RECEIVED

OCT 03 2016

Farmington Field Office
Bureau of Land Management

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

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.

SUBMIT IN TRIPLICATE *– Other instructions on page 2.*

5. Lease Serial No.
NMNM 10087 and NMNM 0080273

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

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

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Lybrook M24-2307 01H

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

9. API Well No.
pending 30-043-21273

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

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

10. Field and Pool or Exploratory Area
Basin Mancos

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
SHL: 1,098' FSL, 381' FWL Section 24, Township 23N, Range 7W
BHL: 1,720' FSL, 330' FWL Section 23, Township 23N, Range 7W

11. Country or Parish, State
Sandoval, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other Withdraw APD and ROW NMNM 132734
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ 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) respectfully requests to withdraw the Lybrook M24-2307 01H APD and the associated Access Road Standard Form 299 Rights-of-Way (ROW) NMNM 132734. Both the APD and ROW were submitted to the BLM on April 7, 2015.

OIL CONS. DIV DIST. 3

OCT 13 2016

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

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

Title Senior Regulatory Analyst

Signature Holly Hill

Date 09/30/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by William Tambekou

Title Petroleum Engineer

Date 10/7/2016

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)

NMOCD

62

RECEIVED
APR 07 2015
Farmington Field Office
Bureau of Land Management

CONFIDENTIAL

Form 3160-3
(August 2007)

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM 10087 and NMNM 0080273

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

1a. Type of work: ☑ DRILL ☐ REENTER

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

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
Lybrook M24-2307 01H

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

9. API Well No.
30-043-21273

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

3b. Phone No. *(include area code)*
720-876-5994

10. Field and Pool, or Exploratory
Basin Mancos

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 1,098' FSL and 381' FWL Section 24, T23N, R7W
At proposed prod. zone 1,720' FSL and 330' FWL Section 23, T23N, R7W

11. Sec., T. R. M. or Blk. and Survey or Area
SHL: Section 24, T23N, R7W NMPM

14. Distance in miles and direction from nearest town or post office*
+/- 2.0 miles southeast of the intersection of US Hwy 550 & CR 378 in Lybrook, NM

12. County or Parish
Sandoval

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
BHL is 330' from west line of Sec. 23

16. No. of acres in lease
NMNM 10087 - 320.0
NMNM 0080273 - 622.08

17. Spacing Unit dedicated to this well
320.0 acres - S2 of Section 23

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
Lybrook M24-2307 02H is +/- 30' SW of SHL

19. Proposed Depth
5,529' TVD/10,763' MD

20. BLM/BIA Bond No. on file
COB-000235

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
7,110' GL, 7,126' KB

22. Approximate date work will start*
11/05/2015

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	Name *(Printed Typed)*	Date
Shawn Turk	Shawn Turk	4/2/15

Title
Regulatory Analyst

Approved by *(Signature)*	Name *(Printed Typed)*	Date
Title	**Office**	

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"

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

NMOCD

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., 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 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
	97232	BASIN MANCOS

[4] Property Code	[5] Property Name	[6] Well Number
	LYBROOK M24-2307	01H

[7] OGRID No.	[8] Operator Name	[9] Elevation
282327	ENCANA OIL & GAS (USA) INC.	7110.1'

[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
M	24	23N	07W		1098'	SOUTH	381'	WEST	SANDOVAL

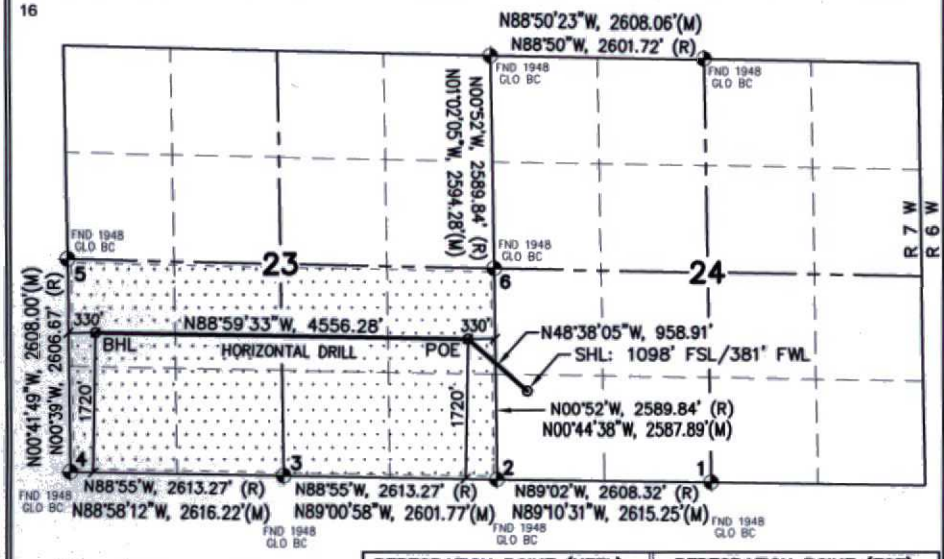
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Line	County
L	23	23N	07W		1720'	SOUTH	330'	WEST	SANDOVAL

[12] Dedicated Acres (RECORD) PROJECT AREA	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320.00 ACRES S/2 SECTION 23			

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



M24-2307 01H WELL
SHL (WELL FLAG)
LAT. 36.207266 'N (NAD83)
LONG. 107.534621 'W (NAD83)
LAT. 36.207252 'N (NAD27)
LONG. 107.534015 'W (NAD27)
POE (POINT OF ENTRY)
LAT. 36.209008 'N (NAD83)
LONG. 107.537058 'W (NAD83)
LAT. 36.208994 'N (NAD27)
LONG. 107.536451 'W (NAD27)
BHL (BOTTOM HOLE LOCATION)
LAT. 36.209238 'N (NAD83)
LONG. 107.552494 'W (NAD83)
LAT. 36.209224 'N (NAD27)
LONG. 107.551887 'W (NAD27)

PERFORATION POINT (HEEL) 1720' FSL/ 350' FEL	PERFORATION POINT (TOE) 1720' FSL/ 340' FWL
LAT. 36.209009 'N (NAD83)	LAT. 36.209237 'N (NAD83)
LONG. 107.537126 'W (NAD83)	LONG. 107.552460 'W (NAD83)
LAT. 36.208995 'N (NAD27)	LAT. 36.209224 'N (NAD27)
LONG. 107.536519 'W (NAD27)	LONG. 107.551853 'W (NAD27)

SECTION CORNERS

1 LAT. 36.204156 'N (NAD83)	4 LAT. 36.204530 'N (NAD83)	
LONG. 107.527009 'W (NAD83)	LONG. 107.553545 'W (NAD83)	
LAT. 36.204142 'N (NAD27)	LAT. 36.204516 'N (NAD27)	
LONG. 107.526403 'W (NAD27)	LONG. 107.552939 'N (NAD27)	
2 LAT. 36.204266 'N (NAD83)	5 LAT. 36.211691 'N (NAD83)	
LONG. 107.535869 'W (NAD83)	LONG. 107.553646 'W (NAD83)	
LAT. 36.204252 'N (NAD27)	LAT. 36.211677 'N (NAD27)	
LONG. 107.535263 'W (NAD27)	LONG. 107.553040 'W (NAD27)	
3 LAT. 36.204395 'N (NAD83)	6 LAT. 36.211372 'N (NAD83)	
LONG. 107.554683 'W (NAD83)	LONG. 107.535975 'W (NAD83)	
LAT. 36.204381 'N (NAD27)	LAT. 36.211358 'N (NAD27)	
LONG. 107.544076 'N (NAD27)	LONG. 107.535368 'W (NAD27)	

[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.

Shawn Turk 4/2/15
Signature Date

Shawn Turk
Printed Name

shawn.turk@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.

May 13, 2014
Date of Survey

Signature and Seal of Professional Surveyor:

Richard L. Mulliken

RICHARD L. MULLIKEN
NEW MEXICO
16873
3-12-15
PROFESSIONAL SURVEYOR

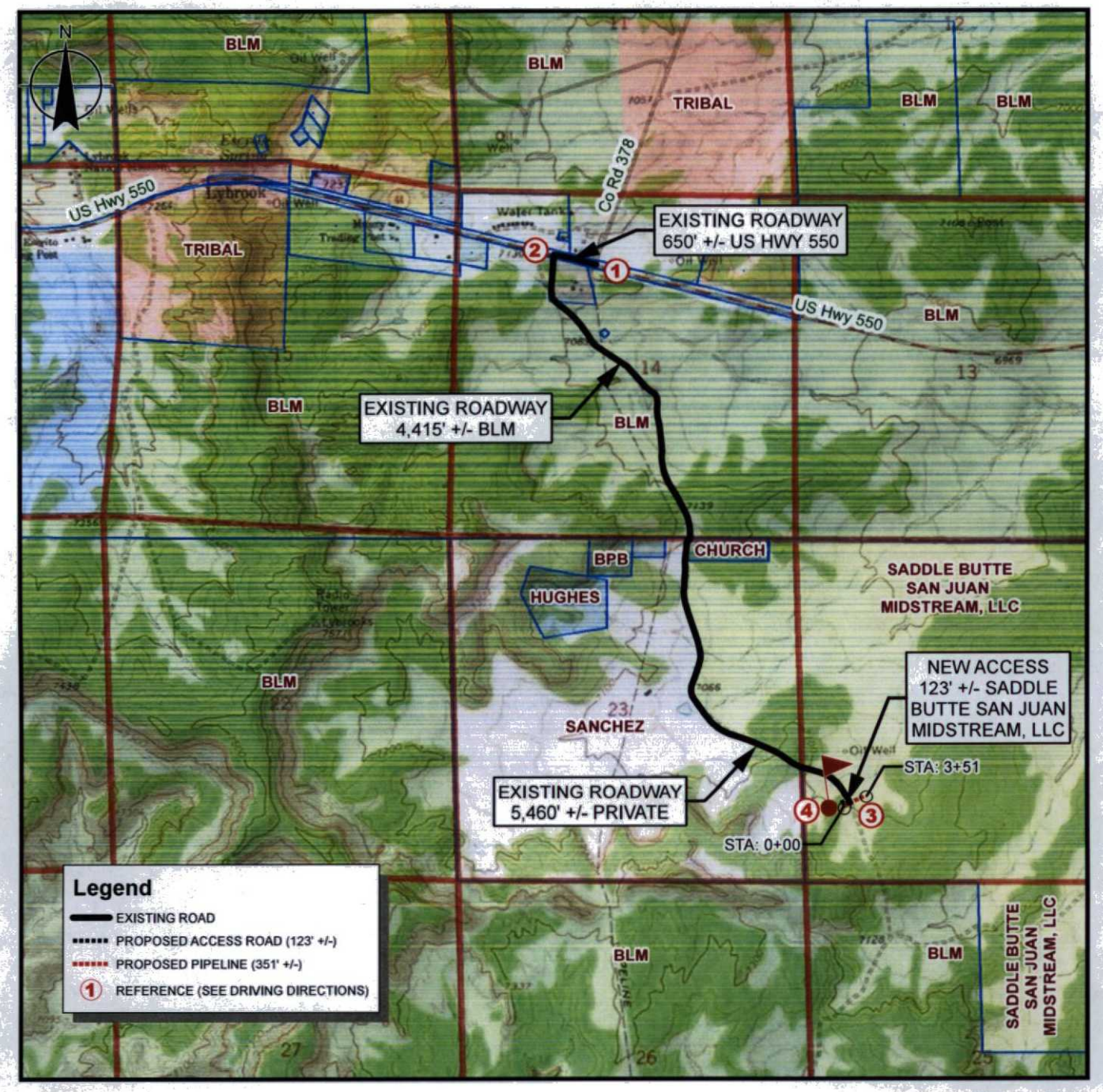
RICHARD L. MULLIKEN
Certificate Number 16873

Sheet A

LATITUDE: 36.207266° N
LONGITUDE: 107.534621° W
DATUM: NAD 83

ENCANA OIL & GAS (USA) INC.

LYBROOK M24-2307 #01H
1098' FSL & 381' FWL
LOCATED IN THE SW/4 SW/4 OF SECTION 24
T23N, R07W, N.M.P.M.
SANDOVAL COUNTY, NEW MEXICO
123' +/- OF NEW ACCESS ACROSS SADDLE BUTTE SAN JUAN MIDSTREAM, LLC



U.S.G.S QUAD: LYBROOK
SCALE: 1" = 2000' (1:24,000)
JOB No.: 14-07-07 REV1
DATE: 11/3/2014
DRAWN BY: SMM
SHEET 1 OF 1

INSTALL NEW 24" CMP
STA. 0+05 - EXISTING ROAD

WASATCH SURVEYING
WASATCH SURVEYING ASSOCIATES
906 MAIN STREET, EVANSTON, WY 82930
(307) 789-4545

Sheet B

ENCANA OIL & GAS (USA) INC.

LYBROOK M24-2307 #01H
1098' FSL & 381' FWL
LOCATED IN THE SW/4 SW/4 OF SECTION 24
T23N, R07W, N.M.P.M.
SANDOVAL COUNTY, NEW MEXICO
123' +/- OF NEW ACCESS ACROSS SADDLE BUTTE SAN JUAN MIDSTREAM, LLC

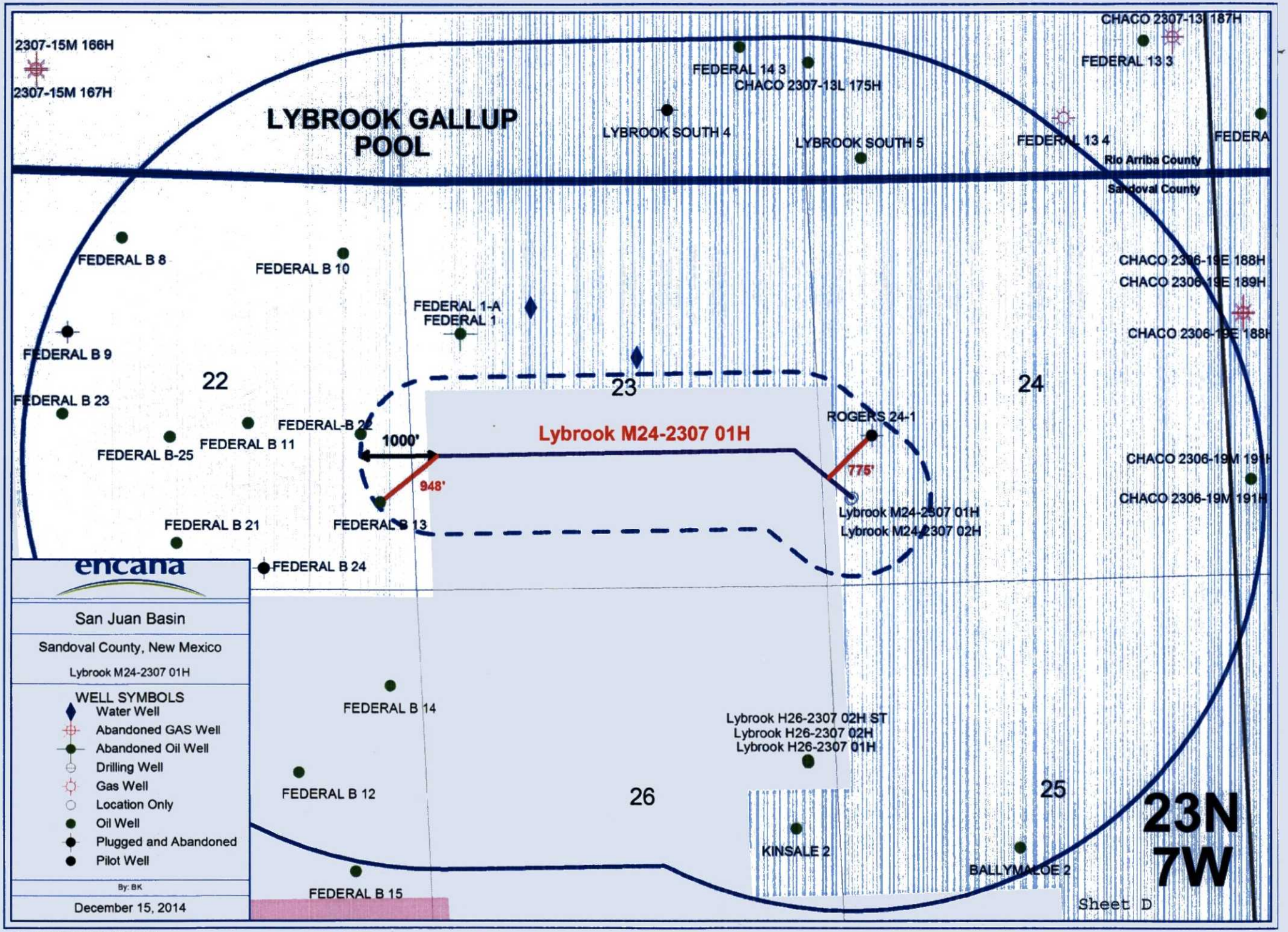
DIRECTIONS

1) FROM THE INTERSECTION OF COUNTY ROAD 378 & HWY 550 IN LYBROOK, NEW MEXICO, TRAVEL WEST ON HWY 550 FOR 650 FEET OR 0.1 MILES TO A GRAVEL ROAD TO THE LEFT (SOUTH)

2) TURN LEFT (SOUTH) ONTO THE GRAVEL ROAD AND TRAVEL SOUTHERLY FOR 1.9 MILES TO NEW ACCESS ROAD ON THE RIGHT (WEST).

