

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

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

☐ AMENDED REPORT
☒ As-Drilled

CONFIDENTIAL

WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number 30-045-35489	'Pool Code 5890	'Pool Name BISTI LOWER-GALLUP
'Property Code 313128	'Property Name ESCRITO L18-2409	'Well Number 02H
'OGRID No. 282327	'Operator Name ENCANA OIL & GAS (USA) INC.	'Elevation 6977'

¹⁰ Surface Location

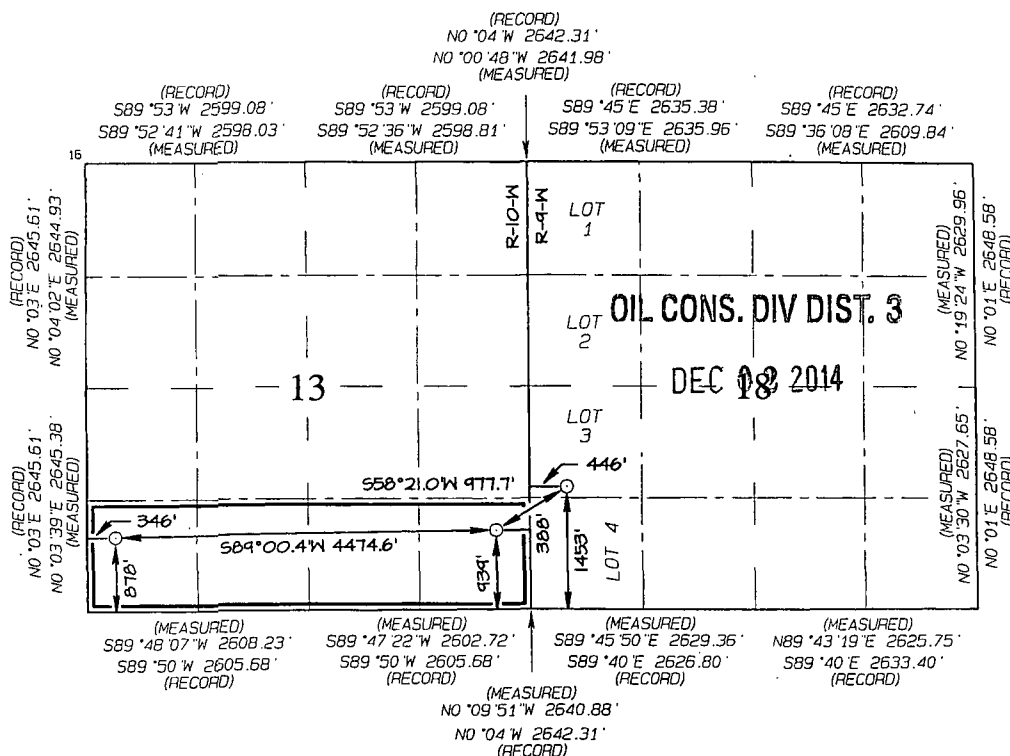
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	18	24N	9W	3	1453	SOUTH	446	WEST	SAN JUAN

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
M	13	24N	10W		878	SOUTH	346	WEST	SAN JUAN

¹² Dedicated Acres 160.00 Acres S/2 S/2 - Section 13	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



END-OF-LATERAL:
878' FSL 346' FWL
SECTION 13, T24N, R10W
LAT: 36.30914°N
LONG: 107.85512°W
DATUM: NAD1927

LAT: 36.30916°N
LONG: 107.85574°W
DATUM: NAD1983

POINT-OF-ENTRY
939' FSL 388' FEL
SECTION 13, T24N, R10W
LAT: 36.30936 °N
LONG: 107.83994 °W
DATUM: NAD1927

LAT: 36.30937 °N
LONG: 107.84055 °W
DATUM: NAD1983

SURFACE LOCATION
1453' FSL 446' FWL
SECTION 18, T24N, R9W
LAT: 36.31077°N
LONG: 107.83711°W
DATUM: NAD1927

LAT: 36.31078°N
LONG: 107.83773°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 of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Jessica Gregg 12/01/14

Signature Date

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: OCTOBER 30, 2014
Date of Survey: APRIL 24, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

FY

15
KO

DEVIATION SURVEYS

Escrito L18-2409 02H

30-045-35489

CONFIDENTIAL

MD (Feet)	Inclination (Degree)
306'	0.70
600'	1.00
916'	0.80
1232'	0.80
1548'	0.70
1859'	1.10
2162'	0.20
2464'	0.50
2767'	0.70
3078'	0.70
3395'	0.50
3711'	0.70
4027'	7.30

OIL CONS. DIV DIST. 3

DEC 02 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, Operations Technician

12/1/14

Date

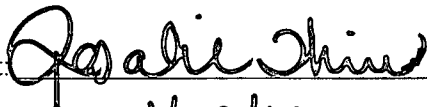
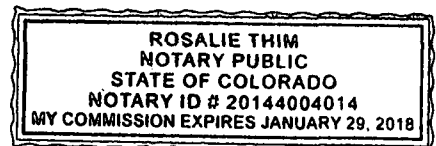
ACKNOWLEDGMENT

State of Colorado
City and County of Denver

This instrument was acknowledged before me on this 1st day of December, 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.

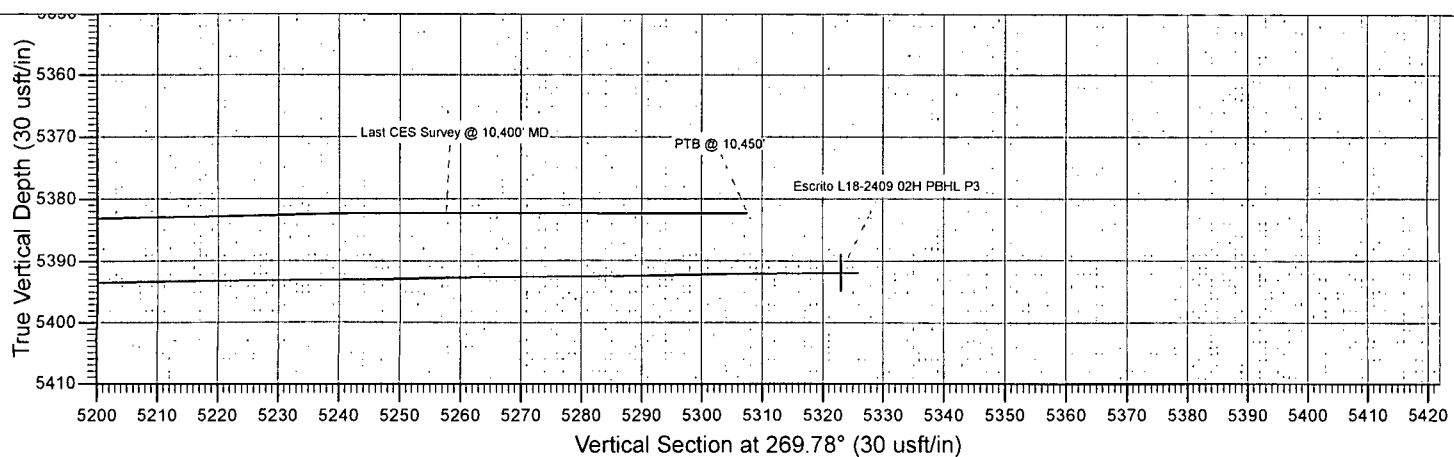
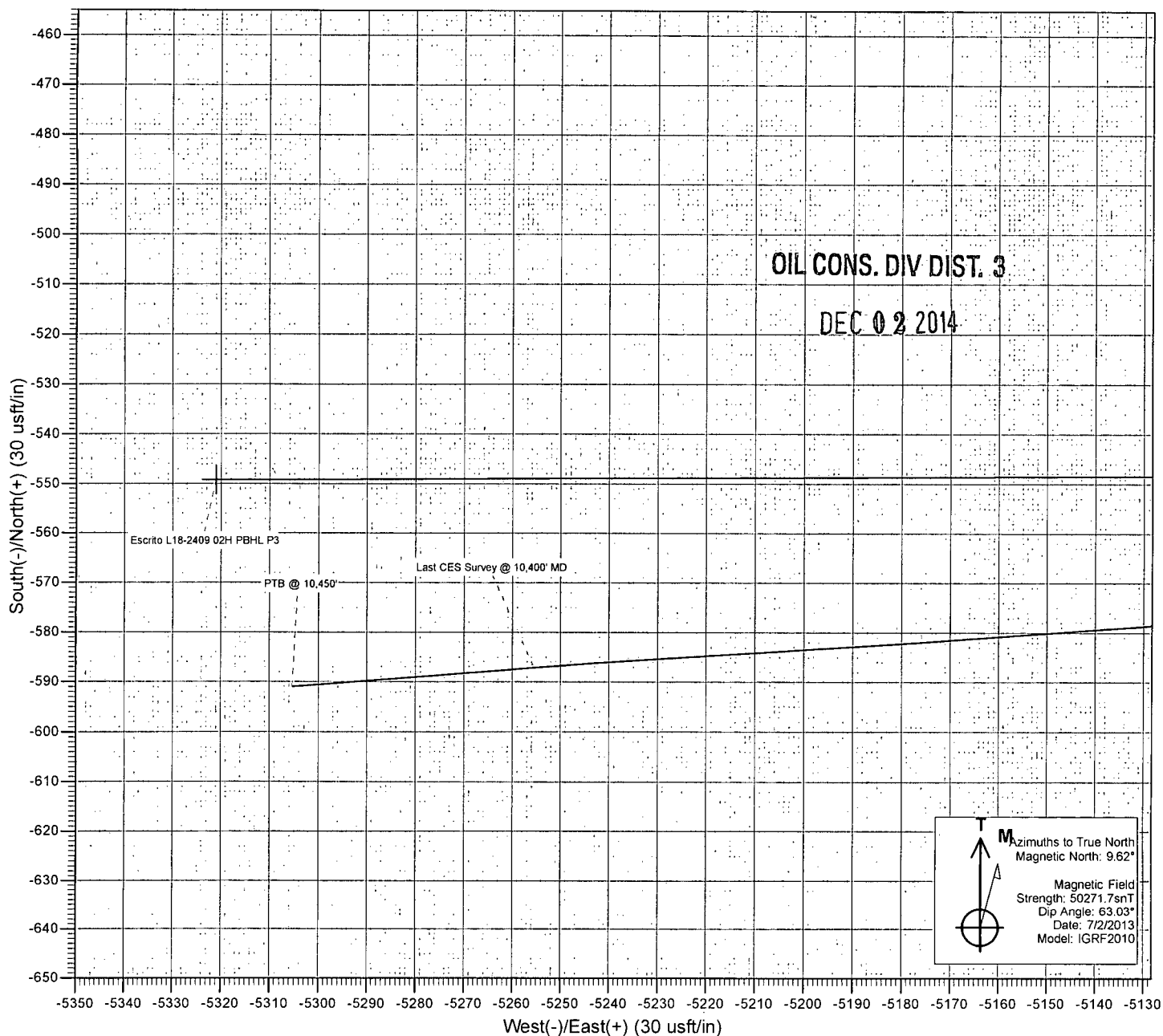
In witness whereof, I hereunto set my hand and official seal.

