

APR 29 2014

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 523-6181 Fax: (575) 523-0720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Grande Rd., Aztec, N.M. 87410
Phone: (505) 834-6178 Fax: (505) 834-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 478-3460 Fax: (505) 478-3462

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 Dr.
Santa Fe, NM 87505

☐ AMENDED REPORT
☒ AS-DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35487		² Pool Code 5890		³ Pool Name BISTI LOWER-GALLUP	
⁴ Property Code 40267		⁵ Property Name ESCRITO L17-2409			⁶ Well Number 01H
⁷ GRID No. 282327		⁸ Operator Name ENCANA OIL & GAS (USA) INC.			⁹ Elevation 8792'

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	17	24N	9W		1730'	SOUTH	310'	WEST	SAN JUAN

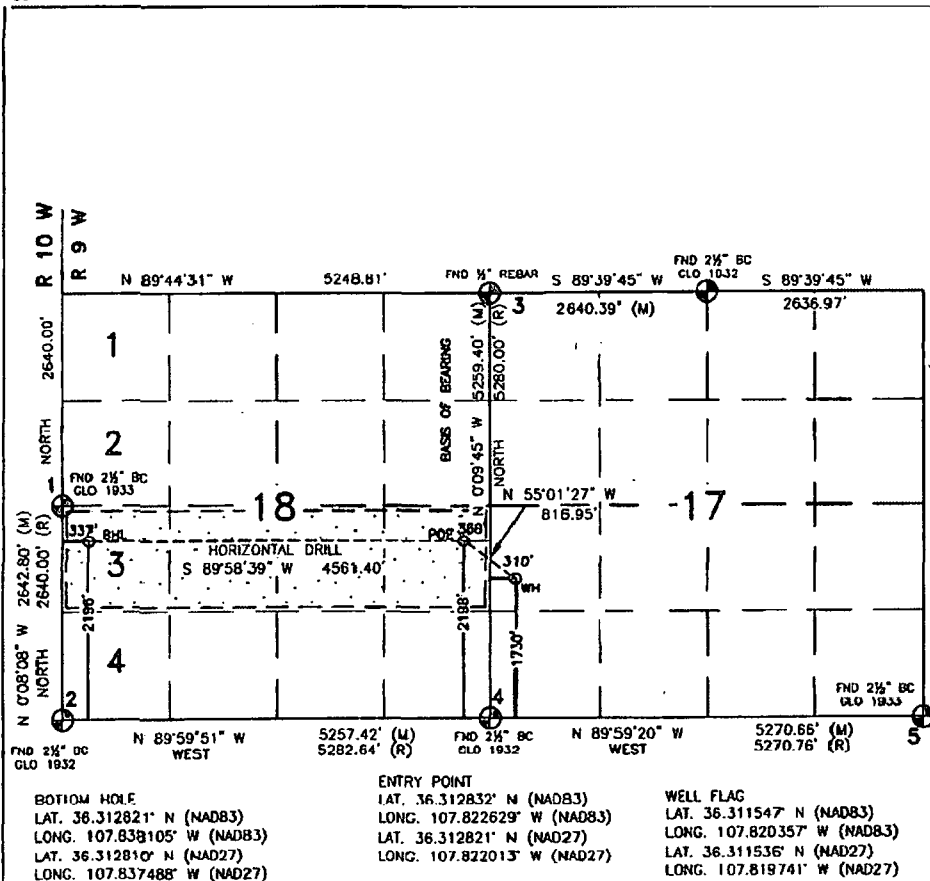
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	18	24N	9W	3	2196'	SOUTH	337'	WEST	SAN JUAN

¹² Dedicated Acres 160.00 ACRES N/2 S/2 SEC. 18		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

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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 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 district.

Brenda R. Linster
Signature Date

Brenda R. Linster

Printed Name

brenda.linster@encana.com

E-mail Address

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.

AS-BUILT - APRIL 14, 2014

SURVEYED - MARCH 15, 2013

Date of Survey

Signature and Seal of Professional Surveyor:

DAVID R. RUSSELL
NEW MEXICO
REGISTERED PROFESSIONAL LAND SURVEYOR
10201

DAVID RUSSELL
Certificate Number 10201

PV

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DEVIATION SURVEYS

MD (Feet)	Inclination (Degree)
742	1.2
1047	.7
1352	.9
1663	.5
1979	.2
2294	1
2608	1.3
2923	.8
3239	.3
3554	.6
3869	1.1
4184	.4
4499	.1
4701	4.8
4859	21.4

OIL CONS. DIV DIST. 3

APR 29 2014

OPERATOR CERTIFICATION

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

Melissa Lasley
 Melissa Lasley, Engineering Technologist

04/28/2014

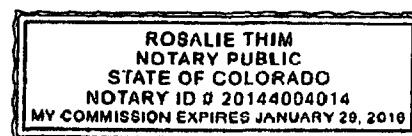
ACKNOWLEDGMENT

State of Colorado
 City and County of Denver

This instrument was acknowledged before me on this 28th day of April, 2014 by Melissa Lasley as Attorney in Fact of 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



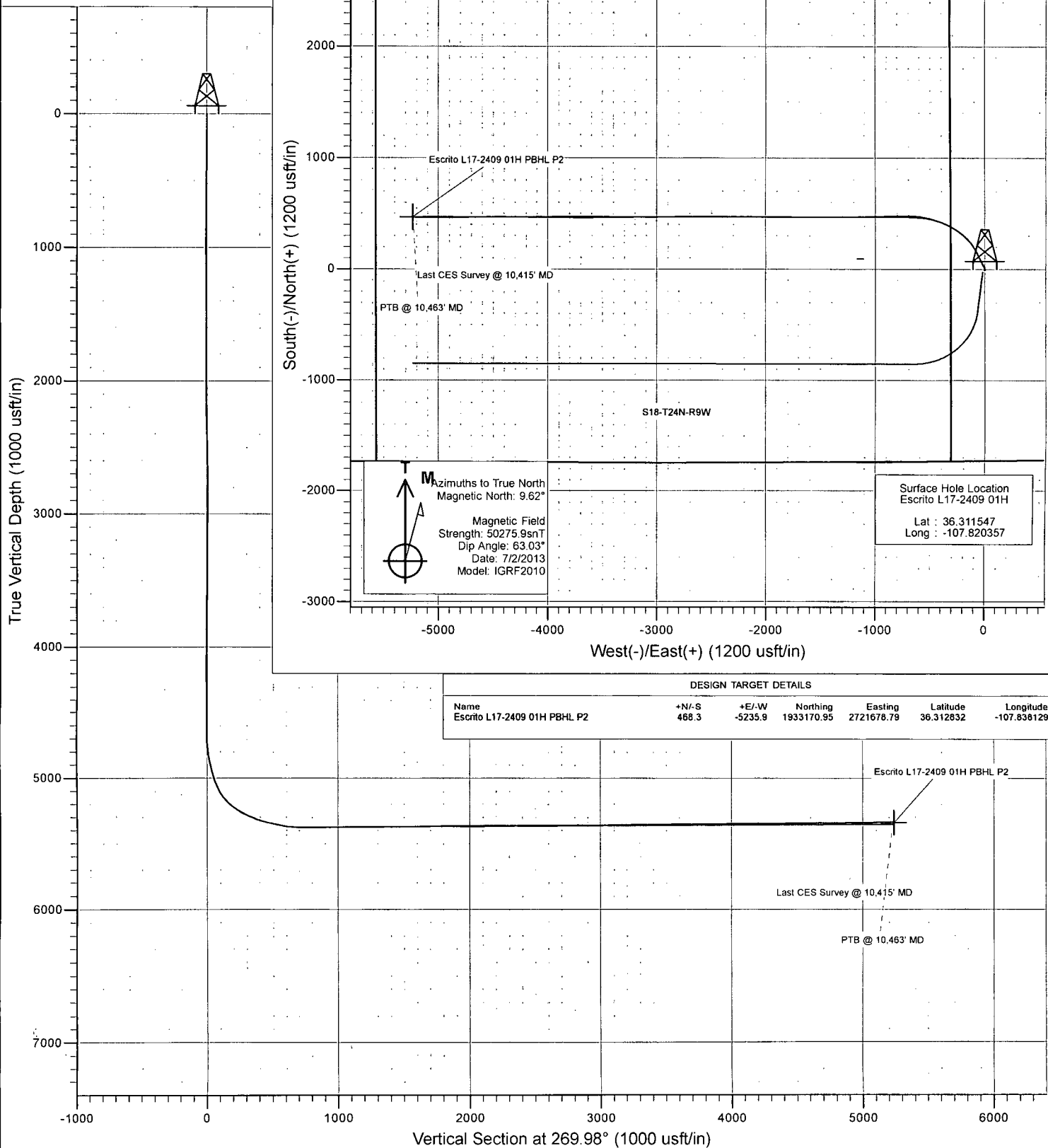


Project: San Juan County, NM
 Site: S17-T24N-R9W (Escrito)
 Well: Escrito L17-2409 01H
 Wellbore: Hz
 Design: FINAL

