

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

Form C-101
Revised July 18, 2013

Energy Minerals and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

☒ AMENDED REPORT

OIL CONS. DIV DIST. 3

FEB 19 2014

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address ENCANA OIL AND GAS (USA) INC. 370 17TH STREET, SUITE 1700 DENVER, CO 80202		2. OGRID Number 282327
4. Property Code 40914		3. API Number 30-043-21198
5. Property Name Lybrook P32-2307		6. Well No. 01H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
SHL: P	32	23N	7W		664	SOUTH	31	EAST	SANDOVAL

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
BHL: M	32	23N	7W		950	SOUTH	330	WEST	SANDOVAL

9. Pool Information

Pool Name ALAMITO-GALLUP	Pool Code 1039
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Additional Well Information

11. Work Type N	12. Well Type O	13. Cable/Rotary R	14. Lease Type S	15. Ground Level Elevation 6,874'
16. Multiple N/A	17. Proposed Depth 4,983' TVD/9,735' MD	18. Formation GALLUP	19. Contractor AZTEC	20. Spud Date 10/16/2014
Depth to Ground water UNKNOWN		Distance from nearest fresh water well GREATER THAN 5,280'		Distance to nearest surface water ~6,000'

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
CONDUCTOR	30"	20"	94#	60'	100	SURFACE
SURFACE	12 1/4"	9 5/8"	36#	500'	178	SURFACE
INTERMEDIATE	8 3/4"	7"	26#	5,005' TVD/5,222' MD	527 (30% EXCESS)	SURFACE
PROD. LINER	6 1/8"	4 1/2"	11.6#	5,022' - 9,735' MD	N/A	N/A

Casing/Cement Program: Additional Comments

HORIZONTAL LATERAL IN THE GALLUP FORMATION. NO CEMENT IN THE PRODUCTION LINER. WILL RUN EXTERNAL SWELL CASING PACKER SYSTEM. WILL USE OIL-BASED MUD SYSTEM FROM INTERMEDIATE CASING POINT TO TD OF HORIZONTAL LATERAL.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
ANNULAR	3,000	1,500	TBD
SINGLE RAM	3,000	3,000	TBD
ROTATING HEAD	3,000	1,500	TBD

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **NO DRILLING PIT WILL BE USED.**
I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.

Signature:

Printed name: Jessica Gregg

Title: Regulatory Analyst

E-mail Address: jessica.gregg@encana.com

Date: 2/13/2014

Phone: 720-838-5458

OIL CONSERVATION DIVISION

Approved By:

Charles H. ... 2-26-2014

Title:

SUPERVISOR DISTRICT #3

Approved Date:

FEB 26 2014

Expiration Date:

2/26/16

Conditions of Approval Attached

FEB 26 2014 ca

IV

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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21198	² Pool Code 1039	³ Pool Name ALAMITO - GALLUP
⁴ Property Code 40414	⁵ Property Name LYBROOK P32-2307	⁶ Well Number 01H
⁷ GRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.	⁹ Elevation 6874'

¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	32	23N	7W		664	SOUTH	31	EAST	SANDOVAL

