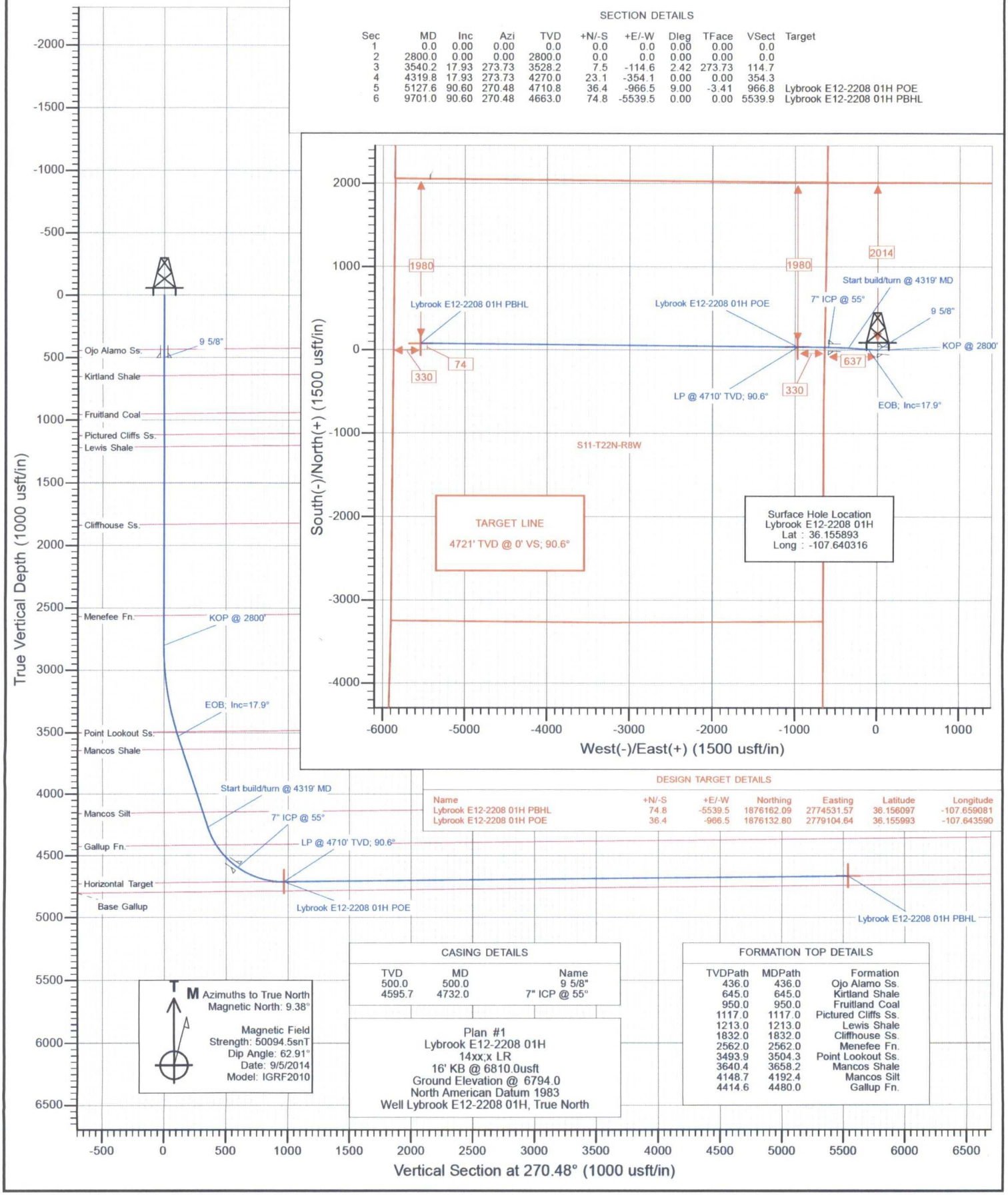
encana

Project: San Juan County, NM
Site: S12-T22N-R8W
Well: Lybrook E12-2208 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	2800.0	0.00	0.00	2800.0	0.0	0.0	0.00	0.00	0.0	
3	3540.2	17.93	273.73	3528.2	7.5	-114.6	2.42	273.73	114.7	
4	4319.8	17.93	273.73	4270.0	23.1	-354.1	0.00	0.00	354.3	
5	5127.6	90.60	270.48	4710.8	36.4	-966.5	9.00	-3.41	966.8	Lybrook E12-2208 01H POE
6	9701.0	90.60	270.48	4663.0	74.8	-5539.5	0.00	0.00	5539.9	Lybrook E12-2208 01H PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Lybrook E12-2208 01H PBHL	74.8	-5539.5	1876162.09	2774531.57	36.156097	-107.659081
Lybrook E12-2208 01H POE	36.4	-966.5	1876132.80	2779104.64	36.155993	-107.643590