OIL CONS. DIV DIST. 3 CATHEDRAL

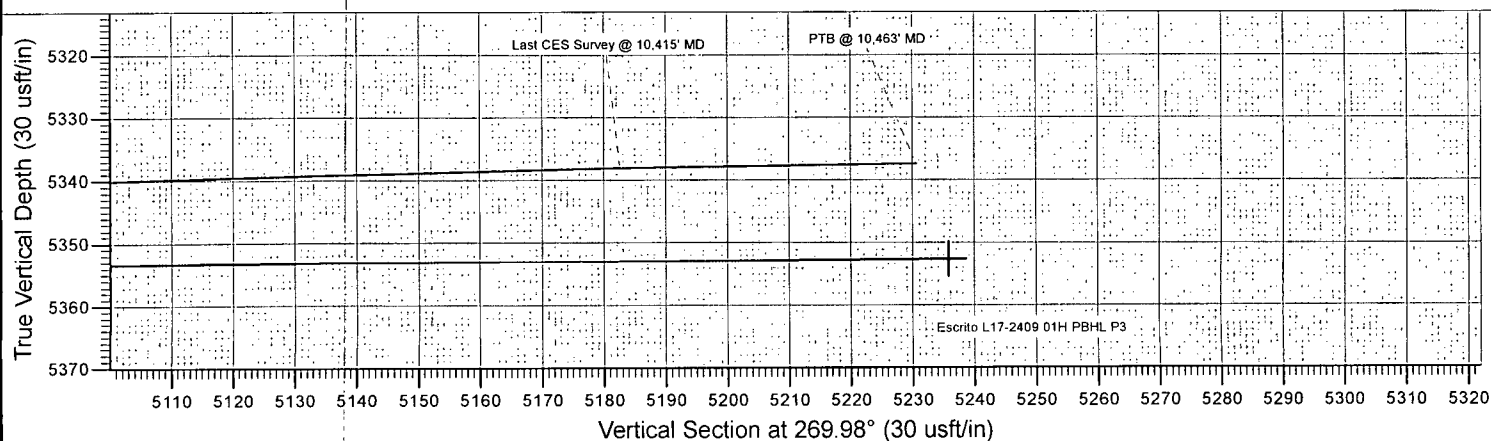
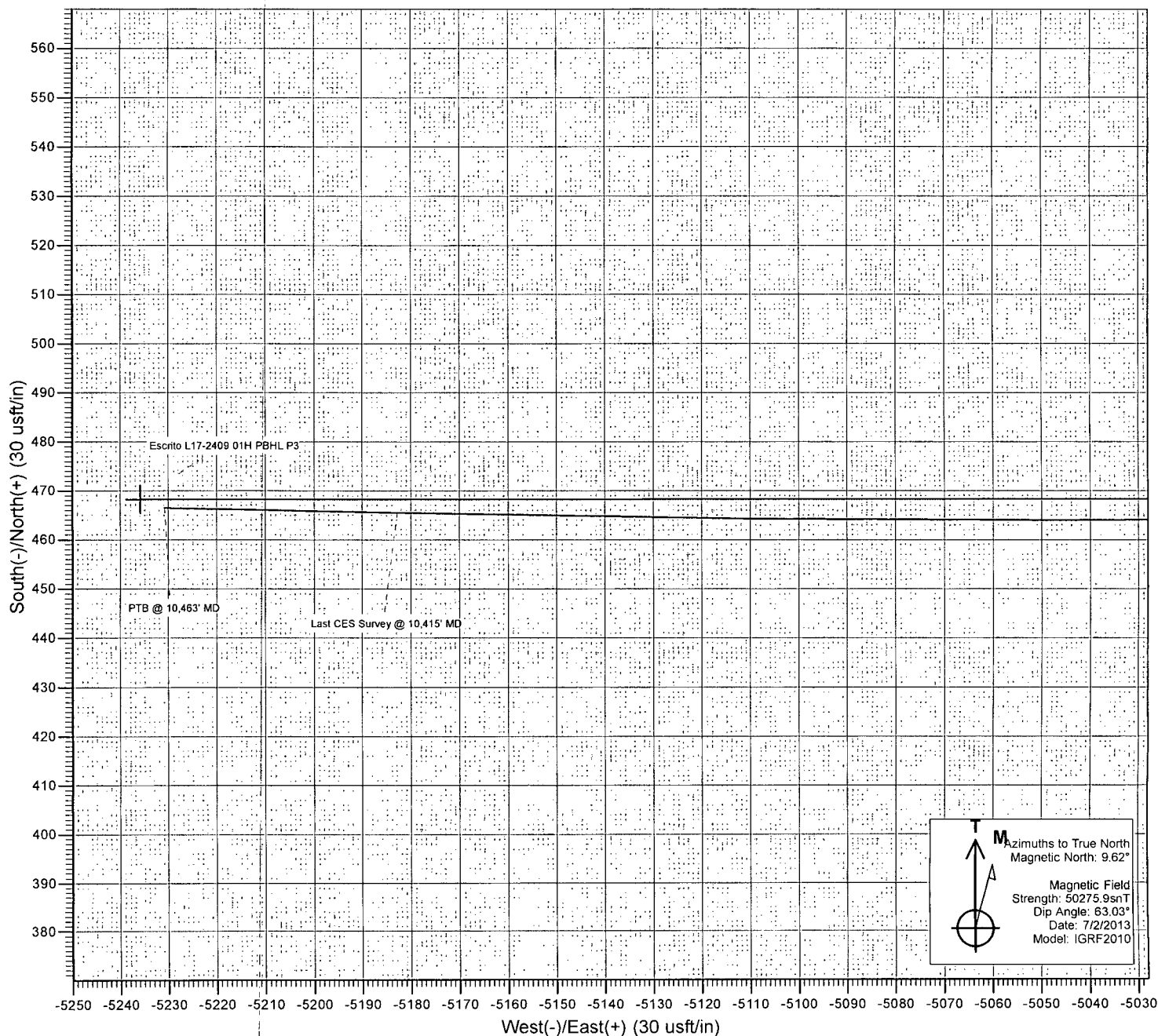
APR 29 2014

FINAL
 Escrito L17-2409 01H
 145084/307555; SC
 WELL @ 6808.0usft (Aztec 950)
 Ground Elevation @ 6792.0
 North American Datum 1983
 Well Escrito L17-2409 01H, True North





Project: San Juan County, NM
 Site: S17-T24N-R9W (Escrito)
 Well: Escrito L17-2409 01H
 Wellbore: Hz
 Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L17-2409 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6808.0usft (Aztec 950)
Site:	S17-T24N-R9W (Escrito)	MD Reference:	WELL @ 6808.0usft (Aztec 950)
Well:	Escrito L17-2409 01H	North Reference:	True
Wellbore:	H2	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		S17-T24N-R9W (Escrito)			
Site Position:		Northing:	1,932,703.40 usft	Latitude:	36.311547
From:	Lat/Long	Easting:	2,726,914.75 usft	Longitude:	-107.820357
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.01 °

Well	Escrito L17-2409 01H					
Well Position	+N/-S	0.0 usft	Northing:	1,932,703.40 usft	Latitude:	36.311547
	+E/-W	0.0 usft	Easting:	2,726,914.75 usft	Longitude:	-107.820357
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,792.0 usft

Wellbore	H2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/2/2013	9.62	63.03	50,276

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	269.98	

Survey Program	Date	3/24/2014
From	To	
(usft)	(usft)	
558.0	10,463.0	
Survey (Wellbore)	Tool Name	Description
Survey #1 (H2)	Geolink MWD	Geolink MWD