3) FOLLOW THE NEW ACCESS ROAD 123 FEET TO THE WELL FLAG FOR THE PROPOSED M24-2307 WELL PAD

4) WELL FLAG LOCATED AT : LATITUDE: 36.207266° N, LONGITUDE: 107.534621° W (NAD 83)



PETRA 12/15/2014 3:03:15 PM

ENCANA OIL & GAS (USA) INC.

LYBROOK M24-2307 #01H

- PROPOSED PIPELINE -

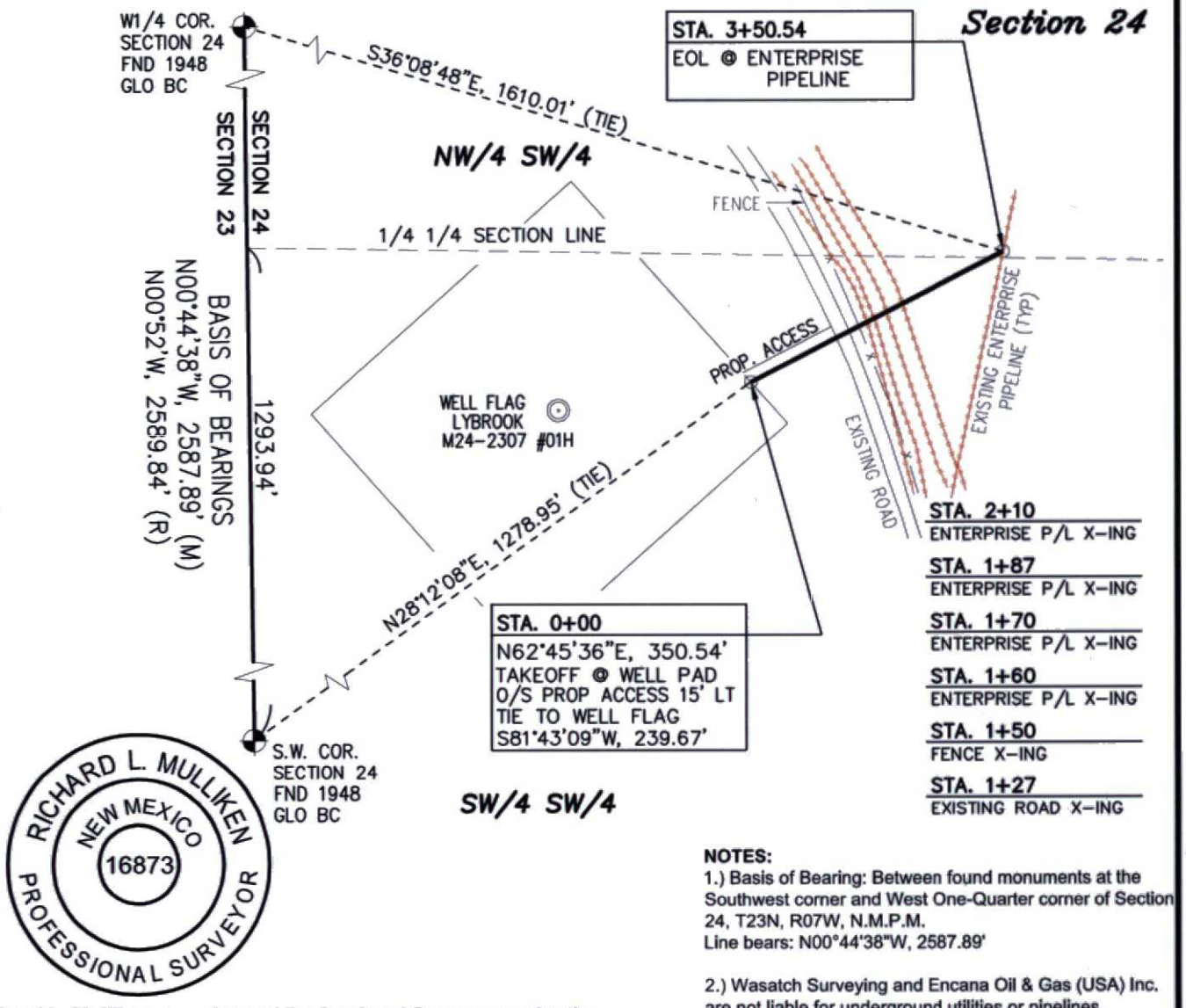
LOCATED IN THE SW/4 SW/4 & NW/4 SW/4
OF SECTION 24
T23N, R07W, N.M.P.M.
SANDOVAL COUNTY, NEW MEXICO

~ SURFACE OWNERSHIP ~
SADDLE BUTTE SAN JUAN MIDSTREAM, LLC
SW/4 SECTION 24
0+00 to 3+50.54
350.54 FT. or 21.24 RODS

N

100' 0' 200'

SCALE: 1" = 200'



RICHARD L. MULLIKEN
NEW MEXICO
16873
PROFESSIONAL SURVEYOR

NOTES:

1.) Basis of Bearing: Between found monuments at the Southwest corner and West One-Quarter corner of Section 24, T23N, R07W, N.M.P.M.
Line bears: N00°44'38"W, 2587.89'

2.) Wasatch Surveying and Encana Oil & Gas (USA) Inc. are not liable for underground utilities or pipelines. Contractor should call One-Call for location of any marked or unmarked, buried pipelines or cables on well pad, in construction zone and/or access road at least two (2) working days prior to construction.

I, Richard L. Mulliken, a registered Professional Surveyor under the laws of the State of New Mexico, hereby certify that this plat was prepared from field notes of an actual survey made by me or under my supervision, and that the same is true and correct to the best of my belief and meets the minimum standards for surveying in New Mexico.

Richard L. Mulliken Date: 11-02-14

Richard L. Mulliken, PS
New Mexico L.S. #16873

JOB No. 14-07-07 REV-1 DATE: 10/31/14 DRAWN BY: CJT

WASATCH SURVEYING

WASATCH SURVEYING ASSOCIATES
906 MAIN STREET, EVANSTON, WY 82930
(307) 789-4545

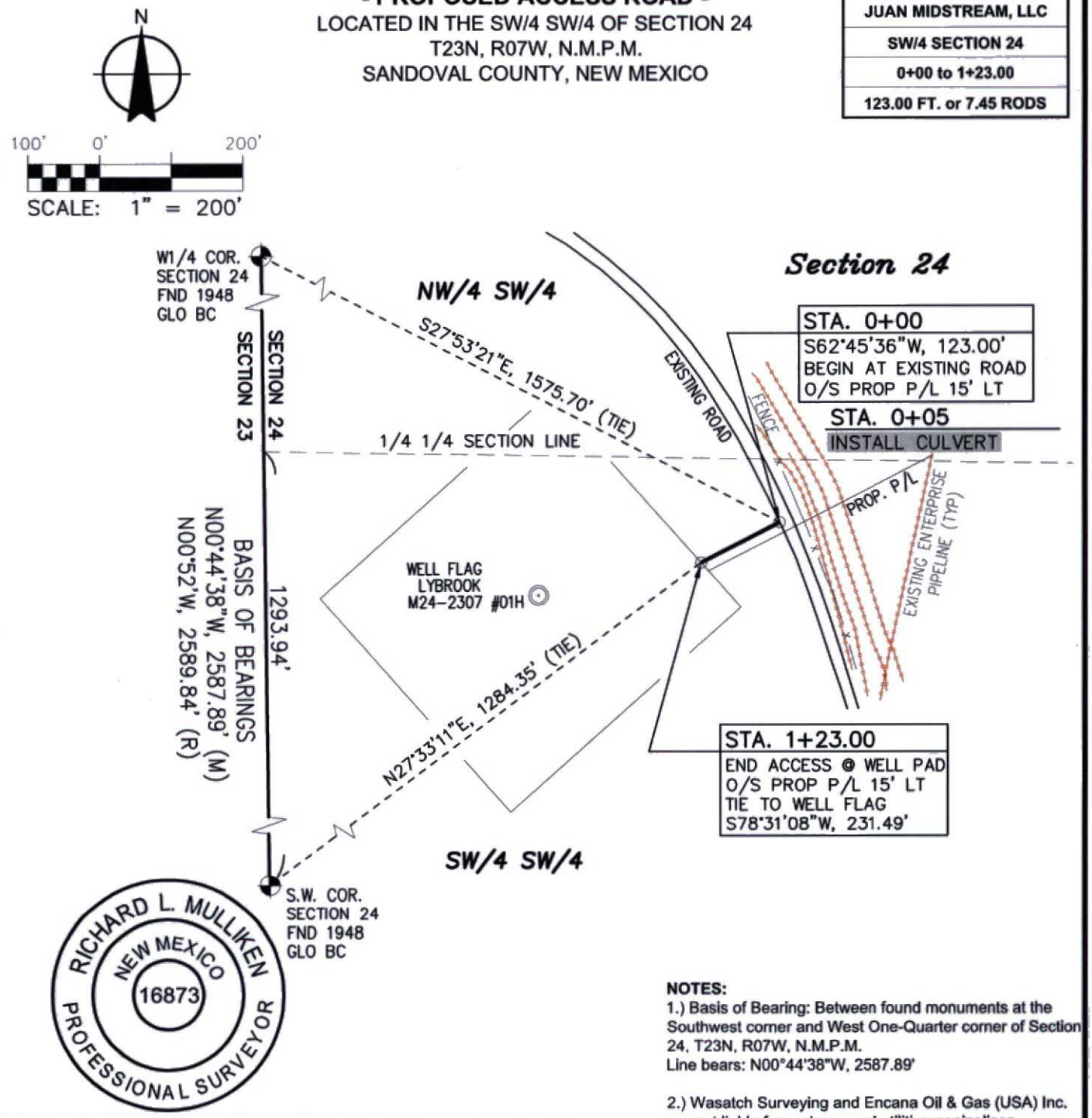
ENCANA OIL & GAS (USA) INC.

LYBROOK M24-2307 #01H

- PROPOSED ACCESS ROAD -

LOCATED IN THE SW/4 SW/4 OF SECTION 24
T23N, R07W, N.M.P.M.
SANDOVAL COUNTY, NEW MEXICO

~ SURFACE OWNERSHIP ~
SADDLE BUTTE SAN JUAN MIDSTREAM, LLC
SW/4 SECTION 24
0+00 to 1+23.00
123.00 FT. or 7.45 RODS



RICHARD L. MULLIKEN
NEW MEXICO
16873
PROFESSIONAL SURVEYOR

NOTES:

1.) Basis of Bearing: Between found monuments at the Southwest corner and West One-Quarter corner of Section 24, T23N, R07W, N.M.P.M.
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I, Richard L. Mulliken, a registered Professional Surveyor under the laws of the State of New Mexico, hereby certify that this plat was prepared from field notes of an actual survey made by me or under my supervision, and that the same is true and correct to the best of my belief and meets the minimum standards for surveying in New Mexico.

R L. Mulliken Date: 11-02-14

Richard L. Mulliken, PS
New Mexico L.S. #16873

JOB No. 14-07-07 REV-1 DATE: 10/31/14 DRAWN BY: CJT

WASATCH SURVEYING

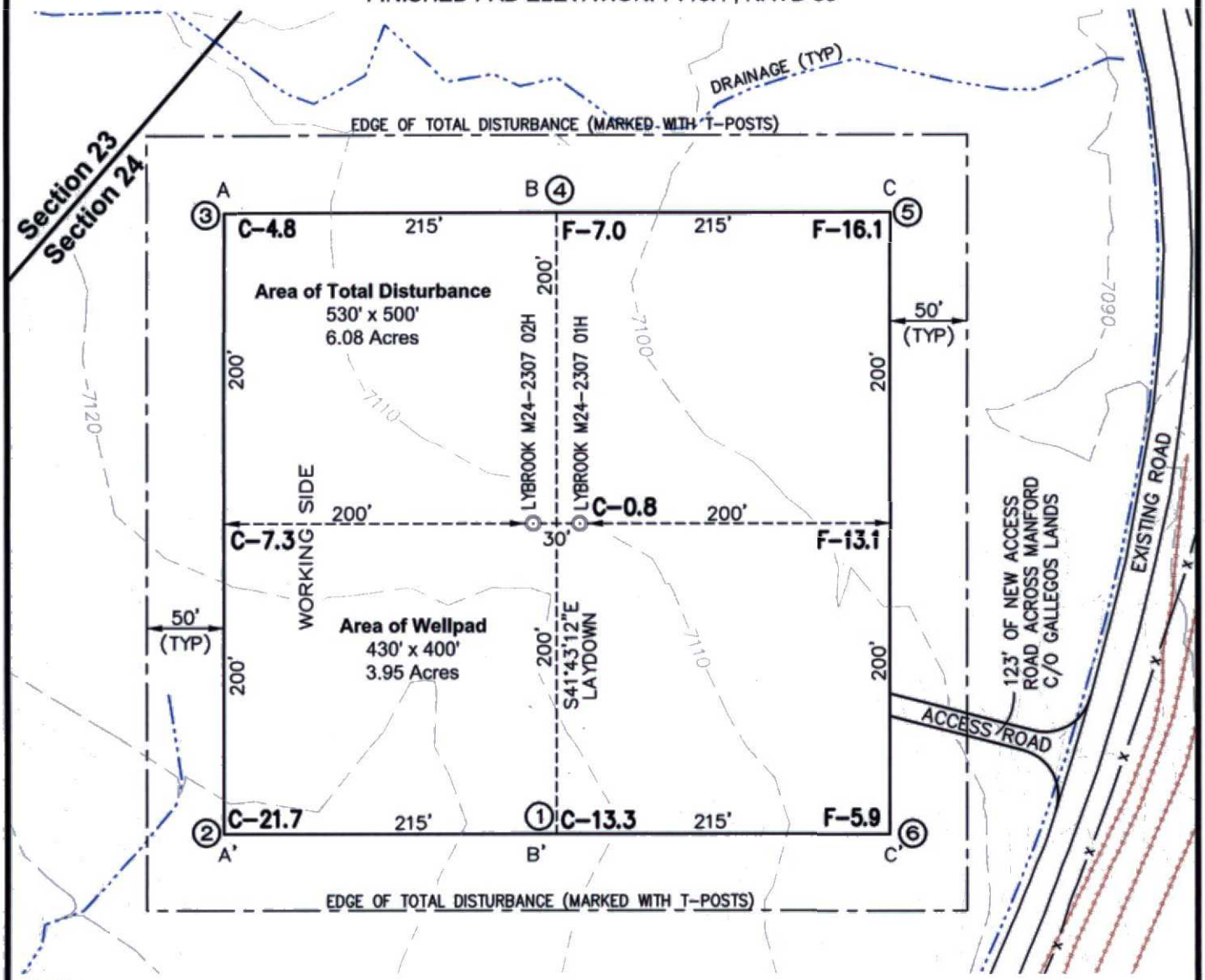
WASATCH SURVEYING ASSOCIATES
906 MAIN STREET, EVANSTON, WY 82930
(307) 789-4545

WELL FLAG
LATITUDE: 36.207266° N
LONGITUDE: 107.534621° W
DATUM: NAD83

ENCANA OIL & GAS (USA) INC.