¹¹Bottom Hole Location If Different From Surface

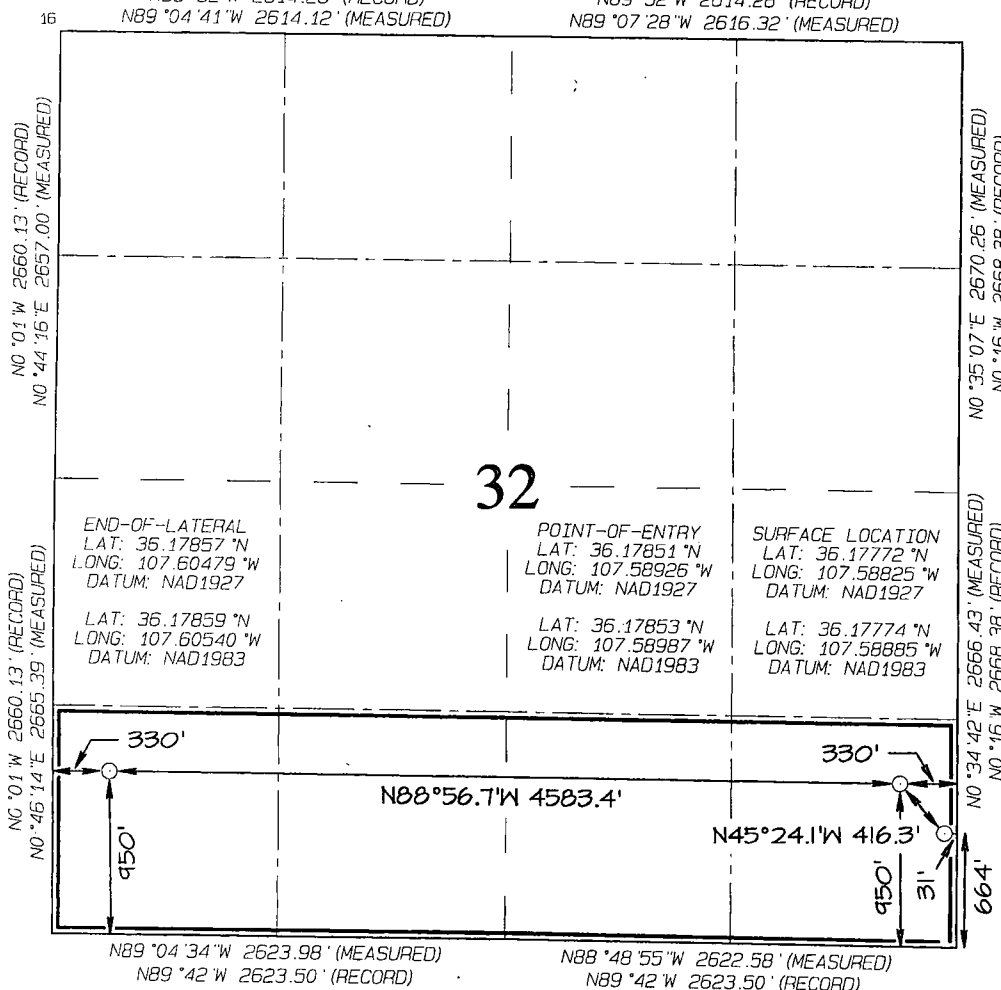
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	32	23N	7W		950	SOUTH	330	WEST	SANDOVAL

¹² Dedicated Acres 160.0 Acres - S/2 S/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

N89°52'W 2614.26' (RECORD)
N89°04'41"W 2614.12' (MEASURED)

N89°52'W 2614.26' (RECORD)
N89°07'28"W 2616.32' (MEASURED)



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Holly Hill 1/15/14
Signature Date
Holly Hill

Printed Name
Holly.Hill@encana.com

E-mail Address

¹⁸ SURVEYOR CERTIFICATION

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

Date Revised: AUGUST 22, 2013
Date of Survey: JUNE 3, 2013

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

Directions from the Intersection of US Hwy 550 & US Hwy 64
in Bloomfield, NM to Encana Oil & Gas (USA) Inc. Lybrook P32-2307 01H
664' FSL & 31' FEL, Section 32, T23N, R7W, N.M.P.M., Sandoval County, NM

Latitude: 36.17774°N Longitude: 107.58885°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 38.7 miles to Mile Marker 112.7;

Go right (Southerly) on County Road #7900 for 4.9 miles to fork in road;

Go straight (South-easterly) remaining on County Road #7900 for 0.2 miles to fork in road;

Go left (North-easterly) exiting County Road #7900 for 2.8 miles to three-way intersection;