CASING DETAILS

TVD	MD	Name
500.0	500.0	9 5/8"
4595.7	4732.0	7" ICP @ 55°

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
436.0	436.0	Ojo Alamo Ss.
645.0	645.0	Kirtland Shale
950.0	950.0	Fruitland Coal
1117.0	1117.0	Pictured Cliffs Ss.
1213.0	1213.0	Lewis Shale
1832.0	1832.0	Cliffhouse Ss.
2562.0	2562.0	Menefee Fn.
3493.9	3504.3	Point Lookout Ss.
3640.4	3658.2	Mancos Shale
4148.7	4192.4	Mancos Silt
4414.6	4480.0	Gallup Fn.

T M Azimuths to True North
Magnetic North: 9.38°

Magnetic Field
Strength: 50094.5snT
Dip Angle: 62.91°
Date: 9/5/2014
Model: IGRF2010

Plan #1
Lybrook E12-2208 01H
14xx;x LR
16' KB @ 6810.0usft
Ground Elevation @ 6794.0
North American Datum 1983
Well Lybrook E12-2208 01H, True North

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook E12-2208 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6810.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6810.0usft
Site:	S12-T22N-R8W	**North Reference:**	True
Well:	Lybrook E12-2208 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	S12-T22N-R8W				
Site Position:		**Northing:**	1,876,098.31 usft	**Latitude:**	36.155893
From:	Lat/Long	**Easting:**	2,780,071.21 usft	**Longitude:**	-107.640316
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.11 °

Well	Lybrook E12-2208 01H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	1,876,098.31 usft	**Latitude:**	36.155893
	+E/-W	0.0 usft	**Easting:**	2,780,071.21 usft	**Longitude:**	-107.640316
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	6,794.0 usft

Wellbore	HZ			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	9/5/2014	9.38	62.91	50,095

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	270.48	

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	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,540.2	17.93	273.73	3,528.2	7.5	-114.6	2.42	2.42	0.00	273.73	
4,319.8	17.93	273.73	4,270.0	23.1	-354.1	0.00	0.00	0.00	0.00	
5,127.6	90.60	270.48	4,710.8	36.4	-966.5	9.00	9.00	-0.40	-3.41	Lybrook E12-2208 01
9,701.0	90.60	270.48	4,663.0	74.8	-5,539.5	0.00	0.00	0.00	0.00	Lybrook E12-2208 01

