

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

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

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

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

Submit one copy to appropriate
District Office

☐ AMENDED REPORT
☒ AS-DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35521	² Pool Code 97232	³ Pool Name BASIN MANCOS GAS
⁴ Property Code 313135	⁵ Property Name ESCRITO M32-2408	⁶ Well Number 01H
⁷ OGRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.	⁹ Elevation 6913'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	WEST/West line	County
M	32	24N	8W		414'	SOUTH	60'	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	WEST/West line	County
M	31	24N	8W	4	430'	SOUTH	405'	WEST	SAN JUAN

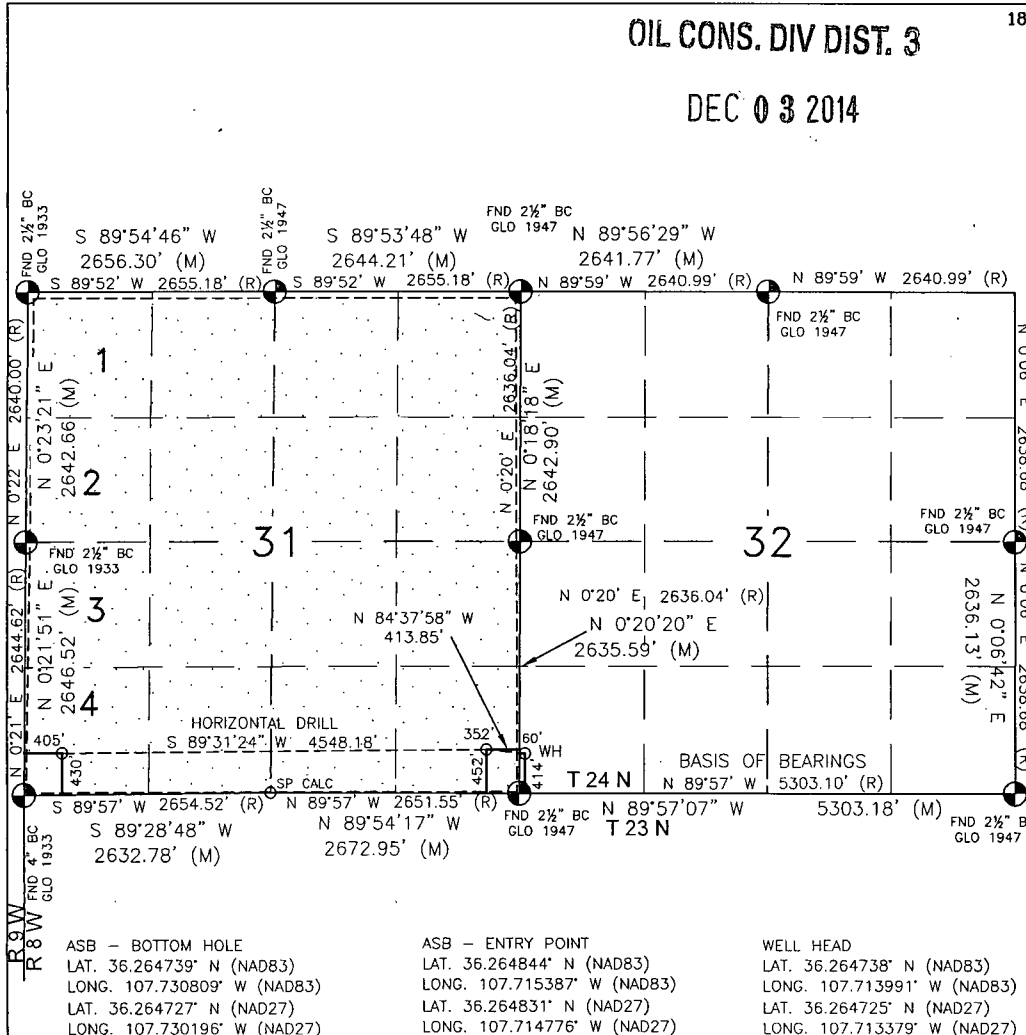
¹² Dedicated Acres 643.00 ACRES ALL OF SEC. 31	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16

OIL CONS. DIV DIST. 3

DEC 03 2014



¹⁸ 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

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 of Asbuilt Survey - NOVEMBER 11, 2014

Date of Survey - JULY 31, 2013

Signature and Seal of Professional Surveyor:

David R. Russell
DAVID R. RUSSELL
REGISTERED PROFESSIONAL SURVEYOR
10201
Certificate Number 10201

DEVIATION SURVEYS

Escrito M32-2408 01H

30-045-35521

CONFIDENTIAL

MD (Feet)	Inclination (Degree)
756'	1.10
1072'	2.20
1389'	0.80
1705'	1.10
2021'	0.70
2337'	0.40
2653'	0.50
2969'	2.20
3285'	8.40

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

12/1/14

Date

ACKNOWLEDGMENT

State of Colorado

City and County of Denver

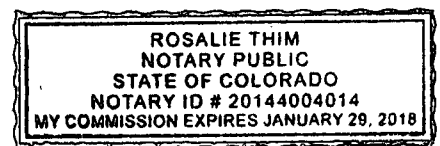
This instrument was acknowledged before me on this 1st day of December, 2014 by Cristi Bauer as Operations Technician of Encana Oil & Gas (USA) Inc., authorized agent for Encana Oil & Gas (USA) Inc., on behalf of said corporation.

