

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

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

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

OTL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

☐ AMENDED REPORT
☒ As-Drilled

CONFIDENTIAL

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35481	*Pool Code 98080	*Pool Name NAGEEZI UNIT HZ (OIL)
*Property Code 313752	*Property Name NAGEEZI UNIT L27-2409	*Well Number 02H
*OGRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.	*Elevation 6924'

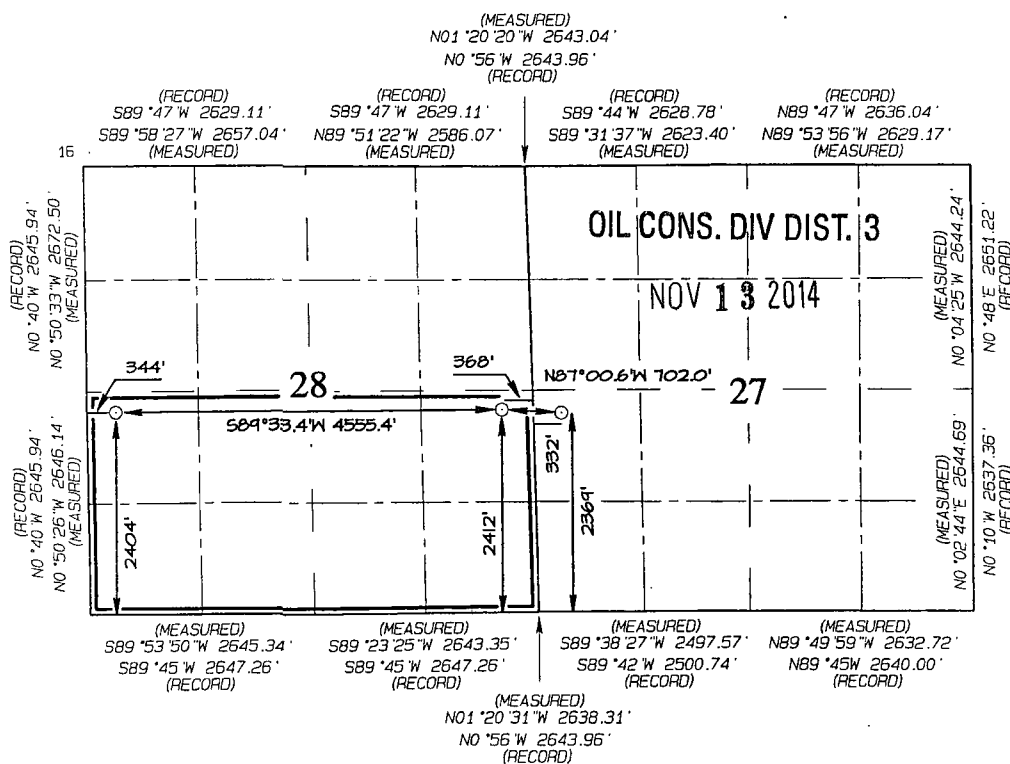
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	27	24N	9W		2369	SOUTH	332	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
L	28	24N	9W		2404	SOUTH	344	WEST	SAN JUAN	
¹² Dedicated Acres					¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.	
320.0 Acres S/2 Section 28									R-13856 9,135.51 Acres	

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



END-OF-LATERAL
2404' FSL 344' FWL
SECTION 28, T24N, R9W
LAT: 36.28434°N
LONG: 107.80163°W
DATUM: NAD1927

LAT: 36.28435°N
LONG: 107.80225°W
DATUM: NAD1983

POINT-OF-ENTRY
2412' FSL 368' FEL
SECTION 28, T24N, R9W
LAT: 36.28443° N
LONG: 107.78618° W
DATUM: NAD1927

LAT: 36.28445° N
LONG: 107.78679° W
DATUM: NAD1983

SURFACE LOCATION
2369' FSL 332' FWL
SECTION 27, T24N, R9W
LAT: 36.28433°N
LONG: 107.78380°W
DATUM: NAD1927

LAT: 36.28434°N
LONG: 107.78441°W
DATUM: NAD1983

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, but a mineral or working interest, or a voluntary pooling agreement or a compulsory pooling order, heretofore entered by the division.

Signature Jessie Dragg Date 4/12/14

Jessica Gregg

Printed Name
Jessica.Gregg@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 21, 2014
Date of Survey: JULY 30, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

FY

16
KO

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6151 Fax: (575) 393-0720

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811 S. First Street, Artesia, NM 88210
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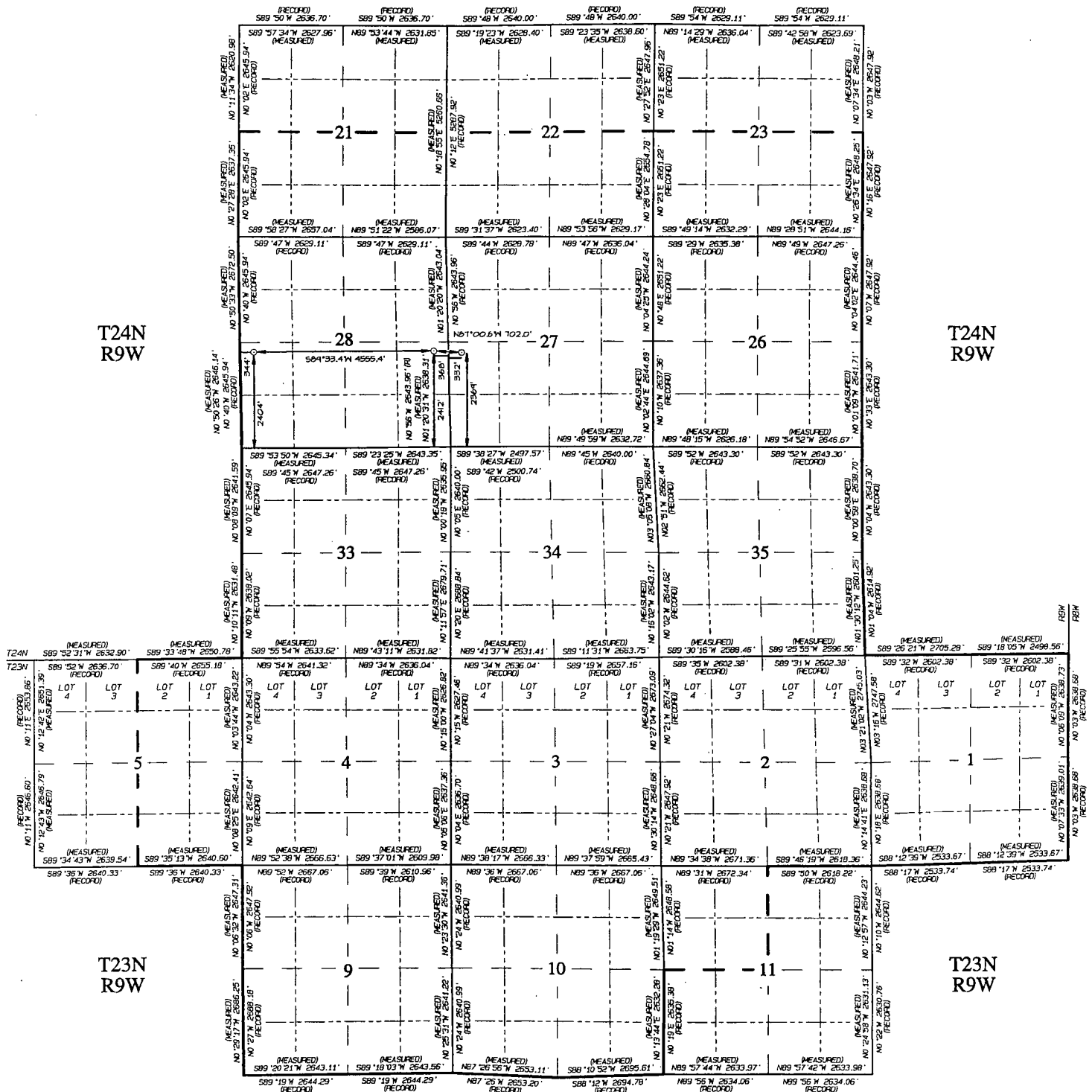
State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

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

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT



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LAT: 36.28434° N
LONG: 107.78441° W
DATUM: NAD1983

DEVIATION SURVEYS
Nageezi Unit L27-2409 02H
30-045-35481

CONFIDENTIAL

MD (Feet)	Inclination (Degree)
777'	0.40
1091'	0.90
1399'	0.80
1706'	0.50
2014'	1.10
2323'	1.50
2640'	1.40
2956'	0.80
3272'	0.50
3588'	0.40
3904'	0.30
4220'	0.04
4472'	1.50
4631'	12.10

OIL CONS. DIV DIST. 3

NOV 13 2014

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Cristi Bauer

Cristi Bauer, Operations Technician

11/12/14

Date

ACKNOWLEDGMENT

State of Colorado
City and County of Denver

This instrument was acknowledged before me on this 12th day of November, 2014 by Cristi Bauer as Operations Technician of Encana Oil & Gas (USA) Inc., authorized agent for Encana Oil & Gas (USA) Inc., on behalf of said corporation.