Notary Public:

My Commission Expires: 1/29/18



Project: San Juan County, NM
Site: S18-T24N-R9W (Escrito)
Well: Escrito L18-2409 02H
Wellbore: Hz
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L18-2409 02H
Project:	San Juan County, NM	TVD Reference:	15' KB @ 6992.0usft (Aztec 920)
Site:	S18-T24N-R9W (Escrito)	MD Reference:	15' KB @ 6992.0usft (Aztec 920)
Well:	Escrito L18-2409 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		S18-T24N-R9W (Escrito)			
Site Position:		Northing:	1,932,453.09 usft	Latitude:	36.310860
From:	Lat/Long	Easting:	2,721,790.42 usft	Longitude:	-107.837750
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.00 °

Well	Escrito L18-2409 02H					
Well Position	+N/-S	0.0 usft	Northing:	1,932,423.97 usft	Latitude:	36.310780
	+E/-W	0.0 usft	Easting:	2,721,796.31 usft	Longitude:	-107.837730
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,977.0 usft	

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	7/2/2013	9.63	63.03	50,272

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	269.78

Survey Program		Date	9/23/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
117.0	10,450.0	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	
117.0	0.10	14.00	117.0	0.1	0.0	0.0	0.09	0.09	
180.0	0.10	141.80	180.0	0.1	0.1	-0.1	0.29	0.00	
243.0	0.30	109.80	243.0	0.0	0.3	-0.3	0.35	0.32	
306.0	0.70	115.60	306.0	-0.2	0.8	-0.8	0.64	0.63	
369.0	0.60	157.20	369.0	-0.7	1.2	-1.2	0.75	-0.16	
433.0	0.80	168.00	433.0	-1.4	1.5	-1.5	0.37	0.31	
460.0	0.50	159.40	460.0	-1.7	1.5	-1.5	1.17	-1.11	
537.0	1.00	143.70	537.0	-2.6	2.1	-2.0	0.70	0.65	
600.0	1.00	127.70	600.0	-3.4	2.8	-2.8	0.44	0.00	
663.0	0.90	133.80	663.0	-4.0	3.6	-3.6	0.23	-0.16	
726.0	0.90	148.20	726.0	-4.8	4.2	-4.2	0.36	0.00	
789.0	0.80	146.00	788.9	-5.6	4.7	-4.7	0.17	-0.16	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L18-2409 02H
Project:	San Juan County, NM	TVD Reference:	15' KB @ 6992.0usft (Aztec 920)
Site:	S18-T24N-R9W (Escrito)	MD Reference:	15' KB @ 6992.0usft (Aztec 920)
Well:	Escrito L18-2409 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)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
852.0	0.80	151.30	851.9	-6.3	5.2	-5.2	0.12	0.00	
916.0	0.80	147.10	915.9	-7.1	5.6	-5.6	0.09	0.00	
979.0	1.00	143.80	978.9	-7.9	6.2	-6.2	0.33	0.32	
1,042.0	1.00	147.70	1,041.9	-8.8	6.8	-6.8	0.11	0.00	
1,105.0	1.00	142.90	1,104.9	-9.7	7.5	-7.4	0.13	0.00	
1,168.0	0.10	270.70	1,167.9	-10.2	7.7	-7.7	1.69	-1.43	
1,232.0	0.80	290.70	1,231.9	-10.0	7.3	-7.2	1.10	1.09	
1,295.0	0.70	285.50	1,294.9	-9.7	6.5	-6.4	0.19	-0.16	
1,358.0	0.90	283.30	1,357.9	-9.5	5.6	-5.6	0.32	0.32	
1,421.0	0.90	293.00	1,420.9	-9.2	4.7	-4.7	0.24	0.00	
1,484.0	0.90	277.70	1,483.9	-9.0	3.7	-3.7	0.38	0.00	
1,548.0	0.70	283.80	1,547.9	-8.8	2.9	-2.8	0.34	-0.31	
1,611.0	0.50	279.50	1,610.9	-8.7	2.2	-2.2	0.33	-0.32	
1,674.0	0.40	289.70	1,673.9	-8.5	1.7	-1.7	0.20	-0.16	
1,737.0	0.70	264.40	1,736.9	-8.5	1.2	-1.1	0.60	0.48	
1,798.0	1.00	250.30	1,797.9	-8.7	0.3	-0.2	0.60	0.49	
1,859.0	1.10	252.70	1,858.8	-9.1	-0.8	0.8	0.18	0.16	
1,919.0	0.20	152.80	1,918.8	-9.3	-1.3	1.3	1.92	-1.50	
1,981.0	0.30	71.50	1,980.8	-9.4	-1.1	1.1	0.54	0.16	
2,041.0	0.40	78.70	2,040.8	-9.3	-0.7	0.8	0.18	0.17	
2,102.0	0.20	87.50	2,101.8	-9.3	-0.4	0.4	0.34	-0.33	
2,162.0	0.20	118.90	2,161.8	-9.3	-0.2	0.2	0.18	0.00	
2,223.0	0.20	92.50	2,222.8	-9.4	0.0	0.1	0.15	0.00	
2,284.0	0.40	124.70	2,283.8	-9.5	0.3	-0.2	0.42	0.33	
2,343.0	0.20	154.80	2,342.8	-9.7	0.5	-0.4	0.42	-0.34	
2,403.0	0.40	129.10	2,402.8	-9.9	0.7	-0.6	0.39	0.33	
2,464.0	0.50	40.90	2,463.8	-9.8	1.0	-1.0	1.03	0.16	
2,524.0	1.00	22.50	2,523.8	-9.2	1.4	-1.4	0.91	0.83	
2,585.0	0.80	18.10	2,584.8	-8.3	1.7	-1.7	0.35	-0.33	
2,646.0	0.90	6.60	2,645.8	-7.4	1.9	-1.9	0.32	0.16	
2,707.0	0.80	3.80	2,706.8	-6.5	2.0	-2.0	0.18	-0.16	
2,767.0	0.70	13.50	2,766.8	-5.7	2.1	-2.1	0.27	-0.17	
2,828.0	0.90	5.20	2,827.8	-4.9	2.2	-2.2	0.38	0.33	
2,889.0	0.80	21.80	2,888.8	-4.0	2.5	-2.4	0.43	-0.16	
2,952.0	0.90	13.50	2,951.8	-3.1	2.7	-2.7	0.25	0.16	
3,015.0	0.60	14.80	3,014.8	-2.3	2.9	-2.9	0.48	-0.48	
3,078.0	0.70	27.70	3,077.8	-1.7	3.2	-3.2	0.28	0.16	
3,142.0	0.50	28.90	3,141.8	-1.1	3.5	-3.5	0.31	-0.31	
3,205.0	0.30	315.20	3,204.8	-0.7	3.5	-3.5	0.80	-0.32	
3,268.0	0.40	279.80	3,267.8	-0.6	3.2	-3.2	0.37	0.16	
3,332.0	0.40	259.50	3,331.8	-0.6	2.8	-2.8	0.22	0.00	
3,395.0	0.50	268.50	3,394.8	-0.6	2.3	-2.3	0.19	0.16	
3,458.0	0.40	247.30	3,457.8	-0.7	1.8	-1.8	0.31	-0.16	
3,521.0	0.30	269.00	3,520.8	-0.8	1.4	-1.4	0.26	-0.16	
3,585.0	0.10	214.10	3,584.8	-0.8	1.2	-1.2	0.40	-0.31	
3,648.0	0.40	173.90	3,647.8	-1.1	1.2	-1.2	0.52	0.48	
3,711.0	0.70	221.10	3,710.8	-1.6	1.0	-1.0	0.82	0.48	
3,774.0	2.50	211.40	3,773.7	-3.1	0.0	0.0	2.88	2.86	
3,838.0	3.60	208.30	3,837.6	-6.0	-1.7	1.7	1.74	1.72	
3,901.0	5.10	200.60	3,900.5	-10.4	-3.6	3.6	2.55	2.38	
3,964.0	6.20	197.90	3,963.1	-16.2	-5.6	5.7	1.80	1.75	
4,027.0	7.30	193.40	4,025.7	-23.4	-7.6	7.7	1.94	1.75	
4,091.0	8.30	187.10	4,089.1	-31.9	-9.1	9.2	2.05	1.56	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S18-T24N-R9W (Escrito)
Well: Escrito L18-2409 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L18-2409 02H
TVD Reference: 15' KB @ 6992.0usft (Aztec 920)
MD Reference: 15' KB @ 6992.0usft (Aztec 920)
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
4,154.0	9.10	184.40	4,151.4	-41.4	-10.1	10.2	1.43	1.27	
4,217.0	9.80	190.90	4,213.5	-51.6	-11.4	11.6	2.02	1.11	
4,280.0	10.90	196.80	4,275.5	-62.6	-14.2	14.4	2.42	1.75	
4,344.0	12.50	195.50	4,338.2	-75.1	-17.8	18.1	2.53	2.50	
4,407.0	12.90	188.90	4,399.6	-88.6	-20.7	21.0	2.39	0.63	
4,470.0	13.80	190.80	4,460.9	-102.9	-23.2	23.6	1.59	1.43	
4,533.0	14.70	195.00	4,522.0	-118.0	-26.7	27.1	2.17	1.43	
4,596.0	16.00	196.10	4,582.8	-134.1	-31.1	31.7	2.11	2.06	
4,660.0	17.00	195.70	4,644.1	-151.6	-36.1	36.7	1.57	1.56	
4,723.0	21.70	195.00	4,703.5	-171.7	-41.6	42.3	7.47	7.46	
4,786.0	26.10	198.40	4,761.1	-196.1	-49.0	49.8	7.32	6.98	
4,817.0	28.10	200.10	4,788.7	-209.4	-53.7	54.5	6.92	6.45	
4,849.0	29.90	203.00	4,816.7	-223.9	-59.4	60.3	7.14	5.62	
4,881.0	31.40	203.60	4,844.2	-238.8	-65.8	66.8	4.78	4.69	
4,912.0	32.30	208.30	4,870.6	-253.5	-73.0	74.0	8.51	2.90	
4,944.0	33.70	209.80	4,897.4	-268.8	-81.5	82.5	5.07	4.37	
4,975.0	35.10	212.80	4,923.0	-283.7	-90.6	91.7	7.09	4.52	
5,007.0	36.20	217.40	4,949.0	-299.0	-101.3	102.5	9.05	3.44	
5,039.0	37.00	220.60	4,974.7	-313.8	-113.3	114.5	6.46	2.50	
5,070.0	38.90	222.60	4,999.1	-328.0	-126.0	127.2	7.30	6.13	
5,102.0	40.10	225.20	5,023.8	-342.7	-140.1	141.4	6.38	3.75	
5,134.0	41.80	224.60	5,048.0	-357.5	-154.9	156.3	5.45	5.31	
5,165.0	44.30	226.40	5,070.7	-372.4	-170.0	171.4	8.99	8.06	
5,197.0	46.10	228.80	5,093.2	-387.7	-186.8	188.2	7.74	5.62	
5,228.0	45.00	234.70	5,114.9	-401.4	-204.1	205.7	14.04	-3.55	
5,260.0	44.60	237.70	5,137.6	-413.9	-222.8	224.4	6.72	-1.25	
5,292.0	45.20	239.80	5,160.3	-425.6	-242.2	243.8	5.00	1.87	
5,323.0	46.50	244.80	5,181.9	-436.0	-261.8	263.5	12.31	4.19	