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

Notary Public

Rosalie Thim

My Commission Expires:

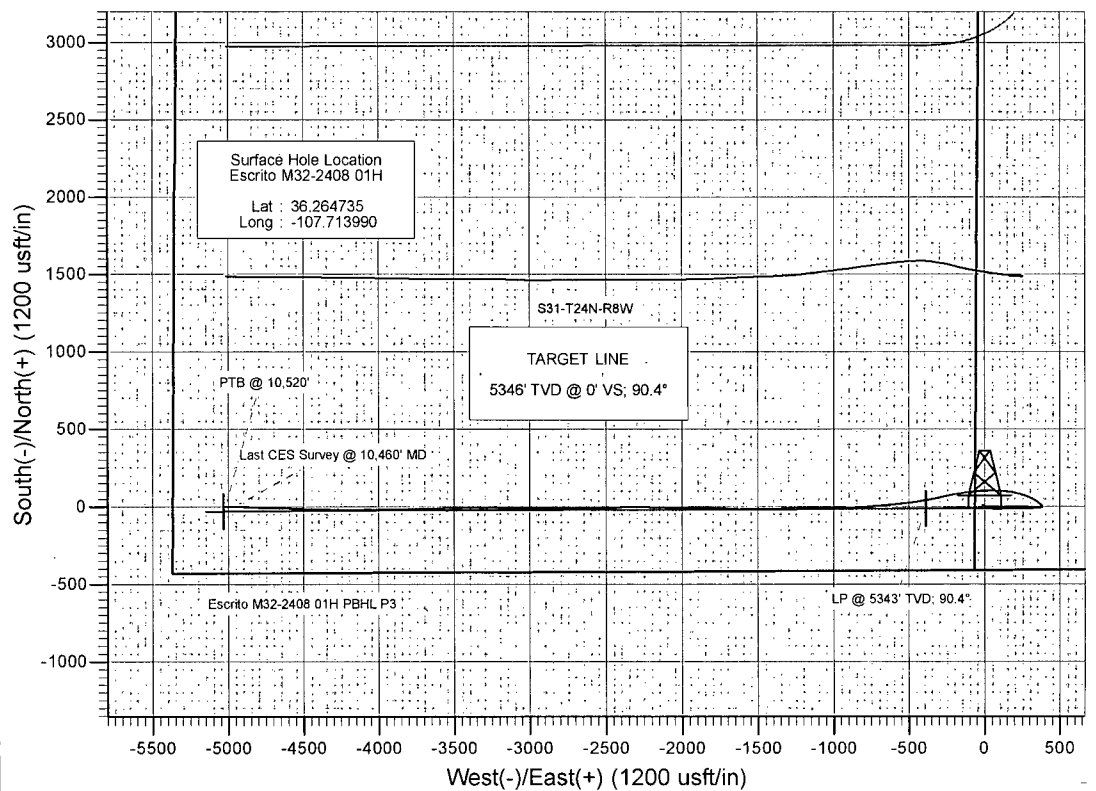
1/29/18



Project: San Juan County, NM
Site: S32-T24N-R8W (Escrito)
Well: Escrito M32-2408 01H
Wellbore: Hz
Design: FINAL