LYBROOK M24-2307 #01H
1098' FSL & 381' FWL
LOCATED IN THE SW/4 SW/4 OF SECTION 24
T23N, R7W, N.M.P.M.
SANDOVAL COUNTY, NEW MEXICO
EXISTING GROUND ELEVATION: 7110.9', NAVD 88
FINISHED PAD ELEVATION: 7110.1', NAVD 88

~ SURFACE OWNERSHIP ~
SADDLE BUTTE SAN JUAN MIDSTREAM, LLC



NOTES:

1.) Basis of Bearing: Between found monuments at the Southwest corner and West One-Quarter corner of Section 24, T23N, R7W, N.M.P.M. Line bears: N00°44'38"W, 2587.89'

2.) Wasatch Surveying and Encana Oil & Gas (USA) Inc. are not liable for underground utilities or pipelines. Contractor should call One-Call for location of any marked or unmarked, buried pipelines or cables on well pad, in construction zone and/or access road at least two (2) working days prior to construction.

3.) Steel T-Posts have been set to define the Edge of Disturbance limits which are 50' offset from the edge of the staked wellpad.

DATUM NOTE:
Datum NAD83(2011) Epoch 2010.000 (GRS80)
Projection Type = Transverse Mercator
Origin Latitude = 36°15'00" North
Origin Longitude = 107°52'30" West
Scale Reduction = 1.000 297 195 Unitless
Units = U.S. Survey Foot (USSF)
GEOID12a NAVD88
(WSA Local Coord Sys: Crow Mesa)

TOTAL PERMITTED AREA
530' x 500' = 6.08 ACRES
JOB No. 14-07-07 REV-1
DATE: 10/31/14
DRAWN BY: SGT

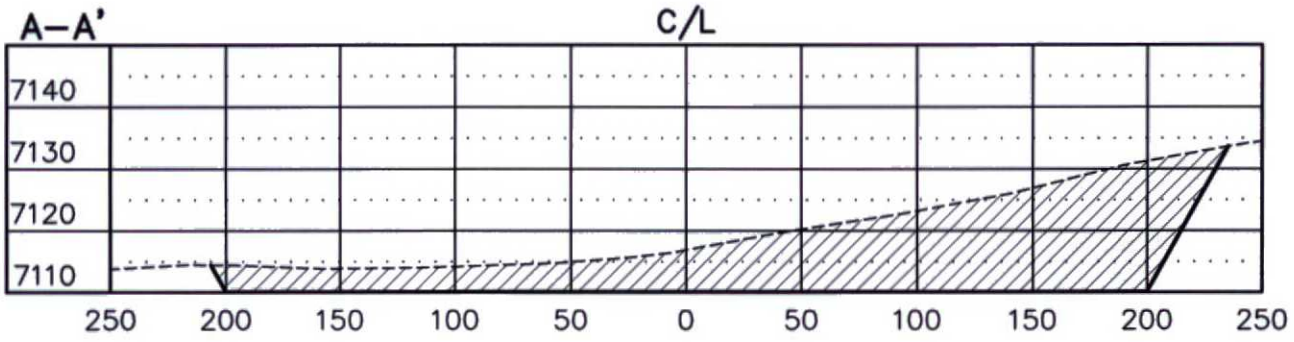
100' 0' 100'
SCALE: 1" = 100'

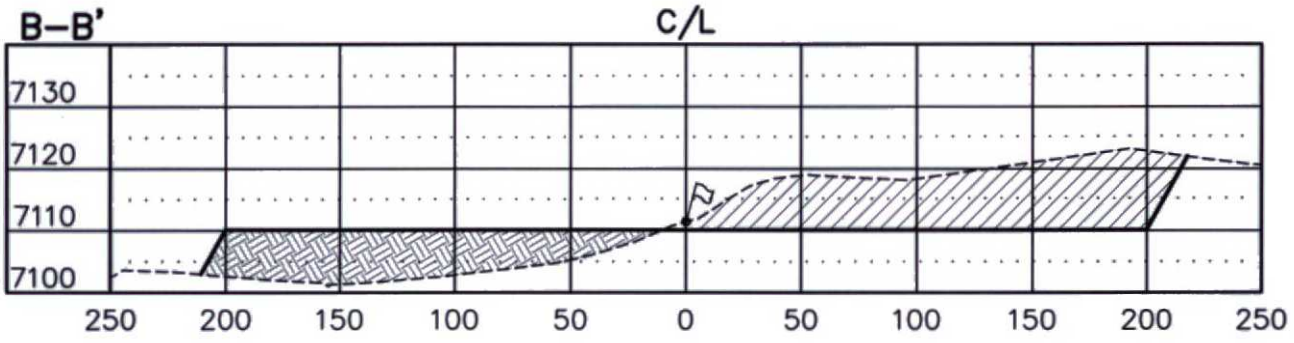
WASATCH SURVEYING
WASATCH SURVEYING ASSOCIATES
906 MAIN STREET, EVANSTON, WY 82930
(307) 789-4545

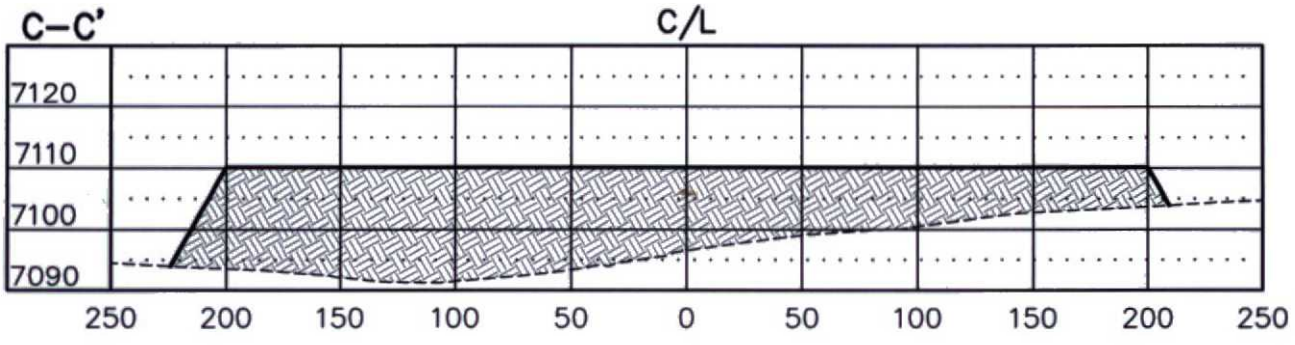
WELL FLAG
LATITUDE: 36.207266° N
LONGITUDE: 107.534621° W
DATUM: NAD83

ENCANA OIL & GAS (USA) INC.

LYBROOK M24-2307 #01H
1098' FSL & 381' FWL
LOCATED IN THE SW/4 SW/4 OF SECTION 24
T23N, R7W, N.M.P.M.
SANDOVAL COUNTY, NEW MEXICO
EXISTING GROUND ELEVATION: 7110.9', NAVD 88
FINISHED PAD ELEVATION: 7110.1', NAVD 88





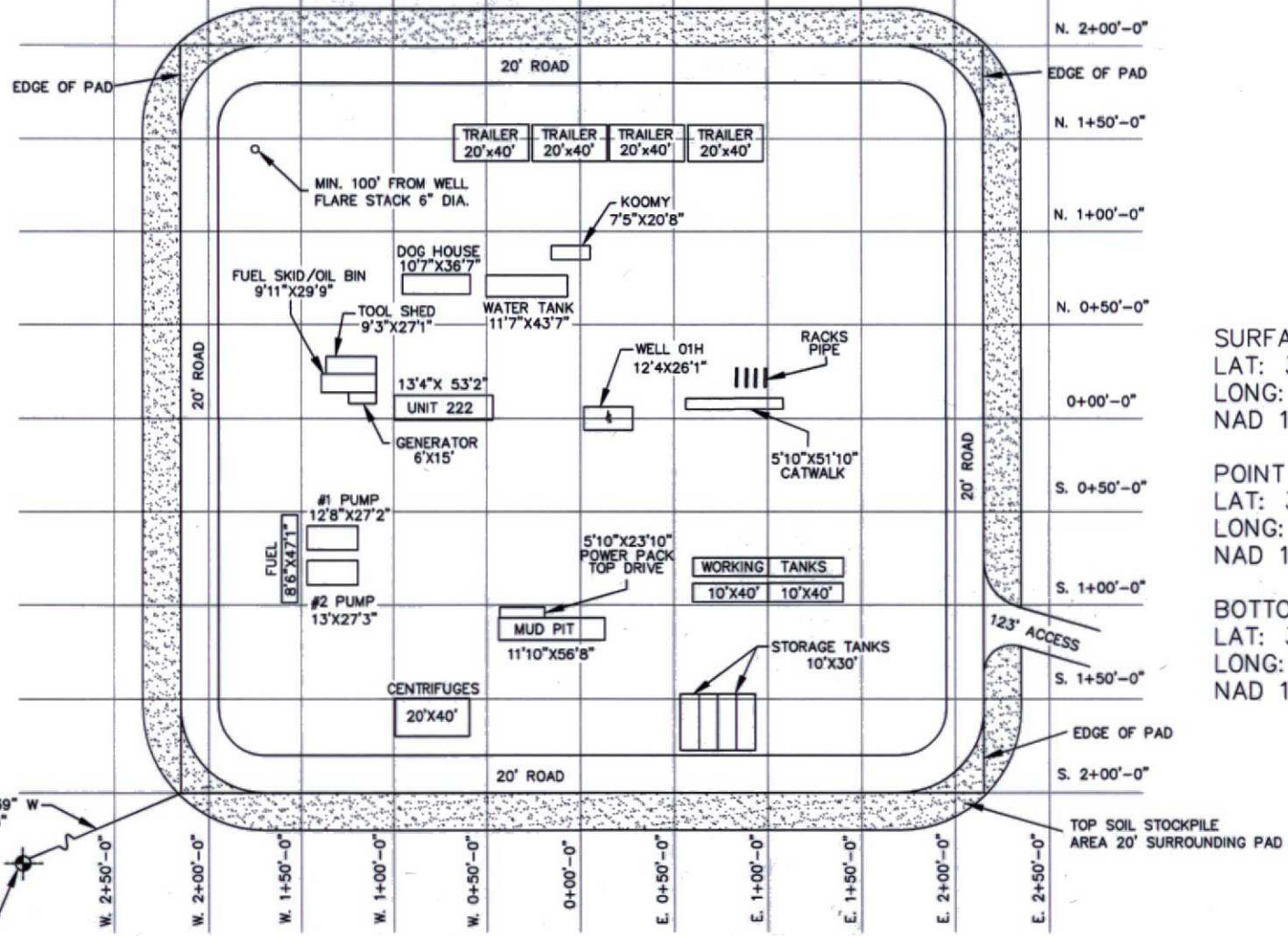


CUT
FILL

HORIZ. SCALE: 1"= 80'
VERT. SCALE: 1" = 30'
JOB No. 14-07-07 REV-1
DATE: 10/31/14

NOTE:
Wasatch Surveying and Encana Oil & Gas (USA) Inc. are not liable for underground utilities or pipelines. Contractor should call One-Call for location of any marked or unmarked, buried pipelines or cables on well pad, in construction zone and/or access road at least two (2) working days prior to construction.

WASATCH SURVEYING
WASATCH SURVEYING ASSOCIATES
906 MAIN STREET, EVANSTON, WY 82930



SURFACE LOCATION
LAT: 36.207266 N
LONG: 107.534621 W
NAD 1983

POINT OF ENTRY
LAT: 36.209008 N
LONG: 107.537058 W
NAD 1983

BOTTOM HOLE
LAT: 36.209238 N
LONG: 107.552494 W
NAD 1983

THE SOUTHWEST CORNER
SEC. 24, T.23N., R.07W.

NOTE: TYPICAL LAYOUT THAT MAY BE CHANGED BASED ON SITE-SPECIFIC CONDITIONS AND EQUIPMENT AVAILABILITY.

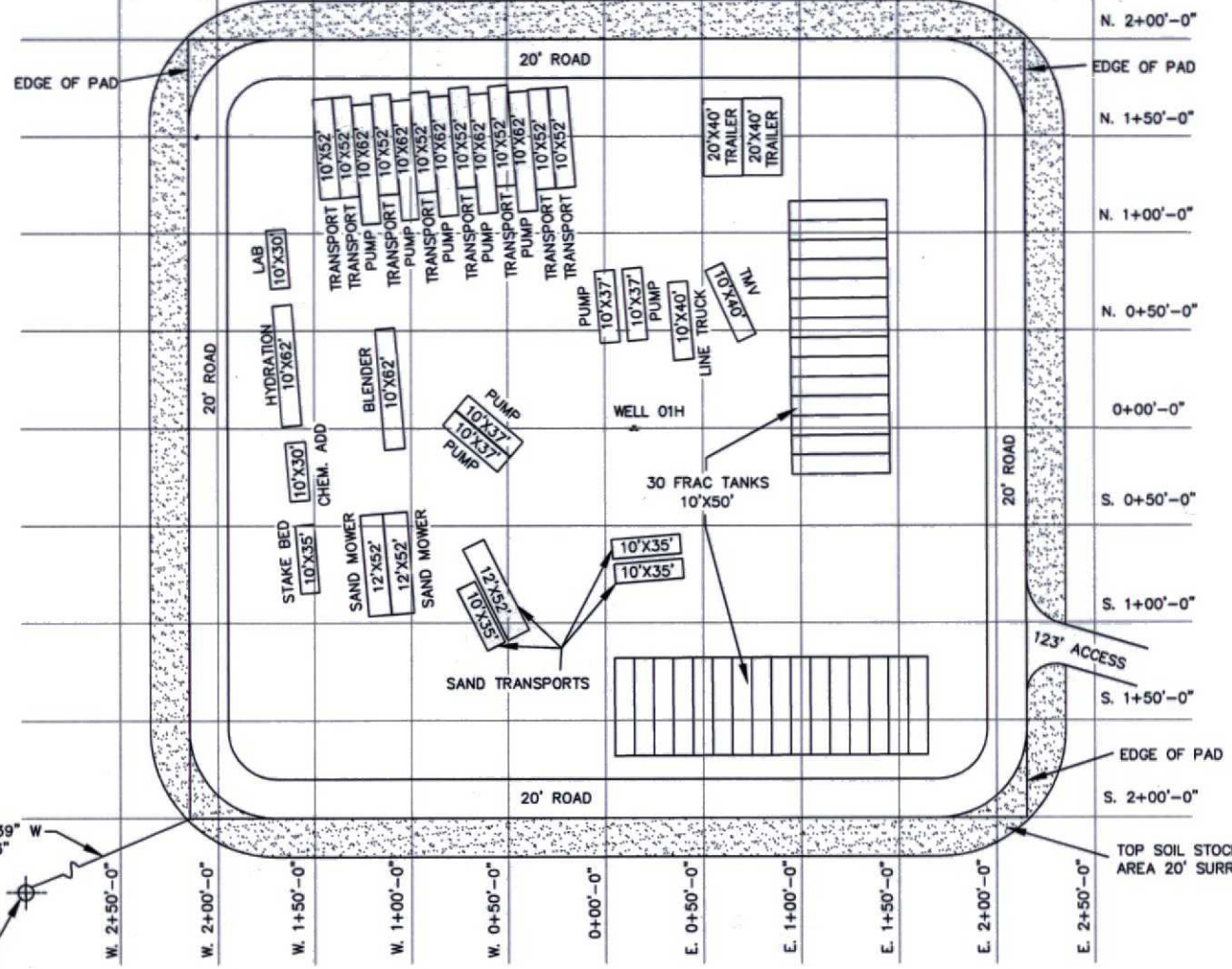
encana. natural gas

LDIS LLC.
TYPICAL DRILLING LAYOUT
NEW MEXICO
LM-NV-A-3000

Sheet H-1

Date and Time Saved: 2012-03-08, 8:15 AM

Drawings Must Comply with Encana Drafting Standards (EDI-004-S-01)



SURFACE LOCATION
LAT: 36.207266 N
LONG: 107.534621 W
NAD 1983

POINT OF ENTRY
LAT: 36.209008 N
LONG: 107.537058 W
NAD 1983

BOTTOM HOLE
LAT: 36.209238 N
LONG: 107.552494 W
NAD 1983

NOTE: TYPICAL LAYOUT THAT MAY BE CHANGED BASED ON SITE-SPECIFIC CONDITIONS AND EQUIPMENT AVAILABILITY.

encana. natural gas

LYBROOK M24-2307-01H
S24-T23N-R07W
WELL PAD
S24-T23N-R07W
1"=50'-0" 1465370

LDIS LLC.
TYPICAL COMPLETIONS LAYOUT
NEW MEXICO
A
LM-NV-A-3001

Sheet H-2

Date and Time Saved: 2012-03-08, 9:58 AM

Drawings Must Comply with Encana Drafting Standards (ECA-004-S-01)

Lybrook M24-2307 01H
SHL: 1,098' FSL, 381' FWL Sec 24, T23N, R7W
BHL: 1,720' FSL, 330' FWL Sec 23, T23N, R7W
Sandoval, New Mexico
Lease Number: NMNM 10087 & NMNM 0080273

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.	1,387
Kirtland Shale	1,518
Fruitland Coal	1,823
Pictured Cliffs Ss.	1,992
Lewis Shale	2,091
Cliffhouse Ss.	2,853
Menefee Fn.	3,525
Point Lookout Ss.	4,297
Mancos Shale	4,528
Mancos Silt	5,084
Gallup Fn.	5,331
Base Gallup	5,664

The referenced surface elevation is 7110', KB 7126'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,823
Oil/Gas	Pictured Cliffs Ss.	1,992
Oil/Gas	Cliffhouse Ss.	2,853
Gas	Menefee Fn.	3,525
Oil/Gas	Point Lookout Ss.	4,297
Oil/Gas	Mancos Shale	4,528
Oil/Gas	Mancos Silt	5,084
Oil/Gas	Gallup Fn.	5,331

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

Lybrook M24-2307 01H
SHL: 1,098' FSL, 381' FWL Sec 24, T23N, R7W
BHL: 1,720' FSL, 330' FWL Sec 23, T23N, R7W
Sandoval, New Mexico
Lease Number: NMNM 10087 & NMNM 0080273

3. PRESSURE CONTROL

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

Proposed BOP and choke manifold arrangements are attached.

