

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

Jami Bailey, 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 3160-4 or 3160-5 form.

Operator Signature Date: February 12, 2014

Application Type:

☐ P&A ☐ Drilling/Casing Change ☐ Recomplete/DHC
☐ Location Change ☒ Other: _plug back and sidetrack_____

Well information:

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf. Owner	UL	Sec	Twp	N/S	Rng	W/E
30-043-21133-00-00	LYBROOK H26 2307	002H	ENCANA OIL & GAS (USA) INC.	O	A	Sandoval	F	H	26	23	N	7	W

Conditions of Approval:

- Notify NMOCD 24hrs prior to beginning operations
- Freshwater mud is required until freshwater zones are cased and cemented
- Add Mancos plug from 4435-4535 in vertical hole prior to sidetrack
- Add Liner plug from 5419-5519
- Hold C104 for amended NSL
- Hold C104 for directional survey and "as drilled" plat

NMOCD Approved by Signature

6/12/14

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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

5. Lease Serial No.
NM 28748

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

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

8. Well Name and No.
Lybrook H26-2307 02H

9. API Well No.
30-043-21133

10. Field and Pool or Exploratory Area
Basin Mancos

11. County or Parish, State
Sandoval County, New Mexico

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

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

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

3b. Phone No. (include area code)
720-876-5331

4. Location of Well (Footage, Sec. T, R, M., or Survey Description)
SHL: 2227' FNL and 357' FEL Section 26, Township 23 North, Range 7 West
BHL: 1550' FNL and 330' FWL Section 26, Township 23 North, Range 7 West

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

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

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

Encana Oil & Gas (USA) Inc. (Encana) wishes to plug back and sidetrack the Lybrook H26-2307 02H well. Please find enclosed the following items in regards to the sidetrack operations:

- Revised C-102
- Revised 10 Point Drilling Plan
- Directionals
- Wellhead Blowout Control System
- Wellbore Diagram
- Casing and Tubing Design

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

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

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

Holly Hill

Title: Regulatory Analyst

Signature

Holly Hill

Date: 02/12/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Troy Salyers

Title: *Petroleum Engineer*

Date: *2/21/2014*

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

Office: *FFO*

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

(Instructions on page 2)

NMOC

AV

District I
1525 N. French Drive, Hobbs, NM 88240
Phone: (575) 393 6161 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334 6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476 3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-043-21133		*Pool Code 97232	*Pool Name BASTIN MANCOS
*Property Code 39120	*Property Name LYBROOK H2G-2307		*Well Number 02H
*OCRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.		*Elevation 7233'

¹⁰ Surface Location

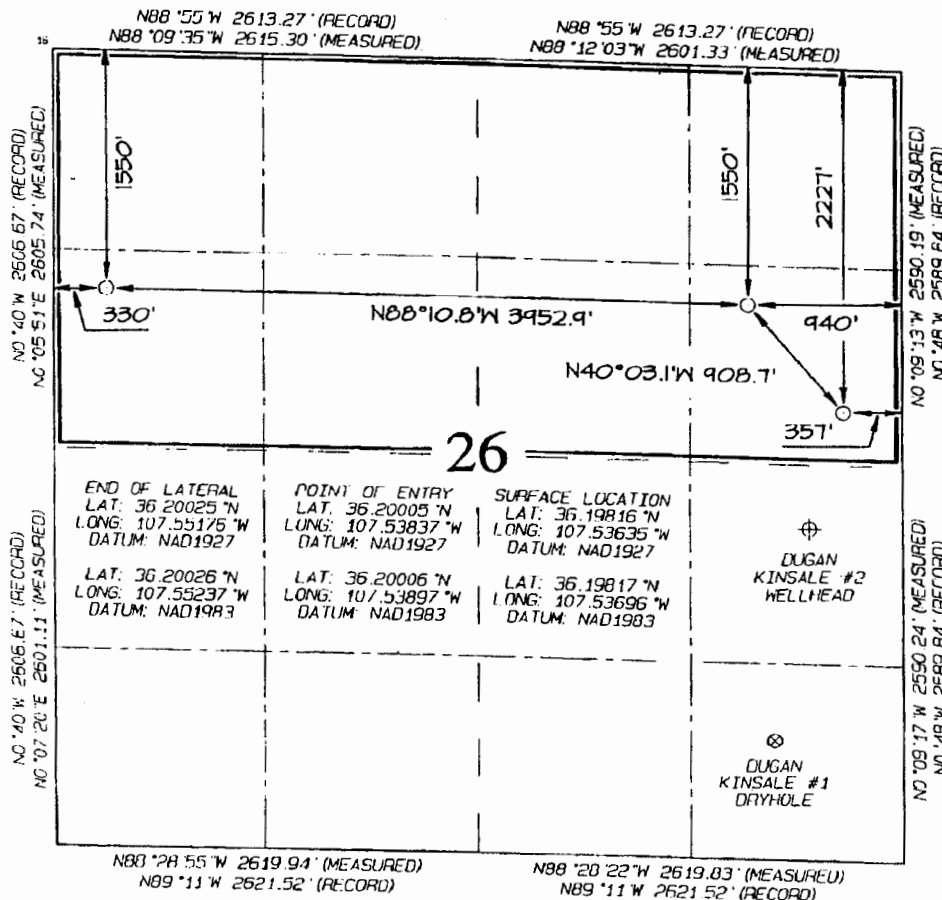
UL or Lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
H	26	23N	7W		2227	NORTH	357	EAST	SANDOVAL

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
E	26	23N	7W		1550	NORTH	330	WEST	SANDOVAL

*Dedicated Acres 320.0 Acres - (N/2)	*Joint or Infill	*Consolidation Code	*Under No. NSL-6769
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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



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.

Holly Hill 2/11/14
Signature Date

Holly Hill

Printed Name
holly.hill@encana.com

E-mail Address

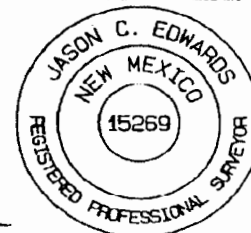
¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.