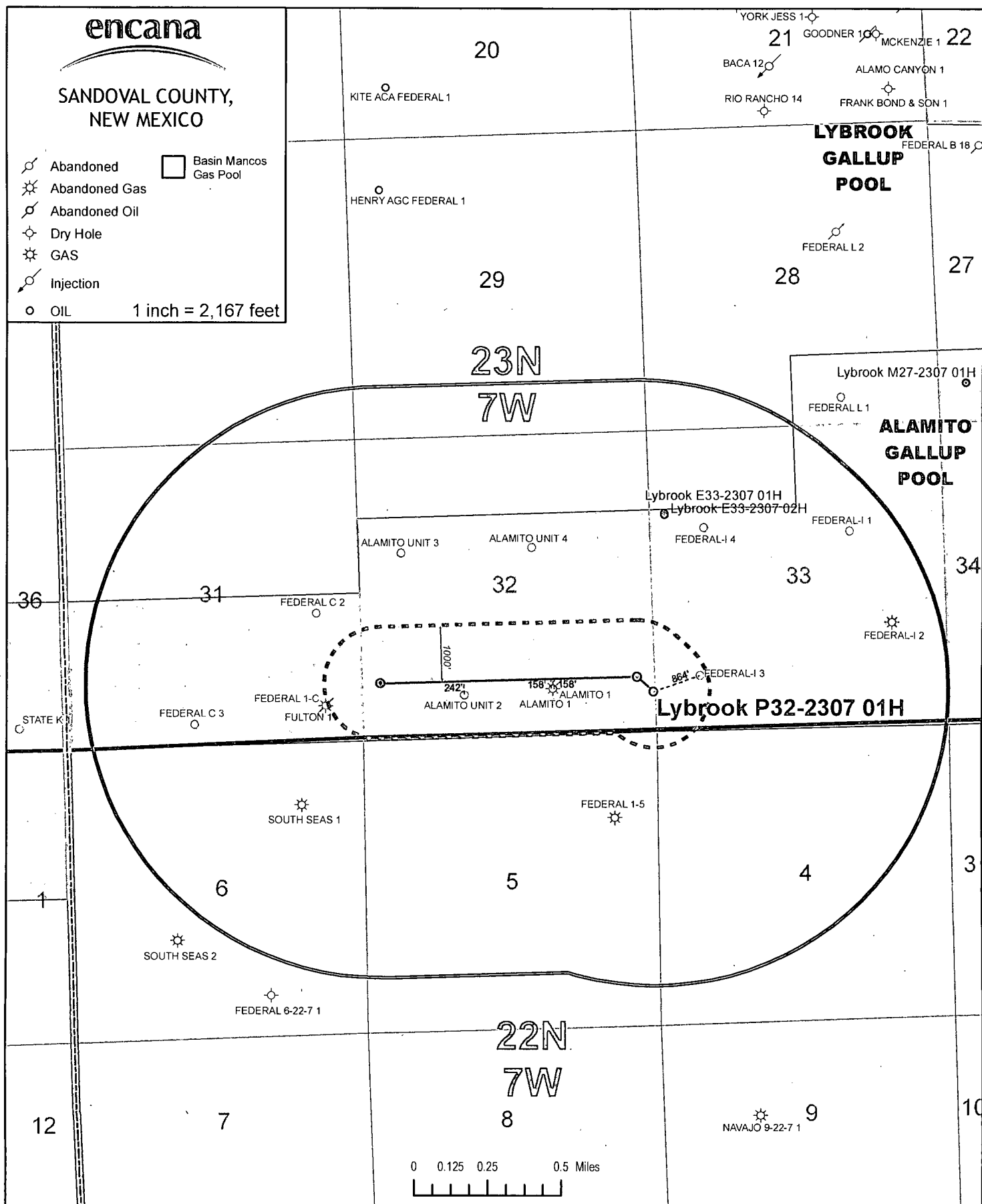
Go straight (Easterly) for 0.2 miles to fork in road at gate;