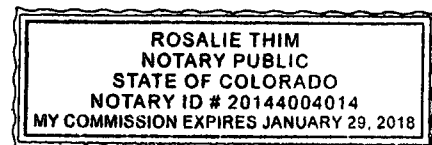
In witness whereof, I hereunto set my hand and official seal.

Notary Public:

Rosalie Thim

My Commission Expires:

1/29/18



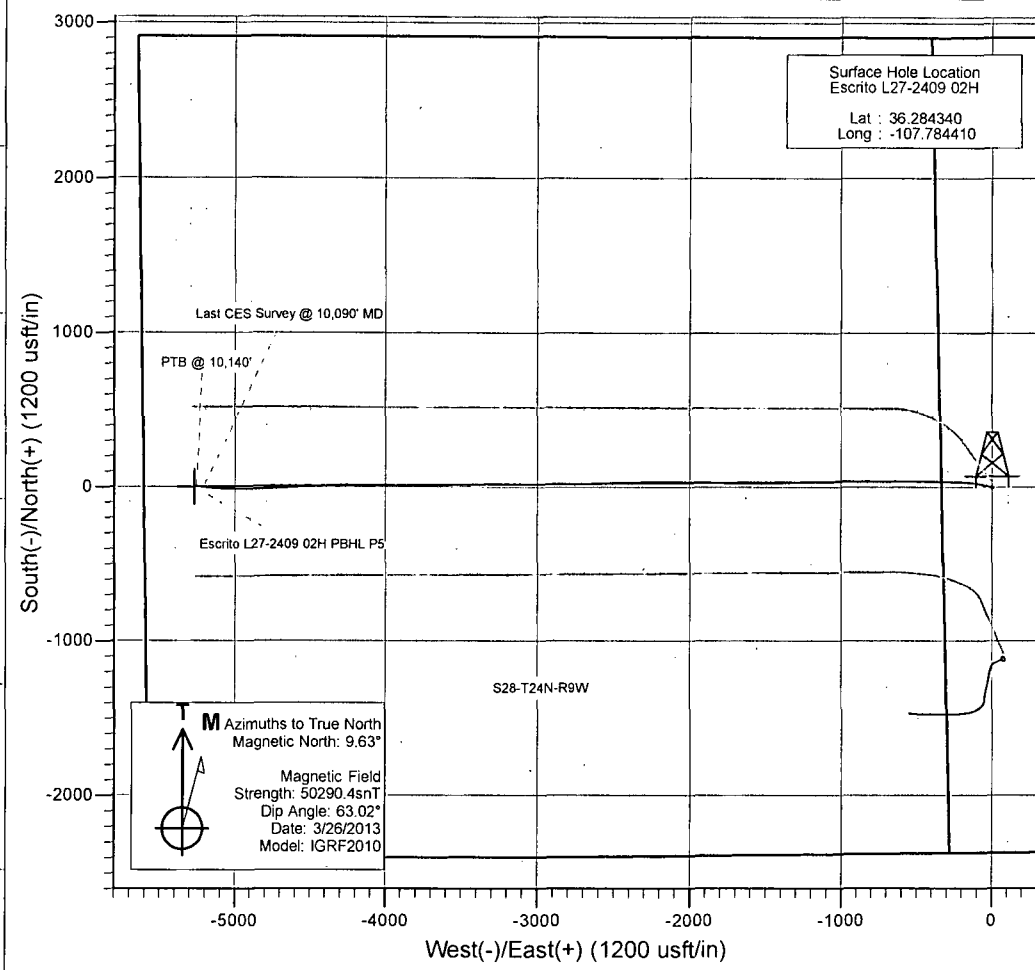
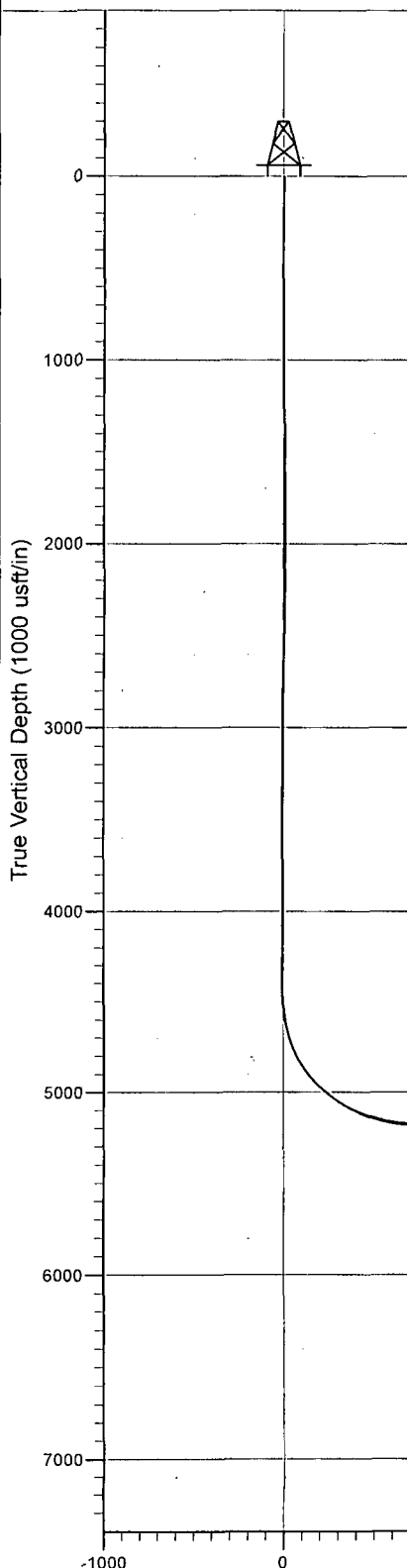
encana

natural gas

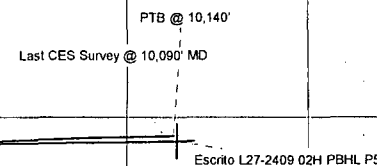
Project: San Juan County, NM
 Site: S27-T24N-R9W
 Well: Escrito L27-2409 02H
 Wellbore: Hz
 Design: FINAL



FINAL
 Escrito L27-2409 02H
 145249/322255; LR
 16' KB @ 6940.0usft (Aztec 950)
 Ground Elevation @ 6924.0
 North American Datum 1983
 Well Escrito L27-2409 02H, True North



DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Escrito L27-2409 02H PBHL P5	0.5	-5272.6	1922800.56	2732237.87	36.284340	-107.802300