Date Revised: JANUARY 30, 2014

Survey Date: OCTOBER 3, 2012

Signature and Seal of Professional Surveyor



Jason C. Edwards
Certificate Number 15269

Lybrook H26-2307 02H
SHL: SENE 26 23N 7W
2227 FNL 357 FEL
BHL: SWNW 26 23N 7W
1550 FNL 330 FWL
Sandoval, New Mexico

RECEIVED

FEB 20 2014

San Juan Field Office
Bureau of Land Management

**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	1,405
Kirtland Shale	1,588
Fruitland Coal	1,828
Pictured Cliffs Ss.	2,021
Lewis Shale	2,148
Cliffhouse Ss.	2,878
Menefee Fn.	3,556
Point Lookout Ss.	4,384
Mancos Shale	4,595
Mancos Silt	5,118
Gallup Fn.	5,381

The referenced surface elevation is 0', KB 5,444'

G.L. 7233

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

Substance	Formation	Depth (TVD) units = feet
Water	Ojo Alamo Ss.	1,405
Water/Gas	Fruitland Coal	1,828
Oil/Gas	Pictured Cliffs Ss.	2,021
Oil/Gas	Cliffhouse Ss.	2,878
Gas	Menefee Fn.	3,556
Oil/Gas	Point Lookout Ss.	4,384
Oil/Gas	Mancos Shale	4,595
Oil/Gas	Mancos Silt	5,118
Oil/Gas	Gallup Fn.	5,381

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

3. PRESSURE CONTROL

- Pressure control equipment and configuration will be designed to meet 2M standards.
- Working pressure on rams and BOPE will be 3,000 psi.
- Function test and visual inspection of the BOP will be conducted daily and noted in the IADC Daily Drilling Report.
- The Annular BOP will be pressure tested to a minimum of 50 percent of its rated working pressure.
- Blind and Pipe Rams/BOP will be tested against a test plug to 100 percent of rated working pressure.
- Pressure tests are required before drilling out from under all casing strings set and cemented in place.

Lybrook H26-2307 02H
 SHL: SENE 26 23N 7W
 2227 FNL 357 FEL
 BHL: SWNW 26 23N 7W
 1550 FNL 330 FWL
 Sandoval, New Mexico

- 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
- 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'	30"	20"	94#	H40, STC New
[†] Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
[†] Intermediate	0'-4271'	8 3/4"	7"	26#	J55, LTC New
Production Liner	4071'-9919'	6 1/8"	4 1/2"	11.6#	B80*, LTC New

[†]Already Existing Casing

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

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.

Lybrook H26-2307 02H
 SHL: SENE 26 23N 7W
 2227 FNL 357 FEL
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 1550 FNL 330 FWL
 Sandoval, New Mexico

b) The proposed cementing program is as follows

Casing	Depth (MD)	Cement Volume (sacks)	Cement Type & Yield	Designed TOC	Centralizers
Plug	4284'-4319'	7 sks	Class G Cement + R3	4284'	none, cast iron bridge plug below
Production Liner	4071'-9919'	30% open hole excess 464 sks	Premium Lite High Strength FM + .7% R-3 + 1.15% bwoc FL-52A + .25 lb/sk Cello Flake + .5% bwoc CD-32 + 3% bwow KCl	4071'	none

A cast iron bridge plug will be set with cement on top. After pressure testing the plug, a whipstock will be set on top to kickoff and sidetrack through casing.

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 sidetrack kick off point of 4271'. A whipstock will be used to exit existing intermediate casing. After exiting casing, the well will be built to a 30 degree tangent and held until kicking off a build and turn at 4989' TVD. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5428'/9919'	Gallup

6. DRILLING FLUIDS PROGRAM

a) Intermediate Casing Point to TD:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	4271'/4271'- 5428'/9919'	Synthetic Oil Based Mud	8.6-9.0	15-25	<15

b) 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.

Lybrook H26-2307 02H
SHL: SENE 26 23N 7W
2227 FNL 357 FEL
BHL: SWNW 26 23N 7W
1550 FNL 330 FWL
Sandoval, New Mexico

- c) 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, including fresh water and oil-based operations. 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 5444' 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

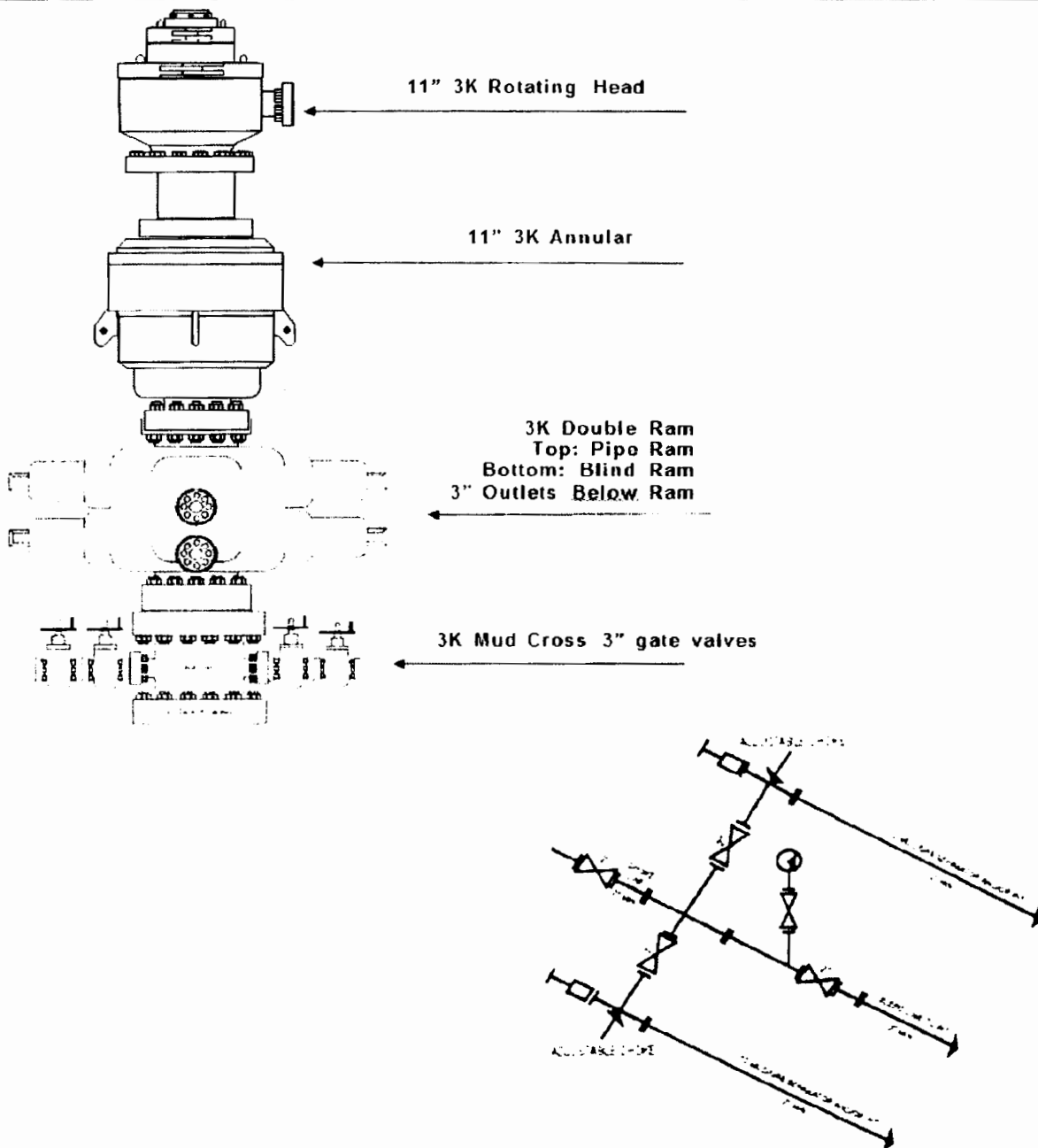
Drilling is estimated to commence on May 28, 2014. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