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
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
558.0	0.60	137.80	558.0	-2.2	2.0	-2.0	0.11	0.11	
619.0	0.60	150.80	619.0	-2.7	2.3	-2.3	0.22	0.00	
680.0	0.80	158.10	680.0	-3.4	2.6	-2.6	0.36	0.33	
742.0	1.20	147.00	742.0	-4.3	3.2	-3.2	0.71	0.65	
803.0	0.70	65.20	803.0	-4.7	3.8	-3.8	2.13	-0.82	
864.0	1.00	43.80	864.0	-4.1	4.6	-4.6	0.71	0.49	
925.0	0.90	40.70	924.9	-3.4	5.2	-5.2	0.18	-0.16	
986.0	0.70	333.30	985.9	-2.7	5.4	-5.4	1.48	-0.33	
1,047.0	0.70	302.50	1,046.9	-2.2	4.9	-4.9	0.61	0.00	
1,108.0	0.70	309.30	1,107.9	-1.7	4.3	-4.3	0.14	0.00	
1,169.0	0.80	283.50	1,168.9	-1.4	3.6	-3.6	0.57	0.16	
1,230.0	0.90	275.90	1,229.9	-1.2	2.7	-2.7	0.25	0.16	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S17-T24N-R9W (Escrito)
 Well: Escrito L17-2409 01H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Escrito L17-2409 01H
 TVD Reference: WELL @ 6808.0usft (Aztec 950)
 MD Reference: WELL @ 6808.0usft (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
1,291.0	1.20	245.10	1,290.9	-1.5	1.6	-1.6	1.03	0.49	
1,352.0	0.90	240.40	1,351.9	-2.0	0.7	-0.7	0.51	-0.49	
1,413.0	0.70	37.30	1,412.9	-1.9	0.5	-0.5	2.57	-0.33	
1,474.0	1.00	42.00	1,473.9	-1.2	1.0	-1.0	0.50	0.49	
1,537.0	0.80	36.80	1,536.9	-0.5	1.7	-1.7	0.34	-0.32	
1,600.0	0.50	36.40	1,599.9	0.1	2.1	-2.1	0.48	-0.48	
1,663.0	0.50	35.80	1,662.9	0.6	2.4	-2.4	0.01	0.00	
1,726.0	0.50	58.30	1,725.9	0.9	2.8	-2.8	0.31	0.00	
1,789.0	0.30	24.00	1,788.9	1.2	3.1	-3.1	0.48	-0.32	
1,853.0	0.20	334.30	1,852.9	1.5	3.1	-3.1	0.36	-0.16	
1,916.0	0.10	126.83	1,915.9	1.5	3.1	-3.1	0.46	-0.16	
1,979.0	0.20	89.50	1,978.9	1.5	3.3	-3.3	0.21	0.16	
2,042.0	0.50	241.20	2,041.9	1.4	3.2	-3.2	1.08	0.48	
2,105.0	0.60	248.60	2,104.9	1.1	2.6	-2.6	0.19	0.16	
2,168.0	0.50	243.80	2,167.9	0.9	2.1	-2.1	0.17	-0.16	
2,231.0	0.60	249.60	2,230.9	0.7	1.5	-1.5	0.18	0.16	
2,294.0	1.00	269.00	2,293.9	0.5	0.6	-0.6	0.76	0.63	
2,356.0	0.80	268.90	2,355.8	0.5	-0.3	0.3	0.32	-0.32	
2,419.0	0.80	254.50	2,418.8	0.4	-1.2	1.2	0.32	0.00	
2,482.0	0.80	257.60	2,481.8	0.2	-2.0	2.0	0.07	0.00	
2,545.0	1.10	264.80	2,544.8	0.0	-3.1	3.1	0.51	0.48	
2,608.0	1.30	262.00	2,607.8	-0.1	-4.4	4.4	0.33	0.32	
2,671.0	1.40	258.10	2,670.8	-0.4	-5.8	5.8	0.22	0.16	
2,734.0	0.70	245.80	2,733.8	-0.7	-7.0	7.0	1.16	-1.11	
2,798.0	0.50	203.10	2,797.8	-1.1	-7.4	7.4	0.74	-0.31	
2,860.0	0.40	149.80	2,859.8	-1.6	-7.4	7.4	0.67	-0.16	
2,923.0	0.80	135.40	2,922.8	-2.1	-7.0	7.0	0.67	0.63	
2,986.0	0.60	143.40	2,985.8	-2.6	-6.5	6.5	0.35	-0.32	
3,049.0	0.40	103.50	3,048.8	-3.0	-6.1	6.1	0.62	-0.32	
3,113.0	0.30	41.30	3,112.8	-2.9	-5.8	5.8	0.58	-0.16	
3,176.0	0.60	78.90	3,175.8	-2.7	-5.3	5.3	0.64	0.48	
3,239.0	0.30	57.80	3,238.8	-2.5	-4.9	4.9	0.54	-0.48	
3,302.0	0.10	117.70	3,301.8	-2.5	-4.7	4.7	0.42	-0.32	
3,365.0	0.20	142.70	3,364.8	-2.6	-4.6	4.6	0.19	0.16	
3,427.0	0.40	134.80	3,426.8	-2.8	-4.3	4.3	0.33	0.32	
3,491.0	0.50	119.30	3,490.8	-3.1	-3.9	3.9	0.24	0.16	
3,554.0	0.60	128.40	3,553.8	-3.5	-3.4	3.4	0.21	0.16	
3,617.0	0.80	123.80	3,616.8	-3.9	-2.8	2.8	0.33	0.32	
3,680.0	0.80	154.60	3,679.7	-4.6	-2.3	2.3	0.67	0.00	
3,743.0	1.00	155.90	3,742.7	-5.5	-1.8	1.8	0.32	0.32	
3,806.0	0.90	87.10	3,805.7	-5.9	-1.1	1.1	1.71	-0.16	
3,869.0	1.10	74.70	3,868.7	-5.8	0.0	0.0	0.47	0.32	
3,932.0	0.90	84.80	3,931.7	-5.5	1.0	-1.0	0.42	-0.32	
3,995.0	0.50	66.10	3,994.7	-5.4	1.8	-1.8	0.72	-0.63	
4,058.0	0.60	20.80	4,057.7	-5.0	2.1	-2.1	0.69	0.16	
4,121.0	0.80	7.30	4,120.7	-4.2	2.3	-2.3	0.41	0.32	
4,184.0	0.40	7.00	4,183.7	-3.6	2.4	-2.4	0.63	-0.63	
4,247.0	0.30	18.40	4,246.7	-3.2	2.5	-2.5	0.19	-0.16	
4,309.0	0.30	347.40	4,308.7	-2.9	2.5	-2.5	0.26	0.00	
4,372.0	0.20	309.10	4,371.7	-2.7	2.4	-2.4	0.30	-0.16	
4,436.0	0.10	19.90	4,435.7	-2.5	2.3	-2.3	0.30	-0.16	
4,499.0	0.10	17.20	4,498.7	-2.4	2.3	-2.3	0.01	0.00	
4,562.0	0.20	249.20	4,561.7	-2.4	2.3	-2.2	0.43	0.16	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S17-T24N-R9W (Escrito)
 Well: Escrito L17-2409 01H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Escrito L17-2409 01H
 TVD Reference: WELL @ 6808.0usft (Aztec 950)
 MD Reference: WELL @ 6808.0usft (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
4,611.0	0.40	153.90	4,610.7	-2.6	2.2	-2.2	0.95	0.41	
4,638.0	0.30	188.60	4,637.7	-2.8	2.3	-2.3	0.85	-0.37	
4,670.0	0.90	331.80	4,669.7	-2.6	2.1	-2.1	3.61	1.88	
4,701.0	4.80	339.20	4,700.7	-1.2	1.6	-1.6	12.61	12.58	
4,733.0	9.10	336.60	4,732.4	2.4	0.1	-0.1	13.47	13.44	
4,764.0	12.00	335.80	4,762.9	7.6	-2.2	2.2	9.37	9.35	
4,796.0	16.30	335.10	4,793.9	14.7	-5.5	5.5	13.45	13.44	
4,827.0	18.70	332.20	4,823.5	23.0	-9.6	9.6	8.23	7.74	
4,859.0	21.40	329.20	4,853.5	32.6	-15.0	15.0	9.03	8.44	
4,890.0	24.00	330.30	4,882.1	42.9	-21.0	21.0	8.50	8.39	
4,922.0	26.50	332.80	4,911.1	54.9	-27.5	27.5	8.49	7.81	
4,953.0	28.80	333.70	4,938.5	67.8	-34.0	34.0	7.54	7.42	
4,985.0	31.50	333.60	4,966.2	82.2	-41.1	41.1	8.44	8.44	
5,016.0	34.70	332.80	4,992.2	97.3	-48.7	48.7	10.42	10.32	
5,047.0	38.10	333.50	5,017.1	113.7	-57.0	57.0	11.05	10.97	
5,079.0	40.60	333.50	5,041.9	131.9	-66.1	66.1	7.81	7.81	
5,111.0	43.00	333.30	5,065.7	150.9	-75.7	75.6	7.51	7.50	
5,142.0	46.00	332.20	5,087.8	170.2	-85.6	85.5	9.99	9.68	
5,173.0	48.30	328.40	5,108.9	190.0	-96.9	96.8	11.65	7.42	
5,205.0	50.80	324.20	5,129.7	210.2	-110.4	110.3	12.68	7.81	
5,236.0	51.90	322.00	5,149.0	229.6	-124.9	124.8	6.58	3.55	
5,267.0	54.00	319.90	5,167.7	248.8	-140.5	140.4	8.67	6.77	
5,298.0	55.60	316.20	5,185.6	267.6	-157.5	157.4	11.03	5.16	
5,330.0	57.50	313.10	5,203.2	286.3	-176.4	176.3	10.03	5.94	
5,362.0	59.60	310.70	5,219.9	304.6	-196.8	196.7	9.16	6.56	
5,393.0	61.40	308.10	5,235.2	321.7	-217.6	217.5	9.33	5.81	
5,424.0	62.60	305.30	5,249.7	338.0	-239.6	239.4	8.86	3.87	
5,455.0	63.90	302.40	5,263.7	353.5	-262.5	262.4	9.35	4.19	
5,487.0	65.40	300.10	5,277.4	368.5	-287.3	287.1	8.01	4.69	
5,518.0	67.50	298.20	5,289.8	382.3	-312.1	312.0	8.80	6.77	
5,550.0	69.60	296.30	5,301.5	395.9	-338.6	338.4	8.58	6.56	
5,582.0	70.40	293.10	5,312.4	408.5	-365.9	365.7	9.72	2.50	
5,613.0	72.10	290.60	5,322.4	419.4	-393.1	393.0	9.40	5.48	
5,644.0	74.20	288.60	5,331.4	429.4	-421.1	420.9	9.17	6.77	
5,676.0	76.70	286.60	5,339.4	438.7	-450.6	450.4	9.88	7.81	
5,710.0	77.60	284.20	5,347.0	447.5	-482.5	482.4	7.37	2.65	
5,748.0	78.50	279.60	5,354.9	455.2	-518.9	518.7	12.08	2.37	
5,779.0	79.00	277.40	5,360.9	459.7	-549.0	548.8	7.14	1.61	
5,809.0	80.00	275.60	5,366.4	463.0	-578.3	578.1	6.78	3.33	
5,839.0	81.70	273.60	5,371.1	465.4	-607.8	607.6	8.68	5.67	
5,870.0	84.90	272.40	5,374.8	467.0	-638.5	638.4	11.02	10.32	
5,901.0	87.00	272.40	5,376.9	468.3	-669.4	669.3	6.77	6.77	
5,933.0	87.40	272.30	5,378.5	469.6	-701.4	701.2	1.29	1.25	
5,964.0	89.30	271.70	5,379.4	470.7	-732.3	732.2	6.43	6.13	
5,996.0	89.90	271.10	5,379.6	471.5	-764.3	764.2	2.65	1.88	
6,059.0	91.10	270.70	5,379.1	472.4	-827.3	827.1	2.01	1.90	
6,122.0	90.80	270.20	5,378.0	472.9	-890.3	890.1	0.93	-0.48	
6,185.0	90.80	270.20	5,377.2	473.2	-953.3	953.1	0.00	0.00	
6,248.0	90.70	269.70	5,376.3	473.1	-1,016.3	1,016.1	0.81	-0.16	
6,311.0	90.30	269.70	5,375.8	472.8	-1,079.3	1,079.1	0.63	-0.63	
6,374.0	90.60	269.60	5,375.3	472.4	-1,142.3	1,142.1	0.50	0.48	
6,437.0	90.40	269.40	5,374.7	471.8	-1,205.3	1,205.1	0.45	-0.32	
6,500.0	90.50	269.50	5,374.2	471.2	-1,268.3	1,268.1	0.22	0.16	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S17-T24N-R9W (Escrito)
 Well: Escrito L17-2409 01H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Escrito L17-2409 01H
 TVD Reference: WELL @ 6808.0usft (Aztec 950)
 MD Reference: WELL @ 6808.0usft (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 (°/100usft)	Build Rate (°/100u)	Formations / Comments
6,563.0	90.20	269.80	5,373.9	470.9	-1,331.3	1,331.1	0.67	-0.48	
6,626.0	90.00	270.10	5,373.7	470.8	-1,394.3	1,394.1	0.57	-0.32	
6,689.0	90.30	269.70	5,373.6	470.7	-1,457.3	1,457.1	0.79	0.48	
6,752.0	90.90	269.40	5,372.9	470.2	-1,520.3	1,520.1	1.06	0.95	
6,815.0	91.00	270.20	5,371.9	470.0	-1,583.3	1,583.1	1.28	0.16	
6,878.0	90.60	270.50	5,371.0	470.4	-1,646.2	1,646.1	0.79	-0.63	
6,942.0	90.80	270.00	5,370.2	470.6	-1,710.2	1,710.1	0.84	0.31	
7,004.0	90.40	270.30	5,369.6	470.8	-1,772.2	1,772.1	0.81	-0.65	
7,067.0	90.20	270.60	5,369.2	471.3	-1,835.2	1,835.1	0.57	-0.32	
7,130.0	90.30	270.30	5,369.0	471.8	-1,898.2	1,898.1	0.50	0.16	
7,193.0	90.70	270.40	5,368.4	472.2	-1,961.2	1,961.1	0.65	0.63	
7,256.0	90.70	270.50	5,367.6	472.7	-2,024.2	2,024.1	0.16	0.00	
7,319.0	89.70	270.30	5,367.4	473.1	-2,087.2	2,087.1	1.62	-1.59	
7,381.0	90.00	270.50	5,367.6	473.5	-2,149.2	2,149.1	0.58	0.48	
7,444.0	90.30	270.60	5,367.4	474.1	-2,212.2	2,212.0	0.50	0.48	
7,507.0	90.80	270.90	5,366.8	475.0	-2,275.2	2,275.0	0.93	0.79	
7,570.0	90.60	270.20	5,366.0	475.6	-2,338.2	2,338.0	1.16	-0.32	
7,632.0	90.60	270.40	5,365.4	475.9	-2,400.2	2,400.0	0.32	0.00	
7,695.0	91.00	270.30	5,364.5	476.3	-2,463.2	2,463.0	0.65	0.63	
7,758.0	90.20	269.60	5,363.9	476.2	-2,526.2	2,526.0	1.69	-1.27	
7,821.0	90.60	269.70	5,363.4	475.8	-2,589.2	2,589.0	0.65	0.63	
7,884.0	91.10	269.70	5,362.5	475.5	-2,652.2	2,652.0	0.79	0.79	
7,948.0	90.40	269.40	5,361.6	475.0	-2,716.2	2,716.0	1.19	-1.09	
8,010.0	90.20	269.00	5,361.3	474.1	-2,778.2	2,778.0	0.72	-0.32	
8,073.0	90.60	268.50	5,360.9	472.8	-2,841.1	2,841.0	1.02	0.63	
8,137.0	90.20	269.40	5,360.4	471.6	-2,905.1	2,905.0	1.54	-0.63	
8,199.0	89.80	268.30	5,360.4	470.4	-2,967.1	2,966.9	1.89	-0.65	
8,262.0	90.40	269.30	5,360.3	469.0	-3,030.1	3,029.9	1.85	0.95	
8,325.0	91.10	270.20	5,359.5	468.8	-3,093.1	3,092.9	1.81	1.11	
8,388.0	90.70	270.00	5,358.5	468.9	-3,156.1	3,155.9	0.71	-0.63	
8,452.0	90.90	269.90	5,357.6	468.8	-3,220.1	3,219.9	0.35	0.31	
8,515.0	90.50	270.10	5,356.8	468.8	-3,283.1	3,282.9	0.71	-0.63	
8,577.0	90.40	269.00	5,356.4	468.3	-3,345.1	3,344.9	1.78	-0.16	
8,640.0	90.80	268.50	5,355.7	467.0	-3,408.0	3,407.9	1.02	0.63	
8,704.0	90.90	268.70	5,354.7	465.4	-3,472.0	3,471.9	0.35	0.16	
8,767.0	90.80	269.70	5,353.8	464.5	-3,535.0	3,534.8	1.60	-0.16	
8,830.0	90.50	270.10	5,353.1	464.4	-3,598.0	3,597.8	0.79	-0.48	
8,893.0	89.90	269.80	5,352.9	464.3	-3,661.0	3,660.8	1.06	-0.95	
8,956.0	90.50	270.00	5,352.7	464.2	-3,724.0	3,723.8	1.00	0.95	
9,019.0	90.50	270.60	5,352.1	464.6	-3,787.0	3,786.8	0.95	0.00	
9,082.0	90.00	271.10	5,351.8	465.5	-3,850.0	3,849.8	1.12	-0.79	
9,145.0	90.30	271.00	5,351.7	466.7	-3,913.0	3,912.8	0.50	0.48	
9,208.0	90.80	270.60	5,351.1	467.5	-3,976.0	3,975.8	1.02	0.79	
9,271.0	90.00	270.50	5,350.6	468.1	-4,039.0	4,038.8	1.28	-1.27	
9,334.0	90.70	270.50	5,350.2	468.7	-4,102.0	4,101.8	1.11	1.11	
9,397.0	90.50	270.70	5,349.6	469.3	-4,165.0	4,164.8	0.45	-0.32	
9,460.0	90.20	270.30	5,349.2	469.9	-4,228.0	4,227.8	0.79	-0.48	
9,523.0	90.80	270.30	5,348.6	470.2	-4,291.0	4,290.8	0.95	0.95	
9,587.0	90.70	270.50	5,347.8	470.7	-4,355.0	4,354.8	0.35	-0.16	
9,650.0	90.50	269.80	5,347.1	470.8	-4,417.9	4,417.8	1.16	-0.32	
9,712.0	90.20	269.70	5,346.8	470.6	-4,479.9	4,479.8	0.51	-0.48	
9,775.0	90.80	269.70	5,346.2	470.2	-4,542.9	4,542.8	0.95	0.95	
9,838.0	89.80	268.90	5,345.9	469.5	-4,605.9	4,605.8	2.03	-1.59	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S17-T24N-R9W (Escrito)
Well: Escrito L17-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito L17-2409 01H
TVD Reference: WELL @ 6808.0usft (Aztec 950)
MD Reference: WELL @ 6808.0usft (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	
9,901.0	90.40	268.70	5,345.8	468.2	-4,668.9	4,668.8	1.00	0.95		
9,964.0	90.30	268.30	5,345.4	466.5	-4,731.9	4,731.7	0.65	-0.16		
10,027.0	90.40	269.00	5,345.0	465.0	-4,794.9	4,794.7	1.12	0.16		
10,090.0	91.50	269.80	5,344.0	464.4	-4,857.9	4,857.7	2.16	1.75		
10,153.0	90.40	270.10	5,342.9	464.3	-4,920.9	4,920.7	1.81	-1.75		
10,216.0	90.50	269.80	5,342.4	464.2	-4,983.9	4,983.7	0.50	0.16		
10,279.0	91.20	269.80	5,341.5	464.0	-5,046.8	5,046.7	1.11	1.11		
10,342.0	91.90	270.80	5,339.8	464.4	-5,109.8	5,109.7	1.94	1.11		
10,415.0	90.80	271.10	5,338.1	465.6	-5,182.8	5,182.6	1.56	-1.51	Last CES Survey @ 10,415' MD	
10,463.0	90.80	271.10	5,337.4	466.5	-5,230.8	5,230.6	0.00	0.00	PTB @ 10,463' MD	

Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Escrito L17-2409 01H PI	- actual wellpath misses target center by 16.1usft at 10463.0usft MD (5337.4 TVD, 466.5 N, -5230.8 E)	0.00	0.00	5,352.6	468.3	-5,235.9	1,933,170.95	2,721,678.79	36.312832	-107.838129
- Point										
Escrito L17-2409 01H PI	- actual wellpath misses target center by 7.9usft at 5872.4usft MD (5375.0 TVD, 467.1 N, -641.0 E)	0.00	0.00	5,367.6	470.0	-641.4	1,933,173.28	2,726,273.31	36.312838	-107.822534
- Point										
Escrito L17-2409 01H PI	- actual wellpath misses target center by 8.2usft at 10463.0usft MD (5337.4 TVD, 466.5 N, -5230.8 E)	0.00	0.00	5,343.6	468.3	-5,235.9	1,933,170.95	2,721,678.79	36.312832	-107.838129
- Point										
Escrito L17-2409 01H PI	- actual wellpath misses target center by 8.9usft at 5873.6usft MD (5375.1 TVD, 467.1 N, -642.1 E)	0.00	0.00	5,383.5	470.0	-641.4	1,933,173.28	2,726,273.31	36.312838	-107.822534
- Point										
Escrito L17-2409 01H PI	- actual wellpath misses target center by 15.0usft at 10463.0usft MD (5337.4 TVD, 466.5 N, -5230.8 E)	0.00	0.00	5,351.4	468.3	-5,235.9	1,933,170.95	2,721,678.79	36.312832	-107.838129
- Point										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
10,415.0	5,338.1	465.6	-5,182.8	Last CES Survey @ 10,415' MD	
10,463.0	5,337.4	466.5	-5,230.8	PTB @ 10,463' MD	