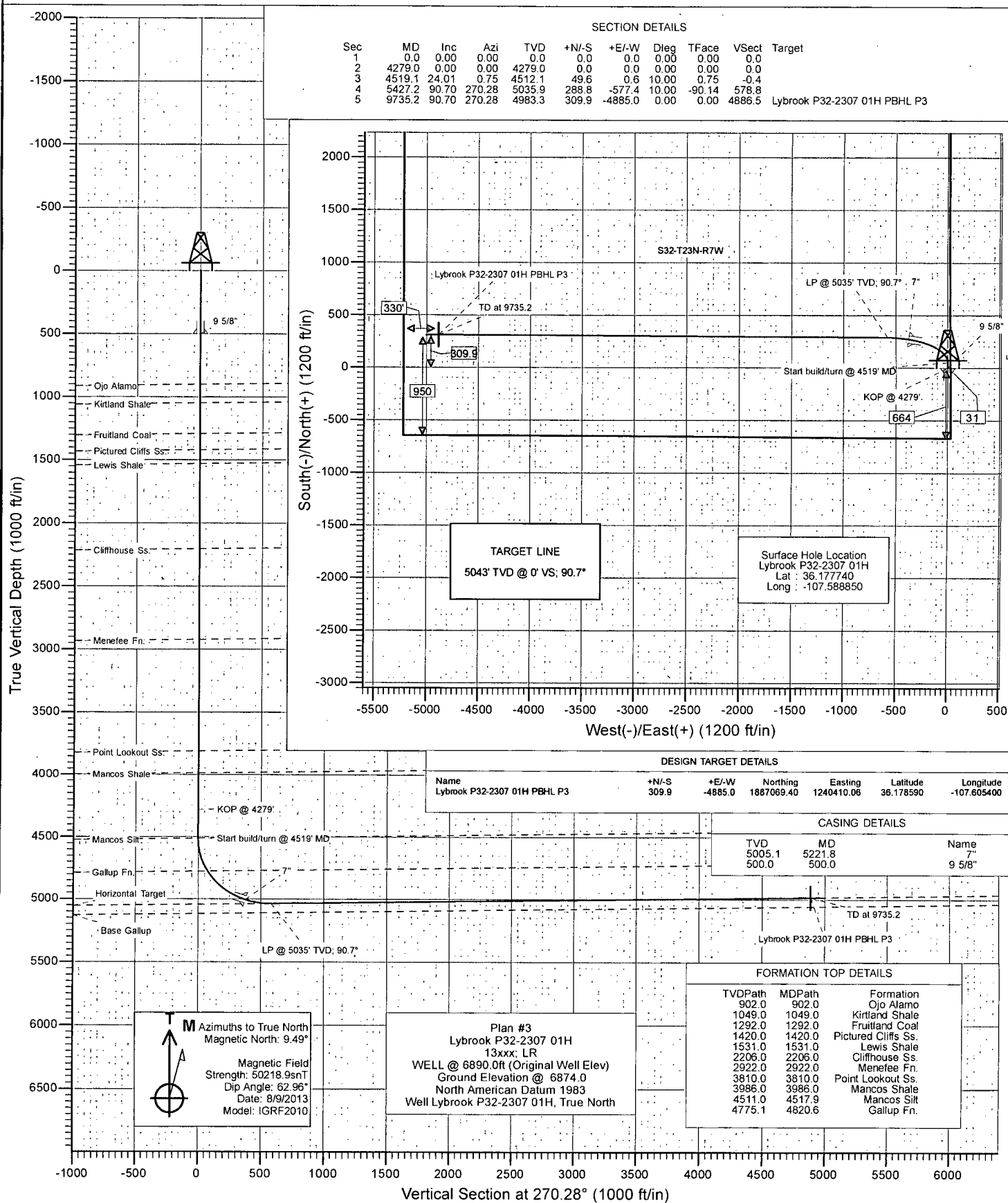
Go straight (Easterly) for 1.0 miles to fork in road;

Go right which is straight (Easterly) for 1.1 miles to new access on right-hand side of existing roadway which continues for 422' to staked Encana Lybrook P32-2307 01H location.