It is anticipated that the drilling of this well will take approximately 12 days.

WELLHEAD BLOWOUT CONTROL SYSTEM

encana

Well Name and Number:
Lybrook H26-2307 02H





Boomerang Tube LLC

CASING (OR) TUBING DESCRIPTION AND PERFORMANCE PROPERTIES

Pipe Outside Diameter (ins)	_____	4.500
Pipe Wall Thickness (ins)	_____	0.250
Nominal Weight Per Foot (lbs)	_____	11.60

Thread Name	_____	Long Thread CSG
Grade Name	_____	SB-80

Pipe Minimum Yield (psi)	_____	80,000
Pipe Minimum Ultimate (psi)	_____	90,000

Coupling Minimum Yield (psi)	_____	80,000
Coupling Minimum Ultimate (psi)	_____	100,000

Coupling or Joint Outside Diameter (ins)	_____	5.000
Drift Diameter (ins)	_____	3.875
Plain End Weight per Foot (lbs)	_____	11.36

Joint Strength (lbs)	_____	201,000
Internal Yield (psi)	_____	7,780
Collapse Rating (psi)	_____	6,350

MAXIMUM DEPTH/LENGTH BASED ON MUD WTS & SAFETY FACTORS

Drilling Mud Weight (ppg)	_____	9.625
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Tension Safety Factor	_____	1.80
Maximum Tension Length (ft)	_____	9,630

Internal Yield Safety Factor	_____	1.10
Maximum Depth for Internal Yield (ft)	_____	14,150

Collapse Safety Factor	_____	1.125
Maximum Collapse Depth (ft)	_____	11,290

API RELATED VALUES and INTERMEDIATE CALCULATION RESULTS

Coupling Thread Fracture Strength	_____	464,000
Pipe Thread Fracture Strength (lbs)	_____	201,000

Pipe Body Plain End Yield (lbs)	_____	267,000
Round Thread Pull-Out (lbs)	_____	219,000

Minimum Make-up Torque (ft-lbs)	_____	1,640
Nominal Make-up Torque (ft-lbs)	_____	2,190
Maximum Make-up Torque (ft-lbs)	_____	2,740

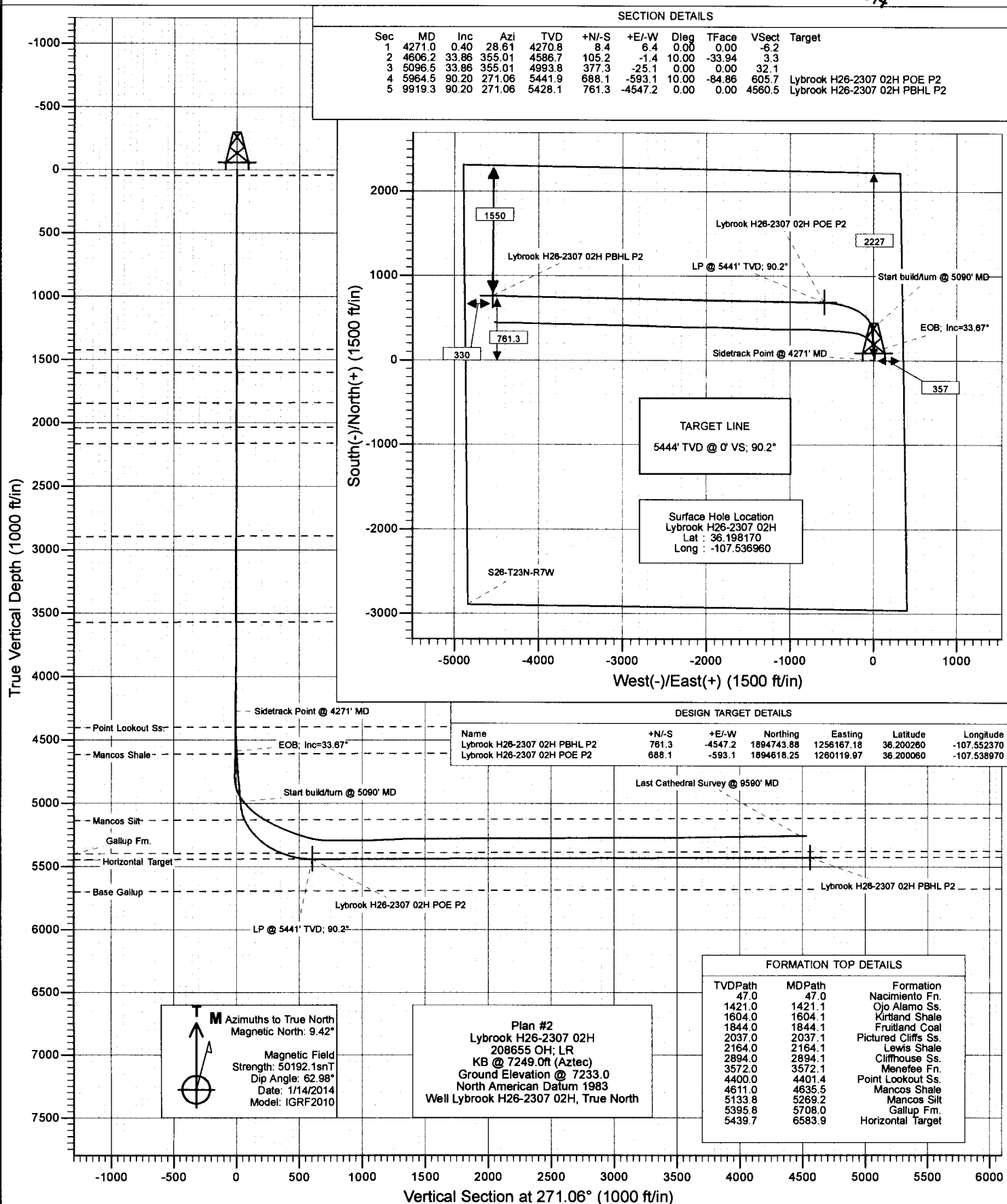
Coupling Internal Yield (psi)	_____	10,660
Pipe Body Internal Yield (psi)	_____	7,780
Leak @ E1 or E7 plane (psi)	_____	17,920