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

San Juan County, NM

S17-T24N-R9W (Escrito)

Escrito L17-2409 01H

Hz

OIL CONS. DIV DIST. 3

APR 29 2014

Design: FINAL

Survey Report - Geographic

24 March, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L17-2409 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6808.0usft (Aztec 950)
Site:	S17-T24N-R9W (Escrito)	MD Reference:	WELL @ 6808.0usft (Aztec 950)
Well:	Escrito L17-2409 01H	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		S17-T24N-R9W (Escrito)			
Site Position:		Northing:	1,932,703.40 usft	Latitude:	36.311547
From:	Lat/Long	Easting:	2,726,914.75 usft	Longitude:	-107.820357
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.01 °

Well	Escrito L17-2409 01H					
Well Position	+N/-S	0.0 usft	Northing:	1,932,703.40 usft	Latitude:	36.311547
	+E/-W	0.0 usft	Easting:	2,726,914.75 usft	Longitude:	-107.820357
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,792.0 usft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/2/2013	9.62	63.03	50,276

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	269.98	

Survey Program		Date	3/24/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
558.0	10,463.0	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	1,932,703.40	2,726,914.75	36.311547	-107.820357
558.0	0.60	137.80	558.0	-2.2	2.0	1,932,701.24	2,726,916.71	36.311541	-107.820351
619.0	0.60	150.80	619.0	-2.7	2.3	1,932,700.72	2,726,917.08	36.311540	-107.820349
680.0	0.80	158.10	680.0	-3.4	2.6	1,932,700.05	2,726,917.40	36.311538	-107.820348
742.0	1.20	147.00	742.0	-4.3	3.2	1,932,699.10	2,726,917.91	36.311535	-107.820347
803.0	0.70	65.20	803.0	-4.7	3.8	1,932,698.73	2,726,918.60	36.311534	-107.820344
864.0	1.00	43.80	864.0	-4.1	4.6	1,932,699.27	2,726,919.31	36.311536	-107.820342
925.0	0.90	40.70	924.9	-3.4	5.2	1,932,700.01	2,726,919.99	36.311538	-107.820339
986.0	0.70	333.30	985.9	-2.7	5.4	1,932,700.71	2,726,920.13	36.311540	-107.820339
1,047.0	0.70	302.50	1,046.9	-2.2	4.9	1,932,701.24	2,726,919.65	36.311541	-107.820341
1,108.0	0.70	309.30	1,107.9	-1.7	4.3	1,932,701.68	2,726,919.05	36.311542	-107.820343
1,169.0	0.80	283.50	1,168.9	-1.4	3.6	1,932,702.01	2,726,918.34	36.311543	-107.820345