-  Abandoned
 Abandoned Gas
 Abandoned Oil
 Dry Hole
 GAS
 Injection
 OIL
-  Basin Mancos Gas Pool
- 1 inch = 2,167 feet





Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook P32-2307 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6890.0ft (Original Well Elev)
Project:	Sandoval County, NM	MD Reference:	WELL @ 6890.0ft (Original Well Elev)
Site:	Lybrook	North Reference:	True
Well:	Lybrook P32-2307 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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	Lybrook				
Site Position:		Northing:	1,882,676.45 ft	Latitude:	36.168210
From:	Lat/Long	Easting:	1,287,068.90 ft	Longitude:	-107.447150
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-0.71 °

Well	Lybrook P32-2307 01H					
Well Position	+N/-S	0.0 ft	Northing:	1,886,692.15 ft	Latitude:	36.177740
	+E/-W	0.0 ft	Easting:	1,245,290.35 ft	Longitude:	-107.588850
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,874.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/9/2013	9.49	62.96	50,219

Design	Plan #3			
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	270.28

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	
4,279.0	0.00	0.00	4,279.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,519.1	24.01	0.75	4,512.1	49.6	0.6	10.00	10.00	0.00	0.75	
5,427.2	90.70	270.28	5,035.9	288.8	-577.4	10.00	7.34	-9.96	-90.14	
9,735.2	90.70	270.28	4,983.3	309.9	-4,885.0	0.00	0.00	0.00	0.00	Lybrook P32-2307 01

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: Sandoval County, NM
 Site: Lybrook
 Well: Lybrook P32-2307 01H
 Wellbore: Hz
 Design: Plan #3

Local Co-ordinate Reference: Well Lybrook P32-2307 01H
 TVD Reference: WELL @ 6890.0ft (Original Well Elev)
 MD Reference: WELL @ 6890.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

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	
902.0	0.00	0.00	902.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,049.0	0.00	0.00	1,049.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
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	
1,292.0	0.00	0.00	1,292.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,420.0	0.00	0.00	1,420.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,531.0	0.00	0.00	1,531.0	0.0	0.0	0.0	0.00	0.00	Lewis 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	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,206.0	0.00	0.00	2,206.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
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	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
2,922.0	0.00	0.00	2,922.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
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	
3,600.0	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	
3,810.0	0.00	0.00	3,810.0	0.0	0.0	0.0	0.00	0.00	Point Lookout Ss.
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	
3,986.0	0.00	0.00	3,986.0	0.0	0.0	0.0	0.00	0.00	Mancos Shale
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	

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: Lybrook
Well: Lybrook P32-2307 01H
Wellbore: Hz
Design: Plan #3