Pipe Hydrostatic Test Pressure @ 80 % SMYS	_____	7,100
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Project: Sandoval County, NM
 Site: Lybrook
 Well: Lybrook H26-2307 02H
 Wellbore: STK
 Design: Plan #2

OIL CONS. DIVISION
 JUN 4 2014
 CATHEDRAL



Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook H26-2307 02H
Wellbore: STK
Design: Plan #2

Local Coordinates Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Lybrook H26-2307 02H
KB @ 7249.0ft (Aztec)
KB @ 7249.0ft (Aztec)
True
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: Lybrook
Site Position:
From: Lat/Long
Position Uncertainty: 0.0 ft
Northing: 1,882,676.45 ft
Easting: 1,287,068.90 ft
Slot Radius: 13.200 in
Latitude: 36.168210
Longitude: -107.447150
Grid Convergence: -0.71 °

Well: Lybrook H26-2307 02H
Well Position: +N-S 0.0 ft
+E-W 0.0 ft
Position Uncertainty 0.0 ft
Northing: 1,893,922.34 ft
Easting: 1,260,703.90 ft
Wellhead Elevation: ft
Latitude: 36.198170
Longitude: -107.536960
Ground Level: 7,233.0 ft

Wellbore: STK
Magnetic:
Model Name: IGRF2010
Sample Date: 1/14/2014
Declination (°): 9.42
Dip Angle (°): 62.98
Field Strength (mT): 50,192

Design: Plan #2
Audit Notes:
Version: Phase: PLAN Tie On Depth: 4,271.0
Vertical Section: Depth From (TVD) (ft) +N-S (ft) +E-W (ft) Direction (°)
0.0 0.0 0.0 271.06

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (ft)	Target
4,271.0	0.40	28.61	4,270.8	8.4	6.4	0.00	0.00	0.00	0.00	
4,606.2	33.86	355.01	4,586.7	105.2	-1.4	10.00	9.98	-10.02	-33.94	
5,096.5	33.86	355.01	4,993.8	377.3	-25.1	0.00	0.00	0.00	0.00	
5,964.5	90.20	271.06	5,441.9	688.1	-593.1	10.00	6.49	-9.67	-84.86	Lybrook H26-2307 02
9,919.3	90.20	271.06	5,428.1	761.3	-4,547.2	0.00	0.00	0.00	0.00	Lybrook H26-2307 02

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook H26-2307 02H
Wellbore: STK
Design: Plan #2