5,355.0	47.20	247.50	5,203.8	-445.4	-283.2	284.9	6.53	2.19	
5,387.0	48.60	251.50	5,225.2	-453.7	-305.4	307.2	10.25	4.37	
5,418.0	49.50	253.90	5,245.6	-460.6	-327.8	329.5	6.53	2.90	
5,450.0	51.80	255.40	5,265.9	-467.2	-351.6	353.4	8.05	7.19	
5,482.0	54.00	256.80	5,285.2	-473.3	-376.4	378.2	7.71	6.87	
5,513.0	56.30	258.10	5,302.9	-478.8	-401.2	403.1	8.18	7.42	
5,545.0	59.20	259.50	5,319.9	-484.1	-427.8	429.6	9.79	9.06	
5,576.0	61.40	262.40	5,335.3	-488.3	-454.4	456.2	10.79	7.10	
5,608.0	63.70	262.80	5,350.1	-492.0	-482.5	484.4	7.27	7.19	
5,640.0	64.70	263.30	5,364.0	-495.5	-511.1	513.0	3.43	3.12	
5,671.0	66.60	263.70	5,376.8	-498.7	-539.2	541.1	6.24	6.13	
5,703.0	69.70	264.90	5,388.7	-501.6	-568.7	570.7	10.29	9.69	
5,734.0	72.00	265.90	5,398.8	-503.9	-597.9	599.9	8.02	7.42	
5,766.0	73.40	265.30	5,408.4	-506.3	-628.4	630.3	4.73	4.37	
5,798.0	75.00	266.50	5,417.1	-508.5	-659.1	661.0	6.17	5.00	
5,829.0	77.50	267.30	5,424.4	-510.1	-689.2	691.1	8.45	8.06	
5,861.0	79.30	267.50	5,430.9	-511.5	-720.5	722.4	5.66	5.62	
5,892.0	80.80	269.10	5,436.2	-512.4	-751.0	753.0	7.02	4.84	
5,909.0	82.40	269.40	5,438.7	-512.7	-767.8	769.8	9.57	9.41	
5,914.0	82.70	269.50	5,439.4	-512.7	-772.8	774.7	6.33	6.01	
5,945.0	83.80	269.50	5,443.0	-513.0	-803.5	805.5	3.55	3.55	
5,977.0	85.30	269.40	5,446.0	-513.3	-835.4	837.4	4.70	4.69	
6,009.0	86.10	269.40	5,448.4	-513.6	-867.3	869.3	2.50	2.50	
6,040.0	87.40	269.30	5,450.2	-514.0	-898.2	900.2	4.21	4.19	
6,072.0	88.50	269.00	5,451.3	-514.4	-930.2	932.2	3.56	3.44	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S18-T24N-R9W (Escrito)
Well: Escrito L18-2409 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L18-2409 02H
TVD Reference: 15' KB @ 6992.0usft (Aztec 920)
MD Reference: 15' KB @ 6992.0usft (Aztec 920)
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
6,103.0	89.20	268.80	5,452.0	-515.0	-961.2	963.2	2.35	2.26	
6,135.0	89.90	268.30	5,452.2	-515.9	-993.2	995.2	2.69	2.19	
6,198.0	91.10	268.10	5,451.7	-517.8	-1,056.2	1,058.1	1.93	1.90	
6,262.0	91.30	268.00	5,450.3	-520.0	-1,120.1	1,122.1	0.35	0.31	
6,325.0	91.50	268.40	5,448.8	-522.0	-1,183.1	1,185.1	0.71	0.32	
6,388.0	91.50	267.80	5,447.1	-524.1	-1,246.0	1,248.0	0.95	0.00	
6,451.0	92.10	268.80	5,445.2	-525.9	-1,308.9	1,311.0	1.85	0.95	
6,515.0	90.70	268.80	5,443.6	-527.3	-1,372.9	1,374.9	2.19	-2.19	
6,578.0	91.80	270.00	5,442.2	-527.9	-1,435.9	1,437.9	2.58	1.75	
6,641.0	91.00	271.80	5,440.7	-527.0	-1,498.9	1,500.9	3.13	-1.27	
6,704.0	89.60	270.80	5,440.4	-525.5	-1,561.8	1,563.8	2.73	-2.22	
6,768.0	88.20	268.80	5,441.6	-525.7	-1,625.8	1,627.8	3.81	-2.19	
6,828.0	88.90	268.90	5,443.1	-527.0	-1,685.8	1,687.8	1.18	1.17	
6,889.0	90.50	269.30	5,443.4	-527.9	-1,746.8	1,748.8	2.70	2.62	
6,950.0	92.20	270.20	5,442.0	-528.2	-1,807.8	1,809.8	3.15	2.79	
7,011.0	92.40	270.10	5,439.5	-528.0	-1,868.7	1,870.7	0.37	0.33	
7,072.0	91.90	270.80	5,437.2	-527.5	-1,929.7	1,931.7	1.41	-0.82	
7,132.0	91.70	271.00	5,435.4	-526.6	-1,989.6	1,991.7	0.47	-0.33	
7,192.0	90.10	270.60	5,434.4	-525.8	-2,049.6	2,051.6	2.75	-2.67	
7,253.0	89.90	270.30	5,434.4	-525.3	-2,110.6	2,112.6	0.59	-0.33	
7,314.0	89.80	270.70	5,434.6	-524.7	-2,171.6	2,173.6	0.68	-0.16	
7,373.0	90.00	270.70	5,434.7	-524.0	-2,230.6	2,232.6	0.34	0.34	
7,434.0	89.40	270.10	5,435.0	-523.6	-2,291.6	2,293.6	1.39	-0.98	
7,494.0	89.20	269.00	5,435.7	-524.1	-2,351.6	2,353.6	1.86	-0.33	
7,555.0	89.40	268.80	5,436.5	-525.2	-2,412.6	2,414.6	0.46	0.33	
7,616.0	90.00	268.50	5,436.8	-526.7	-2,473.6	2,475.6	1.10	0.98	
7,677.0	91.10	268.50	5,436.2	-528.3	-2,534.6	2,536.6	1.80	1.80	
7,738.0	91.40	268.80	5,434.9	-529.7	-2,595.5	2,597.5	0.70	0.49	
7,798.0	91.10	268.20	5,433.6	-531.3	-2,655.5	2,657.5	1.12	-0.50	
7,859.0	91.50	267.90	5,432.2	-533.4	-2,716.4	2,718.5	0.82	0.66	
7,920.0	91.30	267.40	5,430.7	-535.9	-2,777.4	2,779.4	0.88	-0.33	
7,983.0	91.80	267.70	5,429.0	-538.6	-2,840.3	2,842.3	0.93	0.79	
8,046.0	90.90	268.20	5,427.5	-540.8	-2,903.2	2,905.3	1.63	-1.43	
8,109.0	90.00	267.30	5,427.0	-543.3	-2,966.2	2,968.2	2.02	-1.43	
8,173.0	90.30	268.20	5,426.8	-545.8	-3,030.1	3,032.2	1.48	0.47	
8,236.0	89.90	268.20	5,426.7	-547.8	-3,093.1	3,095.2	0.63	-0.63	
8,299.0	90.80	268.30	5,426.4	-549.7	-3,156.1	3,158.1	1.44	1.43	
8,362.0	92.40	268.40	5,424.6	-551.5	-3,219.0	3,221.1	2.54	2.54	
8,425.0	91.90	267.80	5,422.2	-553.6	-3,281.9	3,284.0	1.24	-0.79	
8,488.0	93.10	268.80	5,419.5	-555.5	-3,344.8	3,346.9	2.48	1.90	
8,552.0	92.90	268.20	5,416.1	-557.1	-3,408.7	3,410.8	0.99	-0.31	
8,615.0	93.20	268.90	5,412.8	-558.7	-3,471.6	3,473.7	1.21	0.48	
8,678.0	91.90	269.80	5,410.0	-559.4	-3,534.5	3,536.7	2.51	-2.06	
8,742.0	91.10	269.20	5,408.3	-560.0	-3,598.5	3,600.6	1.56	-1.25	
8,805.0	92.20	269.40	5,406.5	-560.8	-3,661.5	3,663.6	1.77	1.75	
8,868.0	91.10	268.00	5,404.7	-562.2	-3,724.4	3,726.6	2.83	-1.75	
8,932.0	90.90	268.10	5,403.6	-564.4	-3,788.4	3,790.5	0.35	-0.31	
8,995.0	91.40	268.80	5,402.3	-566.1	-3,851.4	3,853.5	1.37	0.79	
9,058.0	91.60	269.20	5,400.6	-567.2	-3,914.3	3,916.5	0.71	0.32	
9,122.0	91.90	270.20	5,398.7	-567.5	-3,978.3	3,980.5	1.63	0.47	
9,185.0	91.70	270.40	5,396.7	-567.2	-4,041.3	4,043.4	0.45	-0.32	
9,248.0	90.50	269.80	5,395.5	-567.1	-4,104.3	4,106.4	2.13	-1.90	
9,311.0	90.80	270.60	5,394.8	-566.9	-4,167.3	4,169.4	1.36	0.48	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L18-2409 02H
Project:	San Juan County, NM	TVD Reference:	15' KB @ 6992.0usft (Aztec 920)
Site:	S18-T24N-R9W (Escrito)	MD Reference:	15' KB @ 6992.0usft (Aztec 920)
Well:	Escrito L18-2409 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)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
9,374.0	90.50	270.60	5,394.1	-566.2	-4,230.2	4,232.4	0.48	-0.48	
9,437.0	89.90	269.80	5,393.9	-566.0	-4,293.2	4,295.4	1.59	-0.95	
9,501.0	90.60	270.20	5,393.6	-566.0	-4,357.2	4,359.4	1.26	1.09	
9,564.0	91.20	270.50	5,392.6	-565.6	-4,420.2	4,422.4	1.06	0.95	
9,627.0	90.20	270.30	5,391.8	-565.1	-4,483.2	4,485.4	1.62	-1.59	
9,690.0	90.40	270.30	5,391.5	-564.8	-4,546.2	4,548.4	0.32	0.32	
9,753.0	90.70	270.00	5,390.9	-564.7	-4,609.2	4,611.4	0.67	0.48	
9,816.0	90.10	269.60	5,390.4	-564.9	-4,672.2	4,674.4	1.14	-0.95	
9,879.0	91.80	270.80	5,389.4	-564.7	-4,735.2	4,737.3	3.30	2.70	
9,942.0	91.00	269.50	5,387.9	-564.5	-4,798.2	4,800.3	2.42	-1.27	
10,005.0	89.50	268.20	5,387.6	-565.8	-4,861.2	4,863.3	3.15	-2.38	
10,069.0	90.80	268.20	5,387.4	-567.8	-4,925.1	4,927.3	2.03	2.03	
10,132.0	91.50	267.60	5,386.1	-570.1	-4,988.1	4,990.2	1.46	1.11	
10,195.0	91.10	266.60	5,384.7	-573.3	-5,051.0	5,053.1	-1.71	-0.63	
10,258.0	90.10	265.60	5,384.1	-577.5	-5,113.8	5,116.0	2.24	-1.59	
10,321.0	91.00	266.40	5,383.5	-581.9	-5,176.7	5,178.9	1.91	1.43	
10,385.0	90.90	266.20	5,382.4	-586.1	-5,240.5	5,242.7	0.35	-0.16	
10,400.0	89.90	265.60	5,382.3	-587.1	-5,255.5	5,257.7	7.77	-6.67	Last CES Survey @ 10,400' MD
10,450.0	89.90	265.60	5,382.4	-591.0	-5,305.3	5,307.6	0.00	0.00	PTB @ 10,450'