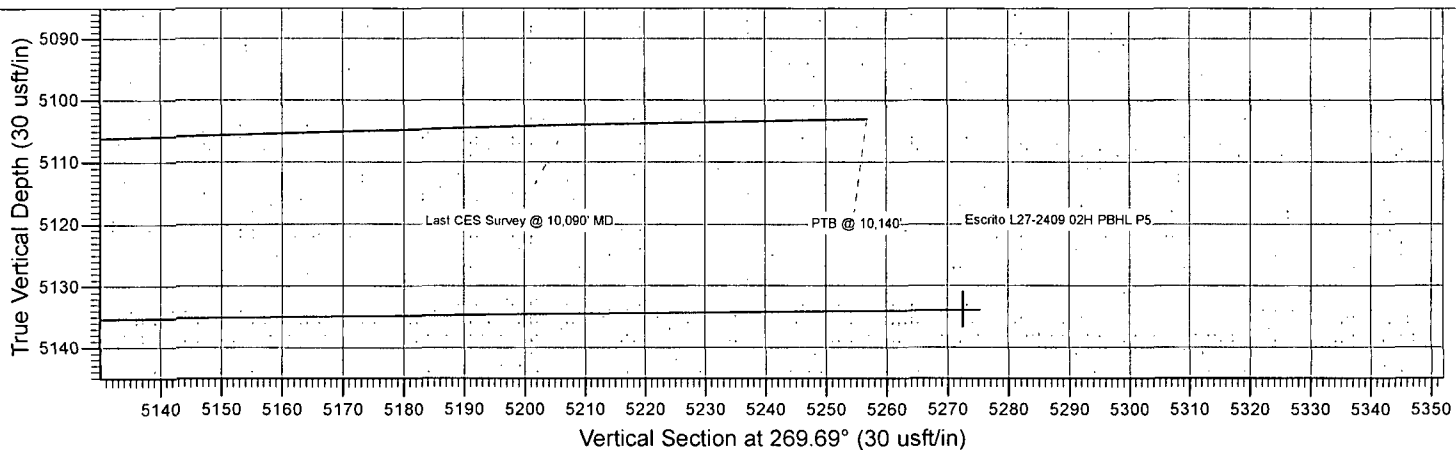
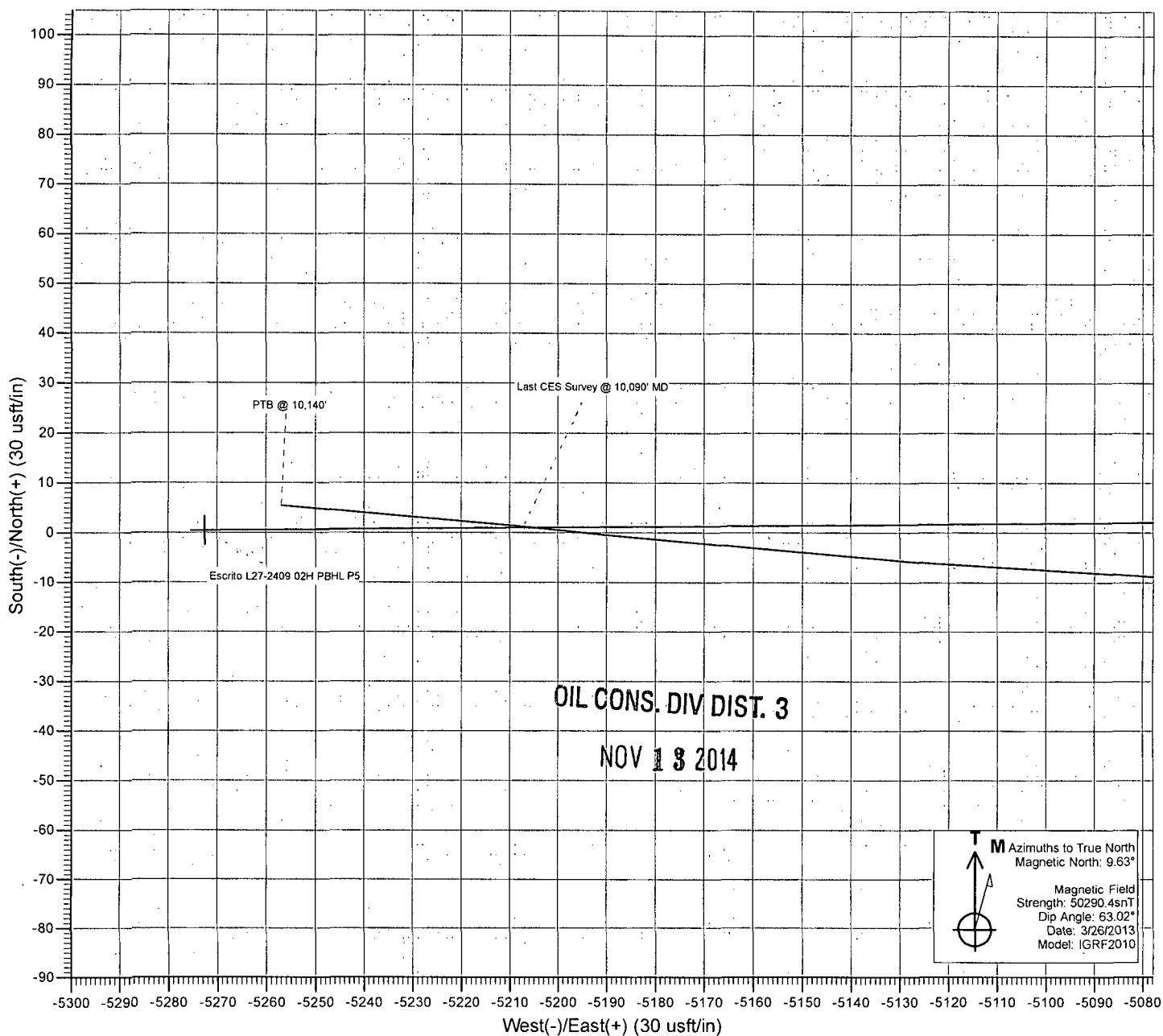
OIL CONS. DIV DIST. 3

NOV 13 2014

Vertical Section at 269.69° (1000 usft/in)



Project: San Juan County, NM
Site: S27-T24N-R9W
Well: Escrito L27-2409 02H
Wellbore: Hz
Design: FINAL



Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S27-T24N-R9W
Well: Escrito L27-2409 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L27-2409 02H
TVD Reference: 16' KB @ 6940.0usft (Aztec 950)
MD Reference: 16' KB @ 6940.0usft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Project	San Juan County, NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	S27-T24N-R9W				
Site Position:		Northing:	1,922,835.50 usft	Latitude:	36.284430
From:	Lat/Long	Easting:	2,737,510.43 usft	Longitude:	-107.784410
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.03 °

Well	Escrito L27-2409 02H					
Well Position	+N/-S	0.0 usft	Northing:	1,922,802.74 usft	Latitude:	36.284340
	+E/-W	0.0 usft	Easting:	2,737,510.45 usft	Longitude:	-107.784410
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,924.0 usft	

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/26/2013	9.63	63.02	50,290

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	269.69	

Survey Program		Date	8/4/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
587.0	10,140.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Formations / Comments
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
587.0	0.10	57.30	587.0	0.3	0.4	-0.4	0.02	0.02	
651.0	0.10	178.90	651.0	0.3	0.5	-0.5	0.27	0.00	
714.0	0.10	207.30	714.0	0.1	0.5	-0.5	0.08	0.00	
777.0	0.40	271.00	777.0	0.1	0.2	-0.2	0.58	0.48	
840.0	0.50	343.20	840.0	0.4	-0.1	0.1	0.85	0.16	
903.0	0.40	286.70	903.0	0.7	-0.4	0.4	0.69	-0.16	
967.0	0.90	312.40	967.0	1.1	-1.0	1.0	0.89	0.78	
1,030.0	0.90	322.90	1,030.0	1.8	-1.6	1.6	0.26	0.00	
1,091.0	0.90	320.90	1,091.0	2.6	-2.2	2.2	0.05	0.00	
1,152.0	0.90	324.60	1,152.0	3.3	-2.8	2.8	0.10	0.00	
1,214.0	1.00	324.10	1,214.0	4.2	-3.4	3.4	0.16	0.16	
1,275.0	1.10	334.40	1,274.9	5.1	-4.0	3.9	0.35	0.16	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
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Well: Escrito L27-2409 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L27-2409 02H
TVD Reference: 16' KB @ 6940.0usft (Aztec 950)
MD Reference: 16' KB @ 6940.0usft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
1,337.0	1.60	329.60	1,336.9	6.4	-4.7	4.6	0.83	0.81	
1,399.0	0.80	216.60	1,398.9	6.8	-5.4	5.3	3.31	-1.29	
1,460.0	0.90	209.60	1,459.9	6.1	-5.8	5.8	0.24	0.16	
1,522.0	0.80	221.80	1,521.9	5.3	-6.4	6.3	0.33	-0.16	
1,583.0	0.80	210.60	1,582.9	4.6	-6.9	6.9	0.26	0.00	
1,645.0	0.50	208.50	1,644.9	4.0	-7.2	7.2	0.49	-0.48	
1,706.0	0.50	194.60	1,705.9	3.5	-7.4	7.4	0.20	0.00	
1,768.0	0.80	221.60	1,767.9	2.9	-7.8	7.8	0.68	0.48	
1,829.0	0.70	213.70	1,828.9	2.3	-8.3	8.3	0.24	-0.16	
1,891.0	1.20	221.90	1,890.9	1.5	-8.9	8.9	0.83	0.81	
1,952.0	1.20	227.70	1,951.9	0.6	-9.8	9.8	0.20	0.00	
2,014.0	1.10	161.20	2,013.9	-0.4	-10.1	10.1	2.04	-0.16	
2,075.0	1.40	138.10	2,074.8	-1.5	-9.4	9.4	0.95	0.49	
2,137.0	1.50	139.70	2,136.8	-2.7	-8.4	8.4	0.17	0.16	
2,198.0	1.60	138.90	2,197.8	-3.9	-7.3	7.3	0.17	0.16	
2,260.0	1.40	149.60	2,259.8	-5.2	-6.3	6.4	0.55	-0.32	
2,323.0	1.50	153.20	2,322.8	-6.6	-5.6	5.6	0.21	0.16	
2,387.0	1.70	167.60	2,386.7	-8.3	-5.0	5.1	0.70	0.31	
2,450.0	1.20	116.40	2,449.7	-9.5	-4.2	4.3	2.11	-0.79	
2,513.0	1.10	102.10	2,512.7	-9.9	-3.0	3.1	0.48	-0.16	
2,576.0	1.30	78.90	2,575.7	-9.9	-1.7	1.8	0.83	0.32	
2,640.0	1.40	68.90	2,639.7	-9.5	-0.3	0.3	0.40	0.16	
2,703.0	1.20	18.60	2,702.7	-8.6	0.6	-0.6	1.78	-0.32	
2,766.0	1.40	15.70	2,765.6	-7.2	1.0	-1.0	0.33	0.32	
2,829.0	1.40	8.80	2,828.6	-5.7	1.4	-1.3	0.27	0.00	
2,893.0	1.40	7.40	2,892.6	-4.2	1.6	-1.6	0.05	0.00	
2,956.0	0.80	346.40	2,955.6	-3.0	1.6	-1.6	1.13	-0.95	
3,019.0	0.80	337.80	3,018.6	-2.2	1.3	-1.3	0.19	0.00	
3,082.0	1.00	344.40	3,081.6	-1.2	1.0	-1.0	0.36	0.32	
3,146.0	0.20	44.60	3,145.6	-0.6	0.9	-0.9	1.43	-1.25	
3,209.0	0.40	131.10	3,208.6	-0.7	1.2	-1.2	0.69	0.32	
3,272.0	0.50	108.50	3,271.6	-0.9	1.6	-1.6	0.32	0.16	
3,335.0	0.60	116.70	3,334.6	-1.1	2.2	-2.2	0.20	0.16	
3,398.0	0.80	127.90	3,397.6	-1.6	2.8	-2.8	0.38	0.32	
3,462.0	1.20	131.40	3,461.5	-2.3	3.7	-3.6	0.63	0.63	
3,525.0	0.40	133.60	3,524.5	-2.9	4.3	-4.3	1.27	-1.27	
3,588.0	0.40	186.00	3,587.5	-3.2	4.4	-4.4	0.56	0.00	
3,651.0	0.30	248.60	3,650.5	-3.5	4.3	-4.3	0.59	-0.16	
3,714.0	0.40	194.80	3,713.5	-3.8	4.1	-4.0	0.52	0.16	
3,778.0	0.20	229.30	3,777.5	-4.1	3.9	-3.9	0.41	-0.31	
3,841.0	0.70	194.50	3,840.5	-4.5	3.7	-3.7	0.87	0.79	
3,904.0	0.30	155.70	3,903.5	-5.0	3.7	-3.7	0.80	-0.63	
3,967.0	0.10	50.60	3,966.5	-5.2	3.8	-3.8	0.54	-0.32	
4,030.0	0.30	266.50	4,029.5	-5.1	3.7	-3.7	0.61	0.32	
4,093.0	0.60	262.90	4,092.5	-5.2	3.2	-3.2	0.48	0.48	
4,157.0	0.50	246.60	4,156.5	-5.3	2.6	-2.6	0.29	-0.16	
4,220.0	0.04	99.50	4,219.5	-5.4	2.4	-2.4	0.85	-0.73	
4,283.0	0.04	267.80	4,282.5	-5.5	2.4	-2.4	0.13	0.00	
4,346.0	0.10	235.90	4,345.5	-5.5	2.3	-2.3	0.11	0.10	
4,409.0	0.30	198.80	4,408.5	-5.7	2.2	-2.2	0.36	0.32	
4,441.0	0.40	171.30	4,440.5	-5.9	2.2	-2.2	0.60	0.31	
4,472.0	1.50	280.80	4,471.5	-5.9	1.8	-1.8	5.41	3.55	
4,504.0	3.70	284.70	4,503.5	-5.6	0.4	-0.4	6.89	6.87	