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Lybrook H26-2307 02H
KB @ 7249.0ft (Aztec)
KB @ 7249.0ft (Aztec)
True
Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Asimuth (°)	Vertical Depth (ft)	+MD-S (ft)	+SL-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments/ Formations
4,271.0	0.40	28.61	4,270.8	8.4	6.4	-6.2	0.00	0.00	Sidetrack Point @ 4271' MD
4,300.0	3.24	358.66	4,299.8	9.3	6.4	-6.2	10.00	9.79	
4,400.0	13.24	355.64	4,398.7	23.5	5.5	-5.0	10.00	9.99	
4,401.4	13.38	355.63	4,400.0	23.9	5.4	-5.0	10.00	10.00	Point Lookout Ss.
4,500.0	23.24	355.20	4,493.5	54.7	2.9	-1.9	10.00	10.00	
4,600.0	33.24	355.02	4,581.5	101.8	-1.1	3.0	10.00	10.00	
4,604.3	33.67	355.02	4,585.1	104.2	-1.3	3.2	10.00	10.00	EOB; Inc=33.67°
4,606.2	33.86	355.01	4,586.7	105.2	-1.4	3.3	10.00	10.00	
4,635.5	33.86	355.01	4,611.0	121.4	-2.8	5.1	0.00	0.00	Mancos Shale
4,700.0	33.86	355.01	4,664.6	157.3	-5.9	8.8	0.00	0.00	
4,800.0	33.86	355.01	4,747.6	212.8	-10.8	14.7	0.00	0.00	
4,900.0	33.86	355.01	4,830.6	268.3	-15.6	20.6	0.00	0.00	
5,000.0	33.86	355.01	4,913.7	323.8	-20.5	26.5	0.00	0.00	
5,090.5	33.86	355.01	4,988.8	374.0	-24.8	31.8	0.00	0.00	Start build/turn @ 5090' MD
5,096.5	33.86	355.01	4,993.8	377.3	-25.1	32.1	0.00	0.00	
5,100.0	33.89	354.39	4,996.7	379.3	-25.3	32.3	10.00	0.94	
5,200.0	36.11	337.34	5,078.8	434.3	-39.4	47.5	10.00	2.21	
5,269.2	38.91	326.93	5,133.8	471.4	-59.2	67.9	10.00	4.05	Mancos Silt
5,300.0	40.43	322.73	5,157.5	487.5	-70.5	79.5	10.00	4.93	
5,400.0	46.26	310.86	5,230.3	537.0	-117.6	127.5	10.00	5.83	
5,500.0	53.09	301.26	5,295.1	581.5	-179.2	189.9	10.00	6.83	
5,600.0	60.56	293.31	5,349.8	619.6	-253.6	265.0	10.00	7.47	
5,700.0	68.44	286.47	5,392.9	650.1	-338.4	350.3	10.00	7.88	
5,708.0	69.08	285.97	5,395.8	652.2	-345.5	357.5	10.00	8.03	Gallup Fm.
5,800.0	76.57	280.36	5,422.9	672.1	-431.0	443.4	10.00	8.14	
5,900.0	84.83	274.65	5,439.1	684.9	-528.8	541.3	10.00	8.27	
5,962.5	90.03	271.17	5,441.9	688.1	-591.1	603.8	10.00	8.31	LP @ 5441' TVD; 90.2°
5,964.5	90.20	271.06	5,441.9	688.1	-593.1	605.7	10.00	8.32	
6,000.0	90.20	271.06	5,441.8	688.8	-628.6	641.2	0.00	0.00	
6,100.0	90.20	271.06	5,441.4	690.6	-728.6	741.2	0.00	0.00	
6,200.0	90.20	271.06	5,441.1	692.5	-828.5	841.2	0.00	0.00	
6,300.0	90.20	271.06	5,440.7	694.3	-928.5	941.2	0.00	0.00	
6,400.0	90.20	271.06	5,440.4	696.2	-1,028.5	1,041.2	0.00	0.00	
6,500.0	90.20	271.06	5,440.0	698.0	-1,128.5	1,141.2	0.00	0.00	
6,583.9	90.20	271.06	5,439.7	699.6	-1,212.4	1,225.1	0.00	0.00	Horizontal Target
6,600.0	90.20	271.06	5,439.7	699.9	-1,228.5	1,241.2	0.00	0.00	
6,700.0	90.20	271.06	5,439.3	701.7	-1,328.5	1,341.2	0.00	0.00	
6,800.0	90.20	271.06	5,439.0	703.6	-1,428.4	1,441.2	0.00	0.00	
6,900.0	90.20	271.06	5,438.6	705.4	-1,528.4	1,541.2	0.00	0.00	
7,000.0	90.20	271.06	5,438.3	707.3	-1,628.4	1,641.2	0.00	0.00	
7,100.0	90.20	271.06	5,437.9	709.1	-1,728.4	1,741.2	0.00	0.00	
7,200.0	90.20	271.06	5,437.6	711.0	-1,828.4	1,841.2	0.00	0.00	
7,300.0	90.20	271.06	5,437.2	712.8	-1,928.4	1,941.2	0.00	0.00	
7,400.0	90.20	271.06	5,436.9	714.7	-2,028.3	2,041.2	0.00	0.00	
7,500.0	90.20	271.06	5,436.5	716.5	-2,128.3	2,141.2	0.00	0.00	
7,600.0	90.20	271.06	5,436.2	718.4	-2,228.3	2,241.2	0.00	0.00	
7,700.0	90.20	271.06	5,435.8	720.2	-2,328.3	2,341.2	0.00	0.00	
7,800.0	90.20	271.06	5,435.5	722.1	-2,428.3	2,441.2	0.00	0.00	
7,900.0	90.20	271.06	5,435.1	723.9	-2,528.2	2,541.2	0.00	0.00	
8,000.0	90.20	271.06	5,434.8	725.8	-2,628.2	2,641.2	0.00	0.00	
8,100.0	90.20	271.06	5,434.4	727.6	-2,728.2	2,741.2	0.00	0.00	
8,200.0	90.20	271.06	5,434.1	729.5	-2,828.2	2,841.2	0.00	0.00	

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook H26-2307 02H
Wellbore: STK
Design: Plan #2

Local Coordinates Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Lybrook H26-2307 02H
KB @ 7249.0ft (Aztec)
KB @ 7249.0ft (Aztec)
True
Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+H/E (ft)	+H/W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Built Rate (°/100ft)	Comments / Forecasts
8,300.0	90.20	271.06	5,433.7	731.3	-2,928.2	2,941.2	0.00	0.00	
8,400.0	90.20	271.06	5,433.4	733.2	-3,028.2	3,041.2	0.00	0.00	
8,500.0	90.20	271.06	5,433.0	735.0	-3,128.1	3,141.2	0.00	0.00	
8,600.0	90.20	271.06	5,432.7	736.9	-3,228.1	3,241.2	0.00	0.00	
8,700.0	90.20	271.06	5,432.3	738.7	-3,328.1	3,341.2	0.00	0.00	
8,800.0	90.20	271.06	5,432.0	740.6	-3,428.1	3,441.2	0.00	0.00	
8,900.0	90.20	271.06	5,431.7	742.4	-3,528.1	3,541.2	0.00	0.00	
9,000.0	90.20	271.06	5,431.3	744.3	-3,628.0	3,641.2	0.00	0.00	
9,100.0	90.20	271.06	5,431.0	746.1	-3,728.0	3,741.2	0.00	0.00	
9,200.0	90.20	271.06	5,430.6	748.0	-3,828.0	3,841.2	0.00	0.00	
9,300.0	90.20	271.06	5,430.3	749.8	-3,928.0	3,941.2	0.00	0.00	
9,400.0	90.20	271.06	5,429.9	751.7	-4,028.0	4,041.2	0.00	0.00	
9,500.0	90.20	271.06	5,429.6	753.5	-4,128.0	4,141.2	0.00	0.00	
9,600.0	90.20	271.06	5,429.2	755.4	-4,227.9	4,241.2	0.00	0.00	
9,700.0	90.20	271.06	5,428.9	757.2	-4,327.9	4,341.2	0.00	0.00	
9,800.0	90.20	271.06	5,428.5	759.1	-4,427.9	4,441.2	0.00	0.00	
9,900.0	90.20	271.06	5,428.2	760.9	-4,527.9	4,541.2	0.00	0.00	
9,919.3	90.20	271.06	5,428.1	761.3	-4,547.2	4,560.5	0.00	0.00	

Targets									
Target Name	Dis Angle (°)	Dis Dir (°)	TVD (ft)	N-S (ft)	E-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Lybrook H26-2307 02H I - 1st miles target - Shape - Point	0.00	0.00	5,428.1	761.3	-4,547.2	1,894,743.88	1,256,167.18	36.200260	-107.552370
Lybrook H26-2307 02H I - plan hits target center - Point	0.00	0.00	5,441.9	688.1	-593.1	1,894,618.25	1,260,119.97	36.200060	-107.538970
Lybrook H26-2307 02H I - plan misses target center by 9.9ft at 6058.8ft MD (5441.6 TVD, 689.9 N, -687.4 E) - Point	0.00	0.00	5,442.0	680.0	-687.6	1,894,611.40	1,260,025.43	36.200038	-107.539290
Lybrook H26-2307 02H I - plan misses target center by 4.8ft at 9919.3ft MD (5428.1 TVD, 761.3 N, -4547.2 E) - Point	0.00	0.00	5,430.1	757.0	-4,548.0	1,894,739.61	1,256,166.35	36.200248	-107.552373