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L18-2409 02H
Project:	San Juan County, NM	TVD Reference:	15' KB @ 6992.0usft (Aztec 920)
Site:	S18-T24N-R9W (Escrito)	MD Reference:	15' KB @ 6992.0usft (Aztec 920)
Well:	Escrito L18-2409 02H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Escrito L18-2409 02H PI	0.00	0.00	5,391.9	-549.2	-5,321.0	1,931,875.02	2,716,475.30	36.309270	-107.855790
- actual wellpath misses target center by 45.6usft at 10450.0usft MD (5382.4 TVD, -591.0 N, -5305.3 E)									
- Point									
Escrito L18-2409 02H PI	0.00	0.00	5,447.5	-531.5	-774.9	1,931,892.53	2,721,021.41	36.309320	-107.840360
- actual wellpath misses target center by 20.3usft at 5917.2usft MD (5439.8 TVD, -512.7 N, -776.0 E)									
- Point									
Escrito L18-2409 02H PI	0.00	0.00	5,483.2	-531.5	-774.9	1,931,892.53	2,721,021.41	36.309320	-107.840360
- actual wellpath misses target center by 47.1usft at 5921.4usft MD (5440.3 TVD, -512.8 N, -780.1 E)									
- Point									
Escrito L18-2409 02H PI	0.00	0.00	5,401.2	-549.2	-5,321.0	1,931,875.02	2,716,475.30	36.309270	-107.855790
- actual wellpath misses target center by 48.5usft at 10450.0usft MD (5382.4 TVD, -591.0 N, -5305.3 E)									
- Point									
Escrito L18-2409 02H PI	0.00	0.00	5,448.9	-531.5	-774.9	1,931,892.53	2,721,021.41	36.309320	-107.840360
- actual wellpath misses target center by 20.8usft at 5917.4usft MD (5439.8 TVD, -512.7 N, -776.1 E)									
- Point									
Escrito L18-2409 02H PI	0.00	0.00	5,443.5	-549.2	-5,321.0	1,931,875.02	2,716,475.30	36.309270	-107.855790
- actual wellpath misses target center by 75.7usft at 10450.0usft MD (5382.4 TVD, -591.0 N, -5305.3 E)									
- Point									

Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
6,055.6	5,462.0	TL		-0.70	270.00

Design Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
10,400.0	5,382.3	-587.1	-5,255.5	Last CES Survey @ 10,400' MD
10,450.0	5,382.4	-591.0	-5,305.3	PTB @ 10,450'

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

San Juan County, NM

S18-T24N-R9W (Escrito)

Escrito L18-2409 02H

Hz

Design: FINAL

Survey Report - Geographic

23 September, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L18-2409 02H
Project:	San Juan County, NM	TVD Reference:	15' KB @ 6992.0usft (Aztec 920)
Site:	S18-T24N-R9W (Escrito)	MD Reference:	15' KB @ 6992.0usft (Aztec 920)
Well:	Escrito L18-2409 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	S18-T24N-R9W (Escrito)				
Site Position:		Northing:	1,932,453.09 usft	Latitude:	36.310860
From:	Lat/Long	Easting:	2,721,790.42 usft	Longitude:	-107.837750
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.00 °

Well	Escrito L18-2409 02H					
Well Position	+N/-S	0.0 usft	Northing:	1,932,423.97 usft	Latitude:	36.310780
	+E/-W	0.0 usft	Easting:	2,721,796.31 usft	Longitude:	-107.837730
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,977.0 usft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/2/2013	9.63	63.03	50,272

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	269.78	

Survey Program		Date	9/23/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
117.0	10,450.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

Survey										
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	1,932,423.97	2,721,796.31	36.310780	-107.837730	
117.0	0.10	14.00	117.0	0.1	0.0	1,932,424.07	2,721,796.34	36.310780	-107.837730	
180.0	0.10	141.80	180.0	0.1	0.1	1,932,424.08	2,721,796.38	36.310780	-107.837730	
243.0	0.30	109.80	243.0	0.0	0.3	1,932,423.98	2,721,796.57	36.310780	-107.837729	
306.0	0.70	115.60	306.0	-0.2	0.8	1,932,423.76	2,721,797.07	36.310780	-107.837728	
369.0	0.60	157.20	369.0	-0.7	1.2	1,932,423.29	2,721,797.55	36.310778	-107.837726	
433.0	0.80	168.00	433.0	-1.4	1.5	1,932,422.54	2,721,797.77	36.310776	-107.837725	
460.0	0.50	159.40	460.0	-1.7	1.5	1,932,422.25	2,721,797.85	36.310775	-107.837725	
537.0	1.00	143.70	537.0	-2.6	2.1	1,932,421.39	2,721,798.37	36.310773	-107.837723	
600.0	1.00	127.70	600.0	-3.4	2.8	1,932,420.61	2,721,799.13	36.310771	-107.837721	
663.0	0.90	133.80	663.0	-4.0	3.6	1,932,419.93	2,721,799.92	36.310769	-107.837718	
726.0	0.90	148.20	726.0	-4.8	4.2	1,932,419.17	2,721,800.54	36.310767	-107.837716	