4. CASING & CEMENTING PROGRAM

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

a) The proposed casing design is as follows:

Casing	Depth (MD)	Hole Size	Csg Size	Weight	Grade
Conductor	0'-60'	26"	16"	42.09#	
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-5588'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5488'-10763'	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 M24-2307 01H
SHL: 1,098' FSL, 381' FWL Sec 24, T23N, R7W
BHL: 1,720' FSL, 330' FWL Sec 23, T23N, R7W
Sandoval, New Mexico
Lease Number: NMNM 10087 & NMNM 0080273

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'-5588'	100% open hole excess Stage 1 Lead: 521 sks Stage 1 Tail: 396 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	5488'-10763'	50% OH excess Stage 1 Blend Total: 298sks	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 4595'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5529'/10763'	Gallup

Lybrook M24-2307 01H
SHL: 1,098' FSL, 381' FWL Sec 24, T23N, R7W
BHL: 1,720' FSL, 330' FWL Sec 23, T23N, R7W
Sandoval, New Mexico
Lease Number: NMNM 10087 & NMNM 0080273

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'-5399'/5588	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"	5399'/5588'-5529'/10763'	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 +/- 2618 psi based on a 9.0 ppg at 5594' 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 November 5, 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: 1,098' FSL, 381' FWL Sec 24, T23N, R7

County: Sandoval

WELL: Lybrook M24-2307 01H

Encana Oil & Gas (USA) Inc.

WELL SUMMARY

ENG: Michael Sanch 4-2-15

RIG: Unassigned

GLE: 7110.1

RKBE: 7126.1

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 LTC TOC Surface with 100% OH Excess: 228 sks Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water.	Fresh wtr 8.3-10	Vertical <1°
		Nacimiento Fn.	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.	1,387		8 3/4	7" 26ppf J55 LTC TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 917sks Stage 1 Lead: 521 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: 396 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	1,518					
		Fruitland Coal	1,823					
		Pictured Cliffs Ss.	1,992					
		Lewis Shale	2,091					
		Cliffhouse Ss.	2,853					
		Menefee Fn.	3,525					
		Point Lookout Ss.	4,297					
		Mancos Shale	4,528					
	Mud logger onsite	KOP	4,595	4,595				
Surveys every 30' through the curve		Mancos Silt	5,084					
		Gallup Fn.	5,331					
		7" Csg	5,399	5,588'				
Surveys every stand to TD unless directed otherwise by Geologist MWD Gamma Directional	No OH Logs	Horizontal Target	5,594		6 1/8	100' overlap at liner top		Horz Inc/TVD 90.7deg/5594.1ft
		TD	5,529	10,763		5175' Drilled Lateral		TD = 10762.7 MD
		Base Gallup	5,664			4 1/2" 11.6ppf SB80 LTC TOC @ hanger (50% OH excess) Stage 1 Total: 298sks Stage 1 Blend: 298 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	

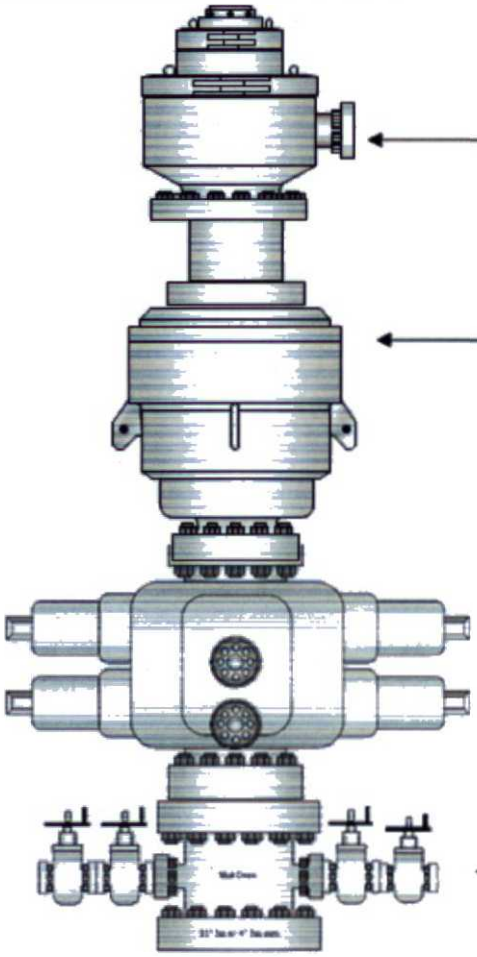
NOTES:

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 4595', 8 3/4 inch holesize
5) Start curve at 10deg/100' build rate
6) Drill to csg point of 5588' MD
7) R&C 7" csg, circ cmt to surface
8) Land at ~55 deg, drill lateral to 10763' run 4 1/2 inch cemented liner

WELLHEAD BLOWOUT CONTROL SYSTEM

encana

Well Name and Number:
Lybrook M24-2307 01H

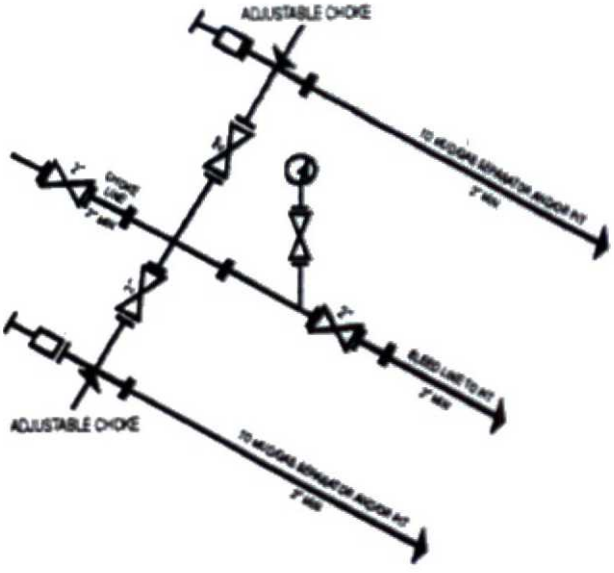


11" 3K Rotating Head

11" 3K Annular

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

3K Mud Cross 3" gate valves



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
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

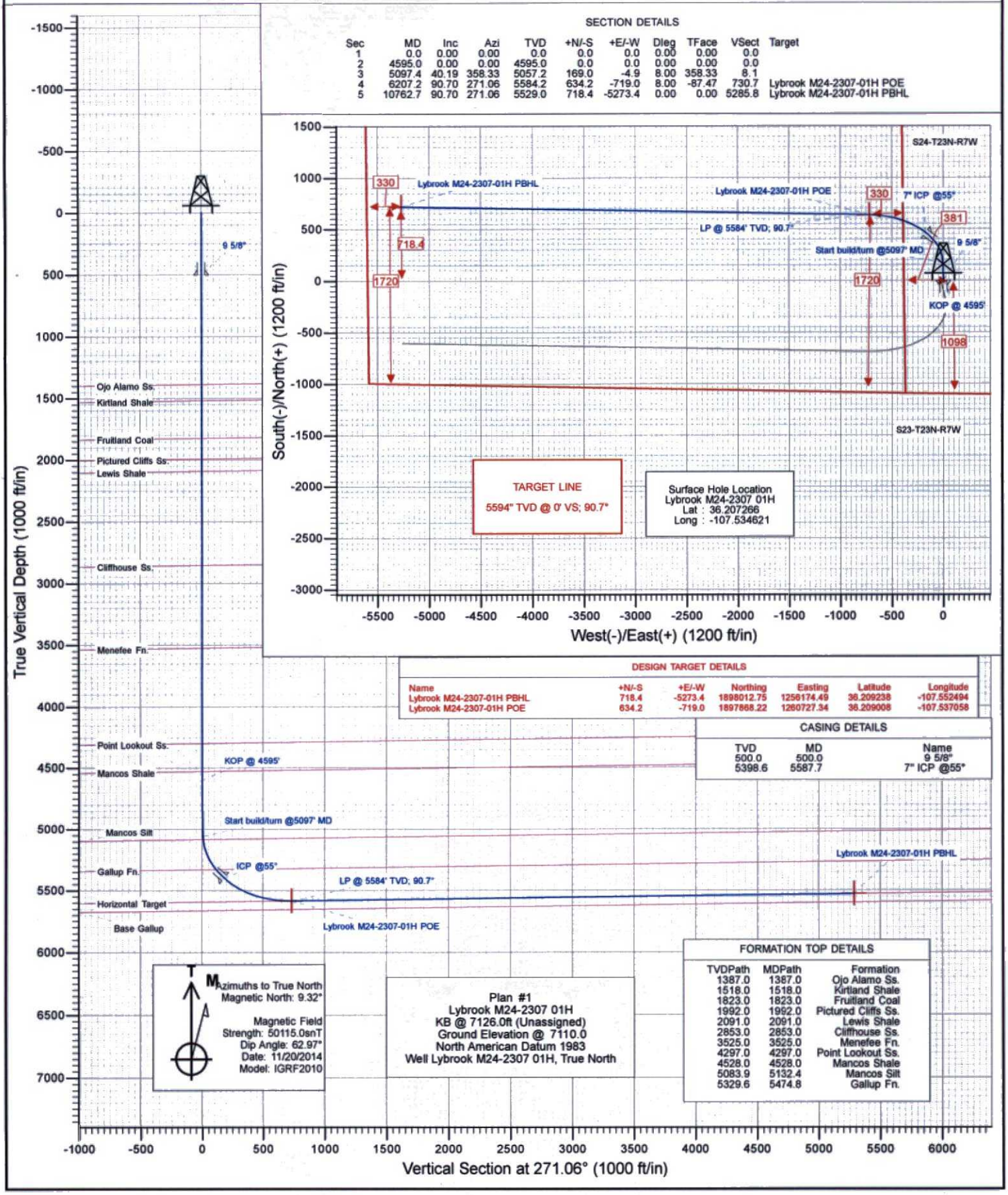
encana natural gas

Project: Sandoval County, NM
Site: S24-T23N-R7W
Well: Lybrook M24-2307 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	4595.0	0.00	0.00	4595.0	0.0	0.0	0.00	0.00	0.0	
3	5097.4	40.19	358.33	5057.2	169.0	-4.9	8.00	358.33	8.1	
4	6207.2	90.70	271.06	5584.2	634.2	-719.0	8.00	-87.47	730.7	Lybrook M24-2307-01H POE
5	10762.7	90.70	271.06	5529.0	718.4	-5273.4	0.00	0.00	5285.8	Lybrook M24-2307-01H PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Lybrook M24-2307-01H PBHL	718.4	-5273.4	1898012.75	1256174.49	36.209238	-107.552494
Lybrook M24-2307-01H POE	634.2	-719.0	1897868.22	1260727.34	36.209008	-107.537058

CASING DETAILS

TVD	MD	Name
500.0	500.0	9 5/8"
5398.6	5587.7	7" ICP @55°

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1387.0	1387.0	Ojo Alamo Ss.
1518.0	1518.0	Kirtland Shale
1823.0	1823.0	Fruitland Coal
1992.0	1992.0	Pictured Cliffs Ss.
2091.0	2091.0	Lewis Shale
2853.0	2853.0	Cliffhouse Ss.
3525.0	3525.0	Menefee Fn.
4297.0	4297.0	Point Lookout Ss.
4528.0	4528.0	Mancos Shale
5083.9	5132.4	Mancos Silt
5329.6	5474.8	Gallup Fn.

Azimuths to True North
Magnetic North: 9.32°

Magnetic Field
Strength: 50115.0snT
Dip Angle: 62.97°
Date: 11/20/2014
Model: IGRF2010

Plan #1
Lybrook M24-2307 01H
KB @ 7126.0ft (Unassigned)
Ground Elevation @ 7110.0
North American Datum 1983
Well Lybrook M24-2307 01H, True North

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook M24-2307 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 7126.0ft (Unassigned)
Project:	Sandoval County, NM	**MD Reference:**	KB @ 7126.0ft (Unassigned)
Site:	S24-T23N-R7W	**North Reference:**	True
Well:	Lybrook M24-2307 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Project	Sandoval County, NM		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	S24-T23N-R7W				
Site Position:		**Northing:**	1,897,224.52 ft	**Latitude:**	36.207266
From:	Lat/Long	**Easting:**	1,261,437.92 ft	**Longitude:**	-107.534621
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	-0.76 °

Well	Lybrook M24-2307 01H				
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,897,224.52 ft	**Latitude:**	36.207266
	+E/-W	0.0 ft	**Easting:**	1,261,437.92 ft	**Longitude:**	-107.534621
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	7,110.0 ft

Wellbore	HZ			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	11/20/2014	9.32	62.97	50,115

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
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 (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,595.0	0.00	0.00	4,595.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,097.4	40.19	358.33	5,057.2	169.0	-4.9	8.00	8.00	0.00	358.33	
6,207.2	90.70	271.06	5,584.2	634.2	-719.0	8.00	4.55	-7.86	-87.47	Lybrook M24-2307-01
10,762.7	90.70	271.06	5,529.0	718.4	-5,273.4	0.00	0.00	0.00	0.00	Lybrook M24-2307-01