Local Co-ordinate Reference: Well Lybrook P32-2307 01H
TVD Reference: WELL @ 6890.0ft (Original Well Elev)
MD Reference: WELL @ 6890.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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
4,279.0	0.00	0.00	4,279.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4279'
4,300.0	2.10	0.75	4,300.0	0.4	0.0	0.0	10.00	10.00	
4,400.0	12.10	0.75	4,399.1	12.7	0.2	-0.1	10.00	10.00	
4,500.0	22.10	0.75	4,494.6	42.1	0.6	-0.3	10.00	10.00	
4,517.9	23.89	0.75	4,511.0	49.1	0.6	-0.4	10.00	10.00	Mancos Silt
4,519.1	24.01	0.75	4,512.1	49.6	0.6	-0.4	10.00	10.00	Start build/turn @ 4519' MD
4,600.0	25.24	341.46	4,585.8	82.4	-4.6	5.0	10.00	1.52	
4,700.0	29.70	321.92	4,674.7	122.2	-26.7	27.3	10.00	4.46	
4,800.0	36.26	307.97	4,758.6	160.0	-65.4	66.2	10.00	6.56	
4,820.6	37.78	305.66	4,775.1	167.5	-75.4	76.2	10.00	7.37	Gallup Fn.
4,900.0	43.99	298.07	4,835.1	194.7	-119.5	120.5	10.00	7.82	
5,000.0	52.35	290.68	4,901.8	225.1	-187.4	188.5	10.00	8.37	
5,100.0	61.09	284.83	4,956.7	250.3	-266.9	268.2	10.00	8.73	
5,200.0	70.03	279.91	4,998.0	269.7	-355.8	357.1	10.00	8.94	
5,221.8	72.00	278.91	5,005.1	273.0	-376.1	377.4	10.00	9.03	7"
5,300.0	79.09	275.51	5,024.6	282.5	-451.2	452.5	10.00	9.08	
5,400.0	88.22	271.39	5,035.7	288.4	-550.2	551.6	10.00	9.12	
5,427.2	90.70	270.28	5,035.9	288.8	-577.4	578.8	10.00	9.14	LP @ 5035' TVD; 90.7°
5,500.0	90.70	270.28	5,035.0	289.2	-650.2	651.6	0.00	0.00	
5,600.0	90.70	270.28	5,033.8	289.7	-750.2	751.6	0.00	0.00	
5,700.0	90.70	270.28	5,032.6	290.2	-850.2	851.6	0.00	0.00	
5,800.0	90.70	270.28	5,031.4	290.7	-950.2	951.6	0.00	0.00	
5,900.0	90.70	270.28	5,030.1	291.1	-1,050.2	1,051.6	0.00	0.00	
6,000.0	90.70	270.28	5,028.9	291.6	-1,150.2	1,151.6	0.00	0.00	
6,100.0	90.70	270.28	5,027.7	292.1	-1,250.2	1,251.6	0.00	0.00	
6,200.0	90.70	270.28	5,026.5	292.6	-1,350.2	1,351.6	0.00	0.00	
6,300.0	90.70	270.28	5,025.3	293.1	-1,450.2	1,451.6	0.00	0.00	
6,400.0	90.70	270.28	5,024.0	293.6	-1,550.2	1,551.6	0.00	0.00	
6,500.0	90.70	270.28	5,022.8	294.1	-1,650.1	1,651.6	0.00	0.00	
6,600.0	90.70	270.28	5,021.6	294.6	-1,750.1	1,751.6	0.00	0.00	
6,700.0	90.70	270.28	5,020.4	295.0	-1,850.1	1,851.5	0.00	0.00	
6,800.0	90.70	270.28	5,019.1	295.5	-1,950.1	1,951.5	0.00	0.00	
6,900.0	90.70	270.28	5,017.9	296.0	-2,050.1	2,051.5	0.00	0.00	