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Well: Lybrook
Well: Lybrook H26-2307 02H
Well: STK
Design: Plan #2

Well: Lybrook H26-2307 02H
MD @ 7249.0ft (Aztec)
MD @ 7249.0ft (Aztec)
True
Minimum Curvature

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
47.0	47.0	Nacimiento Fn.		-0.20	271.10	
1,421.1	1,421.0	Ojo Alamo Ss.		-0.20	271.10	
1,604.1	1,604.0	Kirtland Shale		-0.20	271.10	
1,844.1	1,844.0	Fruitland Coal		-0.20	271.10	
2,037.1	2,037.0	Pictured Cliffs Ss.		-0.20	271.10	
2,164.1	2,164.0	Lewis Shale		-0.20	271.10	
2,894.1	2,894.0	Cliffhouse Ss.		-0.20	271.10	
3,572.1	3,572.0	Menefee Fn.		-0.20	271.10	
4,401.4	4,400.0	Point Lookout Ss.		-0.20	271.10	
4,635.5	4,611.0	Mancos Shale		-0.20	271.10	
5,269.2	5,134.0	Mancos Silt		-0.20	271.10	
5,708.0	5,397.0	Gallup Fm.		-0.20	271.10	
6,583.9	5,444.0	Horizontal Target		-0.20	271.10	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		Easting (ft)	Northing (ft)	Comment	
4,271.0	4,270.8	8.4	6.4	Sidetrack Point @ 4271' MD	
4,604.3	4,585.1	104.3	-0.1	EOB; Inc=33.67°	
5,090.5	4,989.7	373.1	-20.0	Start build/turn @ 5090' MD	
5,962.5	5,441.9	685.3	-588.0	LP @ 5441' TVD; 90.2°	
9,922.5	5,428.1	761.3	-4,547.2	TD at 9922.5	

EnCana Oil & Gas (USA) Inc

Sandoval County, NM

Lybrook

Lybrook H26-2307 02H

STK

Plan #2

Anticollision Report

03 February, 2014

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Reference Well: Lybrook
Site Error: 0.0ft
Reference Well: Lybrook H26-2307 02H
Well Error: 0.0ft
Reference Well: STK
Reference Design: Plan #2

Local Co-ordinate Reference: Well Lybrook H26-2307 02H
TVD Reference: KB @ 7249.0ft (Aztec)
MD Reference: KB @ 7249.0ft (Aztec)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Reference: Plan #2
Filter type: NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method: Stations
Depth Range: Unlimited
Results Limited by: Maximum center-center distance of 500.0ft
Warning Levels Evaluated at: 2.00 Sigma
Error Model: Systematic Ellipse
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic

Survey Tool Parameters		Date: 3/3/2014			
From (ft)	To (ft)	Survey (Well/Design)	Tool Name	Description	
530.0	4,271.0	Survey #1 (OH)	MWD	Geolink MWD	
4,271.0	9,919.3	Plan #2 (STK)	Geolink MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centers (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Lybrook						
Lybrook H26-2307 02H - OH - SURVEYS	4,271.0	4,269.0	0.0	0.0	0.000	Level 1, CC, ES, SF

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Reference Site: Lybrook
Site Error: 0.0ft
Reference Well: Lybrook H26-2307 02H
Well Error: 0.0ft
Reference Wellbore: STK
Reference Design: Plan #2