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook M24-2307 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 7126.0ft (Unassigned)
Project:	Sandoval County, NM	**MD Reference:**	KB @ 7126.0ft (Unassigned)
Site:	S24-T23N-R7W	**North Reference:**	True
Well:	Lybrook M24-2307 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	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	
1,100.0	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	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,387.0	0.00	0.00	1,387.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
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	
1,518.0	0.00	0.00	1,518.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
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	
1,823.0	0.00	0.00	1,823.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
1,992.0	0.00	0.00	1,992.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,091.0	0.00	0.00	2,091.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,853.0	0.00	0.00	2,853.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	
3,525.0	0.00	0.00	3,525.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	
4,297.0	0.00	0.00	4,297.0	0.0	0.0	0.0	0.00	0.00	Point Lookout Ss.
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook M24-2307 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 7126.0ft (Unassigned)
Project:	Sandoval County, NM	**MD Reference:**	KB @ 7126.0ft (Unassigned)
Site:	S24-T23N-R7W	**North Reference:**	True
Well:	Lybrook M24-2307 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	
4,528.0	0.00	0.00	4,528.0	0.0	0.0	0.0	0.00	0.00	Mancos Shale
4,595.0	0.00	0.00	4,595.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4595'
4,600.0	0.40	358.33	4,600.0	0.0	0.0	0.0	8.00	8.00	
4,700.0	8.40	358.33	4,699.6	7.7	-0.2	0.4	8.00	8.00	
4,800.0	16.40	358.33	4,797.2	29.1	-0.8	1.4	8.00	8.00	
4,900.0	24.40	358.33	4,890.9	63.9	-1.9	3.0	8.00	8.00	
5,000.0	32.40	358.33	4,978.8	111.4	-3.3	5.3	8.00	8.00	
5,097.4	40.19	358.33	5,057.2	169.0	-4.9	8.1	8.00	8.00	Start build/turn @5097' MD
5,100.0	40.20	358.01	5,059.2	170.7	-5.0	8.1	8.00	0.37	
5,132.4	40.40	354.01	5,083.9	191.6	-6.4	10.0	8.00	0.60	Mancos Silt
5,200.0	41.24	345.83	5,135.1	235.0	-14.2	18.5	8.00	1.24	
5,300.0	43.48	334.43	5,209.1	298.1	-37.1	42.7	8.00	2.25	
5,400.0	46.76	324.12	5,279.7	358.8	-73.4	80.0	8.00	3.28	
5,474.8	49.76	317.17	5,329.6	401.8	-108.8	116.2	8.00	4.01	Gallup Fn.
5,500.0	50.86	314.98	5,345.7	415.8	-122.3	129.9	8.00	4.37	
5,587.7	54.99	307.86	5,398.6	461.9	-174.7	183.3	8.00	4.70	ICP @55°
5,600.0	55.60	306.92	5,405.6	468.1	-182.8	191.4	8.00	4.96	
5,700.0	60.80	299.77	5,458.3	514.6	-253.8	263.2	8.00	5.20	
5,800.0	66.35	293.33	5,502.8	554.5	-333.8	344.0	8.00	5.55	
5,900.0	72.13	287.42	5,538.3	586.9	-421.4	432.2	8.00	5.79	
6,000.0	78.09	281.89	5,564.0	611.3	-514.9	526.1	8.00	5.96	
6,100.0	84.15	276.60	5,579.4	627.1	-612.3	623.8	8.00	6.06	
6,200.0	90.26	271.43	5,584.3	634.1	-711.9	723.5	8.00	6.11	
6,207.2	90.70	271.06	5,584.2	634.2	-719.0	730.7	8.00	6.11	LP @ 5584' TVD; 90.7°
6,300.0	90.70	271.06	5,583.1	635.9	-811.8	823.5	0.00	0.00	
6,400.0	90.70	271.06	5,581.9	637.8	-911.8	923.5	0.00	0.00	
6,500.0	90.70	271.06	5,580.7	639.6	-1,011.8	1,023.5	0.00	0.00	
6,600.0	90.70	271.06	5,579.5	641.5	-1,111.8	1,123.5	0.00	0.00	
6,700.0	90.70	271.06	5,578.3	643.3	-1,211.7	1,223.4	0.00	0.00	
6,800.0	90.70	271.06	5,577.0	645.2	-1,311.7	1,323.4	0.00	0.00	
6,900.0	90.70	271.06	5,575.8	647.0	-1,411.7	1,423.4	0.00	0.00	
7,000.0	90.70	271.06	5,574.6	648.9	-1,511.7	1,523.4	0.00	0.00	
7,100.0	90.70	271.06	5,573.4	650.7	-1,611.6	1,623.4	0.00	0.00	
7,200.0	90.70	271.06	5,572.2	652.6	-1,711.6	1,723.4	0.00	0.00	
7,300.0	90.70	271.06	5,571.0	654.4	-1,811.6	1,823.4	0.00	0.00	
7,400.0	90.70	271.06	5,569.8	656.3	-1,911.6	1,923.4	0.00	0.00	
7,500.0	90.70	271.06	5,568.6	658.1	-2,011.5	2,023.4	0.00	0.00	
7,600.0	90.70	271.06	5,567.3	660.0	-2,111.5	2,123.4	0.00	0.00	
7,700.0	90.70	271.06	5,566.1	661.8	-2,211.5	2,223.4	0.00	0.00	
7,800.0	90.70	271.06	5,564.9	663.7	-2,311.5	2,323.4	0.00	0.00	
7,900.0	90.70	271.06	5,563.7	665.5	-2,411.5	2,423.4	0.00	0.00	
8,000.0	90.70	271.06	5,562.5	667.4	-2,511.4	2,523.4	0.00	0.00	
8,100.0	90.70	271.06	5,561.3	669.2	-2,611.4	2,623.3	0.00	0.00	
8,200.0	90.70	271.06	5,560.1	671.1	-2,711.4	2,723.3	0.00	0.00	
8,300.0	90.70	271.06	5,558.8	672.9	-2,811.4	2,823.3	0.00	0.00	
8,400.0	90.70	271.06	5,557.6	674.8	-2,911.3	2,923.3	0.00	0.00	
8,500.0	90.70	271.06	5,556.4	676.6	-3,011.3	3,023.3	0.00	0.00	
8,600.0	90.70	271.06	5,555.2	678.5	-3,111.3	3,123.3	0.00	0.00	
8,700.0	90.70	271.06	5,554.0	680.3	-3,211.3	3,223.3	0.00	0.00	
8,800.0	90.70	271.06	5,552.8	682.2	-3,311.2	3,323.3	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook M24-2307 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 7126.0ft (Unassigned)
Project:	Sandoval County, NM	**MD Reference:**	KB @ 7126.0ft (Unassigned)
Site:	S24-T23N-R7W	**North Reference:**	True
Well:	Lybrook M24-2307 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,900.0	90.70	271.06	5,551.6	684.0	-3,411.2	3,423.3	0.00	0.00	
9,000.0	90.70	271.06	5,550.4	685.9	-3,511.2	3,523.3	0.00	0.00	
9,100.0	90.70	271.06	5,549.1	687.7	-3,611.2	3,623.3	0.00	0.00	
9,200.0	90.70	271.06	5,547.9	689.6	-3,711.1	3,723.3	0.00	0.00	
9,300.0	90.70	271.06	5,546.7	691.4	-3,811.1	3,823.3	0.00	0.00	
9,400.0	90.70	271.06	5,545.5	693.2	-3,911.1	3,923.3	0.00	0.00	
9,500.0	90.70	271.06	5,544.3	695.1	-4,011.1	4,023.2	0.00	0.00	
9,600.0	90.70	271.06	5,543.1	696.9	-4,111.0	4,123.2	0.00	0.00	
9,700.0	90.70	271.06	5,541.9	698.8	-4,211.0	4,223.2	0.00	0.00	
9,800.0	90.70	271.06	5,540.6	700.6	-4,311.0	4,323.2	0.00	0.00	
9,900.0	90.70	271.06	5,539.4	702.5	-4,411.0	4,423.2	0.00	0.00	
10,000.0	90.70	271.06	5,538.2	704.3	-4,510.9	4,523.2	0.00	0.00	
10,100.0	90.70	271.06	5,537.0	706.2	-4,610.9	4,623.2	0.00	0.00	
10,200.0	90.70	271.06	5,535.8	708.0	-4,710.9	4,723.2	0.00	0.00	
10,300.0	90.70	271.06	5,534.6	709.9	-4,810.9	4,823.2	0.00	0.00	
10,400.0	90.70	271.06	5,533.4	711.7	-4,910.8	4,923.2	0.00	0.00	
10,500.0	90.70	271.06	5,532.2	713.6	-5,010.8	5,023.2	0.00	0.00	
10,600.0	90.70	271.06	5,530.9	715.4	-5,110.8	5,123.2	0.00	0.00	
10,700.0	90.70	271.06	5,529.7	717.3	-5,210.8	5,223.2	0.00	0.00	
10,762.7	90.70	271.06	5,529.0	718.4	-5,273.4	5,285.8	0.00	0.00	TD at 10762.7

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Lybrook M24-2307-01H - plan hits target center - Point	0.00	359.24	5,584.2	634.2	-719.0	1,897,868.22	1,260,727.34	36.209008	-107.537058
Lybrook M24-2307-01H - plan hits target center - Point	0.00	359.23	5,529.0	718.4	-5,273.4	1,898,012.75	1,256,174.49	36.209238	-107.552494

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
500.0	500.0	9 5/8"	0.000	0.000
5,587.7	5,398.6	ICP @55°	0.000	0.000

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Lybrook M24-2307 01H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 7126.0ft (Unassigned)
Project:	Sandoval County, NM	**MD Reference:**	KB @ 7126.0ft (Unassigned)
Site:	S24-T23N-R7W	**North Reference:**	True
Well:	Lybrook M24-2307 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,387.0	1,387.0	Ojo Alamo Ss.		-0.70	271.06
1,518.0	1,518.0	Kirtland Shale		-0.70	271.06
1,823.0	1,823.0	Fruitland Coal		-0.70	271.06
1,992.0	1,992.0	Pictured Cliffs Ss.		-0.70	271.06
2,091.0	2,091.0	Lewis Shale		-0.70	271.06
2,853.0	2,853.0	Cliffhouse Ss.		-0.70	271.06
3,525.0	3,525.0	Menefee Fn.		-0.70	271.06
4,297.0	4,297.0	Point Lookout Ss.		-0.70	271.06
4,528.0	4,528.0	Mancos Shale		-0.70	271.06
5,132.4	5,084.0	Mancos Silt		-0.70	271.06
5,474.8	5,331.0	Gallup Fn.		-0.70	271.06

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
4,595.0	4,595.0	0.0	0.0	KOP @ 4595'
5,097.4	5,057.2	169.0	-4.9	Start build/turn @5097' MD
6,207.2	5,584.2	634.2	-719.0	LP @ 5584' TVD; 90.7°
10,762.7	5,529.0	718.4	-5,273.4	TD at 10762.7

EnCana Oil & Gas (USA) Inc

Sandoval County, NM
S24-T23N-R7W
Lybrook M24-2307 01H
HZ
Plan #1

Anticollision Report

20 November, 2014

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Lybrook M24-2307 01H
Project:	Sandoval County, NM	**TVD Reference:**	KB @ 7126.0ft (Unassigned)
Reference Site:	S24-T23N-R7W	**MD Reference:**	KB @ 7126.0ft (Unassigned)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Lybrook M24-2307 01H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,276.3ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 11/20/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	10,762.0	Plan #1 (HZ)	Geolink MWD	Geolink MWD

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S24-T23N-R7W						
Lybrook M24-2307 02H - HZ - Plan #1	4,433.8	4,433.8	30.1	14.6	1.950	CC, ES, SF

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Lybrook M24-2307 01H
Project:	Sandoval County, NM	**TVD Reference:**	KB @ 7126.0ft (Unassigned)
Reference Site:	S24-T23N-R7W	**MD Reference:**	KB @ 7126.0ft (Unassigned)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Lybrook M24-2307 01H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S24-T23N-R7W - Lybrook M24-2307 02H - HZ - Plan #1 — Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD — Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-131.76	-20.0	-22.4	30.1				
100.0	100.0	100.0	100.0	0.1	0.1	-131.76	-20.0	-22.4	30.1	29.8	0.29	102.530	
200.0	200.0	200.0	200.0	0.3	0.3	-131.76	-20.0	-22.4	30.1	29.4	0.64	46.807	
300.0	300.0	300.0	300.0	0.5	0.5	-131.76	-20.0	-22.4	30.1	29.1	0.99	30.326	
400.0	400.0	400.0	400.0	0.7	0.7	-131.76	-20.0	-22.4	30.1	28.7	1.34	22.428	
500.0	500.0	500.0	500.0	0.8	0.8	-131.76	-20.0	-22.4	30.1	28.4	1.69	17.795	
600.0	600.0	600.0	600.0	1.0	1.0	-131.76	-20.0	-22.4	30.1	28.0	2.04	14.748	
700.0	700.0	700.0	700.0	1.2	1.2	-131.76	-20.0	-22.4	30.1	27.7	2.39	12.591	
800.0	800.0	800.0	800.0	1.4	1.4	-131.76	-20.0	-22.4	30.1	27.3	2.74	10.985	
900.0	900.0	900.0	900.0	1.5	1.5	-131.76	-20.0	-22.4	30.1	27.0	3.09	9.743	
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-131.76	-20.0	-22.4	30.1	26.6	3.43	8.753	
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-131.76	-20.0	-22.4	30.1	26.3	3.78	7.945	
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-131.76	-20.0	-22.4	30.1	25.9	4.13	7.274	
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-131.76	-20.0	-22.4	30.1	25.6	4.48	6.708	
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-131.76	-20.0	-22.4	30.1	25.2	4.83	6.223	
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-131.76	-20.0	-22.4	30.1	24.9	5.18	5.804	
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-131.76	-20.0	-22.4	30.1	24.5	5.53	5.437	
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-131.76	-20.0	-22.4	30.1	24.2	5.88	5.114	
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-131.76	-20.0	-22.4	30.1	23.8	6.23	4.828	
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-131.76	-20.0	-22.4	30.1	23.5	6.58	4.571	
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-131.76	-20.0	-22.4	30.1	23.1	6.93	4.341	
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	-131.76	-20.0	-22.4	30.1	22.8	7.27	4.133	
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	-131.76	-20.0	-22.4	30.1	22.4	7.62	3.943	
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	-131.76	-20.0	-22.4	30.1	22.1	7.97	3.771	
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	-131.76	-20.0	-22.4	30.1	21.7	8.32	3.613	
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	-131.76	-20.0	-22.4	30.1	21.4	8.67	3.467	
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-131.76	-20.0	-22.4	30.1	21.0	9.02	3.333	
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	-131.76	-20.0	-22.4	30.1	20.7	9.37	3.209	
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	-131.76	-20.0	-22.4	30.1	20.3	9.72	3.094	
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	-131.76	-20.0	-22.4	30.1	20.0	10.07	2.986	
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	-131.76	-20.0	-22.4	30.1	19.6	10.42	2.886	
3,100.0	3,100.0	3,100.0	3,100.0	5.4	5.4	-131.76	-20.0	-22.4	30.1	19.3	10.77	2.793	
3,200.0	3,200.0	3,200.0	3,200.0	5.6	5.6	-131.76	-20.0	-22.4	30.1	18.9	11.11	2.705	
3,300.0	3,300.0	3,300.0	3,300.0	5.7	5.7	-131.76	-20.0	-22.4	30.1	18.6	11.46	2.623	
3,400.0	3,400.0	3,400.0	3,400.0	5.9	5.9	-131.76	-20.0	-22.4	30.1	18.3	11.81	2.545	
3,500.0	3,500.0	3,500.0	3,500.0	6.1	6.1	-131.76	-20.0	-22.4	30.1	17.9	12.16	2.472	
3,600.0	3,600.0	3,600.0	3,600.0	6.3	6.3	-131.76	-20.0	-22.4	30.1	17.6	12.51	2.403	
3,700.0	3,700.0	3,700.0	3,700.0	6.4	6.4	-131.76	-20.0	-22.4	30.1	17.2	12.86	2.338	
3,800.0	3,800.0	3,800.0	3,800.0	6.6	6.6	-131.76	-20.0	-22.4	30.1	16.9	13.21	2.276	
3,900.0	3,900.0	3,900.0	3,900.0	6.8	6.8	-131.76	-20.0	-22.4	30.1	16.5	13.56	2.217	
4,000.0	4,000.0	4,000.0	4,000.0	7.0	7.0	-131.76	-20.0	-22.4	30.1	16.2	13.91	2.162	
4,100.0	4,100.0	4,100.0	4,100.0	7.1	7.1	-131.76	-20.0	-22.4	30.1	15.8	14.26	2.109	
4,200.0	4,200.0	4,200.0	4,200.0	7.3	7.3	-131.76	-20.0	-22.4	30.1	15.5	14.60	2.058	
4,300.0	4,300.0	4,300.0	4,300.0	7.5	7.5	-131.76	-20.0	-22.4	30.1	15.1	14.95	2.010	
4,400.0	4,400.0	4,400.0	4,400.0	7.7	7.7	-131.76	-20.0	-22.4	30.1	14.8	15.30	1.965	
4,433.8	4,433.8	4,433.8	4,433.8	7.7	7.7	-131.76	-20.0	-22.4	30.1	14.6	15.42	1.950	CC, ES, SF
4,500.0	4,500.0	4,498.9	4,498.9	7.8	7.8	-134.75	-21.8	-22.0	30.9	15.3	15.65	1.977	
4,600.0	4,600.0	4,595.0	4,594.0	8.0	8.0	-150.04	-34.6	-18.6	39.7	23.7	16.00	2.484	
4,700.0	4,699.6	4,683.5	4,679.3	8.2	8.2	-166.74	-57.1	-12.7	69.1	52.9	16.21	4.260	
4,800.0	4,797.2	4,757.1	4,747.6	8.4	8.4	-175.04	-83.5	-5.7	123.2	107.0	16.18	7.617	
4,900.0	4,890.9	4,813.1	4,797.5	8.6	8.6	-178.83	-108.1	0.7	195.8	179.9	15.90	12.311	
5,000.0	4,978.8	4,850.0	4,829.2	9.0	8.7	179.12	-126.3	5.5	281.0	265.6	15.42	18.226	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Lybrook M24-2307 01H
Project:	Sandoval County, NM	**TVD Reference:**	KB @ 7126.0ft (Unassigned)
Reference Site:	S24-T23N-R7W	**MD Reference:**	KB @ 7126.0ft (Unassigned)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Lybrook M24-2307 01H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S24-T23N-R7W - Lybrook M24-2307 02H - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,059.2	4,876.6	4,851.5	9.5	8.8	178.12	-140.4	9.3	374.4	359.6	14.80	25.289	
5,200.0	5,135.1	4,900.0	4,870.6	10.1	8.9	-148.77	-153.5	12.7	470.8	454.8	15.99	29.441	
5,300.0	5,209.1	4,900.0	4,870.6	10.8	8.9	-117.54	-153.5	12.7	566.6	548.2	18.37	30.847	
5,400.0	5,279.7	4,913.0	4,881.0	11.6	9.0	-98.14	-161.0	14.7	661.0	641.0	19.95	33.135	
5,500.0	5,345.7	4,918.7	4,885.5	12.5	9.0	-83.34	-164.3	15.5	753.2	732.2	20.96	35.927	
5,600.0	5,405.6	4,922.0	4,888.1	13.5	9.0	-72.56	-166.3	16.1	842.4	820.9	21.57	39.052	
5,700.0	5,458.3	4,923.2	4,889.1	14.7	9.1	-64.59	-167.0	16.2	928.2	906.2	21.93	42.318	
5,800.0	5,502.8	4,922.7	4,888.7	16.1	9.1	-58.65	-166.7	16.2	1,009.8	987.7	22.14	45.608	
5,900.0	5,538.3	4,920.7	4,887.1	17.6	9.0	-54.24	-165.5	15.8	1,086.9	1,064.7	22.25	48.840	
6,000.0	5,564.0	4,917.3	4,884.4	19.2	9.0	-51.03	-163.5	15.3	1,159.0	1,136.6	22.31	51.943	
6,100.0	5,579.4	4,912.6	4,880.7	20.9	9.0	-48.78	-160.7	14.6	1,225.5	1,203.2	22.34	54.863	