7,000.0	90.70	270.28	5,016.7	296.5	-2,150.1	2,151.5	0.00	0.00	
7,100.0	90.70	270.28	5,015.5	297.0	-2,250.1	2,251.5	0.00	0.00	
7,200.0	90.70	270.28	5,014.3	297.5	-2,350.1	2,351.5	0.00	0.00	
7,300.0	90.70	270.28	5,013.0	298.0	-2,450.1	2,451.5	0.00	0.00	
7,400.0	90.70	270.28	5,011.8	298.5	-2,550.1	2,551.5	0.00	0.00	
7,500.0	90.70	270.28	5,010.6	299.0	-2,650.1	2,651.5	0.00	0.00	
7,600.0	90.70	270.28	5,009.4	299.4	-2,750.0	2,751.5	0.00	0.00	
7,700.0	90.70	270.28	5,008.2	299.9	-2,850.0	2,851.5	0.00	0.00	
7,800.0	90.70	270.28	5,006.9	300.4	-2,950.0	2,951.5	0.00	0.00	
7,900.0	90.70	270.28	5,005.7	300.9	-3,050.0	3,051.5	0.00	0.00	
8,000.0	90.70	270.28	5,004.5	301.4	-3,150.0	3,151.5	0.00	0.00	
8,100.0	90.70	270.28	5,003.3	301.9	-3,250.0	3,251.4	0.00	0.00	
8,200.0	90.70	270.28	5,002.0	302.4	-3,350.0	3,351.4	0.00	0.00	
8,300.0	90.70	270.28	5,000.8	302.9	-3,450.0	3,451.4	0.00	0.00	
8,400.0	90.70	270.28	4,999.6	303.4	-3,550.0	3,551.4	0.00	0.00	
8,500.0	90.70	270.28	4,998.4	303.8	-3,650.0	3,651.4	0.00	0.00	
8,600.0	90.70	270.28	4,997.2	304.3	-3,750.0	3,751.4	0.00	0.00	
8,700.0	90.70	270.28	4,995.9	304.8	-3,850.0	3,851.4	0.00	0.00	
8,800.0	90.70	270.28	4,994.7	305.3	-3,949.9	3,951.4	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook P32-2307 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6890.0ft (Original Well Elev)
Project:	Sandoval County, NM	MD Reference:	WELL @ 6890.0ft (Original Well Elev)
Site:	Lybrook	North Reference:	True
Well:	Lybrook P32-2307 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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	270.28	4,993.5	305.8	-4,049.9	4,051.4	0.00	0.00	
9,000.0	90.70	270.28	4,992.3	306.3	-4,149.9	4,151.4	0.00	0.00	
9,100.0	90.70	270.28	4,991.0	306.8	-4,249.9	4,251.4	0.00	0.00	
9,200.0	90.70	270.28	4,989.8	307.3	-4,349.9	4,351.4	0.00	0.00	
9,300.0	90.70	270.28	4,988.6	307.8	-4,449.9	4,451.4	0.00	0.00	
9,400.0	90.70	270.28	4,987.4	308.2	-4,549.9	4,551.3	0.00	0.00	
9,500.0	90.70	270.28	4,986.2	308.7	-4,649.9	4,651.3	0.00	0.00	
9,600.0	90.70	270.28	4,984.9	309.2	-4,749.9	4,751.3	0.00	0.00	
9,700.0	90.70	270.28	4,983.7	309.7	-4,849.9	4,851.3	0.00	0.00	
9,734.6	90.70	270.28	4,983.3	309.9	-4,884.5	4,886.0	0.00	0.00	Lybrook P32-2307 01H PBHL - Lybrook P32-23
9,735.2	90.70	270.28	4,983.3	309.9	-4,885.0	4,886.5	0.00	0.00	TD at 9735.2 - Lybrook P32-2307 01H PBHL P3