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook E12-2208 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6810.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6810.0usft
Site:	S12-T22N-R8W	**North Reference:**	True
Well:	Lybrook E12-2208 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	
436.0	0.00	0.00	436.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
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	
645.0	0.00	0.00	645.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
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	
950.0	0.00	0.00	950.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
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	
1,117.0	0.00	0.00	1,117.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,213.0	0.00	0.00	1,213.0	0.0	0.0	0.0	0.00	0.00	Lewis 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	
1,600.0	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	
1,832.0	0.00	0.00	1,832.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
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	
2,562.0	0.00	0.00	2,562.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	KOP @ 2800'
2,900.0	2.42	273.73	2,900.0	0.1	-2.1	2.1	2.42	2.42	
3,000.0	4.84	273.73	2,999.8	0.5	-8.4	8.4	2.42	2.42	
3,100.0	7.27	273.73	3,099.2	1.2	-19.0	19.0	2.42	2.42	
3,200.0	9.69	273.73	3,198.1	2.2	-33.7	33.7	2.42	2.42	
3,300.0	12.11	273.73	3,296.3	3.4	-52.5	52.6	2.42	2.42	
3,400.0	14.53	273.73	3,393.6	4.9	-75.5	75.6	2.42	2.42	
3,500.0	16.95	273.73	3,489.8	6.7	-102.6	102.7	2.42	2.42	
3,504.3	17.06	273.73	3,493.9	6.8	-103.8	103.9	2.42	2.42	Point Lookout Ss.
3,540.2	17.93	273.73	3,528.2	7.5	-114.6	114.7	2.42	2.42	EOB; Inc=17.9°
3,600.0	17.93	273.73	3,585.1	8.7	-133.0	133.1	0.00	0.00	
3,658.2	17.93	273.73	3,640.4	9.8	-150.9	150.9	0.00	0.00	Mancos Shale
3,700.0	17.93	273.73	3,680.2	10.7	-163.7	163.8	0.00	0.00	
3,800.0	17.93	273.73	3,775.4	12.7	-194.4	194.5	0.00	0.00	
3,900.0	17.93	273.73	3,870.5	14.7	-225.2	225.3	0.00	0.00	
4,000.0	17.93	273.73	3,965.6	16.7	-255.9	256.0	0.00	0.00	
4,100.0	17.93	273.73	4,060.8	18.7	-286.6	286.7	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook E12-2208 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6810.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6810.0usft
Site:	S12-T22N-R8W	**North Reference:**	True
Well:	Lybrook E12-2208 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
4,192.4	17.93	273.73	4,148.7	20.5	-315.0	315.1	0.00	0.00	Mancos Silt
4,200.0	17.93	273.73	4,155.9	20.7	-317.3	317.5	0.00	0.00	
4,300.0	17.93	273.73	4,251.1	22.7	-348.0	348.2	0.00	0.00	
4,319.8	17.93	273.73	4,270.0	23.1	-354.1	354.3	0.00	0.00	Start build/turn @ 4319' MD
4,400.0	25.13	272.73	4,344.5	24.7	-383.5	383.7	9.00	8.99	
4,480.0	32.33	272.15	4,414.6	26.3	-421.9	422.1	9.00	8.99	Gallup Fn.
4,500.0	34.13	272.04	4,431.3	26.7	-432.8	433.0	9.00	8.99	
4,600.0	43.12	271.61	4,509.3	28.7	-495.2	495.4	9.00	9.00	
4,700.0	52.12	271.31	4,576.7	30.6	-568.9	569.2	9.00	9.00	
4,732.0	55.00	271.23	4,595.7	31.1	-594.7	594.9	9.00	9.00	7" ICP @ 55°
4,800.0	61.12	271.07	4,631.6	32.3	-652.3	652.6	9.00	9.00	
4,900.0	70.12	270.87	4,672.9	33.8	-743.3	743.6	9.00	9.00	
5,000.0	79.12	270.69	4,699.4	35.1	-839.6	839.9	9.00	9.00	
5,100.0	88.11	270.53	4,710.5	36.2	-938.9	939.2	9.00	9.00	