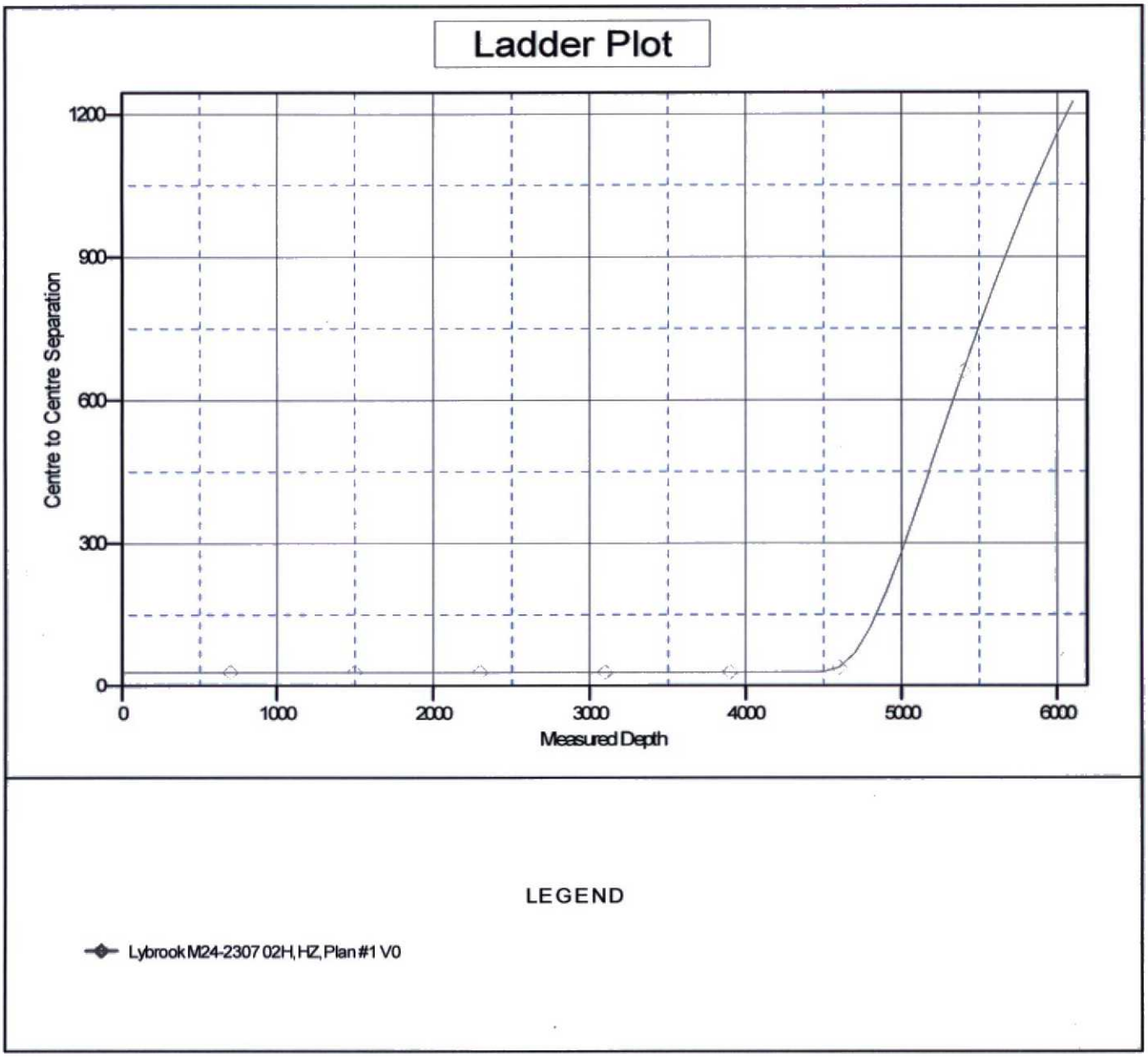
Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Lybrook M24-2307 01H
Project:	Sandoval County, NM	**TVD Reference:**	KB @ 7126.0ft (Unassigned)
Reference Site:	S24-T23N-R7W	**MD Reference:**	KB @ 7126.0ft (Unassigned)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Lybrook M24-2307 01H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 7126.0ft (Unassigned)
Offset Depths are relative to Offset Datum
Central Meridian is -106.250000 °

Coordinates are relative to: Lybrook M24-2307 01H
Coordinate System is US State Plane 1983, New Mexico Central Zone
Grid Convergence at Surface is: -0.76°



Lybrook M24-2307 01H
SHL: SWSW Section 24, T23N, R7W
1,098' FSL and 381' FWL
BHL: NWSW Section 23, T23N, R7W
1,720' FSL and 330' FWL
Sandoval County, New Mexico
Lease Number: NMNM 10087 & NMNM 0080273

Encana Oil & Gas (USA) Inc.
Surface Use Plan of Operations

Please see attached survey package and supporting documents:

Survey Package:
Sheet A- Form C-102
Sheet B- Topo Map Depicting Well Site, Access Roads, and Pipeline
Sheet C- Directions to Site
Sheet D- Adjacent Wells
Sheet E- Proposed Pipeline Survey
Sheet F- Proposed Access Road Survey
Sheets G-1 and G-2- Proposed Well Site Plan and Profile
Sheets H-1 and H-2- Proposed Well Site Layout

Appendix A- Reclamation Plan
Appendix B- Road Maintenance Plan
Appendix C- Standard Road Details

1. EXISTING ROADS

A. Existing access roads are shown on Sheet B.

B. Directions to the site are provided on Sheet C.

C. The existing road that will be used to access the location was identified at the onsite as a Resource Road in good condition and regularly maintained. This road will need upgraded back to HWY 550. Approximately 4,415' of upgraded roadway is on BLM surface, with the remaining 5,460' of upgraded roadway located on private land. Road driving surface will be 24 feet wide. Engineered designs are not required, please refer to Surface Owner Agreement with Saddle Butte Pipeline.

D. Roads will be maintained in the same or better condition as existed prior to the commencement of operations and said maintenance will continue until final abandonment and reclamation of the well location. Encana will inspect and maintain the roads as outlined in the attached Road Maintenance Plan (Appendix B).

E. Dust emissions will be controlled on the roads and locations, during construction, drilling, and completions operations with the application of dust suppressants (e.g. water and/or magnesium chloride). Dust control will be implemented when dust plumes become larger than normal road use conditions or when directed by the BLM Authorized Officer.

2. NEW OR RECONSTRUCTED ACCESS ROADS

A. The proposed access road is staked as shown on Sheet B and Sheet F. Approximately 123 feet of new resource road will be constructed entirely on private lands.

B. The proposed well pad access road was defined as a Resource Road during the onsite conducted on October 17, 2014.

C. Maximum width will be a 40 foot overall right-of-way with a 24 foot road running surface. During drilling and subsequent operations, all equipment and vehicles will be confined to the 24 foot driving surface.

D. One 24-inch culvert will be installed at the new access takeoff at STA.0+05, with a large sediment trap before the culvert. See Sheet B and Sheet F.

E. Culvert pipes will have a minimum slope of 2 percent to ensure drainage. Culverts will have a minimum cover of 18-inches. See Appendix C for a standard culvert design.

F. Maximum grade will average 2 to 3 percent.

G. Construction materials and methods – See Item 6.A.

H. Encana will be responsible for road maintenance from the beginning of construction to completion of operations and the well is plugged and abandoned. See attached Road Maintenance Plan (Appendix B).

I. Dust emissions will be controlled on the roads and locations, during construction, drilling, and completions operations with the application of dust suppressants (e.g. water and/or magnesium chloride). Dust control will be implemented when dust plumes become larger than normal road use conditions or when directed by the BLM Authorized Officer.

3. LOCATION OF EXISTING WELLS

Please refer to Sheet D.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

A. Survey Monuments

Encana will protect all survey monuments, witness corners, reference monuments and bearing trees in the affected areas against disturbance during construction, operation, maintenance and termination of the facilities authorized herein.

Encana will immediately notify the BLM Authorized Officer in the event that any corners, monuments or markers are disturbed or are anticipated to be disturbed. If any monuments, corner or accessories are destroyed, obliterated or damaged during construction, operation or maintenance, Encana will secure the services of a Registered Land Surveyor to restore the disturbed monuments, corner or accessories, at the same location, using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands of the United States, latest edition. Encana will ensure that the Registered Land Surveyor properly records the survey in compliance with 12.8.2 NMAC and will send a copy to the BLM.

B. Pipeline

1. A 351 foot (0.07 miles), up to 6-inch outside diameter, steel gas pipeline, is proposed. The entire length of the pipeline will be located on private surface. The pipeline will follow the new access road to STA.1+27, where it will cross the existing road, and connect to an existing Enterprise pipeline at STA.3+50.54 in the NWSW of Section 24, T23N, R7W. Please refer to Sheets B and E.

2. Encana will request a 40 foot right-of-way for the pipeline. Construction width of the pipeline workspace will be restricted to 50 feet of disturbance, including the access road and will be designated as 20 feet of disturbance adjacent to the road and 30 feet of disturbance on the road.

3. All buried pipelines will be buried to a minimum depth of 3 feet, except at road crossings where they will be buried to a depth of 4 feet.

4. Pipeline location warning signs will be installed within 90 days after burial of pipeline is completed.

5. The pipeline right-of-way will be conditioned in a manner to preclude vehicular travel upon said right-of-way as depicted in the Reclamation Plan in Appendix A, except for access to pipeline above-ground appurtenances.

C. Production Facility

1. The production equipment and facility layout will be deferred until the facility and reclamation onsite with the BLM prior to setting any equipment.

2. Production equipment will be placed on location in such a manner to minimize long-term disturbance and maximize interim reclamation. As practical, access will be provided by a teardrop-shaped road through the production area so that the center may be revegetated.

3. A berm will be constructed completely around any production facilities which contain fluids (i.e. production tanks, produced water tanks, etc.). These berms will be constructed of compacted subsoil, corrugated metal, or equivalent, be impervious, and hold 110 percent of the capacity of the largest tank. If manifold tanks are constructed, berms will be constructed to hold 110 percent of the combined capacity of the manifold tanks.

4. All permanent (onsite for 6 months or longer) above-ground equipment constructed or installed, including pumping units, will be painted Juniper Green. All production facilities will be painted within 3 months of installation. Facilities that are required to comply with Occupation Health and Safety Act Rules and Regulations will be excluded from this painting requirement, and will be identified at the facility onsite.

5. LOCATION AND TYPES OF WATER SUPPLY

Water to be used for the drilling and completing of this well will be hauled by truck over the roads described in Sections 1 and 2. The water source will be from one or more existing private water wells.

One source is located in the SWNE of Section 32, T25N, R9W. The well has been assigned the POD Number SJ-2105 by the New Mexico Office of the State Engineer. To access the well pad from this water well, travel NE on Highway 57 approximately 0.1 miles to Highway 550. Turn right onto Highway 550 and travel 20.2 miles turn right onto gravel road. Travel 1.9 miles to new access road on the right (west). New access is 123 feet to the proposed Encana Lybrook M24-2307 well pad.

The second source is located in the NENE of Section 9, T21N, R2W. The well has been assigned the Permit Number RG-82771 through RG-82771-S-2 by the New Mexico Office of the State Engineer. To access the well pad from this water well, turn left on to Highway 550. Travel 31.2 miles and turn left onto gravel road. Travel 1.9 miles to the new access road on the right (west). New access is 123 feet to the proposed Encana Lybrook M24-2307 well pad.

6. CONSTRUCTION MATERIALS AND METHODS

A. Access Road

1. The access road will be designed and constructed as a Resource Road in accordance with the BLM Gold Book Standards and BLM 9113-1 (Roads Design Handbook) and BLM 9113-2 (Roads National Inventory and Condition Assessment Guidance and Instructions Handbook). Construction will include ditching, draining, installing culverts, crowning or sloping and dipping the roadbed, as necessary, to provide a well-constructed and safe road.

2. An existing fence line will be cut and braced for pipeline installation. H-braces will be installed prior to cutting the fence. The H-braces will be constructed in accordance with the BLM Gold Book standard.

3. Any trees larger than 3-inches in diameter will be cut at ground level and delimbed. The trunks will be stacked whole along the access road, well pad, and/or pipeline for wood gathering. Stumps will be cut as close to the ground as possible. Stumps and root balls will be hauled to an approved disposal site or stockpiled at the edge of the well pad and buried in the cut slopes of the pad during interim reclamation.

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

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

4. After removal of vegetation, topsoil will be segregated and windrowed on the edge of the access road. Topsoil will be defined as the top 6-inches of soil. The stockpiled topsoil will be free of brush and tree limbs, trunks and root balls, but may include chipped or mulched material so long as it is incorporated into the topsoil stockpile.

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

5. All construction materials for the access road will consist of native borrow and subsoil accumulated during road 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 to the area.

6. Culverts will be installed during construction of the access road as reference in Section 2-D. See Sheet B for locations of culverts and Appendix C for a standard culvert design. Culverts will be sized and installed in accordance with BLM Gold Book standards and BLM 9113-1 (Roads Design Handbook) and BLM 9113-2 (Roads National Inventory and Condition Assessment Guidance and Instructions Handbook).

7. Construction equipment may include chain saws, a brush hog, scraper, maintainer, excavator, and dozer. Construction of the access road and well pad will take approximately 2 to 3 weeks.

B. Well Pad

1. Any trees larger than 3-inches in diameter will be cut at ground level and delimbed. The trunks will be stacked whole along the access road, well pad, and/or pipeline for wood gathering. Stumps will be cut as close to the ground as possible. Stumps and root balls will be hauled to an approved disposal site or stockpiled at the edge of the well pad and buried in the cut slopes of the pad during interim reclamation.

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

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

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

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

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

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

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

   The maximum cut will be approximately 21.7 feet on the southwest corner (Corner #2) and the maximum fill will be approximately 16.1 feet on the northeast corner (Corner #5).

4. As determined during the onsite on October 17, 2014, the following best management practices will be implemented:
   a. Corner #2 of the well pad will be rounded to avoid excessive cut.
   b. Water will be diverted around the pad and silt traps installed in Corner #3 upon interim reclamation.
   c. Drainage will split between Corner #2 and Corner #6 draining to silt trap above the culvert pipe.
   d. A dozer blade wide swelled drainage will be constructed near the top of the slope to prevent erosion between Corners #2 and #6.

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 3 weeks.

C. Pipeline
See Sheet E for a plan design to construct, operate, maintain and terminate a 351 foot, up to 6-inch outside diameter, buried steel well connect pipeline entirely on private lands.

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.

E. Sewage – self-contained, chemical toilets will be provided for human waste disposal. The toilet holding tanks will be pumped, as needed, and the contents thereof disposed of in an approved sewage disposal facility. The toilets will be onsite during all operations.