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L18-2409 02H
Project:	San Juan County, NM	TVD Reference:	15' KB @ 6992.0usft (Aztec 920)
Site:	S18-T24N-R9W (Escrito)	MD Reference:	15' KB @ 6992.0usft (Aztec 920)
Well:	Escrito L18-2409 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
789.0	0.80	146.00	788.9	-5.6	4.7	1,932,418.38	2,721,801.05	36.310765	-107.837714
852.0	0.80	151.30	851.9	-6.3	5.2	1,932,417.63	2,721,801.50	36.310763	-107.837713
916.0	0.80	147.10	915.9	-7.1	5.6	1,932,416.87	2,721,801.96	36.310761	-107.837711
979.0	1.00	143.80	978.9	-7.9	6.2	1,932,416.05	2,721,802.52	36.310758	-107.837709
1,042.0	1.00	147.70	1,041.9	-8.8	6.8	1,932,415.14	2,721,803.14	36.310756	-107.837707
1,105.0	1.00	142.90	1,104.9	-9.7	7.5	1,932,414.24	2,721,803.77	36.310753	-107.837705
1,168.0	0.10	270.70	1,167.9	-10.2	7.7	1,932,413.80	2,721,804.04	36.310752	-107.837704
1,232.0	0.80	290.70	1,231.9	-10.0	7.3	1,932,413.96	2,721,803.57	36.310753	-107.837706
1,295.0	0.70	285.50	1,294.9	-9.7	6.5	1,932,414.22	2,721,802.79	36.310753	-107.837708
1,358.0	0.90	283.30	1,357.9	-9.5	5.6	1,932,414.44	2,721,801.93	36.310754	-107.837711
1,421.0	0.90	293.00	1,420.9	-9.2	4.7	1,932,414.74	2,721,801.00	36.310755	-107.837714
1,484.0	0.90	277.70	1,483.9	-9.0	3.7	1,932,415.00	2,721,800.05	36.310755	-107.837718
1,548.0	0.70	283.80	1,547.9	-8.8	2.9	1,932,415.16	2,721,799.17	36.310756	-107.837721
1,611.0	0.50	279.50	1,610.9	-8.7	2.2	1,932,415.30	2,721,798.53	36.310756	-107.837723
1,674.0	0.40	289.70	1,673.9	-8.5	1.7	1,932,415.42	2,721,798.05	36.310757	-107.837724
1,737.0	0.70	264.40	1,736.9	-8.5	1.2	1,932,415.46	2,721,797.46	36.310757	-107.837726
1,798.0	1.00	250.30	1,797.9	-8.7	0.3	1,932,415.24	2,721,796.59	36.310756	-107.837729
1,859.0	1.10	252.70	1,858.8	-9.1	-0.8	1,932,414.89	2,721,795.53	36.310755	-107.837733
1,919.0	0.20	152.80	1,918.8	-9.3	-1.3	1,932,414.62	2,721,795.03	36.310754	-107.837735
1,981.0	0.30	71.50	1,980.8	-9.4	-1.1	1,932,414.58	2,721,795.23	36.310754	-107.837734
2,041.0	0.40	78.70	2,040.8	-9.3	-0.7	1,932,414.67	2,721,795.58	36.310755	-107.837733
2,102.0	0.20	87.50	2,101.8	-9.3	-0.4	1,932,414.72	2,721,795.90	36.310755	-107.837732
2,162.0	0.20	118.90	2,161.8	-9.3	-0.2	1,932,414.67	2,721,796.10	36.310755	-107.837731
2,223.0	0.20	92.50	2,222.8	-9.4	0.0	1,932,414.61	2,721,796.30	36.310754	-107.837730
2,284.0	0.40	124.70	2,283.8	-9.5	0.3	1,932,414.49	2,721,796.58	36.310754	-107.837729
2,343.0	0.20	154.80	2,342.8	-9.7	0.5	1,932,414.28	2,721,796.79	36.310753	-107.837729
2,403.0	0.40	129.10	2,402.8	-9.9	0.7	1,932,414.05	2,721,797.00	36.310753	-107.837728
2,464.0	0.50	40.90	2,463.8	-9.8	1.0	1,932,414.12	2,721,797.34	36.310753	-107.837727
2,524.0	1.00	22.50	2,523.8	-9.2	1.4	1,932,414.80	2,721,797.71	36.310755	-107.837726
2,585.0	0.80	18.10	2,584.8	-8.3	1.7	1,932,415.70	2,721,798.05	36.310757	-107.837724
2,646.0	0.90	6.60	2,645.8	-7.4	1.9	1,932,416.58	2,721,798.23	36.310760	-107.837724
2,707.0	0.80	3.80	2,706.8	-6.5	2.0	1,932,417.48	2,721,798.32	36.310762	-107.837723
2,767.0	0.70	13.50	2,766.8	-5.7	2.1	1,932,418.25	2,721,798.43	36.310764	-107.837723
2,828.0	0.90	5.20	2,827.8	-4.9	2.2	1,932,419.09	2,721,798.56	36.310767	-107.837723
2,889.0	0.80	21.80	2,888.8	-4.0	2.5	1,932,419.96	2,721,798.76	36.310769	-107.837722
2,952.0	0.90	13.50	2,951.8	-3.1	2.7	1,932,420.85	2,721,799.04	36.310772	-107.837721
3,015.0	0.60	14.80	3,014.8	-2.3	2.9	1,932,421.65	2,721,799.24	36.310774	-107.837720
3,078.0	0.70	27.70	3,077.8	-1.7	3.2	1,932,422.31	2,721,799.50	36.310776	-107.837719
3,142.0	0.50	28.90	3,141.8	-1.1	3.5	1,932,422.90	2,721,799.82	36.310777	-107.837718
3,205.0	0.30	315.20	3,204.8	-0.7	3.5	1,932,423.26	2,721,799.84	36.310778	-107.837718
3,268.0	0.40	279.80	3,267.8	-0.6	3.2	1,932,423.42	2,721,799.50	36.310779	-107.837719
3,332.0	0.40	259.50	3,331.8	-0.6	2.8	1,932,423.41	2,721,799.06	36.310779	-107.837721
3,395.0	0.50	268.50	3,394.8	-0.6	2.3	1,932,423.37	2,721,798.57	36.310778	-107.837723
3,458.0	0.40	247.30	3,457.8	-0.7	1.8	1,932,423.27	2,721,798.09	36.310778	-107.837724
3,521.0	0.30	269.00	3,520.8	-0.8	1.4	1,932,423.19	2,721,797.73	36.310778	-107.837725
3,585.0	0.10	214.10	3,584.8	-0.8	1.2	1,932,423.14	2,721,797.53	36.310778	-107.837726
3,648.0	0.40	173.90	3,647.8	-1.1	1.2	1,932,422.87	2,721,797.52	36.310777	-107.837726
3,711.0	0.70	221.10	3,710.8	-1.6	1.0	1,932,422.36	2,721,797.29	36.310776	-107.837727
3,774.0	2.50	211.40	3,773.7	-3.1	0.0	1,932,420.90	2,721,796.32	36.310772	-107.837730
3,838.0	3.60	208.30	3,837.6	-6.0	-1.7	1,932,417.94	2,721,794.64	36.310764	-107.837736
3,901.0	5.10	200.60	3,900.5	-10.4	-3.6	1,932,413.58	2,721,792.72	36.310752	-107.837742
3,964.0	6.20	197.90	3,963.1	-16.2	-5.6	1,932,407.72	2,721,790.69	36.310735	-107.837749
4,027.0	7.30	193.40	4,025.7	-23.4	-7.6	1,932,400.59	2,721,788.71	36.310716	-107.837756
4,091.0	8.30	187.10	4,089.1	-31.9	-9.1	1,932,392.05	2,721,787.20	36.310692	-107.837761
4,154.0	9.10	184.40	4,151.4	-41.4	-10.1	1,932,382.57	2,721,786.26	36.310666	-107.837764