Local Co-ordinate Reference: Well Lybrook H26-2307 02H
TVD Reference: KB @ 7249.0ft (Aztec)
MD Reference: KB @ 7249.0ft (Aztec)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Lybrook - Lybrook H26-2307 02H - OH - SURVEYS														Offset Site Error	0.0ft
														Offset Well Error	0.0ft
Measured Depth (ft)	Vertical Depth (ft)	Horizontal Depth (ft)	Vertical Error (ft)	Horizontal Error (ft)	Offset (ft)	Logarithmic Interval (ft)	Offset Wellbore Center (ft)	Offset (ft)	Horizontal Distance (ft)	Vertical Distance (ft)	Total Distance (ft)	Minimum Factor	Maximum Factor		
4,271.0	4,270.8	4,269.0	4,268.8	0.0	0.0	0.00	8.4	6.4	0.0	0.0	0.00	0.00	0.00	Level 1, CC, ES, SF	
4,284.7	4,284.5	4,282.7	4,282.5	0.0	0.0	172.80	8.4	6.4	0.2	0.1	0.04	3.702			
4,300.0	4,299.8	4,298.0	4,297.8	0.1	0.0	175.89	8.5	6.5	0.7	0.6	0.10	7.527			
4,350.0	4,349.5	4,347.8	4,347.6	0.1	0.1	178.02	8.8	6.7	5.5	5.2	0.28	19.644			
4,400.0	4,398.7	4,397.0	4,396.8	0.2	0.2	178.39	9.2	7.0	14.4	13.9	0.47	30.352			
4,450.0	4,446.8	4,445.2	4,445.0	0.4	0.3	178.64	9.7	7.2	27.5	26.8	0.69	40.057			
4,500.0	4,493.5	4,492.3	4,492.1	0.5	0.4	178.92	10.2	7.5	44.7	43.8	0.91	49.342			
4,550.0	4,538.5	4,544.0	4,543.8	0.6	0.5	178.93	12.9	7.7	64.1	63.0	1.15	55.977			
4,600.0	4,581.5	4,599.5	4,598.3	0.9	0.6	178.25	22.9	8.1	81.7	80.2	1.41	58.060			
4,606.2	4,586.7	4,606.2	4,604.8	0.9	0.6	178.12	24.4	8.2	83.8	82.3	1.44	58.151			
4,700.0	4,664.6	4,712.2	4,704.8	1.4	0.9	175.05	58.7	11.9	108.7	106.7	1.98	54.791			
4,800.0	4,747.6	4,831.0	4,809.6	1.9	1.3	172.51	114.4	13.5	119.9	117.3	2.57	46.626			
4,900.0	4,830.6	4,947.7	4,902.6	2.5	1.9	178.58	181.9	-5.3	114.1	111.1	3.10	36.875			
4,993.0	4,907.9	5,033.1	4,963.8	3.2	2.8	-166.54	231.6	-37.4	107.0	102.9	4.12	25.958			
5,000.0	4,913.7	5,038.8	4,967.8	3.2	2.9	-165.19	234.8	-40.2	107.0	102.8	4.25	25.209			
5,096.5	4,993.8	5,110.0	5,015.6	3.9	3.8	-147.20	270.1	-79.2	122.4	116.1	6.31	19.409			
5,100.0	4,996.7	5,113.8	5,018.1	3.9	3.9	-145.69	271.8	-81.5	123.5	117.0	6.43	19.204			
5,150.0	5,038.1	5,146.1	5,039.5	4.3	4.3	-130.37	285.4	-101.4	140.8	133.2	7.64	18.443			
5,200.0	5,078.8	5,179.5	5,060.7	4.8	4.7	-116.74	298.2	-123.9	161.1	152.2	8.88	18.135			
5,250.0	5,118.7	5,210.8	5,079.0	5.3	5.2	-105.22	309.0	-146.8	182.8	172.7	10.05	18.185			
5,300.0	5,157.5	5,237.0	5,094.0	5.8	5.5	-96.08	316.7	-166.9	205.5	194.4	11.07	18.565			
5,350.0	5,194.8	5,269.0	5,111.7	6.4	6.0	-88.29	324.0	-192.5	228.7	216.5	12.11	18.883			
5,400.0	5,230.3	5,301.0	5,128.3	7.1	6.4	-81.94	329.7	-219.2	251.6	238.5	13.08	19.234			
5,450.0	5,263.8	5,332.0	5,143.3	7.7	6.8	-76.75	334.3	-246.0	273.6	259.7	13.97	19.593			
5,500.0	5,295.1	5,364.0	5,157.8	8.4	7.2	-72.55	337.8	-274.3	294.5	279.8	14.77	19.944			
5,550.0	5,323.8	5,404.7	5,175.4	9.1	7.8	-69.25	341.5	-310.7	313.3	297.7	15.59	20.097			
5,600.0	5,349.8	5,449.9	5,194.1	9.9	8.4	-66.73	345.7	-351.7	329.1	312.7	16.37	20.097			
5,650.0	5,372.9	5,491.0	5,210.3	10.7	9.0	-64.86	349.6	-389.3	341.6	324.6	16.98	20.113			
5,700.0	5,392.9	5,529.3	5,224.2	11.5	9.6	-63.49	352.6	-424.9	351.8	334.4	17.43	20.187			
5,750.0	5,409.6	5,571.9	5,238.7	12.2	10.2	-62.73	355.6	-464.8	359.2	341.4	17.81	20.176			
5,800.0	5,422.9	5,614.0	5,252.5	13.0	10.8	-62.53	358.0	-504.5	363.9	345.8	18.06	20.149			
5,850.0	5,432.8	5,653.8	5,264.5	13.8	11.5	-62.77	359.8	-542.4	365.9	347.8	18.17	20.137			
5,900.0	5,439.1	5,695.6	5,275.3	14.6	12.2	-63.38	361.8	-582.7	365.3	347.1	18.24	20.033			
5,950.0	5,441.8	5,738.8	5,284.0	15.4	12.9	-64.31	364.0	-625.0	362.3	344.0	18.26	19.836			
5,964.5	5,441.9	5,751.4	5,286.0	15.7	13.1	-64.62	364.8	-637.3	360.8	342.6	18.26	19.761			
6,000.0	5,441.8	5,773.1	5,288.6	16.2	13.5	-64.95	366.0	-658.9	357.6	338.2	19.42	18.417			
6,100.0	5,441.4	5,858.2	5,291.9	17.9	15.1	-65.36	369.2	-743.9	353.9	330.8	23.16	15.281			
6,200.0	5,441.1	5,950.2	5,291.2	19.6	16.9	-65.20	372.7	-835.7	352.3	325.3	27.04	13.032			
6,220.2	5,441.0	5,968.6	5,291.1	20.0	17.3	-65.19	373.1	-854.1	352.3	324.5	27.83	12.659			
6,300.0	5,440.7	6,043.6	5,290.5	21.4	18.8	-65.16	374.1	-929.2	352.9	321.9	31.04	11.370			
6,400.0	5,440.4	6,139.2	5,290.8	23.3	20.8	-65.39	373.8	-1,024.8	354.6	319.3	35.21	10.069			
6,500.0	5,440.0	6,233.3	5,288.4	25.3	22.8	-65.27	372.8	-1,118.8	358.2	318.8	39.30	9.112			
6,600.0	5,439.7	6,337.2	5,284.1	27.3	25.1	-64.86	372.2	-1,222.6	361.9	318.4	43.53	8.313			
6,700.0	5,439.3	6,455.8	5,278.5	29.4	27.8	-64.00	376.2	-1,341.0	362.4	314.5	47.90	7.567			
6,800.0	5,439.0	6,559.6	5,278.6	31.6	30.2	-63.85	381.4	-1,444.7	359.4	307.2	52.21	6.884			
6,900.0	5,438.6	6,650.0	5,279.4	33.8	32.3	-63.94	384.0	-1,535.0	357.9	301.6	56.35	6.351			
7,000.0	5,438.3	6,752.6	5,279.1	36.0	34.7	-63.91	386.3	-1,637.6	357.5	296.8	60.73	5.887			
7,100.0	5,437.9	6,853.2	5,278.6	38.2	37.1	-63.78	389.9	-1,738.1	356.0	291.0	65.02	5.476			
7,200.0	5,437.6	6,951.6	5,277.5	40.5	39.4	-63.56	393.3	-1,836.5	354.9	285.7	69.20	5.129			
7,247.4	5,437.4	6,996.3	5,277.0	41.6	40.5	-63.47	394.5	-1,881.1	354.7	283.5	71.15	4.985			
7,300.0	5,437.2	7,044.8	5,276.7	42.8	41.6	-63.47	395.2	-1,929.6	355.0	281.6	73.35	4.840			
7,400.0	5,436.9	7,140.8	5,276.4	45.1	43.9	-63.61	395.0	-2,025.6	356.8	279.1	77.71	4.592			

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

Anticollision Report

Client:	ina Oil & Gas (USA) Inc	Local Geodetic Reference:	Well Lybrook H26-2307 02H
Location:	oval County, NM	TVD Reference:	KB @ 7249.0ft (Aztec)
Well:	ok	BD Reference:	KB @ 7249.0ft (Aztec)
Well ID:	ok H26-2307 02H	North Reference:	True
Well Type:		Survey Calculation Method:	Minimum Curvature
Well Status:		Output error level:	2.00 sigma
Well Depth:		Database:	USA EDM 5000 Multi Users DB
Well ID:	#2	Offset TVD Reference:	Offset Datum