5,127.6	90.60	270.48	4,710.8	36.4	-966.5	966.8	9.00	9.00	LP @ 4710' TVD; 90.6° - Lybrook E12-2208 01I
5,200.0	90.60	270.48	4,710.0	37.0	-1,038.9	1,039.1	0.00	0.00	
5,300.0	90.60	270.48	4,709.0	37.9	-1,138.9	1,139.1	0.00	0.00	
5,400.0	90.60	270.48	4,708.0	38.7	-1,238.9	1,239.1	0.00	0.00	
5,500.0	90.60	270.48	4,706.9	39.5	-1,338.8	1,339.1	0.00	0.00	
5,600.0	90.60	270.48	4,705.9	40.4	-1,438.8	1,439.1	0.00	0.00	
5,700.0	90.60	270.48	4,704.8	41.2	-1,538.8	1,539.1	0.00	0.00	
5,800.0	90.60	270.48	4,703.8	42.1	-1,638.8	1,639.1	0.00	0.00	
5,900.0	90.60	270.48	4,702.7	42.9	-1,738.8	1,739.1	0.00	0.00	
6,000.0	90.60	270.48	4,701.7	43.7	-1,838.8	1,839.1	0.00	0.00	
6,100.0	90.60	270.48	4,700.6	44.6	-1,938.8	1,939.1	0.00	0.00	
6,200.0	90.60	270.48	4,699.6	45.4	-2,038.8	2,039.1	0.00	0.00	
6,300.0	90.60	270.48	4,698.5	46.3	-2,138.8	2,139.1	0.00	0.00	
6,400.0	90.60	270.48	4,697.5	47.1	-2,238.8	2,239.1	0.00	0.00	
6,500.0	90.60	270.48	4,696.5	47.9	-2,338.8	2,339.1	0.00	0.00	
6,600.0	90.60	270.48	4,695.4	48.8	-2,438.7	2,439.1	0.00	0.00	
6,700.0	90.60	270.48	4,694.4	49.6	-2,538.7	2,539.1	0.00	0.00	
6,800.0	90.60	270.48	4,693.3	50.5	-2,638.7	2,639.1	0.00	0.00	
6,900.0	90.60	270.48	4,692.3	51.3	-2,738.7	2,739.0	0.00	0.00	
7,000.0	90.60	270.48	4,691.2	52.1	-2,838.7	2,839.0	0.00	0.00	
7,100.0	90.60	270.48	4,690.2	53.0	-2,938.7	2,939.0	0.00	0.00	
7,200.0	90.60	270.48	4,689.1	53.8	-3,038.7	3,039.0	0.00	0.00	
7,300.0	90.60	270.48	4,688.1	54.6	-3,138.7	3,139.0	0.00	0.00	
7,400.0	90.60	270.48	4,687.0	55.5	-3,238.7	3,239.0	0.00	0.00	
7,500.0	90.60	270.48	4,686.0	56.3	-3,338.7	3,339.0	0.00	0.00	
7,600.0	90.60	270.48	4,684.9	57.2	-3,438.7	3,439.0	0.00	0.00	
7,700.0	90.60	270.48	4,683.9	58.0	-3,538.6	3,539.0	0.00	0.00	
7,800.0	90.60	270.48	4,682.9	58.8	-3,638.6	3,639.0	0.00	0.00	
7,900.0	90.60	270.48	4,681.8	59.7	-3,738.6	3,739.0	0.00	0.00	
8,000.0	90.60	270.48	4,680.8	60.5	-3,838.6	3,839.0	0.00	0.00	
8,100.0	90.60	270.48	4,679.7	61.4	-3,938.6	3,939.0	0.00	0.00	
8,200.0	90.60	270.48	4,678.7	62.2	-4,038.6	4,039.0	0.00	0.00	
8,300.0	90.60	270.48	4,677.6	63.0	-4,138.6	4,139.0	0.00	0.00	
8,400.0	90.60	270.48	4,676.6	63.9	-4,238.6	4,239.0	0.00	0.00	
8,500.0	90.60	270.48	4,675.5	64.7	-4,338.6	4,339.0	0.00	0.00	
8,600.0	90.60	270.48	4,674.5	65.6	-4,438.6	4,439.0	0.00	0.00	
8,700.0	90.60	270.48	4,673.4	66.4	-4,538.6	4,538.9	0.00	0.00	
8,800.0	90.60	270.48	4,672.4	67.2	-4,638.5	4,638.9	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook E12-2208 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6810.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6810.0usft
Site:	S12-T22N-R8W	**North Reference:**	True
Well:	Lybrook E12-2208 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	90.60	270.48	4,671.4	68.1	-4,738.5	4,738.9	0.00	0.00	
9,000.0	90.60	270.48	4,670.3	68.9	-4,838.5	4,838.9	0.00	0.00	
9,100.0	90.60	270.48	4,669.3	69.8	-4,938.5	4,938.9	0.00	0.00	
9,200.0	90.60	270.48	4,668.2	70.6	-5,038.5	5,038.9	0.00	0.00	
9,300.0	90.60	270.48	4,667.2	71.4	-5,138.5	5,138.9	0.00	0.00	
9,400.0	90.60	270.48	4,666.1	72.3	-5,238.5	5,238.9	0.00	0.00	
9,500.0	90.60	270.48	4,665.1	73.1	-5,338.5	5,338.9	0.00	0.00	
9,600.0	90.60	270.48	4,664.0	73.9	-5,438.5	5,438.9	0.00	0.00	
9,700.0	90.60	270.48	4,663.0	74.8	-5,538.5	5,538.9	0.00	0.00	
9,701.0	90.60	270.48	4,663.0	74.8	-5,539.5	5,539.9	0.00	0.00	TD at 9701.0 - Lybrook E12-2208 01H PBHL