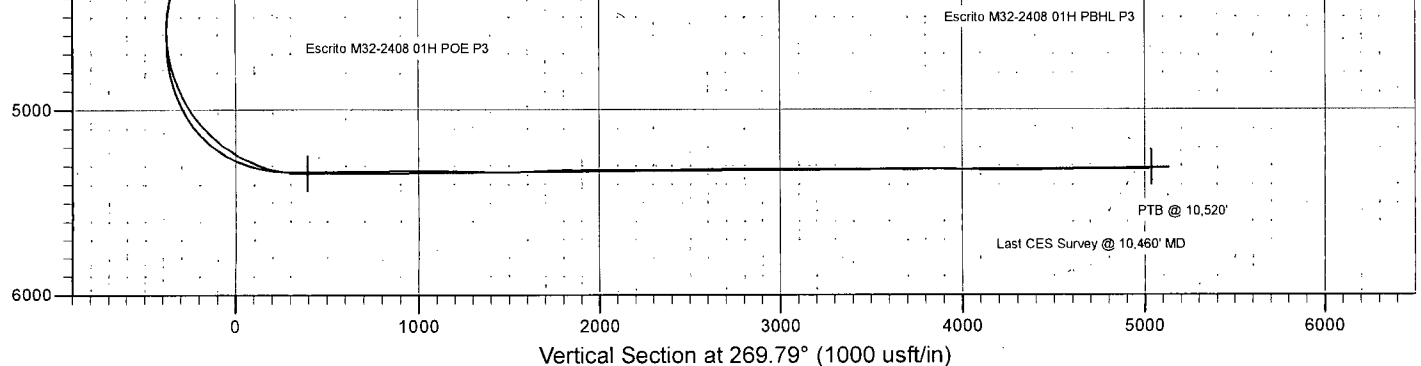
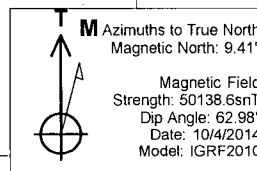
FINAL
Escrito M32-2408 01H
330955 145345; LR
18" KB @ 6932.0usft (A1099)
Ground Elevation @ 6914.0
North American Datum 1983
Well Escrito M32-2408 01H, True North



True Vertical Depth (1000 usft/in)

OIL CONS. DIV DIST. 3

DEC 03 2014



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito M32-2408 01H
Project:	San Juan County, NM	TVD Reference:	18' KB @ 6932.0usft (A1099)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	18' KB @ 6932.0usft (A1099)
Well:	Escrito M32-2408 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		S32-T24N-R8W (Escrito)			
Site Position:		Northing:	1,917,171.32 usft	Latitude:	36.268820
From:	Lat/Long	Easting:	2,758,442.71 usft	Longitude:	-107.713410
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.07 °

Well	Escrito M32-2408 01H					
Well Position	+N-S	0.0 usft	Northing:	1,915,684.07 usft	Latitude:	36.264735
	+E-W	0.0 usft	Easting:	2,758,273.57 usft	Longitude:	-107.713990
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,914.0 usft

Wellbore	H2				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	10/4/2014	9.41	62.98	50,139