Lybrook - Lybrook H26-2307 02H - OH - SURVEYS														Offset Min Error	9.9.9
														Offset Max Error	9.9.9
Station	Depth	Vertical	Horizontal	Vertical	Horizontal	Offset	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Offset	Horizontal
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7,500.0	5,436.5	7,245.5	5,276.5	47.4	46.4	-63.86	394.5	-2,130.3	358.8	276.4	82.35	4.357			
7,600.0	5,436.2	7,356.2	5,275.0	49.8	49.1	-63.60	398.0	-2,241.0	358.0	271.2	86.78	4.125			
7,700.0	5,435.8	7,453.8	5,274.2	52.1	51.5	-63.36	402.3	-2,338.5	355.9	265.0	90.91	3.915			
7,751.3	5,435.7	7,500.1	5,274.0	53.3	52.6	-63.32	403.5	-2,384.7	355.6	262.6	93.02	3.823			
7,800.0	5,435.5	7,548.2	5,274.0	54.5	53.7	-63.36	404.2	-2,432.8	355.7	260.5	95.17	3.737			
7,900.0	5,435.1	7,648.1	5,273.8	56.9	56.2	-63.42	405.5	-2,532.7	356.1	256.5	99.60	3.575			
8,000.0	5,434.8	7,751.7	5,273.0	59.3	58.7	-63.31	408.1	-2,636.3	355.7	251.7	103.95	3.422			
8,100.0	5,434.4	7,850.1	5,272.1	61.6	61.1	-63.13	411.2	-2,734.7	354.8	246.7	108.13	3.281			
8,115.6	5,434.4	7,864.6	5,272.0	62.0	61.4	-63.12	411.5	-2,749.1	354.8	246.0	108.78	3.261			
8,200.0	5,434.1	7,945.9	5,271.9	64.0	63.4	-63.19	412.4	-2,830.4	355.2	242.7	112.49	3.158			
8,300.0	5,433.7	8,049.0	5,270.9	66.4	65.9	-63.14	413.8	-2,933.5	355.9	239.0	116.88	3.045			
8,400.0	5,433.4	8,151.4	5,270.0	68.8	68.4	-62.99	416.7	-3,035.8	355.4	234.2	121.16	2.933			
8,500.0	5,433.0	8,253.7	5,269.5	71.3	70.9	-62.91	419.4	-3,138.1	354.7	229.2	125.50	2.826			
8,600.0	5,432.7	8,351.9	5,269.4	73.7	73.3	-62.89	421.9	-3,236.3	353.9	224.1	129.82	2.726			
8,700.0	5,432.3	8,449.0	5,269.9	76.1	75.7	-62.97	424.3	-3,333.3	353.1	218.8	134.23	2.630			
8,703.3	5,432.3	8,452.2	5,269.9	76.2	75.8	-62.97	424.3	-3,336.5	353.1	218.7	134.37	2.628			
8,800.0	5,432.0	8,544.7	5,268.9	78.5	78.0	-62.94	425.1	-3,429.1	354.2	215.7	138.49	2.557			
8,900.0	5,431.7	8,649.1	5,267.6	81.0	80.6	-62.82	427.0	-3,533.4	354.7	211.8	142.81	2.483			
8,984.2	5,431.4	8,733.2	5,266.3	83.0	82.6	-62.61	429.4	-3,617.5	354.4	208.1	146.24	2.423			
9,000.0	5,431.3	8,747.9	5,266.2	83.4	83.0	-62.60	429.7	-3,632.2	354.4	207.5	146.89	2.413			
9,100.0	5,431.0	8,847.8	5,264.7	85.8	85.5	-62.42	431.6	-3,732.0	354.8	203.8	151.02	2.350			
9,200.0	5,430.6	8,948.1	5,262.4	88.2	87.9	-62.12	433.9	-3,832.3	355.4	200.4	154.97	2.293			
9,300.0	5,430.3	9,045.2	5,262.0	90.7	90.3	-62.15	435.0	-3,929.3	356.1	196.7	159.32	2.235			
9,400.0	5,429.9	9,150.0	5,261.6	93.1	92.9	-62.22	436.0	-4,034.2	356.8	192.9	163.89	2.177			
9,500.0	5,429.6	9,251.0	5,259.4	95.6	95.4	-61.78	440.1	-4,135.1	355.7	188.1	167.59	2.123			
9,519.4	5,429.5	9,268.5	5,258.9	96.0	95.8	-61.71	440.7	-4,152.6	355.7	187.4	168.28	2.114			
9,600.0	5,429.2	9,346.8	5,257.8	98.0	97.7	-61.58	442.2	-4,230.8	356.1	184.5	171.53	2.076			
9,700.0	5,428.9	9,448.3	5,255.5	100.5	100.2	-61.44	444.3	-4,332.3	356.3	180.6	175.66	2.028			
9,800.0	5,428.5	9,547.2	5,255.6	102.9	102.6	-61.37	446.0	-4,431.2	356.7	176.8	179.86	1.983			
9,900.0	5,428.2	9,640.0	5,255.0	105.3	104.9	-61.39	447.0	-4,523.9	357.6	173.5	184.07	1.942			
9,919.3	5,428.1	9,640.0	5,255.0	105.8	104.9	-61.39	447.0	-4,523.9	358.6	174.1	184.49	1.944			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Well Name:	Well Lybrook H26-2307 02H
Project:	Sandoval County, NM	TVL Reference:	KB @ 7249.0ft (Aztec)
Location:	Lybrook	MD Reference:	KB @ 7249.0ft (Aztec)
Well Depth:	0.0ft	North Reference:	True
Reference Well:	Lybrook H26-2307 02H	Survey Calculating Method:	Minimum Curvature
Well Status:	0.0ft	Output Orientation:	2.00 sigma
Reference Well:	STK	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVL Reference:	Offset Datum

Reference Depths are relative to KB @ 7249.0ft (Aztec)
 Offset Depths are relative to Offset Datum
 Central Meridian is -106.250000 °

Coordinates are relative to: Lybrook H26-2307 02H
 Coordinate System is US State Plane 1983, New Mexico Central Zone
 Grid Convergence at Surface is: -0.76°