Cathedral Energy Services

Survey Report

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Wellbore: Hz
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MD Reference: 16' KB @ 6940.0usft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
4,536.0	5.30	289.80	4,535.4	-4.8	-2.0	2.0	5.15	5.00	
4,567.0	6.90	294.00	4,566.2	-3.5	-5.0	5.0	5.35	5.16	
4,599.0	9.50	294.40	4,597.9	-1.7	-9.2	9.2	8.13	8.12	
4,631.0	12.10	292.40	4,629.3	0.7	-14.7	14.7	8.21	8.12	
4,662.0	14.50	290.30	4,659.5	3.3	-21.3	21.3	7.90	7.74	
4,694.0	16.80	289.70	4,690.3	6.2	-29.4	29.4	7.21	7.19	
4,724.0	18.90	289.10	4,718.9	9.3	-38.1	38.1	7.03	7.00	
4,756.0	21.80	286.20	4,748.9	12.6	-48.7	48.7	9.59	9.06	
4,788.0	25.10	284.10	4,778.2	15.9	-61.0	60.9	10.64	10.31	
4,819.0	28.00	281.40	4,805.9	19.0	-74.5	74.4	10.13	9.35	
4,851.0	31.00	278.60	4,833.8	21.7	-90.0	89.9	10.32	9.37	
4,882.0	33.70	277.50	4,860.0	24.0	-106.5	106.3	8.91	8.71	
4,914.0	36.70	277.30	4,886.1	26.4	-124.8	124.6	9.38	9.37	
4,946.0	39.30	275.90	4,911.3	28.7	-144.3	144.2	8.56	8.12	
4,977.0	42.20	274.50	4,934.8	30.5	-164.5	164.3	9.81	9.35	
5,009.0	45.50	272.90	4,957.9	31.9	-186.6	186.4	10.88	10.31	
5,040.0	48.50	271.70	4,979.0	32.8	-209.2	209.1	10.08	9.68	
5,072.0	50.30	271.00	4,999.9	33.4	-233.5	233.4	5.87	5.62	
5,104.0	52.20	271.50	5,019.9	33.9	-258.5	258.3	6.06	5.94	
5,135.0	54.40	271.60	5,038.4	34.6	-283.3	283.1	7.10	7.10	
5,167.0	56.60	271.00	5,056.5	35.2	-309.7	309.5	7.05	6.87	
5,198.0	59.80	270.80	5,072.9	35.6	-336.0	335.8	10.34	10.32	
5,230.0	62.80	271.20	5,088.2	36.1	-364.1	363.9	9.44	9.37	
5,261.0	65.90	271.90	5,101.6	36.9	-392.0	391.8	10.20	10.00	
5,293.0	68.40	271.00	5,114.1	37.6	-421.5	421.3	8.23	7.81	
5,324.0	70.60	271.70	5,124.9	38.3	-450.5	450.3	7.41	7.10	
5,356.0	72.40	271.20	5,135.1	39.0	-480.9	480.6	5.82	5.62	
5,388.0	74.70	270.80	5,144.1	39.6	-511.5	511.3	7.29	7.19	
5,419.0	76.20	270.30	5,151.9	39.9	-541.6	541.3	5.08	4.84	
5,451.0	78.30	270.10	5,159.0	40.0	-572.8	572.5	6.59	6.56	
5,481.0	81.00	269.60	5,164.4	39.9	-602.3	602.0	9.15	9.00	
5,504.0	82.50	268.60	5,167.7	39.5	-625.0	624.8	7.82	6.52	
5,535.0	84.20	269.00	5,171.3	38.9	-655.8	655.6	5.63	5.48	
5,565.0	85.70	269.60	5,173.9	38.5	-685.7	685.5	5.38	5.00	
5,596.0	87.90	270.20	5,175.6	38.5	-716.6	716.4	7.36	7.10	
5,627.0	88.60	270.80	5,176.6	38.8	-747.6	747.4	2.97	2.26	
5,657.0	88.50	270.00	5,177.3	39.0	-777.6	777.4	2.69	-0.33	
5,688.0	88.70	269.80	5,178.1	38.9	-808.6	808.4	0.91	0.65	
5,750.0	89.20	268.40	5,179.2	37.9	-870.6	870.4	2.40	0.81	
5,811.0	91.70	271.10	5,178.8	37.7	-931.6	931.3	6.03	4.10	
5,873.0	90.90	271.20	5,177.4	38.9	-993.5	993.3	1.30	-1.29	
5,934.0	90.80	270.30	5,176.4	39.7	-1,054.5	1,054.3	1.48	-0.16	
5,996.0	89.60	268.00	5,176.2	38.8	-1,116.5	1,116.3	4.18	-1.94	
6,057.0	91.10	269.40	5,175.9	37.4	-1,177.5	1,177.3	3.36	2.46	
6,119.0	90.30	268.50	5,175.1	36.3	-1,239.5	1,239.3	1.94	-1.29	
6,180.0	90.50	267.60	5,174.7	34.2	-1,300.4	1,300.2	1.51	0.33	
6,242.0	91.50	268.90	5,173.6	32.3	-1,362.4	1,362.2	2.65	1.61	
6,303.0	90.40	267.40	5,172.6	30.3	-1,423.3	1,423.2	3.05	-1.80	
6,365.0	91.60	268.90	5,171.5	28.3	-1,485.3	1,485.1	3.10	1.94	
6,426.0	90.20	268.60	5,170.5	27.0	-1,546.3	1,546.1	2.35	-2.30	
6,488.0	90.40	269.20	5,170.2	25.8	-1,608.3	1,608.1	1.02	0.32	
6,550.0	91.50	271.70	5,169.2	26.3	-1,670.2	1,670.1	4.40	1.77	
6,611.0	90.80	271.70	5,168.0	28.1	-1,731.2	1,731.0	1.15	-1.15	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S27-T24N-R9W
Well: Escrito L27-2409 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L27-2409 02H
TVD Reference: 16' KB @ 6940.0usft (Aztec 950)
MD Reference: 16' KB @ 6940.0usft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
6,673.0	90.60	271.30	5,167.2	29.7	-1,793.2	1,793.0	0.72	-0.32	
6,734.0	90.80	272.40	5,166.5	31.7	-1,854.1	1,853.9	1.83	0.33	
6,796.0	89.90	271.80	5,166.1	34.0	-1,916.1	1,915.9	1.74	-1.45	
6,857.0	88.80	271.50	5,166.8	35.7	-1,977.1	1,976.9	1.87	-1.80	
6,920.0	87.50	270.70	5,168.8	36.9	-2,040.0	2,039.8	2.42	-2.06	
6,984.0	89.80	270.10	5,170.3	37.4	-2,104.0	2,103.8	3.71	3.59	
7,047.0	89.60	269.10	5,170.6	36.9	-2,167.0	2,166.8	1.62	-0.32	
7,110.0	92.60	270.90	5,169.4	36.9	-2,230.0	2,229.7	5.55	4.76	
7,173.0	90.10	268.10	5,168.0	36.4	-2,293.0	2,292.7	5.96	-3.97	
7,236.0	91.80	269.50	5,166.9	35.1	-2,355.9	2,355.7	3.50	2.70	
7,299.0	91.50	267.30	5,165.1	33.3	-2,418.9	2,418.7	3.52	-0.48	
7,363.0	91.50	266.50	5,163.4	29.9	-2,482.8	2,482.6	1.25	0.00	
7,426.0	90.90	266.00	5,162.1	25.7	-2,545.6	2,545.4	1.24	-0.95	
7,489.0	91.00	268.80	5,161.1	22.9	-2,608.5	2,608.4	4.45	0.16	
7,552.0	90.60	269.50	5,160.2	21.9	-2,671.5	2,671.4	1.28	-0.63	
7,615.0	89.80	268.90	5,160.0	21.1	-2,734.5	2,734.4	1.59	-1.27	
7,678.0	92.10	270.90	5,158.9	21.0	-2,797.5	2,797.3	4.84	3.65	