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 P32-2307 01H f - plan hits target center - Point	0.00	0.00	4,983.3	309.9	-4,885.0	1,887,069.40	1,240,410.06	36.178590	-107.605400
Lybrook P32-2307 01H f - plan misses target center by 42.6ft at 9734.6ft MD (4983.3 TVD, 309.9 N, -4884.5 E) - Point	0.00	0.00	5,025.9	309.9	-4,885.0	1,887,069.40	1,240,410.06	36.178590	-107.605400
Lybrook P32-2307 01H f - plan misses target center by 35.6ft at 9734.6ft MD (4983.3 TVD, 309.9 N, -4884.5 E) - Point	0.00	0.00	5,018.9	309.9	-4,885.0	1,887,069.40	1,240,410.06	36.178590	-107.605400

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
5,221.8	5,005.1	7"	0.000	0.000
500.0	500.0	9 5/8"	0.000	0.000

Planning Report

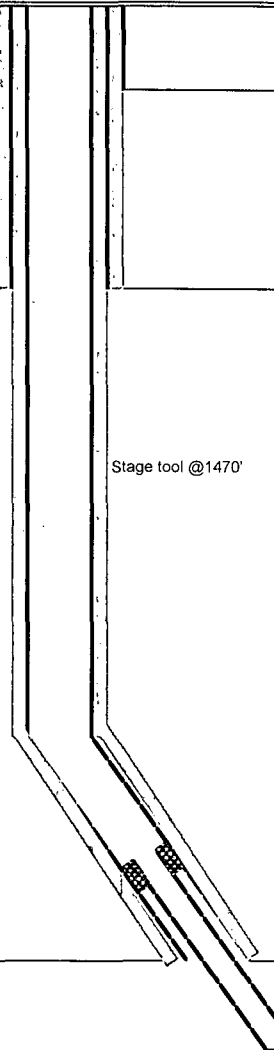
Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Lybrook P32-2307 01H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6890.0ft (Original Well Elev)
Project:	Sandoval County, NM	MD Reference:	WELL @ 6890.0ft (Original Well Elev)
Site:	Lybrook	North Reference:	True
Well:	Lybrook P32-2307 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
902.0	902.0	Ojo Alamo		-0.70	270.28
1,049.0	1,049.0	Kirtland Shale		-0.70	270.28
1,292.0	1,292.0	Fruitland Coal		-0.70	270.28
1,420.0	1,420.0	Pictured Cliffs Ss.		-0.70	270.28
1,531.0	1,531.0	Lewis Shale		-0.70	270.28
2,206.0	2,206.0	Cliffhouse Ss.		-0.70	270.28
2,922.0	2,922.0	Menefee Fn.		-0.70	270.28
3,810.0	3,810.0	Point Lookout Ss.		-0.70	270.28
3,986.0	3,986.0	Mancos Shale		-0.70	270.28
4,517.9	4,511.0	Mancos Silt		-0.70	270.28
4,820.6	4,776.0	Gallup Fn.		-0.70	270.28

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,279.0	4,279.0	0.0	0.0	KOP @ 4279'
4,519.1	4,512.1	49.6	0.6	Start build/turn @ 4519' MD
5,427.2	5,035.9	288.8	-577.4	LP @ 5035' TVD; 90.7°
9,735.2	4,983.3	309.9	-4,885.0	TD at 9735.2

LOC: Sec 32-T23N-R7W County: Sandoval WELL: Lybrook P32-2307 01H			Encana Natural Gas WELL SUMMARY					ENG: 1/16/14 RIG: GLE: 6874 RKBE: 6890	
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
			TVD	MD					
			60	60'		30	20" 94# 100sx Type I Neat 16ppg cmt	Fresh wtr 8.3-9.2	
Surveys After csg is run	None					12 1/4	9 5/8" 36ppf J55 STC TOC @ surface 178 sks Type III Cmt	Fresh wtr 8.4-8.6	Vertical <1°
			500	500					
Surveys every 500'	No OH logs Mud logger onsite	Ojo Alamo Kirtland Fruitland Coal Pictured Cliffs Ss Lewis Shale Cliffhouse Ss Menefee Fn Point Lookout Ss Mancos Sh KICK OFF PT Mancos Silt Gallup Top 7" csg	902 1049 1292 1420 1531 2206 2922 3810 3986 4279 4511 4776 5005			Stage tool @1470' <			

NOTES:

- 1) Drill with 30" bit to 60', set 20" 94# 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 4279', 8 3/4" hole size,
- 5) PU directional tools and start curve at 10deg/100' build rate
- 6) Drill to casing point of 5222' MD
- 7) R&C 7" casing, circ cmt to surface, switch to OBM
- 8) Land at 90deg, drill 4308' lateral to 9735', run 4 1/2" liner with external swellable csg packers