F. Garbage and other waste material – garbage, trash and other waste materials will be collected in a portable, self-contained and fully-enclosed trash container during drilling and completion operations. The accumulated trash will be removed, as needed, and will be disposed of at an authorized sanitary landfill. No trash will be buried or burned on location.

G. Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash container will be cleaned up and removed from the well location.

H. No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing or completing of this well.

I. No extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of this well.

8. ANCILLARY FACILITIES

A. Standard drilling operation equipment that will be on location includes: drilling rig with associated equipment, temporary office trailers equipped with sleeping quarters for essential company personnel, toilet facilities, and trash containers.

9. WELL SITE LAYOUT

A. The proposed well pad layout is shown on Sheets G-1, G-2, H-1, and H-2. Cross sections have been drafted to visualize the planned cuts and fills across the location. Refer to Item 6 for construction materials and methods.

B. No permanent living facilities are planned. Office trailers equipped with living quarters will be provided on location during drilling and completions operations.

C. The production facility layout is being deferred until the Facility and Reclamation onsite with the BLM Representative.

10. PLANS FOR SURFACE RECLAMATION

The project falls within the Sagebrush Vegetation Community. During the onsite on October 17, 2014, plant species were picked from the Sagebrush-Grass Community Seed List. These species will be used in the revegetation seed mixture. A detailed table of the see list and application rates is provided in Section 3.2 of the Reclamation Plan (Appendix A).

The well pad, road and pipeline will fall under the BLM Vegetation Reclamation Procedure B. A site-specific Reclamation Plan is located in Appendix A. The BLM will be contacted 48 hours prior to construction and reclamation.

11. SURFACE OWNERSHIP

WELL PAD, PIPELINE AND ACCESS ROAD
Saddle Butte Pipeline, LLC
858 Main Avenue, Suite 301
Durango, Co. 81301

UPGRADED ACCESS ROAD
Bureau of Land Management
Farmington Field Office
6251 College Blvd., Suite A
Farmington, NM 87402
(505) 564-7600

12. OTHER INFORMATION

A. Final Modifications to the Standard Form 299 Application (NMNM 132734) for authorization to construct, maintain and terminate a 4,415 foot right-of-way for the upgraded access road was submitted to the Bureau of Land Management concurrently with this Application for Permit to Drill.

B. A Class III Cultural Resource Inventory of the proposed well pad, access road, and pipeline route was conducted and filed with the BLM-Farmington Field Office on November 24, 2014.

C. Construction contractors will call New Mexico One-Call (or equivalent) to identify the location of any marked or unmarked pipelines or cables located in proximity to the proposed well pad, access road, and pipeline at least two working days prior to ground disturbance.

D. All operations will be conducted in such a manner that full compliance is made with the applicable laws and regulations, the approved Application for Permit to Drill, and applicable Notice(s) to Lessees.

E. Encana will be fully responsible for the actions of its subcontractors. A complete copy of the approved Application for Permit to Drill will be furnished to the field representatives and will be on location during all construction, drilling, and completions operations.

APPENDIX A

United States Department of the Interior
Bureau of Land Management

Reclamation Plan

Encana Oil & Gas (USA) Inc.

Proposed Lybrook M24-2307
Well Pad, Access Road, and Pipeline

Prepared for

encana

Prepared by

Ecosphere
Environmental Services
4801 N. Butler, Suite 15101
Farmington, NM 87401

March 2015

Bureau of Land Management
Farmington District
Farmington Field Office
6251 N. College Blvd., Ste. A
Farmington, NM 87402
Phone: (505) 564-7600
FAX: (505) 564-7608

New Mexico • Farmington Field Office

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ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
Encana	Encana Oil & Gas (USA) Inc.
FAN	final abandonment notice
FFO	Farmington Field Office
GPS	global positioning system
NMPM	New Mexico Principal Meridian

RECLAMATION PLAN (PROCEDURE B)

Applicant	Encana Oil & Gas (USA) Inc.
Project Type	Well Pad, Access Road, and Pipeline
Well, Oil and Gas Lease, or Right-of-Way (ROW) Name	Lybrook M24-2307
Legal Location	SW ¼ of Section 24, Township 23 North, Range 7 West, New Mexico Principal Meridian (NMPM) in Sandoval County, New Mexico.
Lease Number	NMNM 10087 and NMNM 0080273

1. Introduction

This Reclamation Plan has been prepared to meet the requirements and guidelines of the Bureau of Land Management (BLM) Farmington Field Office (FFO) Bare Soil Reclamation Procedures (BLM 2013a) and Onshore Oil and Gas Order No. 1.

The Encana Oil & Gas (USA) Inc. (Encana) contact person for this Reclamation Plan is:

Katie Wegner
Regulatory Analyst
Encana Oil & Gas (USA) Inc.
370 17th Street, Suite 1700
Denver, CO 80202
720-482-6819

1.1 Vegetation Reclamation Procedure B

Completion of a Vegetation Reclamation Plan in accordance with Procedure B of the BLM/FFO Bare Soil Reclamation Procedures is required for surface-disturbing actions, grants, or permits authorized by the BLM/FFO resulting in bare mineral soil across an area greater than or equal to 1 acre, not including a BLM/FFO-approved working area. Working areas include areas routinely used to operate and maintain facilities or improvements. The FFO makes no distinction between interim and final revegetation processes; revegetation processes and standards are the same for all revegetation activities.

1.2 Revision of the Reclamation Plan

Encana may submit a request to the BLM/FFO to revise the Reclamation Plan at any time during the life of the project in accordance to page 44 of the Gold Book (USDI-USDA 2007). Encana will include justification for the revision request.

2. Project Description

Encana is proposing to construct the Lybrook M24-2307 well pad, well tie pipeline, upgraded access road, and new access road. Two wells would be horizontally drilled from the proposed well pad. The proposed project would be located on private land with the mineral estate administered by the BLM/ ~~Farmington Field Office (~~FFO~~)~~. A proposed road upgrade associated with the action would be located on private land and BLM-managed lands; therefore, BLM special management species are addressed in this

report. The legal coordinates for the proposed well pad are SW ¼ Section 24, Township 23 North, Range 7 West, NMPM in Sandoval County, New Mexico. The legal coordinates for the proposed well head and bottom hole locations are listed in Table 2-1.

Table 2-1. Legal coordinates of proposed wellhead and bottom hole locations for Lybrook M24-2307

Well Number	Surface Location	Bottom Hole Location
01H	1098 feet FSL and 381 feet FWL Section 24, Township 23 North, Range 7 West	1720 feet FSL and 330 feet FWL Section 23, Township 23 North, Range 7 West
02H	1077 feet FSL and 359 feet FWL Section 24, Township 23 North, Range 7 West	400 feet FSL and 330 feet FWL Section 23, Township 23 North, Range 7 West

Note: "FSL" refers to "from the south line", and "FWL" refers to "from the west line."

The proposed well-tie pipeline would be located in Section 24, Township 23 North, Range 7 West, NMPM, in Sandoval County, New Mexico. The proposed access road would be located in Section 24, Township 23 North, Range 7 West, NMPM in Sandoval County, New Mexico. Encana would also upgrade an existing road located in Sections 14, 23, and 24, Township 23 North, Range 7 West, NMPM in Rio Arriba and Sandoval counties, New Mexico.

2.1 Estimated Total Area of Disturbance

Drilling of the proposed Lybrook M24-2307 wells would require constructing a 430-foot by 400-foot well pad with a 50-foot-wide construction zone around the perimeter. Total disturbance from the construction of the proposed well pad would be approximately 6.08 acres.

To access the pad, Encana would upgrade an existing approximately 4,415-foot-long road from U.S. Highway 550 to the project area and would construct the proposed Lybrook M24-2307 access road, which would be approximately 123 feet in length. The proposed upgraded access would be located adjacent to existing disturbance and would be permitted by a 40-foot wide right-of-way (ROW).

Encana would also construct and operate a proposed well-tie pipeline approximately 351 feet in length. The new access road would be parallel to the proposed pipeline for its whole length and would be constructed within a 50-foot-wide corridor. Total disturbance associated with the proposed road and pipeline would result in approximately 4.4 acres.

Total surface disturbance for the proposed project would be 10.5 acres. After interim reclamation, 3.7 acres would remain long-term disturbance;: 1.6 acres on the proposed well pad and 2.1 acres on the proposed and existing road.

The proposed Lybrook M24-2307 well pad project would be constructed in a generally undisturbed area adjacent to an existing road. The upgraded access is an existing road. Based on approximately 50 percent overlap with existing disturbance, new disturbance would be approximately 2.3 acres. The proposed well-tie pipeline would cross approximately 83- feet of existing disturbance. Total new disturbance would be approximately 8.4 acres.

2.2 Remediation

There are no existing roads, stream crossings, erosional features, or other areas that may require remediation.

3. Pre-Disturbance Site Visit

The pre-disturbance site visit occurred on October 17, 2014. The site visit attendees are shown in Table 3-1.

Table 3-1. Pre-disturbance site visit attendees

Name	Affiliation	Contact Number
Craig Willems	BLM/FFO	505-564-7600
Norman Faver	Encana Oil & Gas	505-599-2411
Buck Hinson	Walsh Engineering & Production	505-327-4892
Bud Kramme	Walsh Engineering & Production	505-327-4892
Fred Harden	La Plata Archaeological Consultants	970-565-8708
Derek Hines	Hines Land Service	
Alex Dawson	Saddle Butte Pipeline & Surface Owner	
Tae Hillyer	Ecosphere Environmental Services	505-327-3088

3.1 Vegetation Community

Based on observations made during the pre-disturbance site visit, the BLM/FFO representative determined that the vegetation community that best represents the proposed project area is the Sagebrush-Grass Community. The proposed project and action areas are located in a Great Basin desert scrub community and piñon-junper woodland, consisting of sagebrush flats and slightly rolling open canopy piñon (*Pinus edulis*) and juniper (*Juniperus osteosperma*) within the well pad and along the pipeline and access road. The project area is dominated by Utah juniper, piñon pine, big sagebrush (*Artemisia tridentata*) with an understory of blue grama (*Bouteloua gracilis*). There are approximately 275 Utah juniper and piñon pine that occur on the well pad. Grass cover within the project area was visually estimated to be approximately 40%. Shrub cover in the project area was estimated to be 30%. Tree cover in the project area was visually estimated to be approximately 15%.

3.2 Proposed Reclamation Seed Mix

Disturbance will be re-contoured and topsoil will be redistributed and prepared for seeding by the construction contractor. Ripping, disking, and seeding of the site will be done by Encana using the BLM-approved seed mix, which is shown in Table 3-2. The proposed reclamation seed mix takes into account the existing vegetation on the proposed project site.

Table 3-2. Sagebrush-Grass Community seed mix

Common Name	Scientific Name	Variety	Season	Form	PLS lbs/acre[1]
Fourwing saltbush	*Atriplex canescens*	VNS	Cool	Shrub	2.0
Winterfat	*Krascheninnikovia lanata*	VNS	Cool	Shrub	2.0
Indian ricegrass	*Achnatherum hymenoides*	Paloma or Rimrock	Cool	Bunch	4.0
Blue grama	*Bouteloua gracilis*	Alma or Hachita	Warm	Sod-forming	2.0
Sand dropseed	*Sporobolus cryptandrus*	VNS	Warm	Bunch	0.5
Bottle brush squirreltail	*Elymus elymoides*	Tusas or VNS	Cool	Bunch	3.0
Small burnet	*Sanguisorba minor*	Delar	Cool	Forb	2.0
Blue flax	*Linum lewisii*	Apar	Cool	Forb	0.25

[1]Based on 60 pure live seeds (PLS) per square foot, drill seeded; double this rate (120 PLS per square foot) if broadcast or hydro-seeded; "lbs" refers to pounds

3.3 Vegetation Reclamation Standards

Requirements for determining reclamation and if it is successfully completed for the selected vegetation community are determined by the reclamation percent cover standards for the community, as outlined in Table 3-3. These standards must be met during post-disturbance monitoring procedures in order for the BLM/FFO to sign off on the attainment of vegetation reclamation standards.

Table 3-3. Reclamation goal for Sagebrush-Grass Community vegetation cover

Functional Group	Percent (%) Foliar Cover	Common Species
Trees/Shrubs/Grasses/Forbs	≥35	Utah Juniper-Piñon pine; big sagebrush, four-wing saltbush, antelope bitterbrush, alkali sacaton, Western wheatgrass, Indian ricegrass, galleta, sand dropseed, scarlet globemallow, wooly Indian wheat, fleabane, Penstemon spp., buckwheat, and threadleaf groundsel.
Invasive/Undesirables (10% allowed toward meeting standard of 35%)	≤10	Plants with the potential to become a dominant species on a site and where its presence is a detriment to revegetation efforts or the native plant community. Examples of invasive species include cheatgrass, Russian thistle, and kochia.

Note: ≥ = greater than or equal to; ≤ = less than or equal to.

3.4 Pre-Disturbance Weed Survey

The proposed project area was surveyed for noxious weeds listed on the New Mexico Department of Agriculture's A and B list. During the survey, no noxious weed species were observed within the project area. The Onsite Noxious Weed form was completed and signed by the BLM/FFO representative; the form is attached to this Reclamation Plan.

3.5 Pre-Disturbance Soil Evaluation

The BLM/FFO representative and Encana representative collaboratively decided at the pre-disturbance site visit that no soil testing is necessary for the project reclamation.

3.6 Pre-Disturbance Site Photographs

Photographs were taken of the pre-disturbance site using a digital camera with 12-megapixel capability and without zoom or wide-angle adjustments. The location in North American Datum 83 Latitude/Longitude decimal degrees of each photo point (A through D) was recorded using a global positioning system (GPS). Each photograph is notated with the direction the photograph was taken and the GPS coordinates of the photo point. The photograph locations are listed in Table 3-4.

Table 3-4. List of required pre-disturbance site photographs

Photo Point	Photographs	Location Description
A	1, 2, 3, 4	From each well pad corner, looking toward the center stake
B	5, 6, 7, 8	Four cardinal directions from the center stake
C	9	From the start point of the access road, toward the well pad
D	10	From the end of the access road at the well pad, toward the start of the access road

Location:	Lybrook M24-2307 (corner 6)			
Photo Point:	A	**Photo Direction:**	South	
Photo Number:	1	**GPS Coordinates:**	36.20722	-107.5337

Location:	Lybrook M24-2307 (corner 5)			
Photo Point:	A	**Photo Direction:**	West	
Photo Number:	2	**GPS Coordinates:**	36.20804	-107.5346

Location:	Lybrook M24-2307 (corner 3)			
Photo Point:	A	**Photo Direction:**	East	
Photo Number:	3	**GPS Coordinates:**	36.20726	-107.5357

Location:	Lybrook M24-2307 (corner 2)			
Photo Point:	A	**Photo Direction:**	North	
Photo Number:	4	**GPS Coordinates:**	36.20644	-107.5348

Location:	Lybrook M24-2307 (center stake)			
Photo Point:	B	**Photo Direction:**	North	
Photo Number:	5	**GPS Coordinates:**	36.20726	-107.53466

Location:	Lybrook M24-2307 (center stake)			
Photo Point:	B	**Photo Direction:**	East	
Photo Number:	6	**GPS Coordinates:**	36.20726	-107.53466

Location:	Lybrook M24-2307 (center stake)			
Photo Point:	B	**Photo Direction:**	South	
Photo Number:	7	**GPS Coordinates:**	36.20726	-107.53466

Location:	Lybrook M24-2307 (center stake)			
Photo Point:	B	**Photo Direction:**	West	
Photo Number:	8	**GPS Coordinates:**	36.20726	-107.53466

Location:	Lybrook M24-2307 from the beginning of the access road/pipeline right-of way			
Photo Point:	C	**Photo Direction:**	West	
Photo Number:	9	**GPS Coordinates:**	36.20755	-107.5335

Location:	Lybrook M24-2307 from the end of the access road/pipeline right-of-way			
Photo Point:	D	**Photo Direction:**	East	
Photo Number:	10	**GPS Coordinates:**	36.20736	-107.5338

4. Reclamation Techniques for Successful Revegetation

4.1 Vegetation and Site Clearing

Woody vegetation, such as large shrubs and trees, will be cleared from the staked project area and stockpiled for later use as soil mulch, visual mitigation, and/or wildlife shelters.

Surface rocks (where present and useful for reclamation) will be stockpiled adjacent to the topsoil stockpile. During reclamation activities, the surface rock will be placed within the area of reclamation for erosion control or in a manner that visually blends with the adjacent undisturbed area.