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L18-2409 02H
Project:	San Juan County, NM	TVD Reference:	15' KB @ 6992.0usft (Aztec 920)
Site:	S18-T24N-R9W (Escrito)	MD Reference:	15' KB @ 6992.0usft (Aztec 920)
Well:	Escrito L18-2409 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
4,217.0	9.80	190.90	4,213.5	-51.6	-11.4	1,932,372.34	2,721,784.86	36.310638	-107.837769
4,280.0	10.90	196.80	4,275.5	-62.6	-14.2	1,932,361.37	2,721,782.12	36.310608	-107.837778
4,344.0	12.50	195.50	4,338.2	-75.1	-17.8	1,932,348.90	2,721,778.52	36.310574	-107.837791
4,407.0	12.90	188.90	4,399.6	-88.6	-20.7	1,932,335.38	2,721,775.61	36.310537	-107.837801
4,470.0	13.80	190.80	4,460.9	-102.9	-23.2	1,932,321.05	2,721,773.12	36.310497	-107.837809
4,533.0	14.70	195.00	4,522.0	-118.0	-26.7	1,932,305.95	2,721,769.64	36.310456	-107.837821
4,596.0	16.00	196.10	4,582.8	-134.1	-31.1	1,932,289.89	2,721,765.16	36.310412	-107.837836
4,660.0	17.00	195.70	4,644.1	-151.6	-36.1	1,932,272.41	2,721,760.18	36.310364	-107.837853
4,723.0	21.70	195.00	4,703.5	-171.7	-41.6	1,932,252.28	2,721,754.67	36.310308	-107.837872
4,786.0	26.10	198.40	4,761.1	-196.1	-49.0	1,932,227.87	2,721,747.28	36.310241	-107.837897
4,817.0	28.10	200.10	4,788.7	-209.4	-53.7	1,932,214.54	2,721,742.61	36.310205	-107.837912
4,849.0	29.90	203.00	4,816.7	-223.9	-59.4	1,932,200.12	2,721,736.91	36.310165	-107.837932
4,881.0	31.40	203.60	4,844.2	-238.8	-65.8	1,932,185.14	2,721,730.45	36.310124	-107.837954
4,912.0	32.30	208.30	4,870.6	-253.5	-73.0	1,932,170.44	2,721,723.29	36.310084	-107.837978
4,944.0	33.70	209.80	4,897.4	-268.8	-81.5	1,932,155.21	2,721,714.82	36.310042	-107.838007
4,975.0	35.10	212.80	4,923.0	-283.7	-90.6	1,932,140.25	2,721,705.72	36.310001	-107.838038
5,007.0	36.20	217.40	4,949.0	-299.0	-101.3	1,932,125.01	2,721,694.99	36.309959	-107.838074
5,039.0	37.00	220.60	4,974.7	-313.8	-113.3	1,932,110.19	2,721,682.99	36.309918	-107.838115
5,070.0	38.90	222.60	4,999.1	-328.0	-126.0	1,932,095.94	2,721,670.32	36.309879	-107.838158
5,102.0	40.10	225.20	5,023.8	-342.7	-140.1	1,932,081.29	2,721,656.21	36.309839	-107.838206
5,134.0	41.80	224.60	5,048.0	-357.5	-154.9	1,932,066.43	2,721,641.41	36.309798	-107.838256
5,165.0	44.30	226.40	5,070.7	-372.4	-170.0	1,932,051.61	2,721,626.31	36.309757	-107.838307
5,197.0	46.10	228.80	5,093.2	-387.7	-186.8	1,932,036.30	2,721,609.54	36.309715	-107.838364
5,228.0	45.00	234.70	5,114.9	-401.4	-204.1	1,932,022.61	2,721,592.18	36.309678	-107.838423
5,260.0	44.60	237.70	5,137.6	-413.9	-222.8	1,932,010.07	2,721,573.45	36.309643	-107.838487
5,292.0	45.20	239.80	5,160.3	-425.6	-242.2	1,931,998.35	2,721,554.14	36.309611	-107.838552
5,323.0	46.50	244.80	5,181.9	-436.0	-261.8	1,931,988.03	2,721,534.45	36.309583	-107.838619
5,355.0	47.20	247.50	5,203.8	-445.4	-283.2	1,931,978.60	2,721,513.10	36.309557	-107.838691
5,387.0	48.60	251.50	5,225.2	-453.7	-305.4	1,931,970.29	2,721,490.87	36.309534	-107.838767
5,418.0	49.50	253.90	5,245.6	-460.6	-327.8	1,931,963.34	2,721,468.52	36.309515	-107.838843
5,450.0	51.80	255.40	5,265.9	-467.2	-351.6	1,931,956.79	2,721,444.65	36.309497	-107.838924
5,482.0	54.00	256.80	5,285.2	-473.3	-376.4	1,931,950.67	2,721,419.88	36.309480	-107.839008
5,513.0	56.30	258.10	5,302.9	-478.8	-401.2	1,931,945.15	2,721,395.05	36.309465	-107.839092
5,545.0	59.20	259.50	5,319.9	-484.1	-427.8	1,931,939.90	2,721,368.50	36.309450	-107.839182
5,576.0	61.40	262.40	5,335.3	-488.3	-454.4	1,931,935.67	2,721,341.92	36.309439	-107.839272
5,608.0	63.70	262.80	5,350.1	-492.0	-482.5	1,931,932.02	2,721,313.76	36.309429	-107.839368
5,640.0	64.70	263.30	5,364.0	-495.5	-511.1	1,931,928.53	2,721,285.16	36.309419	-107.839465
5,671.0	66.60	263.70	5,376.8	-498.7	-539.2	1,931,925.34	2,721,257.10	36.309410	-107.839560
5,703.0	69.70	264.90	5,388.7	-501.6	-568.7	1,931,922.39	2,721,227.55	36.309402	-107.839661
5,734.0	72.00	265.90	5,398.8	-503.9	-597.9	1,931,920.05	2,721,198.36	36.309396	-107.839760
5,766.0	73.40	265.30	5,408.4	-506.3	-628.4	1,931,917.70	2,721,167.90	36.309389	-107.839863
5,798.0	75.00	266.50	5,417.1	-508.5	-659.1	1,931,915.50	2,721,137.19	36.309383	-107.839967
5,829.0	77.50	267.30	5,424.4	-510.1	-689.2	1,931,913.88	2,721,107.12	36.309379	-107.840069
5,861.0	79.30	267.50	5,430.9	-511.5	-720.5	1,931,912.46	2,721,075.81	36.309375	-107.840176
5,892.0	80.80	269.10	5,436.2	-512.4	-751.0	1,931,911.55	2,721,045.29	36.309372	-107.840279
5,909.0	82.40	269.40	5,438.7	-512.7	-767.8	1,931,911.34	2,721,028.48	36.309372	-107.840336
5,914.0	82.70	269.50	5,439.4	-512.7	-772.8	1,931,911.29	2,721,023.53	36.309372	-107.840353
5,945.0	83.80	269.50	5,443.0	-513.0	-803.5	1,931,911.02	2,720,992.75	36.309371	-107.840458
5,977.0	85.30	269.40	5,446.0	-513.3	-835.4	1,931,910.72	2,720,960.89	36.309370	-107.840566
6,009.0	86.10	269.40	5,448.4	-513.6	-867.3	1,931,910.38	2,720,928.99	36.309369	-107.840674
6,040.0	87.40	269.30	5,450.2	-514.0	-898.2	1,931,910.03	2,720,898.04	36.309368	-107.840779
6,072.0	88.50	269.00	5,451.3	-514.4	-930.2	1,931,909.56	2,720,866.06	36.309367	-107.840888
6,103.0	89.20	268.80	5,452.0	-515.0	-961.2	1,931,908.97	2,720,835.08	36.309365	-107.840993
6,135.0	89.90	268.30	5,452.2	-515.9	-993.2	1,931,908.16	2,720,803.09	36.309363	-107.841101
6,198.0	91.10	268.10	5,451.7	-517.8	-1,056.2	1,931,906.18	2,720,740.12	36.309358	-107.841315