7,742.0	90.00	268.10	5,157.7	20.4	-2,861.5	2,861.3	5.47	-3.28	
7,805.0	91.60	271.00	5,156.9	19.9	-2,924.5	2,924.3	5.26	2.54	
7,868.0	91.50	269.70	5,155.2	20.3	-2,987.4	2,987.3	2.07	-0.16	
7,931.0	91.10	270.40	5,153.7	20.3	-3,050.4	3,050.3	1.28	-0.63	
7,994.0	90.70	269.50	5,152.7	20.3	-3,113.4	3,113.3	1.56	-0.63	
8,057.0	92.40	270.90	5,151.0	20.5	-3,176.4	3,176.2	3.50	2.70	
8,119.0	89.60	269.80	5,150.0	20.9	-3,238.4	3,238.2	4.85	-4.52	
8,182.0	88.70	268.90	5,150.9	20.2	-3,301.3	3,301.2	2.02	-1.43	
8,245.0	88.50	268.10	5,152.4	18.5	-3,364.3	3,364.2	1.31	-0.32	
8,308.0	90.30	268.80	5,153.1	16.8	-3,427.3	3,427.1	3.07	2.86	
8,371.0	91.80	268.90	5,151.9	15.6	-3,490.3	3,490.1	2.39	2.38	
8,434.0	91.50	269.60	5,150.1	14.7	-3,553.2	3,553.1	1.21	-0.48	
8,497.0	93.90	269.70	5,147.1	14.3	-3,616.1	3,616.0	3.81	3.81	
8,560.0	93.30	269.80	5,143.2	14.1	-3,679.0	3,678.9	0.97	-0.95	
8,622.0	88.90	268.60	5,142.0	13.2	-3,741.0	3,740.9	7.36	-7.10	
8,685.0	89.40	268.70	5,142.9	11.7	-3,804.0	3,803.8	0.81	0.79	
8,748.0	90.20	269.90	5,143.2	10.9	-3,867.0	3,866.8	2.29	1.27	
8,811.0	92.80	272.00	5,141.5	12.0	-3,929.9	3,929.8	5.30	4.13	
8,873.0	92.40	271.50	5,138.7	13.9	-3,991.8	3,991.7	1.03	-0.65	
8,936.0	90.00	268.00	5,137.4	13.6	-4,054.8	4,054.7	6.73	-3.81	
8,999.0	90.40	269.20	5,137.2	12.1	-4,117.8	4,117.6	2.01	0.63	
9,061.0	91.20	270.20	5,136.3	11.7	-4,179.7	4,179.6	2.07	1.29	
9,124.0	91.20	269.70	5,135.0	11.7	-4,242.7	4,242.6	0.79	0.00	
9,187.0	92.20	269.30	5,133.1	11.1	-4,305.7	4,305.6	1.71	1.59	
9,250.0	92.70	269.30	5,130.4	10.4	-4,368.6	4,368.5	0.79	0.79	
9,313.0	91.60	267.40	5,128.0	8.6	-4,431.6	4,431.5	3.48	-1.75	
9,377.0	91.60	265.80	5,126.3	4.8	-4,495.4	4,495.3	2.50	0.00	
9,440.0	92.50	267.30	5,124.0	1.0	-4,558.3	4,558.2	2.78	1.43	
9,503.0	93.10	266.70	5,120.9	-2.3	-4,621.1	4,621.1	1.35	0.95	
9,566.0	91.70	265.90	5,118.3	-6.4	-4,683.9	4,683.9	2.56	-2.22	
9,629.0	91.60	267.60	5,116.5	-10.0	-4,746.8	4,746.8	2.70	-0.16	
9,693.0	91.50	268.60	5,114.7	-12.1	-4,810.7	4,810.7	1.57	-0.16	
9,756.0	91.80	268.60	5,112.9	-13.6	-4,873.7	4,873.7	0.48	0.48	
9,819.0	91.50	270.80	5,111.1	-13.9	-4,936.7	4,936.7	3.52	-0.48	
9,882.0	91.50	272.10	5,109.5	-12.3	-4,999.6	4,999.6	2.06	0.00	
9,945.0	91.50	272.90	5,107.8	-9.6	-5,062.5	5,062.5	1.27	0.00	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S27-T24N-R9W
Well: Escrito L27-2409 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L27-2409 02H
TVD Reference: 16' KB @ 6940.0usft (Aztec 950)
MD Reference: 16' KB @ 6940.0usft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
10,009.0	91.30	273.90	5,106.3	-5.8	-5,126.4	5,126.4	1.59	-0.31	
10,072.0	91.90	275.90	5,104.5	-0.4	-5,189.2	5,189.1	3.31	0.95	
10,090.0	91.10	274.90	5,104.0	1.3	-5,207.1	5,207.0	7.11	-4.44	Last CES Survey @ 10,090' MD
10,140.0	91.10	274.90	5,103.1	5.5	-5,256.9	5,256.8	0.00	0.00	PTB @ 10,140'

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Escrito L27-2409 02H PI - actual wellpath misses target center by 238.5usft at 10140.0usft MD (5103.1 TVD, 5.5 N, -5256.9 E) - Point	0.00	0.00	4,913.8	149.7	-5,272.5	1,922,949.81	2,732,237.82	36.284750	-107.802300
Escrito L27-2409 02H PI - actual wellpath misses target center by 251.2usft at 5518.0usft MD (5169.4 TVD, 39.2 N, -639.0 E) - Point	0.00	0.00	4,962.0	178.4	-666.1	1,922,980.78	2,736,844.29	36.284830	-107.786670
Escrito L27-2409 02H PI - actual wellpath misses target center by 19.4usft at 10140.0usft MD (5103.1 TVD, 5.5 N, -5256.9 E) - Point	0.00	0.00	5,092.8	0.5	-5,272.6	1,922,800.56	2,732,237.87	36.284340	-107.802300
Escrito L27-2409 02H PI - actual wellpath misses target center by 34.9usft at 10140.0usft MD (5103.1 TVD, 5.5 N, -5256.9 E) - Point	0.00	0.00	5,133.8	0.5	-5,272.6	1,922,800.56	2,732,237.87	36.284340	-107.802300
Escrito L27-2409 02H PI - actual wellpath misses target center by 17.2usft at 5541.5usft MD (5171.9 TVD, 38.8 N, -662.3 E) - Point	0.00	0.00	5,161.0	25.5	-663.1	1,922,827.89	2,736,847.31	36.284410	-107.786660
Escrito L27-2409 02H PI - actual wellpath misses target center by 33.6usft at 5539.8usft MD (5171.7 TVD, 38.8 N, -660.6 E) - Point	0.00	0.00	5,141.0	25.5	-663.1	1,922,827.89	2,736,847.31	36.284410	-107.786660
Escrito L27-2409 02H PI - actual wellpath misses target center by 16.6usft at 5543.4usft MD (5172.1 TVD, 38.8 N, -664.2 E) - Point	0.00	0.00	5,182.0	25.5	-663.1	1,922,827.89	2,736,847.31	36.284410	-107.786660
Escrito L27-2409 02H PI - actual wellpath misses target center by 19.1usft at 10140.0usft MD (5103.1 TVD, 5.5 N, -5256.9 E) - Point	0.00	0.00	5,112.7	0.5	-5,272.6	1,922,800.56	2,732,237.87	36.284340	-107.802300

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
10,090.0	5,104.0	1.3	-5,207.1	Last CES Survey @ 10,090' MD
10,140.0	5,103.1	5.5	-5,256.9	PTB @ 10,140'