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 E12-2208 01H I - plan hits target center - Point	0.00	0.00	4,663.0	74.8	-5,539.5	1,876,162.09	2,774,531.57	36.156097	-107.659081
Lybrook E12-2208 01H I - plan hits target center - Point	0.00	0.00	4,710.8	36.4	-966.5	1,876,132.80	2,779,104.64	36.155993	-107.643590

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
500.0	500.0	9 5/8"	0	0
4,732.0	4,595.7	7" ICP @ 55°	0	0

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
436.0	436.0	Ojo Alamo Ss.		-0.60	270.48
645.0	645.0	Kirtland Shale		-0.60	270.48
950.0	950.0	Fruitland Coal		-0.60	270.48
1,117.0	1,117.0	Pictured Cliffs Ss.		-0.60	270.48
1,213.0	1,213.0	Lewis Shale		-0.60	270.48
1,832.0	1,832.0	Cliffhouse Ss.		-0.60	270.48
2,562.0	2,562.0	Menefee Fn.		-0.60	270.48
3,504.3	3,495.0	Point Lookout Ss.		-0.60	270.48
3,658.2	3,642.0	Mancos Shale		-0.60	270.48
4,192.4	4,152.0	Mancos Silt		-0.60	270.48
4,480.0	4,419.0	Gallup Fn.		-0.60	270.48

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook E12-2208 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	16' KB @ 6810.0usft
Project:	San Juan County, NM	**MD Reference:**	16' KB @ 6810.0usft
Site:	S12-T22N-R8W	**North Reference:**	True
Well:	Lybrook E12-2208 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
2,800.0	2,800.0	0.0	0.0	KOP @ 2800'
3,540.2	3,528.2	7.5	-114.6	EOB; Inc=17.9°
4,319.8	4,270.0	23.1	-354.1	Start build/turn @ 4319' MD
5,127.6	4,710.8	36.4	-966.5	LP @ 4710' TVD; 90.6°
9,701.0	4,663.0	74.8	-5,539.5	TD at 9701.0

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 12.7 feet in (corner 3) and the maximum fill will be approximately 10.0 feet between (corner 5 and corner 6).

4. As determined during the onsite on July 17, 2014, the following best management practices will be implemented:
   a. Water will be diverted around the pad and silt traps installed as needed upon interim reclamation.
   b. Silt trap will be constructed in E.O.D. between (corner 2 and corner3).

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 1257 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 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

ENCANA OIL & GAS (USA) INC.

LYBROOK E12-2208 #01H
2014' FNL & 637' FWL
LOCATED IN THE SW/4 NW/4 OF SECTION 12,
T22N, 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, 39.0 MILES TO INDIAN ROUTE 7061 (M.P. 112.6).
2) TURN RIGHT AND GO 7.0 MILES.
3) TURN LEFT ONTO 2-TRACK, WHERE ACCESS IS STAKED.

WELL FLAG LOCATED AT LAT. 36.155893° N, LONG.107.640316° W (NAD 83).

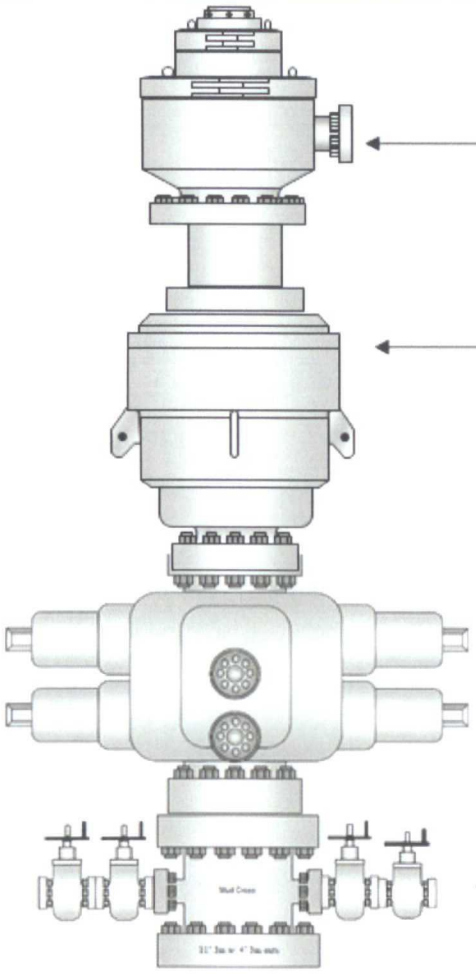
JOB No.: ENC143
DATE: 04/28/14

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 E12-2208 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