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S17-T24N-R9W (Escrito)
 Well: Escrito L17-2409 01H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Escrito L17-2409 01H
 TVD Reference: WELL @ 6808.0usft (Aztec 950)
 MD Reference: WELL @ 6808.0usft (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
1,230.0	0.90	275.90	1,229.9	-1.2	2.7	1,932,702.16	2,726,917.45	36.311544	-107.820348
1,291.0	1.20	245.10	1,290.9	-1.5	1.6	1,932,701.94	2,726,916.40	36.311543	-107.820352
1,352.0	0.90	240.40	1,351.9	-2.0	0.7	1,932,701.44	2,726,915.40	36.311542	-107.820355
1,413.0	0.70	37.30	1,412.9	-1.9	0.5	1,932,701.50	2,726,915.21	36.311542	-107.820356
1,474.0	1.00	42.00	1,473.9	-1.2	1.0	1,932,702.19	2,726,915.79	36.311544	-107.820354
1,537.0	0.80	36.80	1,536.9	-0.5	1.7	1,932,702.95	2,726,916.42	36.311546	-107.820352
1,600.0	0.50	36.40	1,599.9	0.1	2.1	1,932,703.52	2,726,916.85	36.311547	-107.820350
1,663.0	0.50	35.80	1,662.9	0.6	2.4	1,932,703.97	2,726,917.17	36.311549	-107.820349
1,726.0	0.50	58.30	1,725.9	0.9	2.8	1,932,704.33	2,726,917.57	36.311550	-107.820348
1,789.0	0.30	24.00	1,788.9	1.2	3.1	1,932,704.63	2,726,917.87	36.311550	-107.820347
1,853.0	0.20	334.30	1,852.9	1.5	3.1	1,932,704.88	2,726,917.89	36.311551	-107.820347
1,916.0	0.10	126.83	1,915.9	1.5	3.1	1,932,704.95	2,726,917.89	36.311551	-107.820347
1,979.0	0.20	89.50	1,978.9	1.5	3.3	1,932,704.92	2,726,918.04	36.311551	-107.820346
2,042.0	0.50	241.20	2,041.9	1.4	3.2	1,932,704.79	2,726,917.91	36.311551	-107.820347
2,105.0	0.60	248.60	2,104.9	1.1	2.6	1,932,704.53	2,726,917.36	36.311550	-107.820348
2,168.0	0.50	243.80	2,167.9	0.9	2.1	1,932,704.29	2,726,916.81	36.311550	-107.820350
2,231.0	0.60	249.60	2,230.9	0.7	1.5	1,932,704.06	2,726,916.25	36.311549	-107.820352
2,294.0	1.00	269.00	2,293.9	0.5	0.6	1,932,703.93	2,726,915.39	36.311549	-107.820355
2,356.0	0.80	268.90	2,355.8	0.5	-0.3	1,932,703.91	2,726,914.42	36.311548	-107.820358
2,419.0	0.80	254.50	2,418.8	0.4	-1.2	1,932,703.79	2,726,913.56	36.311548	-107.820361
2,482.0	0.80	257.60	2,481.8	0.2	-2.0	1,932,703.57	2,726,912.70	36.311548	-107.820364
2,545.0	1.10	264.80	2,544.8	0.0	-3.1	1,932,703.42	2,726,911.67	36.311547	-107.820368
2,608.0	1.30	262.00	2,607.8	-0.1	-4.4	1,932,703.27	2,726,910.36	36.311547	-107.820372
2,671.0	1.40	258.10	2,670.8	-0.4	-5.8	1,932,703.01	2,726,908.90	36.311546	-107.820377
2,734.0	0.70	245.80	2,733.8	-0.7	-7.0	1,932,702.70	2,726,907.80	36.311545	-107.820381
2,798.0	0.50	203.10	2,797.8	-1.1	-7.4	1,932,702.28	2,726,907.33	36.311544	-107.820382
2,860.0	0.40	149.80	2,859.8	-1.6	-7.4	1,932,701.84	2,726,907.33	36.311543	-107.820382
2,923.0	0.80	135.40	2,922.8	-2.1	-7.0	1,932,701.34	2,726,907.75	36.311541	-107.820381
2,986.0	0.60	143.40	2,985.8	-2.6	-6.5	1,932,700.76	2,726,908.26	36.311540	-107.820379
3,049.0	0.40	103.50	3,048.8	-3.0	-6.1	1,932,700.45	2,726,908.67	36.311539	-107.820378
3,113.0	0.30	41.30	3,112.8	-2.9	-5.8	1,932,700.52	2,726,909.00	36.311539	-107.820377
3,176.0	0.60	78.90	3,175.8	-2.7	-5.3	1,932,700.71	2,726,909.43	36.311540	-107.820375
3,239.0	0.30	57.80	3,238.8	-2.5	-4.9	1,932,700.86	2,726,909.89	36.311540	-107.820374
3,302.0	0.10	117.70	3,301.8	-2.5	-4.7	1,932,700.92	2,726,910.08	36.311540	-107.820373
3,365.0	0.20	142.70	3,364.8	-2.6	-4.6	1,932,700.81	2,726,910.20	36.311540	-107.820373
3,427.0	0.40	134.80	3,426.8	-2.8	-4.3	1,932,700.57	2,726,910.41	36.311539	-107.820372
3,491.0	0.50	119.30	3,490.8	-3.1	-3.9	1,932,700.27	2,726,910.82	36.311538	-107.820371
3,554.0	0.60	128.40	3,553.8	-3.5	-3.4	1,932,699.94	2,726,911.31	36.311538	-107.820369
3,617.0	0.80	123.80	3,616.8	-3.9	-2.8	1,932,699.49	2,726,911.94	36.311536	-107.820367
3,680.0	0.80	154.60	3,679.7	-4.6	-2.3	1,932,698.84	2,726,912.49	36.311535	-107.820365
3,743.0	1.00	155.90	3,742.7	-5.5	-1.8	1,932,697.95	2,726,912.91	36.311532	-107.820364
3,806.0	0.90	87.10	3,805.7	-5.9	-1.1	1,932,697.47	2,726,913.63	36.311531	-107.820361
3,869.0	1.10	74.70	3,868.7	-5.8	0.0	1,932,697.65	2,726,914.70	36.311531	-107.820357
3,932.0	0.90	84.80	3,931.7	-5.5	1.0	1,932,697.86	2,726,915.78	36.311532	-107.820354
3,995.0	0.50	66.10	3,994.7	-5.4	1.8	1,932,698.01	2,726,916.52	36.311532	-107.820351
4,058.0	0.60	20.80	4,057.7	-5.0	2.1	1,932,698.43	2,726,916.89	36.311533	-107.820350
4,121.0	0.80	7.30	4,120.7	-4.2	2.3	1,932,699.18	2,726,917.06	36.311535	-107.820349
4,184.0	0.40	7.00	4,183.7	-3.6	2.4	1,932,699.83	2,726,917.15	36.311537	-107.820349
4,247.0	0.30	18.40	4,246.7	-3.2	2.5	1,932,700.21	2,726,917.23	36.311538	-107.820349
4,309.0	0.30	347.40	4,308.7	-2.9	2.5	1,932,700.52	2,726,917.24	36.311539	-107.820349
4,372.0	0.20	309.10	4,371.7	-2.7	2.4	1,932,700.75	2,726,917.12	36.311540	-107.820349
4,436.0	0.10	19.90	4,435.7	-2.5	2.3	1,932,700.87	2,726,917.05	36.311540	-107.820349
4,499.0	0.10	17.20	4,498.7	-2.4	2.3	1,932,700.98	2,726,917.09	36.311540	-107.820349
4,562.0	0.20	249.20	4,561.7	-2.4	2.3	1,932,700.99	2,726,917.00	36.311540	-107.820350
4,611.0	0.40	153.90	4,610.7	-2.6	2.2	1,932,700.81	2,726,917.00	36.311540	-107.820350

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S17-T24N-R9W (Escrito)
 Well: Escrito L17-2409 01H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Escrito L17-2409 01H
 TVD Reference: WELL @ 6808.0usft (Aztec 950)
 MD Reference: WELL @ 6808.0usft (Aztec 950)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: USA EDM 5000 Multi Users DB