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

San Juan County, NM

S27-T24N-R9W

Escrito L27-2409 02H

Hz

Design: FINAL

Survey Report - Geographic

04 August, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L27-2409 02H
Project:	San Juan County, NM	TVD Reference:	16' KB @ 6940.0usft (Aztec 950)
Site:	S27-T24N-R9W	MD Reference:	16' KB @ 6940.0usft (Aztec 950)
Well:	Escrito L27-2409 02H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	San Juan County, NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	S27-T24N-R9W				
Site Position:		Northing:	1,922,835.50 usft	Latitude:	36.284430
From:	Lat/Long	Easting:	2,737,510.43 usft	Longitude:	-107.784410
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.03 °

Well	Escrito L27-2409 02H					
Well Position	+N/-S	0.0 usft	Northing:	1,922,802.74 usft	Latitude:	36.284340
	+E/-W	0.0 usft	Easting:	2,737,510.45 usft	Longitude:	-107.784410
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,924.0 usft	

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/26/2013	9.63	63.02	50,290

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	269.69	

Survey Program		Date	8/4/2014	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
587.0	10,140.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,922,802.74	2,737,510.45	36.284340	-107.784410
587.0	0.10	57.30	587.0	0.3	0.4	1,922,803.02	2,737,510.88	36.284341	-107.784409
651.0	0.10	178.90	651.0	0.3	0.5	1,922,802.99	2,737,510.93	36.284341	-107.784409
714.0	0.10	207.30	714.0	0.1	0.5	1,922,802.89	2,737,510.90	36.284340	-107.784409
777.0	0.40	271.00	777.0	0.1	0.2	1,922,802.84	2,737,510.66	36.284340	-107.784410
840.0	0.50	343.20	840.0	0.4	-0.1	1,922,803.11	2,737,510.36	36.284341	-107.784411
903.0	0.40	286.70	903.0	0.7	-0.4	1,922,803.44	2,737,510.07	36.284342	-107.784412
967.0	0.90	312.40	967.0	1.1	-1.0	1,922,803.84	2,737,509.48	36.284343	-107.784414
1,030.0	0.90	322.90	1,030.0	1.8	-1.6	1,922,804.57	2,737,508.82	36.284345	-107.784416
1,091.0	0.90	320.90	1,091.0	2.6	-2.2	1,922,805.32	2,737,508.23	36.284347	-107.784418
1,152.0	0.90	324.60	1,152.0	3.3	-2.8	1,922,806.08	2,737,507.65	36.284349	-107.784420
1,214.0	1.00	324.10	1,214.0	4.2	-3.4	1,922,806.92	2,737,507.05	36.284352	-107.784422

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S27-T24N-R9W
Well: Escrito L27-2409 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L27-2409 02H
TVD Reference: 16' KB @ 6940.0usft (Aztec 950)
MD Reference: 16' KB @ 6940.0usft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,275.0	1.10	334.40	1,274.9	5.1	-4.0	1,922,807.88	2,737,506.48	36.284354	-107.784424
1,337.0	1.60	329.60	1,336.9	6.4	-4.7	1,922,809.16	2,737,505.79	36.284358	-107.784426
1,399.0	0.80	216.60	1,398.9	6.8	-5.4	1,922,809.56	2,737,505.09	36.284359	-107.784428
1,460.0	0.90	209.60	1,459.9	6.1	-5.8	1,922,808.80	2,737,504.60	36.284357	-107.784430
1,522.0	0.80	221.80	1,521.9	5.3	-6.4	1,922,808.05	2,737,504.07	36.284355	-107.784432
1,583.0	0.80	210.60	1,582.9	4.6	-6.9	1,922,807.37	2,737,503.57	36.284353	-107.784434
1,645.0	0.50	208.50	1,644.9	4.0	-7.2	1,922,806.76	2,737,503.22	36.284351	-107.784435
1,706.0	0.50	194.60	1,705.9	3.5	-7.4	1,922,806.27	2,737,503.03	36.284350	-107.784435
1,768.0	0.80	221.60	1,767.9	2.9	-7.8	1,922,805.68	2,737,502.67	36.284348	-107.784437
1,829.0	0.70	213.70	1,828.9	2.3	-8.3	1,922,805.05	2,737,502.18	36.284346	-107.784438
1,891.0	1.20	221.90	1,890.9	1.5	-8.9	1,922,804.25	2,737,501.54	36.284344	-107.784440
1,952.0	1.20	227.70	1,951.9	0.6	-9.8	1,922,803.35	2,737,500.64	36.284342	-107.784444
2,014.0	1.10	161.20	2,013.9	-0.4	-10.1	1,922,802.35	2,737,500.35	36.284339	-107.784445
2,075.0	1.40	138.10	2,074.8	-1.5	-9.4	1,922,801.24	2,737,501.04	36.284336	-107.784442
2,137.0	1.50	139.70	2,136.8	-2.7	-8.4	1,922,800.06	2,737,502.07	36.284333	-107.784439
2,198.0	1.60	138.90	2,197.8	-3.9	-7.3	1,922,798.81	2,737,503.15	36.284329	-107.784435
2,260.0	1.40	149.60	2,259.8	-5.2	-6.3	1,922,797.50	2,737,504.10	36.284326	-107.784432
2,323.0	1.50	153.20	2,322.8	-6.6	-5.6	1,922,796.10	2,737,504.86	36.284322	-107.784429
2,387.0	1.70	167.60	2,386.7	-8.3	-5.0	1,922,794.43	2,737,505.45	36.284317	-107.784427
2,450.0	1.20	116.40	2,449.7	-9.5	-4.2	1,922,793.22	2,737,506.24	36.284314	-107.784425
2,513.0	1.10	102.10	2,512.7	-9.9	-3.0	1,922,792.80	2,737,507.42	36.284313	-107.784421
2,576.0	1.30	78.90	2,575.7	-9.9	-1.7	1,922,792.81	2,737,508.71	36.284313	-107.784416
2,640.0	1.40	68.90	2,639.7	-9.5	-0.3	1,922,793.24	2,737,510.15	36.284314	-107.784411
2,703.0	1.20	18.60	2,702.7	-8.6	0.6	1,922,794.14	2,737,511.08	36.284316	-107.784408
2,766.0	1.40	15.70	2,765.6	-7.2	1.0	1,922,795.50	2,737,511.50	36.284320	-107.784407
2,829.0	1.40	8.80	2,828.6	-5.7	1.4	1,922,797.01	2,737,511.83	36.284324	-107.784406
2,893.0	1.40	7.40	2,892.6	-4.2	1.6	1,922,798.55	2,737,512.04	36.284329	-107.784405
2,956.0	0.80	346.40	2,955.6	-3.0	1.6	1,922,799.74	2,737,512.04	36.284332	-107.784405
3,019.0	0.80	337.80	3,018.6	-2.2	1.3	1,922,800.58	2,737,511.77	36.284334	-107.784406
3,082.0	1.00	344.40	3,081.6	-1.2	1.0	1,922,801.52	2,737,511.46	36.284337	-107.784407
3,146.0	0.20	44.60	3,145.6	-0.6	0.9	1,922,802.13	2,737,511.38	36.284338	-107.784407
3,209.0	0.40	131.10	3,208.6	-0.7	1.2	1,922,802.07	2,737,511.63	36.284338	-107.784406
3,272.0	0.50	108.50	3,271.6	-0.9	1.6	1,922,801.84	2,737,512.05	36.284338	-107.784405
3,335.0	0.60	116.70	3,334.6	-1.1	2.2	1,922,801.60	2,737,512.61	36.284337	-107.784403
3,398.0	0.80	127.90	3,397.6	-1.6	2.8	1,922,801.18	2,737,513.25	36.284336	-107.784401
3,462.0	1.20	131.40	3,461.5	-2.3	3.7	1,922,800.47	2,737,514.11	36.284334	-107.784398
3,525.0	0.40	133.60	3,524.5	-2.9	4.3	1,922,799.88	2,737,514.76	36.284332	-107.784396
3,588.0	0.40	186.00	3,587.5	-3.2	4.4	1,922,799.51	2,737,514.90	36.284331	-107.784395
3,651.0	0.30	248.60	3,650.5	-3.5	4.3	1,922,799.23	2,737,514.72	36.284330	-107.784396
3,714.0	0.40	194.80	3,713.5	-3.8	4.1	1,922,798.96	2,737,514.51	36.284330	-107.784396
3,778.0	0.20	229.30	3,777.5	-4.1	3.9	1,922,798.67	2,737,514.37	36.284329	-107.784397
3,841.0	0.70	194.50	3,840.5	-4.5	3.7	1,922,798.22	2,737,514.19	36.284328	-107.784398
3,904.0	0.30	155.70	3,903.5	-5.0	3.7	1,922,797.70	2,737,514.16	36.284326	-107.784398
3,967.0	0.10	50.60	3,966.5	-5.2	3.8	1,922,797.58	2,737,514.27	36.284326	-107.784397
4,030.0	0.30	266.50	4,029.5	-5.1	3.7	1,922,797.61	2,737,514.15	36.284326	-107.784398
4,093.0	0.60	262.90	4,092.5	-5.2	3.2	1,922,797.56	2,737,513.66	36.284326	-107.784399
4,157.0	0.50	246.60	4,156.5	-5.3	2.6	1,922,797.41	2,737,513.07	36.284325	-107.784401
4,220.0	0.04	99.50	4,219.5	-5.4	2.4	1,922,797.29	2,737,512.84	36.284325	-107.784402
4,283.0	0.04	267.80	4,282.5	-5.5	2.4	1,922,797.29	2,737,512.84	36.284325	-107.784402
4,346.0	0.10	235.90	4,345.5	-5.5	2.3	1,922,797.26	2,737,512.77	36.284325	-107.784402
4,409.0	0.30	198.80	4,408.5	-5.7	2.2	1,922,797.07	2,737,512.67	36.284325	-107.784403
4,441.0	0.40	171.30	4,440.5	-5.9	2.2	1,922,796.88	2,737,512.66	36.284324	-107.784403
4,472.0	1.50	280.80	4,471.5	-5.9	1.8	1,922,796.85	2,737,512.28	36.284324	-107.784404
4,504.0	3.70	284.70	4,503.5	-5.6	0.4	1,922,797.19	2,737,510.87	36.284325	-107.784409
4,536.0	5.30	289.80	4,535.4	-4.8	-2.0	1,922,797.95	2,737,508.48	36.284327	-107.784417