4.2 Topsoil Stripping, Storage, and Replacement

At a minimum, the upper 6 inches of topsoil will be stripped, following vegetation and site clearing during construction of the pipeline. Encana (or its contractors) will take care not to mix topsoil with the underlying subsoil horizons and will stockpile the topsoil separately from subsoil or other excavated material. Topsoil and sub-surface soils will be replaced in the proper order, prior to final seedbed preparation.

4.3 Water Management/Erosion Control Features

The BLM/FFO representative and the Encana representative will work in collaboration to develop site-specific erosion control or water management features and to identify installation locations. Potential erosion control or water management features that may be used include (but are not limited to) water bars

or rolling dips for roads, sediment basins or sediment traps, check dams, silt fencing, outlet protection for culverts, erosion control blankets or geotextiles, and straw wattles.

Encana (or its contractors) will use erosion control blankets, straw bales, or straw wattles as appropriate to limit erosion and sediment transport from any stockpiled soils.

As determined during the on-site visit on October 17, 2014, the following best management practices will be implemented:

- One culverts will be installed and have a minimum slope of 2 percent to ensure drainage and a minimum cover of 18-inches in accordance with BLM Gold Book standards and BLM 9113-1 (Roads Design Handbook) and BLM 9113-2 (Roads National Inventory and Condition Assessment Guidance and Instruction Handbook) at the following stationing:
    1. 24-inch culvert at Station 0+05 at the new access road with a large sediment trap before the culvert.
- Corner #2 will be rounded to avoid excess cut.
- Water will be diverted around the pad and silt traps installed in Corner #3 upon interim reclamation.
- Drainage will split between Corner #2 and Corner #6 drainage to silt trap above the culvert pipe.
- A dozer blade wide swelled drainage will be constructed near the top of the slope to prevent erosion between Corner #2 and Corner #6.

4.4 Seedbed Preparation

For cut-and-fill slopes, initial seedbed preparation will consist of backfilling and re-contouring. Disturbed areas will be re-contoured to blend with the surrounding landscape, emphasizing restoration of the existing drainage patterns and landform to pre-construction condition, to the extent practicable.

Seedbed preparation for compacted areas will be ripped to a minimum depth of 12 inches, with a maximum furrow spacing of 2 feet. Where practicable, ripping will be conducted in two passes at perpendicular directions. Disking will be conducted if large clumps or clods remain after ripping. Any tilling or disking that occurs along the contour of the slope and seed drills will also be run along the contour to provide terracing and prevent rapid runoff and erosion. If broadcast seeding is used, a dozer or other tracked equipment will track perpendicular to the slope prior to broadcast seeding.

Following final contouring, the backfilled or ripped surfaces will be covered evenly with stockpiled topsoil. Final seedbed preparation will consist of raking or harrowing the spread topsoil prior to seeding to promote a firm (but not compacted) seedbed without surface crusting. Seedbed preparation may not be necessary for topsoil storage piles or other areas of temporary seeding.

4.5 Soil Amendments

No soil amendments will be used during reclamation of the proposed project area.

4.6 Seeding

The seed mix chosen for this project area is listed in Table 3-2. Seeding will occur within 120 days of completion of the project construction.

A Truax seed drill or modified rangeland drill that allows for seeding species from different seed boxes at different planting depths will be used to seed the disturbed areas of the site. Encana or its reclamation subcontractor will ensure that perennial grasses and shrubs are planted at the appropriate depth. Intermediate size seeds (such as wheatgrasses and shrubs) will be planted at a depth of 0.5 inch, larger seeds (such as Indian ricegrass) will be planted at a depth of at 1 to 2 inches, and small seeds (such as alkali sacaton and sand dropseed) will be planted at a depth of 0.25 inch. In situations where differing planting depths are not practicable with the equipment being used, the entire mix will be planted no deeper than 0.25 inch.

Drill seeding may be used on well-packed and stable soils that occur on gentler slopes and where tractors and drills can safely operate. Where drill seeding is not practicable due to topography, the contractor will hand-broadcast seed using a "cyclone" hand seeder or similar broadcast seeder. Broadcast application of seed requires a doubling of the drill-seeding rate. The seed will then be raked into the ground so the seed is planted no deeper than 0.25 inch below the surface.

4.7 Mulching

Hand seeding with hydro-mulch, excelsior netting, and/or mulch with netting is required on the cut/fill slopes. Mulch should be grass or straw spread at 2,000 to 3,000 pounds per acre or 1 to 2-inches deep. Mulching will consist of crimping certified weed-free straw or certified weed-free native grass hay into the soil.

Straw or native grass hay mulch will then be anchored using one of the following methods:

- Hand Punching – a spade or shovel is used to punch straw into the soil at 12-inch intervals until all areas have straw standing perpendicular to the slope and the straw is embedded at least 4 inches into the soil.
- Roller Punching – a roller is used to spread mulch over an area; the roller is equipped with straight studs not less than 6 inches long, from 4 to 6 inches wide, and approximately 1 inch thick.
- Crimper Punching – like roller punching, a crimper is used over the soil. The crimper has serrated disk blades about 4 to 8 inches apart that force the mulch into the soil. Crimping should be done in two directions with the final pass across the slope.

4.8 Noxious and Invasive Weed Control

Should noxious or invasive weeds be documented after earthwork and seeding activities, the BLM/FFO weed coordinator will provide Encana with specific requirements and instructions for weed treatments including the period of treatment, approved herbicides that may be used, required documentation to be submitted to the BLM/FFO after treatment, and any other site-specific instructions that may be applicable.

4.9 Limiting Access to the Right-of-Way

The proposed pipeline would be parallel to the proposed access road. No portions of the proposed pipeline would be constructed cross-country.

4.10 Temporary Roads or Use Areas

There are no temporary roads or temporary use areas proposed for the project. The construction zone of the proposed well pad would be reclaimed during the interim.

5. Monitoring Requirements

Monitoring will be completed according to BLM/FFO Bare Soil Reclamation Procedure B (BLM 2013b). Monitoring activities will be initiated after the project is completed, during the post-disturbance earthwork and seeding inspection process.

The BLM/FFO will conduct the reclamation monitoring for the project.

5.1 Post-Disturbance Monitoring Initiation

During the post-disturbance inspection at the project site, the BLM/FFO representative (in collaboration with the Encana representative) will determine site-specific monitoring locations for photo point monitoring and vegetation line point intercept transects. The BLM/FFO will GPS the monitoring locations, take the initial monitoring photographs, and complete the initial monitoring report within 60 days of the post-disturbance earthwork and seeding inspection. The initial report will be available from the BLM/FFO.

5.2 Post-Disturbance Monitoring Photographs

Photographs will be taken with a digital camera with 12-megapixel capability and without zoom or wide-angle adjustments. GPS coordinates for each photo point will be provided by the BLM/FFO in the initial monitoring report and subsequently included with each photograph in the annual monitoring report.

5.3 Annual Monitoring

Annual monitoring of the photo points and the vegetation line point intercept transects will begin 2 calendar years after the completion and approval of the earthwork and seeding. The BLM/FFO will conduct the monitoring. Monitoring may occur during any time of the year. A monitoring report of the permanent photo points will be completed by December 31 of the year the site is monitored.

Vegetation line point intercept transects will be monitored annually until attainment of vegetation reclamation standards is met.

5.4 Attainment of Vegetation Reclamation Standards

When vegetation on a reclaimed site appears to meet the required percent revegetation standard (see Section 3.3), Encana will submit to the BLM/FFO a written request for concurrence that revegetation standards have been attained. The request will include all annual transect data sheets and a current set of

monitoring photographs. The BLM/FFO will review the request and approve or deny the request within 60 days of receipt. If the request is denied, the BLM/FFO may initiate a site inspection within 60 days of the denial to analyze the site and determine if remedy actions may be appropriate.

5.5 Long-Term Monitoring

After the required percent revegetation standard has been attained, long-term monitoring will begin. Every fifth year after attainment, the site will be monitored by the BLM/FFO at all established photo points to ensure the site remains productive and stable. The monitoring report will be completed by the BLM/FFO by December 31 of the year the site is monitored.

5.6 Final Abandonment

If 1 acre or more of bare soil results from earthwork required in preparation for final abandonment, Encana will follow the Vegetation Reclamation Plan in accordance with Procedure B of the BLM/FFO Bare Soil Reclamation Procedures (BLM 2013a).

If final abandonment or relinquishment earthwork results in less than 1 acre, but more than 0.1 acre of bare soil, Encana will initiate the Vegetation Reclamation Plan in accordance with Procedure A of the BLM/FFO Bare Soil Reclamation Procedures (BLM 2013a).

Revegetation percent cover standards will be attained, documented, and evaluated by the BLM/FFO or an exception granted before the BLM/FFO will approve a final abandonment notice (FAN) or relinquishment.

5.7 Cessation of Monitoring

Monitoring requirements will remain in effect as long as the permit, grant, or authorization remains in force and until all infrastructure or associated facilities are abandoned by established BLM procedure and a FAN or relinquishment is issued by the BLM/FFO. Encana will document that percent cover standards have been obtained when submitting a request for a FAN or a relinquishment.

6. References

43 CFR Part 3160, "Onshore Oil and Gas Order No. 1; Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; Approval of Operations," 72 Federal Register 44 (March 2007), pp. 10328-10338.

BLM. 2013a. Farmington Field Office Bare Soil Reclamation Procedures. Available at: http://www.blm.gov/pgdata/etc/medialib/blm/nm/field_offices/farmington/farmington_planning/surface_use_plan_of.Par.69026.File.dat/FFO%20Bare%20Soil%20Reclamation%20Procedures%202-1-13.pdf. Accessed February 2013.

BLM. 2013b. Updated Reclamation Goals. Available at: http://www.blm.gov/nm/st/en/fo/Farmington_Field_Office/ffo_planning/surface_use_plan_of/updated_reclamation.html. Accessed February 2013.

U.S. Department of the Interior–U.S. Department of Agriculture (USDI-USDA). 2007. The Gold Book, Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. BLM/WO/ST-06/021+307/REV 07. Bureau of Land Management. Denver, Colorado. 84 pp.

Onsite Noxious Weed Form

If noxious weeds are found during the onsite, fill out form and submit to FFO weed coordinator
Operator Encana **Surveyor(s)** Joe H.
Well Name and Number Lybrook M24-2307 **Date** 10/21/2014
Location: Township, Range, Section T23N R7W Sec 24
Location of Project NAD 83 Decimal Degrees 36.20766 -107.53421

Class A Noxious Weed – Check Box if Found

	Alfombrilla		Diffuse knapweed		Hydrilla		Purple starthistle		Yellow toadflax
	Black henbane		Dyer's woad		Leafy spurge		Ravenna grass		
	Camelthorn		Eurasian watermilfoil		Oxeye daisc		Scotch thistle		
	Canada thistle		Giant salvinia		Parrotfeather		Spotted knapweed		
	Dalmation toadflax		Hoary cress		Purple loosestrife		Yellow starthistle		

Class B Noxious Weed – Check Box if Found

	African rue		Perennial pepperweed		Russian knapweed		Tree of heaven
	Chicory		Musk thistle		Poison hemlock		
	Halogeton		Malta starthistle		Teasel		

Comments:

None Found

FFO Representative: 10-16-14
sign and date
Operator Representative
sign and date

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Appendix B
Road Maintenance Plan

The following Road Maintenance Plan will be implemented and followed by Encana Oil & Gas (USA) Inc. (Encana) for roads utilized in its San Juan Basin Operations. All roads will be constructed and maintained to meet the Bureau of Land Management (BLM) Gold Book Standards and BLM Manuals 9113-1 (Roads Design Handbook) and BLM Manuals 9113-2 (Roads National Inventory and Condition Assessment Guidance and Instructions Handbook).

Road Inspection

1. An Encana representative or designated inspector will inspect all newly constructed or reconstructed roads that will be used to construct, operate, maintain and terminate Encana's oil and gas operations.

2. Road inspections will be conducted monthly or within 72 hours of a major storm event. The Inspector will observe road conditions as they drive to and from locations.

3. Inspectors will examine the roadways and document the inspection using the attached checklist during each inspection. Inspections will consist of road crowns, culverts, ditches, silt traps and/or any other water control structures.

4. Inspection records will be kept on file and will be provided to the BLM upon request.

Maintenance Procedures

Corrections will be documented on the attached inspection checklist and Encana will contact one of its authorized contractors to correct the problem.

1. Road Crown
   If the road crown surface becomes rutted, not adequately draining, or in a roughened condition, Encana's contractor will utilize a maintainer to re-grade and/or resurface the road crown.

2. Culverts
   If culverts or silt traps are plugged, Encana's contractor will use hand tools or a backhoe to excavate and remove debris or sediment impeding the function of the culvert. If the culvert is damaged by having its inlet or outlet crushed, the culvert will be replaced.

3. Ditches
   If road side ditches become blocked or not functioning properly, Encana's contractor will use a maintainer or the necessary equipment to clear or blade the ditch to allow it to function properly.

4. Silt Traps or Water Control Structures
   If silt traps or water control structures are found to be filled with sediment or not functioning properly, Encana's contractor will use the appropriate equipment to clean out sediment or repair/modify the structure to allow it to function properly. Sediment removed from silt traps or water control structures will be disposed of at an approved facility.

5. Disturbances from Maintenance
   If areas are disturbed from implementation of this plan, they will be mitigated and reseeded if necessary.

Encana Road Inspection and Maintenance Report Form

Road Inspected (Site ID): _____

Title of Inspector:	Name of Inspector:	Date:
Type of Area: ☐ Access Road to Well Pad		
Type of Inspection: ☐ Daily ☐ Monthly ☐ Within 72hours of a rain/snowmelt event ☐ Winter Conditions Exist		

Site Specific Information
☐

Road Condition Check List

Road:	Good	Poor	Action Needed	Comments
Surface Condition (slopes/gravel/etc)				
Surface Drainage				
Culvert(s)				
Culvert(s) Inlet Protection				
Culvert(S) Outlet Protection				
Roadside Ditches and Turnouts				
Run On Diversion				
Revegetation				
Sediment Control:	**Good**	**Poor**	**Action Needed**	**Comments**
Check Dam				
Silt Trap/Pond				
Filter Berm				
Sediment Basin				
Sediment Trap				
Wattles				
Silt Fence				

Actions Taken	Date Work Was Performed

Date	Signature	Type of Inspection

Signature certifying that the site is in compliance (after all necessary repairs, maintenance, and changes

_____ _____

Date Signature

Lybrook M24-2307 01H
SHL: SWSW Section 24, T23N, R7W
1,098' FSL and 381' FWL
BHL: NWSW Section 23, T23N, R7W
1,720' FSL and 330' FWL
Sandoval County, New Mexico
Lease Number: NMNM 0080273 AND NMNM 10087

Encana Oil & Gas (USA) Inc.
Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Holly Hill 4/6/15

Holly Hill
Date

Senior Regulatory Analyst
Encana Oil & Gas (USA) Inc.
370 17th Street, Suite 1700
Denver, CO 80202
Phone: (720) 876-5331
Cell: (303) 521-2835

encana

VIA OVERNIGHT MAIL

April 6, 2015

RECEIVED
APR 07 2015
Farmington Field Office
Bureau of Land Management

Bureau of Land Management
Farmington Field Office
6251 College Blvd., Suite A
Farmington, NM 87402

Re: Application for Permit to Drill
Lybrook M24-2307 01H

To Whom It May Concern:

For your records, Encana Oil & Gas (USA) Inc. (Encana) submits an original and four copies of an Application for Permit to Drill the proposed Lybrook M24-2307 01H well. Also enclosed is remittance for the $6,500 processing fee.

Encana requests tight-hole status on this proposed well.

The Lybrook M24-2307 01H proposed wellbore does not meet the current setback requirements for the Basin Mancos Gas Pool (Pool Code 97232). Pursuant to New Mexico Administrative Code (NMAC) 19.15.15.13.C, Encana will file a non-standard location (NSL) request with the New Mexico Oil Conservation Division (NMOCD) to grant the relief of the 660' setback requirements to allow for production in the proposed complete interval.

Please feel free to contact me directly at (720) 876-5994 or via email at shawn.turk@encana.com should you have any questions.

Sincerely,

Shawn Turk
Regulatory Analyst

ENCANA OIL & GAS (USA) INC.,
acting by and through its authorized agent,
Encana Services Company Ltd.

Enc. Lybrook M24-2307 01H APD

Encana Oil & Gas (USA) Inc., acting by and through its authorized agent,
Encana Services Company Ltd.
370 17th Street, Suite 1700, Denver, Colorado 80202 720.876.5994(O) 720.289.4106(C) shawn.turk@encana.com