Survey											
Measured			Vertical			Map		Map			
Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude		
4,638.0	0.30	188.60	4,637.7	-2.8	2.3	1,932,700.65	2,726,917.03	36.311540	-107.820350		
4,670.0	0.90	331.80	4,669.7	-2.6	2.1	1,932,700.79	2,726,916.90	36.311540	-107.820350		
4,701.0	4.80	339.20	4,700.7	-1.2	1.6	1,932,702.22	2,726,916.32	36.311544	-107.820352		
4,733.0	9.10	336.60	4,732.4	2.4	0.1	1,932,705.79	2,726,914.84	36.311554	-107.820357		
4,764.0	12.00	335.80	4,762.9	7.6	-2.2	1,932,710.98	2,726,912.54	36.311568	-107.820365		
4,796.0	16.30	335.10	4,793.9	14.7	-5.5	1,932,718.10	2,726,909.28	36.311587	-107.820376		
4,827.0	18.70	332.20	4,823.5	23.0	-9.6	1,932,726.44	2,726,905.13	36.311610	-107.820390		
4,859.0	21.40	329.20	4,853.5	32.6	-15.0	1,932,735.99	2,726,899.75	36.311637	-107.820408		
4,890.0	24.00	330.30	4,882.1	42.9	-21.0	1,932,746.33	2,726,893.73	36.311665	-107.820429		
4,922.0	26.50	332.80	4,911.1	54.9	-27.5	1,932,758.33	2,726,887.24	36.311698	-107.820451		
4,953.0	28.80	333.70	4,938.5	67.8	-34.0	1,932,771.18	2,726,880.76	36.311733	-107.820473		
4,985.0	31.50	333.60	4,966.2	82.2	-41.1	1,932,785.58	2,726,873.63	36.311773	-107.820497		
5,016.0	34.70	332.80	4,992.2	97.3	-48.7	1,932,800.68	2,726,865.99	36.311814	-107.820523		
5,047.0	38.10	333.50	5,017.1	113.7	-57.0	1,932,817.09	2,726,857.69	36.311859	-107.820551		
5,079.0	40.60	333.50	5,041.9	131.9	-66.1	1,932,835.25	2,726,848.63	36.311909	-107.820582		
5,111.0	43.00	333.30	5,065.7	150.9	-75.7	1,932,854.32	2,726,839.08	36.311962	-107.820614		
5,142.0	46.00	332.20	5,087.8	170.2	-85.6	1,932,873.63	2,726,829.12	36.312015	-107.820648		
5,173.0	48.30	328.40	5,108.9	190.0	-96.9	1,932,893.35	2,726,817.85	36.312069	-107.820686		
5,205.0	50.80	324.20	5,129.7	210.2	-110.4	1,932,913.59	2,726,804.33	36.312125	-107.820732		
5,236.0	51.90	322.00	5,149.0	229.6	-124.9	1,932,932.94	2,726,789.79	36.312178	-107.820781		
5,267.0	54.00	319.90	5,167.7	248.8	-140.5	1,932,952.15	2,726,774.20	36.312230	-107.820834		
5,298.0	55.60	316.20	5,185.6	267.6	-157.5	1,932,970.97	2,726,757.26	36.312282	-107.820892		
5,330.0	57.50	313.10	5,203.2	286.3	-176.4	1,932,989.73	2,726,738.26	36.312334	-107.820956		
5,362.0	59.60	310.70	5,219.9	304.6	-196.8	1,933,007.95	2,726,717.94	36.312384	-107.821025		
5,393.0	61.40	308.10	5,235.2	321.7	-217.6	1,933,025.06	2,726,697.09	36.312431	-107.821096		
5,424.0	62.60	305.30	5,249.7	338.0	-239.6	1,933,041.41	2,726,675.14	36.312476	-107.821170		
5,455.0	63.90	302.40	5,263.7	353.5	-262.5	1,933,056.82	2,726,652.15	36.312518	-107.821248		
5,487.0	65.40	300.10	5,277.4	368.5	-287.3	1,933,071.82	2,726,627.43	36.312559	-107.821332		
5,518.0	67.50	298.20	5,289.8	382.3	-312.1	1,933,085.65	2,726,602.61	36.312597	-107.821417		
5,550.0	69.60	296.30	5,301.5	395.9	-338.6	1,933,099.28	2,726,576.13	36.312635	-107.821506		
5,582.0	70.40	293.10	5,312.4	408.5	-365.9	1,933,111.84	2,726,548.81	36.312669	-107.821599		
5,613.0	72.10	290.60	5,322.4	419.4	-393.1	1,933,122.75	2,726,521.57	36.312699	-107.821692		
5,644.0	74.20	288.60	5,331.4	429.4	-421.1	1,933,132.70	2,726,493.62	36.312727	-107.821786		
5,676.0	76.70	286.60	5,339.4	438.7	-450.6	1,933,142.06	2,726,464.10	36.312752	-107.821887		
5,710.0	77.60	284.20	5,347.0	447.5	-482.5	1,933,150.85	2,726,432.14	36.312776	-107.821995		
5,748.0	78.50	279.60	5,354.9	455.2	-518.9	1,933,158.51	2,726,395.78	36.312797	-107.822119		
5,779.0	79.00	277.40	5,360.9	459.7	-549.0	1,933,163.00	2,726,365.72	36.312810	-107.822221		
5,809.0	80.00	275.60	5,366.4	463.0	-578.3	1,933,166.33	2,726,336.41	36.312819	-107.822320		
5,839.0	81.70	273.60	5,371.1	465.4	-607.8	1,933,168.70	2,726,306.89	36.312825	-107.822420		
5,870.0	84.90	272.40	5,374.8	467.0	-638.5	1,933,170.31	2,726,276.15	36.312830	-107.822525		
5,901.0	87.00	272.40	5,376.9	468.3	-669.4	1,933,171.60	2,726,245.25	36.312833	-107.822630		
5,933.0	87.40	272.30	5,378.5	469.6	-701.4	1,933,172.90	2,726,213.32	36.312837	-107.822738		
5,964.0	89.30	271.70	5,379.4	470.7	-732.3	1,933,173.98	2,726,182.35	36.312840	-107.822843		
5,996.0	89.90	271.10	5,379.6	471.5	-764.3	1,933,174.76	2,726,150.36	36.312842	-107.822952		
6,059.0	91.10	270.70	5,379.1	472.4	-827.3	1,933,175.74	2,726,087.37	36.312845	-107.823165		
6,122.0	90.80	270.20	5,378.0	472.9	-890.3	1,933,176.23	2,726,024.38	36.312846	-107.823379		
6,185.0	90.80	270.20	5,377.2	473.2	-953.3	1,933,176.44	2,725,961.39	36.312847	-107.823593		
6,248.0	90.70	269.70	5,376.3	473.1	-1,016.3	1,933,176.37	2,725,898.40	36.312847	-107.823807		
6,311.0	90.30	269.70	5,375.8	472.8	-1,079.3	1,933,176.04	2,725,835.40	36.312846	-107.824021		
6,374.0	90.60	269.60	5,375.3	472.4	-1,142.3	1,933,175.64	2,725,772.40	36.312845	-107.824234		
6,437.0	90.40	269.40	5,374.7	471.8	-1,205.3	1,933,175.08	2,725,709.41	36.312843	-107.824448		
6,500.0	90.50	269.50	5,374.2	471.2	-1,268.3	1,933,174.47	2,725,646.41	36.312842	-107.824662		
6,563.0	90.20	269.80	5,373.9	470.9	-1,331.3	1,933,174.08	2,725,583.42	36.312840	-107.824876		
6,626.0	90.00	270.10	5,373.7	470.8	-1,394.3	1,933,174.01	2,725,520.42	36.312840	-107.825090		
6,689.0	90.30	269.70	5,373.6	470.7	-1,457.3	1,933,173.90	2,725,457.42	36.312840	-107.825304		