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S27-T24N-R9W
Well: Escrito L27-2409 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L27-2409 02H
TVD Reference: 16' KB @ 6940.0usft (Aztec 950)
MD Reference: 16' KB @ 6940.0usft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,567.0	6.90	294.00	4,566.2	-3.5	-5.0	1,922,799.19	2,737,505.43	36.284330	-107.784427
4,599.0	9.50	294.40	4,597.9	-1.7	-9.2	1,922,801.06	2,737,501.27	36.284335	-107.784441
4,631.0	12.10	292.40	4,629.3	0.7	-14.7	1,922,803.43	2,737,495.76	36.284342	-107.784460
4,662.0	14.50	290.30	4,659.5	3.3	-21.3	1,922,806.01	2,737,489.11	36.284349	-107.784483
4,694.0	16.80	289.70	4,690.3	6.2	-29.4	1,922,808.95	2,737,481.00	36.284357	-107.784510
4,724.0	18.90	289.10	4,718.9	9.3	-38.1	1,922,812.00	2,737,472.32	36.284366	-107.784540
4,756.0	21.80	286.20	4,748.9	12.6	-48.7	1,922,815.35	2,737,461.72	36.284375	-107.784576
4,788.0	25.10	284.10	4,778.2	15.9	-61.0	1,922,818.66	2,737,449.42	36.284384	-107.784617
4,819.0	28.00	281.40	4,805.9	19.0	-74.5	1,922,821.69	2,737,435.91	36.284392	-107.784663
4,851.0	31.00	278.60	4,833.8	21.7	-90.0	1,922,824.40	2,737,420.39	36.284400	-107.784716
4,882.0	33.70	277.50	4,860.0	24.0	-106.5	1,922,826.71	2,737,403.97	36.284406	-107.784772
4,914.0	36.70	277.30	4,886.1	26.4	-124.8	1,922,829.07	2,737,385.68	36.284413	-107.784834
4,946.0	39.30	275.90	4,911.3	28.7	-144.3	1,922,831.32	2,737,366.11	36.284419	-107.784900
4,977.0	42.20	274.50	4,934.8	30.5	-164.5	1,922,833.14	2,737,345.95	36.284424	-107.784968
5,009.0	45.50	272.90	4,957.9	31.9	-186.6	1,922,834.55	2,737,323.84	36.284428	-107.785043
5,040.0	48.50	271.70	4,979.0	32.8	-209.2	1,922,835.44	2,737,301.18	36.284430	-107.785120
5,072.0	50.30	271.00	4,999.9	33.4	-233.5	1,922,836.00	2,737,276.90	36.284432	-107.785203
5,104.0	52.20	271.50	5,019.9	33.9	-258.5	1,922,836.53	2,737,251.95	36.284433	-107.785287
5,135.0	54.40	271.60	5,038.4	34.6	-283.3	1,922,837.19	2,737,227.10	36.284435	-107.785372
5,167.0	56.60	271.00	5,056.5	35.2	-309.7	1,922,837.77	2,737,200.74	36.284437	-107.785461
5,198.0	59.80	270.80	5,072.9	35.6	-336.0	1,922,838.17	2,737,174.40	36.284438	-107.785550
5,230.0	62.80	271.20	5,088.2	36.1	-364.1	1,922,838.65	2,737,146.34	36.284439	-107.785646
5,261.0	65.90	271.90	5,101.6	36.9	-392.0	1,922,839.40	2,737,118.40	36.284441	-107.785740
5,293.0	68.40	271.00	5,114.1	37.6	-421.5	1,922,840.12	2,737,088.93	36.284443	-107.785840
5,324.0	70.60	271.70	5,124.9	38.3	-450.5	1,922,840.80	2,737,059.90	36.284445	-107.785939
5,356.0	72.40	271.20	5,135.1	39.0	-480.9	1,922,841.55	2,737,029.56	36.284447	-107.786042
5,388.0	74.70	270.80	5,144.1	39.6	-511.5	1,922,842.07	2,736,998.88	36.284449	-107.786146
5,419.0	76.20	270.30	5,151.9	39.9	-541.6	1,922,842.34	2,736,968.88	36.284450	-107.786248
5,451.0	78.30	270.10	5,159.0	40.0	-572.8	1,922,842.43	2,736,937.67	36.284450	-107.786354
5,481.0	81.00	269.60	5,164.4	39.9	-602.3	1,922,842.34	2,736,908.16	36.284450	-107.786454
5,504.0	82.50	268.60	5,167.7	39.5	-625.0	1,922,841.97	2,736,885.41	36.284449	-107.786531
5,535.0	84.20	269.00	5,171.3	38.9	-655.8	1,922,841.31	2,736,854.63	36.284447	-107.786635
5,565.0	85.70	269.60	5,173.9	38.5	-685.7	1,922,840.93	2,736,824.75	36.284446	-107.786737
5,596.0	87.90	270.20	5,175.6	38.5	-716.6	1,922,840.86	2,736,793.80	36.284446	-107.786842
5,627.0	88.60	270.80	5,176.6	38.8	-747.6	1,922,841.11	2,736,762.82	36.284447	-107.786947
5,657.0	88.50	270.00	5,177.3	39.0	-777.6	1,922,841.31	2,736,732.83	36.284447	-107.787049
5,688.0	88.70	269.80	5,178.1	38.9	-808.6	1,922,841.24	2,736,701.84	36.284447	-107.787154
5,750.0	89.20	268.40	5,179.2	37.9	-870.6	1,922,840.23	2,736,639.86	36.284444	-107.787364
5,811.0	91.70	271.10	5,178.8	37.7	-931.6	1,922,839.94	2,736,578.87	36.284444	-107.787571
5,873.0	90.90	271.20	5,177.4	38.9	-993.5	1,922,841.15	2,736,516.90	36.284447	-107.787781
5,934.0	90.80	270.30	5,176.4	39.7	-1,054.5	1,922,841.92	2,736,455.91	36.284449	-107.787988
5,996.0	89.60	268.00	5,176.2	38.8	-1,116.5	1,922,840.97	2,736,393.92	36.284447	-107.788199
6,057.0	91.10	269.40	5,175.9	37.4	-1,177.5	1,922,839.55	2,736,332.94	36.284443	-107.788406
6,119.0	90.30	268.50	5,175.1	36.3	-1,239.5	1,922,838.38	2,736,270.96	36.284440	-107.788616
6,180.0	90.50	267.60	5,174.7	34.2	-1,300.4	1,922,836.28	2,736,210.00	36.284434	-107.788823
6,242.0	91.50	268.90	5,173.6	32.3	-1,362.4	1,922,834.35	2,736,148.04	36.284429	-107.789033
6,303.0	90.40	267.40	5,172.6	30.3	-1,423.3	1,922,832.35	2,736,087.08	36.284423	-107.789240
6,365.0	91.60	268.90	5,171.5	28.3	-1,485.3	1,922,830.32	2,736,025.13	36.284418	-107.789450
6,426.0	90.20	268.60	5,170.5	27.0	-1,546.3	1,922,828.96	2,735,964.16	36.284414	-107.789657
6,488.0	90.40	269.20	5,170.2	25.8	-1,608.3	1,922,827.74	2,735,902.17	36.284411	-107.789867
6,550.0	91.50	271.70	5,169.2	26.3	-1,670.2	1,922,828.19	2,735,840.18	36.284412	-107.790077
6,611.0	90.80	271.70	5,168.0	28.1	-1,731.2	1,922,829.97	2,735,779.22	36.284417	-107.790284
6,673.0	90.60	271.30	5,167.2	29.7	-1,793.2	1,922,831.56	2,735,717.25	36.284422	-107.790495
6,734.0	90.80	272.40	5,166.5	31.7	-1,854.1	1,922,833.50	2,735,656.29	36.284427	-107.790701
6,796.0	89.90	271.80	5,166.1	34.0	-1,916.1	1,922,835.74	2,735,594.33	36.284433	-107.790912