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L18-2409 02H
Project:	San Juan County, NM	TVD Reference:	15' KB @ 6992.0usft (Aztec 920)
Site:	S18-T24N-R9W (Escrito)	MD Reference:	15' KB @ 6992.0usft (Aztec 920)
Well:	Escrito L18-2409 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
6,262.0	91.30	268.00	5,450.3	-520.0	-1,120.1	1,931,904.01	2,720,676.17	36.309352	-107.841532
6,325.0	91.50	268.40	5,448.8	-522.0	-1,183.1	1,931,902.03	2,720,613.22	36.309346	-107.841746
6,388.0	91.50	267.80	5,447.1	-524.1	-1,246.0	1,931,899.95	2,720,550.28	36.309340	-107.841959
6,451.0	92.10	268.80	5,445.2	-525.9	-1,308.9	1,931,898.08	2,720,487.34	36.309335	-107.842173
6,515.0	90.70	268.80	5,443.6	-527.3	-1,372.9	1,931,896.75	2,720,423.37	36.309332	-107.842390
6,578.0	91.80	270.00	5,442.2	-527.9	-1,435.9	1,931,896.09	2,720,360.39	36.309330	-107.842604
6,641.0	91.00	271.80	5,440.7	-527.0	-1,498.9	1,931,897.08	2,720,297.42	36.309332	-107.842818
6,704.0	89.60	270.80	5,440.4	-525.5	-1,561.8	1,931,898.51	2,720,234.44	36.309336	-107.843031
6,768.0	88.20	268.80	5,441.6	-525.7	-1,625.8	1,931,898.29	2,720,170.46	36.309336	-107.843249
6,828.0	88.90	268.90	5,443.1	-527.0	-1,685.8	1,931,897.09	2,720,110.49	36.309332	-107.843452
6,889.0	90.50	269.30	5,443.4	-527.9	-1,746.8	1,931,896.14	2,720,049.50	36.309330	-107.843659
6,950.0	92.20	270.20	5,442.0	-528.2	-1,807.8	1,931,895.87	2,719,988.52	36.309329	-107.843866
7,011.0	92.40	270.10	5,439.5	-528.0	-1,868.7	1,931,896.04	2,719,927.56	36.309329	-107.844073
7,072.0	91.90	270.80	5,437.2	-527.5	-1,929.7	1,931,896.52	2,719,866.61	36.309331	-107.844280
7,132.0	91.70	271.00	5,435.4	-526.6	-1,989.6	1,931,897.46	2,719,806.64	36.309333	-107.844483
7,192.0	90.10	270.60	5,434.4	-525.8	-2,049.6	1,931,898.30	2,719,746.66	36.309336	-107.844687
7,253.0	89.90	270.30	5,434.4	-525.3	-2,110.6	1,931,898.78	2,719,685.66	36.309337	-107.844894
7,314.0	89.80	270.70	5,434.6	-524.7	-2,171.6	1,931,899.32	2,719,624.66	36.309338	-107.845101
7,373.0	90.00	270.70	5,434.7	-524.0	-2,230.6	1,931,900.04	2,719,565.67	36.309340	-107.845301
7,434.0	89.40	270.10	5,435.0	-523.6	-2,291.6	1,931,900.47	2,719,504.67	36.309341	-107.845508
7,494.0	89.20	269.00	5,435.7	-524.1	-2,351.6	1,931,900.00	2,719,444.68	36.309340	-107.845712
7,555.0	89.40	268.80	5,436.5	-525.2	-2,412.6	1,931,898.83	2,719,383.69	36.309337	-107.845919
7,616.0	90.00	268.50	5,436.8	-526.7	-2,473.6	1,931,897.40	2,719,322.71	36.309333	-107.846126
7,677.0	91.10	268.50	5,436.2	-528.3	-2,534.6	1,931,895.81	2,719,261.74	36.309329	-107.846333
7,738.0	91.40	268.80	5,434.9	-529.7	-2,595.5	1,931,894.37	2,719,200.77	36.309325	-107.846540
7,798.0	91.10	268.20	5,433.6	-531.3	-2,655.5	1,931,892.80	2,719,140.80	36.309320	-107.846743
7,859.0	91.50	267.90	5,432.2	-533.4	-2,716.4	1,931,890.73	2,719,079.85	36.309315	-107.846950
7,920.0	91.30	267.40	5,430.7	-535.9	-2,777.4	1,931,888.23	2,719,018.92	36.309308	-107.847157
7,983.0	91.80	267.70	5,429.0	-538.6	-2,840.3	1,931,885.55	2,718,956.00	36.309300	-107.847371
8,046.0	90.90	268.20	5,427.5	-540.8	-2,903.2	1,931,883.30	2,718,893.06	36.309294	-107.847584
8,109.0	90.00	267.30	5,427.0	-543.3	-2,966.2	1,931,880.83	2,718,830.11	36.309287	-107.847798
8,173.0	90.30	268.20	5,426.8	-545.8	-3,030.1	1,931,878.32	2,718,766.16	36.309280	-107.848015
8,236.0	89.90	268.20	5,426.7	-547.8	-3,093.1	1,931,876.34	2,718,703.20	36.309275	-107.848229
8,299.0	90.80	268.30	5,426.4	-549.7	-3,156.1	1,931,874.42	2,718,640.23	36.309270	-107.848442
8,362.0	92.40	268.40	5,424.6	-551.5	-3,219.0	1,931,872.61	2,718,577.28	36.309265	-107.848656
8,425.0	91.90	267.80	5,422.2	-553.6	-3,281.9	1,931,870.52	2,718,514.36	36.309259	-107.848869
8,488.0	93.10	268.80	5,419.5	-555.5	-3,344.8	1,931,868.66	2,718,451.45	36.309254	-107.849083
8,552.0	92.90	268.20	5,416.1	-557.1	-3,408.7	1,931,866.99	2,718,387.56	36.309249	-107.849300
8,615.0	93.20	268.90	5,412.8	-558.7	-3,471.6	1,931,865.40	2,718,324.67	36.309245	-107.849513
8,678.0	91.90	269.80	5,410.0	-559.4	-3,534.5	1,931,864.69	2,718,261.74	36.309243	-107.849727
8,742.0	91.10	269.20	5,408.3	-560.0	-3,598.5	1,931,864.13	2,718,197.76	36.309241	-107.849944
8,805.0	92.20	269.40	5,406.5	-560.8	-3,661.5	1,931,863.37	2,718,134.79	36.309239	-107.850158
8,868.0	91.10	268.00	5,404.7	-562.2	-3,724.4	1,931,861.94	2,718,071.84	36.309235	-107.850371
8,932.0	90.90	268.10	5,403.6	-564.4	-3,788.4	1,931,859.77	2,718,007.88	36.309229	-107.850589
8,995.0	91.40	268.80	5,402.3	-566.1	-3,851.4	1,931,858.07	2,717,944.92	36.309224	-107.850802
9,058.0	91.60	269.20	5,400.6	-567.2	-3,914.3	1,931,856.97	2,717,881.95	36.309221	-107.851016
9,122.0	91.90	270.20	5,398.7	-567.5	-3,978.3	1,931,856.64	2,717,817.98	36.309220	-107.851233
9,185.0	91.70	270.40	5,396.7	-567.2	-4,041.3	1,931,856.97	2,717,755.02	36.309221	-107.851447
9,248.0	90.50	269.80	5,395.5	-567.1	-4,104.3	1,931,857.08	2,717,692.03	36.309222	-107.851661
9,311.0	90.80	270.60	5,394.8	-566.9	-4,167.3	1,931,857.31	2,717,629.03	36.309222	-107.851874
9,374.0	90.50	270.60	5,394.1	-566.2	-4,230.2	1,931,857.97	2,717,566.04	36.309224	-107.852088
9,437.0	89.90	269.80	5,393.9	-566.0	-4,293.2	1,931,858.19	2,717,503.04	36.309224	-107.852302
9,501.0	90.60	270.20	5,393.6	-566.0	-4,357.2	1,931,858.19	2,717,439.04	36.309224	-107.852519
9,564.0	91.20	270.50	5,392.6	-565.6	-4,420.2	1,931,858.58	2,717,376.05	36.309225	-107.852733
9,627.0	90.20	270.30	5,391.8	-565.1	-4,483.2	1,931,859.02	2,717,313.06	36.309227	-107.852947

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L18-2409 02H
Project:	San Juan County, NM	TVD Reference:	15' KB @ 6992.0usft (Aztec 920)
Site:	S18-T24N-R9W (Escrito)	MD Reference:	15' KB @ 6992.0usft (Aztec 920)
Well:	Escrito L18-2409 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
9,690.0	90.40	270.30	5,391.5	-564.8	-4,546.2	1,931,859.36	2,717,250.06	36.309228	-107.853161
9,753.0	90.70	270.00	5,390.9	-564.7	-4,609.2	1,931,859.52	2,717,187.07	36.309228	-107.853374
9,816.0	90.10	269.60	5,390.4	-564.9	-4,672.2	1,931,859.31	2,717,124.07	36.309227	-107.853588
9,879.0	91.80	270.80	5,389.4	-564.7	-4,735.2	1,931,859.53	2,717,061.08	36.309228	-107.853802
9,942.0	91.00	269.50	5,387.9	-564.5	-4,798.2	1,931,859.70	2,716,998.10	36.309228	-107.854016
10,005.0	89.50	268.20	5,387.6	-565.8	-4,861.2	1,931,858.44	2,716,935.12	36.309225	-107.854230
10,069.0	90.80	268.20	5,387.4	-567.8	-4,925.1	1,931,856.43	2,716,871.15	36.309219	-107.854447
10,132.0	91.50	267.60	5,386.1	-570.1	-4,988.1	1,931,854.12	2,716,808.21	36.309213	-107.854660
10,195.0	91.10	266.60	5,384.7	-573.3	-5,051.0	1,931,850.94	2,716,745.30	36.309204	-107.854874
10,258.0	90.10	265.60	5,384.1	-577.5	-5,113.8	1,931,846.66	2,716,682.45	36.309192	-107.855087
10,321.0	91.00	266.40	5,383.5	-581.9	-5,176.7	1,931,842.27	2,716,619.61	36.309180	-107.855300
10,385.0	90.90	266.20	5,382.4	-586.1	-5,240.5	1,931,838.14	2,716,555.75	36.309169	-107.855517
10,400.0	89.90	265.60	5,382.3	-587.1	-5,255.5	1,931,837.07	2,716,540.79	36.309166	-107.855568
Last CES Survey @ 10,400' MD									
10,450.0	89.90	265.60	5,382.4	-591.0	-5,305.3	1,931,833.23	2,716,490.94	36.309155	-107.855737
PTB @ 10,450'									

Design 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 L18-2409 02H PI			0.00	0.00	5,391.9	-549.2	-5,321.0	1,931,875.03	2,716,475.30	36.309270	-107.855790
- actual wellpath misses target center by 45.6usft at 10450.0usft MD (5382.4 TVD, -591.0 N, -5305.3 E)											
- Point											
Escrito L18-2409 02H PI			0.00	0.00	5,447.5	-531.5	-774.9	1,931,892.54	2,721,021.41	36.309320	-107.840360
- actual wellpath misses target center by 20.3usft at 5917.2usft MD (5439.8 TVD, -512.7 N, -776.0 E)											
- Point											

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,055.6	5,450.8	TL		-0.70	270.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,400.0	5,382.3	-587.1	-5,255.5	Last CES Survey @ 10,400' MD
10,450.0	5,382.4	-591.0	-5,305.3	PTB @ 10,450'

Checked By: _____ Approved By: _____ Date: _____