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito L17-2409 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6808.0usft (Aztec 950)
Site:	S17-T24N-R9W (Escrito)	MD Reference:	WELL @ 6808.0usft (Aztec 950)
Well:	Escrito L17-2409 01H	North Reference:	True
Wellbore:	H2	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	
6,752.0	90.90	269.40	5,372.9	470.2	-1,520.3	1,933,173.39	2,725,394.42	36.312839		-107.825517	
6,815.0	91.00	270.20	5,371.9	470.0	-1,583.3	1,933,173.16	2,725,331.43	36.312838		-107.825731	
6,878.0	90.60	270.50	5,371.0	470.4	-1,646.2	1,933,173.54	2,725,268.44	36.312839		-107.825945	
6,942.0	90.80	270.00	5,370.2	470.6	-1,710.2	1,933,173.81	2,725,204.45	36.312840		-107.826162	
7,004.0	90.40	270.30	5,369.6	470.8	-1,772.2	1,933,173.96	2,725,142.45	36.312840		-107.826373	
7,067.0	90.20	270.60	5,369.2	471.3	-1,835.2	1,933,174.45	2,725,079.45	36.312842		-107.826587	
7,130.0	90.30	270.30	5,369.0	471.8	-1,898.2	1,933,174.94	2,725,016.46	36.312843		-107.826800	
7,193.0	90.70	270.40	5,368.4	472.2	-1,961.2	1,933,175.31	2,724,953.46	36.312844		-107.827014	
7,256.0	90.70	270.50	5,367.6	472.7	-2,024.2	1,933,175.80	2,724,890.47	36.312845		-107.827228	
7,319.0	89.70	270.30	5,367.4	473.1	-2,087.2	1,933,176.23	2,724,827.47	36.312847		-107.827442	
7,381.0	90.00	270.50	5,367.6	473.5	-2,149.2	1,933,176.66	2,724,765.47	36.312848		-107.827652	
7,444.0	90.30	270.60	5,367.4	474.1	-2,212.2	1,933,177.25	2,724,702.47	36.312849		-107.827866	
7,507.0	90.80	270.90	5,366.8	475.0	-2,275.2	1,933,178.07	2,724,639.48	36.312852		-107.828080	
7,570.0	90.60	270.20	5,366.0	475.6	-2,338.2	1,933,178.66	2,724,576.49	36.312853		-107.828294	
7,632.0	90.60	270.40	5,365.4	475.9	-2,400.2	1,933,178.98	2,724,514.49	36.312854		-107.828504	
7,695.0	91.00	270.30	5,364.5	476.3	-2,463.2	1,933,179.36	2,724,451.50	36.312855		-107.828718	
7,758.0	90.20	269.60	5,363.9	476.2	-2,526.2	1,933,179.29	2,724,388.51	36.312855		-107.828932	
7,821.0	90.60	269.70	5,363.4	475.8	-2,589.2	1,933,178.90	2,724,325.51	36.312854		-107.829146	
7,884.0	91.10	269.70	5,362.5	475.5	-2,652.2	1,933,178.56	2,724,262.52	36.312853		-107.829359	
7,948.0	90.40	269.40	5,361.6	475.0	-2,716.2	1,933,178.05	2,724,198.53	36.312852		-107.829577	
8,010.0	90.20	269.00	5,361.3	474.1	-2,778.2	1,933,177.18	2,724,136.53	36.312849		-107.829787	
8,073.0	90.60	268.50	5,360.9	472.8	-2,841.1	1,933,175.79	2,724,073.55	36.312845		-107.830001	
8,137.0	90.20	269.40	5,360.4	471.6	-2,905.1	1,933,174.61	2,724,009.56	36.312842		-107.830218	
8,199.0	89.80	268.30	5,360.4	470.4	-2,967.1	1,933,173.36	2,723,947.58	36.312839		-107.830428	
8,262.0	90.40	269.30	5,360.3	469.0	-3,030.1	1,933,172.03	2,723,884.59	36.312835		-107.830642	
8,325.0	91.10	270.20	5,359.5	468.8	-3,093.1	1,933,171.75	2,723,821.60	36.312834		-107.830856	
8,388.0	90.70	270.00	5,358.5	468.9	-3,156.1	1,933,171.85	2,723,758.61	36.312835		-107.831070	
8,452.0	90.90	269.90	5,357.6	468.8	-3,220.1	1,933,171.79	2,723,694.61	36.312834		-107.831287	
8,515.0	90.50	270.10	5,356.8	468.8	-3,283.1	1,933,171.78	2,723,631.62	36.312834		-107.831501	
8,577.0	90.40	269.00	5,356.4	468.3	-3,345.1	1,933,171.28	2,723,569.62	36.312833		-107.831711	
8,640.0	90.80	268.50	5,355.7	467.0	-3,408.0	1,933,169.90	2,723,506.64	36.312829		-107.831925	
8,704.0	90.90	268.70	5,354.7	465.4	-3,472.0	1,933,168.33	2,723,442.67	36.312825		-107.832142	
8,767.0	90.80	269.70	5,353.8	464.5	-3,535.0	1,933,167.44	2,723,379.68	36.312823		-107.832356	
8,830.0	90.50	270.10	5,353.1	464.4	-3,598.0	1,933,167.32	2,723,316.69	36.312822		-107.832570	
8,893.0	89.90	269.80	5,352.9	464.3	-3,661.0	1,933,167.26	2,723,253.69	36.312822		-107.832784	
8,956.0	90.50	270.00	5,352.7	464.2	-3,724.0	1,933,167.14	2,723,190.69	36.312822		-107.832997	
9,019.0	90.50	270.60	5,352.1	464.6	-3,787.0	1,933,167.46	2,723,127.69	36.312823		-107.833211	
9,082.0	90.00	271.10	5,351.8	465.5	-3,850.0	1,933,168.39	2,723,064.70	36.312825		-107.833425	
9,145.0	90.30	271.00	5,351.7	466.7	-3,913.0	1,933,169.53	2,723,001.70	36.312828		-107.833639	
9,208.0	90.80	270.60	5,351.1	467.5	-3,976.0	1,933,170.40	2,722,938.70	36.312831		-107.833853	
9,271.0	90.00	270.50	5,350.6	468.1	-4,039.0	1,933,171.00	2,722,875.71	36.312832		-107.834067	
9,334.0	90.70	270.50	5,350.2	468.7	-4,102.0	1,933,171.54	2,722,812.71	36.312834		-107.834280	
9,397.0	90.50	270.70	5,349.6	469.3	-4,165.0	1,933,172.19	2,722,749.72	36.312836		-107.834494	
9,460.0	90.20	270.30	5,349.2	469.9	-4,228.0	1,933,172.73	2,722,686.72	36.312837		-107.834708	
9,523.0	90.80	270.30	5,348.6	470.2	-4,291.0	1,933,173.06	2,722,623.73	36.312838		-107.834922	
9,587.0	90.70	270.50	5,347.8	470.7	-4,355.0	1,933,173.49	2,722,559.73	36.312839		-107.835139	
9,650.0	90.50	269.80	5,347.1	470.8	-4,417.9	1,933,173.65	2,722,496.74	36.312840		-107.835353	
9,712.0	90.20	269.70	5,346.8	470.6	-4,479.9	1,933,173.37	2,722,434.74	36.312839		-107.835563	
9,775.0	90.80	269.70	5,346.2	470.2	-4,542.9	1,933,173.03	2,722,371.74	36.312838		-107.835777	
9,838.0	89.80	268.90	5,345.9	469.5	-4,605.9	1,933,172.26	2,722,308.75	36.312836		-107.835991	
9,901.0	90.40	268.70	5,345.8	468.2	-4,668.9	1,933,170.93	2,722,245.77	36.312832		-107.836205	
9,964.0	90.30	268.30	5,345.4	466.5	-4,731.9	1,933,169.27	2,722,182.79	36.312828		-107.836419	
10,027.0	90.40	269.00	5,345.0	465.0	-4,794.9	1,933,167.78	2,722,119.81	36.312823		-107.836632	
10,090.0	91.50	269.80	5,344.0	464.4	-4,857.9	1,933,167.11	2,722,056.82	36.312822		-107.836846	
10,153.0	90.40	270.10	5,342.9	464.3	-4,920.9	1,933,167.05	2,721,993.83	36.312821		-107.837060	

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S17-T24N-R9W (Escrito)
 Well: Escrito L17-2409 01H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Escrito L17-2409 01H
 TVD Reference: WELL @ 6808.0usft (Aztec 950)
 MD Reference: WELL @ 6808.0usft (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
10,216.0	90.50	269.80	5,342.4	464.2	-4,983.9	1,933,166.98	2,721,930.83	36.312821	-107.837274
10,279.0	91.20	269.80	5,341.5	464.0	-5,046.8	1,933,166.75	2,721,867.84	36.312821	-107.837488
10,342.0	91.90	270.80	5,339.8	464.4	-5,109.8	1,933,167.08	2,721,804.87	36.312821	-107.837701
10,415.0	90.80	271.10	5,338.1	465.6	-5,182.8	1,933,168.28	2,721,731.92	36.312825	-107.837949
Last CES Survey @ 10,415' MD									
10,463.0	90.80	271.10	5,337.4	466.5	-5,230.8	1,933,169.19	2,721,683.93	36.312827	-107.838112
PTB @ 10,463' MD									

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 L17-2409 01H PI	0.00	0.00	5,352.6	468.3	-5,235.9	1,933,170.96	2,721,678.79	36.312832	-107.838129
- actual wellpath misses target center by 16.1usft at 10463.0usft MD (5337.4 TVD, 466.5 N, -5230.8 E)									
- Point									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,415.0	5,338.1	465.6	-5,182.8	Last CES Survey @ 10,415' MD
10,463.0	5,337.4	466.5	-5,230.8	PTB @ 10,463' MD

Checked By: _____ Approved By: _____ Date: _____