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S27-T24N-R9W
Well: Escrito L27-2409 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L27-2409 02H
TVD Reference: 16' KB @ 6940.0usft (Aztec 950)
MD Reference: 16' KB @ 6940.0usft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,857.0	88.80	271.50	5,166.8	35.7	-1,977.1	1,922,837.47	2,735,533.36	36.284438	-107.791119
6,920.0	87.50	270.70	5,168.8	36.9	-2,040.0	1,922,838.64	2,735,470.40	36.284441	-107.791332
6,984.0	89.80	270.10	5,170.3	37.4	-2,104.0	1,922,839.06	2,735,406.43	36.284443	-107.791549
7,047.0	89.60	269.10	5,170.6	36.9	-2,167.0	1,922,838.59	2,735,343.43	36.284441	-107.791763
7,110.0	92.60	270.90	5,169.4	36.9	-2,230.0	1,922,838.55	2,735,280.45	36.284441	-107.791977
7,173.0	90.10	268.10	5,168.0	36.4	-2,293.0	1,922,837.97	2,735,217.47	36.284440	-107.792190
7,236.0	91.80	269.50	5,166.9	35.1	-2,355.9	1,922,836.62	2,735,154.50	36.284436	-107.792404
7,299.0	91.50	267.30	5,165.1	33.3	-2,418.9	1,922,834.83	2,735,091.55	36.284431	-107.792618
7,363.0	91.50	266.50	5,163.4	29.9	-2,482.8	1,922,831.34	2,735,027.67	36.284422	-107.792834
7,426.0	90.90	266.00	5,162.1	25.7	-2,545.6	1,922,827.19	2,734,964.82	36.284410	-107.793048
7,489.0	91.00	268.80	5,161.1	22.9	-2,608.5	1,922,824.30	2,734,901.90	36.284403	-107.793261
7,552.0	90.60	269.50	5,160.2	21.9	-2,671.5	1,922,823.33	2,734,838.92	36.284400	-107.793475
7,615.0	89.80	268.90	5,160.0	21.1	-2,734.5	1,922,822.42	2,734,775.92	36.284398	-107.793689
7,678.0	92.10	270.90	5,158.9	21.0	-2,797.5	1,922,822.28	2,734,712.94	36.284397	-107.793902
7,742.0	90.00	268.10	5,157.7	20.4	-2,861.5	1,922,821.69	2,734,648.96	36.284396	-107.794119
7,805.0	91.60	271.00	5,156.9	19.9	-2,924.5	1,922,821.16	2,734,585.98	36.284394	-107.794333
7,868.0	91.50	269.70	5,155.2	20.3	-2,987.4	1,922,821.51	2,734,523.01	36.284395	-107.794547
7,931.0	91.10	270.40	5,153.7	20.3	-3,050.4	1,922,821.54	2,734,460.02	36.284396	-107.794760
7,994.0	90.70	269.50	5,152.7	20.3	-3,113.4	1,922,821.45	2,734,397.03	36.284395	-107.794974
8,057.0	92.40	270.90	5,151.0	20.5	-3,176.4	1,922,821.64	2,734,334.06	36.284396	-107.795188
8,119.0	89.60	269.80	5,150.0	20.9	-3,238.4	1,922,821.99	2,734,272.08	36.284397	-107.795398
8,182.0	88.70	268.90	5,150.9	20.2	-3,301.3	1,922,821.24	2,734,209.09	36.284395	-107.795612
8,245.0	88.50	268.10	5,152.4	18.5	-3,364.3	1,922,819.56	2,734,146.13	36.284390	-107.795825
8,308.0	90.30	268.80	5,153.1	16.8	-3,427.3	1,922,817.82	2,734,083.16	36.284386	-107.796039
8,371.0	91.80	268.90	5,151.9	15.6	-3,490.3	1,922,816.53	2,734,020.19	36.284382	-107.796253
8,434.0	91.50	269.60	5,150.1	14.7	-3,553.2	1,922,815.67	2,733,957.22	36.284380	-107.796466
8,497.0	93.90	269.70	5,147.1	14.3	-3,616.1	1,922,815.25	2,733,894.30	36.284379	-107.796680
8,560.0	93.30	269.80	5,143.2	14.1	-3,679.0	1,922,814.95	2,733,831.42	36.284378	-107.796893
8,622.0	88.90	268.60	5,142.0	13.2	-3,741.0	1,922,814.05	2,733,769.45	36.284376	-107.797104
8,685.0	89.40	268.70	5,142.9	11.7	-3,804.0	1,922,812.54	2,733,706.48	36.284372	-107.797317
8,748.0	90.20	269.90	5,143.2	10.9	-3,867.0	1,922,811.73	2,733,643.49	36.284369	-107.797531
8,811.0	92.80	272.00	5,141.5	12.0	-3,929.9	1,922,812.75	2,733,580.53	36.284372	-107.797745
8,873.0	92.40	271.50	5,138.7	13.9	-3,991.8	1,922,814.61	2,733,518.62	36.284377	-107.797955
8,936.0	90.00	268.00	5,137.4	13.6	-4,054.8	1,922,814.30	2,733,455.65	36.284377	-107.798168
8,999.0	90.40	269.20	5,137.2	12.1	-4,117.8	1,922,812.73	2,733,392.67	36.284372	-107.798382
9,061.0	91.20	270.20	5,136.3	11.7	-4,179.7	1,922,812.37	2,733,330.69	36.284372	-107.798592
9,124.0	91.20	269.70	5,135.0	11.7	-4,242.7	1,922,812.28	2,733,267.71	36.284371	-107.798806
9,187.0	92.20	269.30	5,133.1	11.1	-4,305.7	1,922,811.70	2,733,204.74	36.284370	-107.799020
9,250.0	92.70	269.30	5,130.4	10.4	-4,368.6	1,922,810.90	2,733,141.80	36.284368	-107.799233
9,313.0	91.60	267.40	5,128.0	8.6	-4,431.6	1,922,809.06	2,733,078.88	36.284363	-107.799447
9,377.0	91.60	265.80	5,126.3	4.8	-4,495.4	1,922,805.23	2,733,015.02	36.284352	-107.799663
9,440.0	92.50	267.30	5,124.0	1.0	-4,558.3	1,922,801.41	2,732,952.18	36.284342	-107.799877
9,503.0	93.10	266.70	5,120.9	-2.3	-4,621.1	1,922,798.09	2,732,889.34	36.284333	-107.800090
9,566.0	91.70	265.90	5,118.3	-6.4	-4,683.9	1,922,793.99	2,732,826.53	36.284322	-107.800303
9,629.0	91.60	267.60	5,116.5	-10.0	-4,746.8	1,922,790.39	2,732,763.67	36.284312	-107.800516
9,693.0	91.50	268.60	5,114.7	-12.1	-4,810.7	1,922,788.24	2,732,699.73	36.284306	-107.800733
9,756.0	91.80	268.60	5,112.9	-13.6	-4,873.7	1,922,786.67	2,732,636.77	36.284302	-107.800947
9,819.0	91.50	270.80	5,111.1	-13.9	-4,936.7	1,922,786.30	2,732,573.80	36.284301	-107.801160
9,882.0	91.50	272.10	5,109.5	-12.3	-4,999.6	1,922,787.87	2,732,510.83	36.284305	-107.801374
9,945.0	91.50	272.90	5,107.8	-9.6	-5,062.5	1,922,790.58	2,732,447.91	36.284312	-107.801588
10,009.0	91.30	273.90	5,106.3	-5.8	-5,126.4	1,922,794.34	2,732,384.04	36.284323	-107.801804
10,072.0	91.90	275.90	5,104.5	-0.4	-5,189.2	1,922,799.69	2,732,321.29	36.284338	-107.802017
10,090.0	91.10	274.90	5,104.0	1.3	-5,207.1	1,922,801.38	2,732,303.38	36.284342	-107.802078

Last CES Survey @ 10,090' MD

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L27-2409 02H
Project:	San Juan County, NM	TVD Reference:	16' KB @ 6940.0usft (Aztec 950)
Site:	S27-T24N-R9W	MD Reference:	16' KB @ 6940.0usft (Aztec 950)
Well:	Escrito L27-2409 02H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,140.0	91.10	274.90	5,103.1	5.5	-5,256.9	1,922,805.62	2,732,253.57	36.284354	-107.802247
PTB @ 10,140'									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Escrito L27-2409 02H PI	0.00	0.00	5,133.8	0.5	-5,272.6	1,922,800.56	2,732,237.87	36.284340	-107.802300
- actual wellpath misses target center by 34.9usft at 10140.0usft MD (5103.1 TVD, 5.5 N, -5256.9 E)									
- Point									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,090.0	5,104.0	1.3	-5,207.1	Last CES Survey @ 10,090' MD
10,140.0	5,103.1	5.5	-5,256.9	PTB @ 10,140'

Checked By: _____	Approved By: _____	Date: _____
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