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	269.79	

Survey Program		Date 10/17/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
566.0	10,520.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Formations /
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Comments
(usft)			(usft)			(usft)	(°/100usf)	(°/100u)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
566.0	1.10	303.30	566.0	3.0	-4.5	4.5	0.19	0.19	
630.0	1.00	312.10	630.0	3.7	-5.5	5.5	0.30	-0.16	
693.0	0.90	315.40	692.9	4.4	-6.2	6.2	0.18	-0.16	
756.0	1.10	300.40	755.9	5.1	-7.1	7.1	0.52	0.32	
819.0	1.10	303.90	818.9	5.7	-8.1	8.1	0.11	0.00	
883.0	1.10	295.70	882.9	6.3	-9.2	9.2	0.25	0.00	
946.0	1.40	289.00	945.9	6.8	-10.5	10.4	0.53	0.48	
1,009.0	1.80	288.40	1,008.9	7.4	-12.1	12.1	0.64	0.63	
1,072.0	2.20	298.60	1,071.8	8.3	-14.1	14.1	0.85	0.63	
1,136.0	0.04	279.40	1,135.8	8.9	-15.2	15.2	3.38	-3.37	
1,199.0	0.70	111.50	1,198.8	8.7	-14.9	14.9	1.17	1.05	
1,262.0	0.40	99.90	1,261.8	8.6	-14.3	14.3	0.51	-0.48	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito M32-2408 01H
Project:	San Juan County, NM	TVD Reference:	18' KB @ 6932.0usft (A1099)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	18' KB @ 6932.0usft (A1099)
Well:	Escrito M32-2408 01H	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
1,325.0	0.30	125.90	1,324.8	8.4	-14.0	13.9	0.29	-0.16	
1,389.0	0.80	141.50	1,388.8	8.0	-13.5	13.5	0.81	0.78	
1,452.0	0.80	116.10	1,451.8	7.4	-12.9	12.8	0.56	0.00	
1,515.0	0.60	99.10	1,514.8	7.2	-12.2	12.1	0.45	-0.32	
1,578.0	1.50	98.40	1,577.8	7.0	-11.0	11.0	1.43	1.43	
1,642.0	1.40	100.60	1,641.8	6.8	-9.4	9.4	0.18	-0.16	
1,705.0	1.10	96.40	1,704.8	6.6	-8.1	8.0	0.50	-0.48	
1,768.0	1.20	115.40	1,767.7	6.2	-6.9	6.8	0.62	0.16	
1,831.0	1.10	127.90	1,830.7	5.5	-5.8	5.8	0.43	-0.16	
1,894.0	1.20	132.90	1,893.7	4.7	-4.8	4.8	0.22	0.16	
1,958.0	1.30	112.90	1,957.7	4.0	-3.7	3.7	0.70	0.16	
2,021.0	0.70	129.60	2,020.7	3.5	-2.7	2.7	1.05	-0.95	
2,084.0	0.20	129.00	2,083.7	3.2	-2.3	2.3	0.79	-0.79	
2,147.0	0.30	132.90	2,146.7	3.0	-2.1	2.1	0.16	0.16	
2,210.0	0.20	210.20	2,209.7	2.8	-2.1	2.1	0.51	-0.16	
2,274.0	0.30	160.30	2,273.7	2.5	-2.1	2.1	0.36	0.16	
2,337.0	0.40	181.80	2,336.7	2.1	-2.0	2.0	0.26	0.16	
2,400.0	0.30	220.80	2,399.7	1.8	-2.1	2.1	0.40	-0.16	
2,463.0	0.50	196.00	2,462.7	1.4	-2.3	2.3	0.41	0.32	
2,526.0	0.40	192.20	2,525.7	0.9	-2.4	2.4	0.17	-0.16	
2,590.0	0.80	324.80	2,589.7	1.1	-2.7	2.7	1.74	0.62	
2,653.0	0.50	187.80	2,652.7	1.2	-3.0	3.0	1.93	-0.48	
2,716.0	0.50	195.00	2,715.7	0.6	-3.1	3.1	0.10	0.00	
2,779.0	0.70	211.70	2,778.7	0.0	-3.4	3.4	0.42	0.32	
2,843.0	0.40	223.40	2,842.7	-0.5	-3.8	3.8	0.50	-0.47	
2,906.0	1.70	123.60	2,905.7	-1.1	-3.1	3.1	2.88	2.06	
2,969.0	2.20	122.40	2,968.6	-2.3	-1.3	1.4	0.80	0.79	
3,032.0	2.70	107.00	3,031.6	-3.4	1.1	-1.1	1.31	0.79	
3,095.0	4.40	104.60	3,094.4	-4.4	4.9	-4.8	2.71	2.70	
3,159.0	6.30	105.70	3,158.2	-6.0	10.6	-10.6	2.97	2.97	
3,222.0	6.40	108.80	3,220.8	-8.1	17.3	-17.2	0.57	0.16	
3,285.0	8.40	97.50	3,283.2	-9.8	25.2	-25.1	3.91	3.17	
3,349.0	10.70	95.90	3,346.4	-11.0	35.7	-35.7	3.62	3.59	
3,412.0	12.60	97.40	3,408.1	-12.5	48.3	-48.3	3.05	3.02	
3,475.0	14.00	92.60	3,469.4	-13.7	62.8	-62.7	2.83	2.22	
3,538.0	15.30	91.00	3,530.3	-14.2	78.7	-78.6	2.16	2.06	
3,601.0	16.70	88.30	3,590.9	-14.1	96.0	-96.0	2.52	2.22	
3,665.0	17.10	87.00	3,652.1	-13.3	114.6	-114.6	0.86	0.62	
3,728.0	16.70	85.60	3,712.4	-12.2	132.9	-132.9	0.91	-0.63	
3,791.0	16.10	85.30	3,772.8	-10.8	150.6	-150.6	0.96	-0.95	
3,854.0	15.50	88.60	3,833.5	-9.8	167.8	-167.7	1.71	-0.95	
3,918.0	16.20	90.40	3,895.0	-9.7	185.2	-185.2	1.34	1.09	
3,981.0	18.10	89.70	3,955.2	-9.7	203.8	-203.8	3.03	3.02	
4,044.0	19.70	91.10	4,014.8	-9.9	224.2	-224.2	2.64	2.54	
4,107.0	20.00	90.60	4,074.1	-10.2	245.6	-245.6	0.55	0.48	
4,170.0	19.70	91.10	4,133.3	-10.5	267.0	-267.0	0.55	-0.48	
4,233.0	19.70	91.00	4,192.6	-10.9	288.2	-288.2	0.05	0.00	
4,296.0	19.20	89.50	4,252.0	-11.0	309.2	-309.2	1.12	-0.79	
4,360.0	18.50	85.40	4,312.6	-10.1	329.9	-329.8	2.34	-1.09	
4,391.0	18.10	83.00	4,342.0	-9.1	339.5	-339.5	2.75	-1.29	
4,423.0	16.30	82.70	4,372.6	-7.9	348.9	-348.9	5.63	-5.62	
4,455.0	14.50	79.90	4,403.5	-6.6	357.3	-357.3	6.08	-5.62	
4,486.0	12.00	76.40	4,433.6	-5.2	364.3	-364.3	8.47	-8.06	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S32-T24N-R8W (Escrito)
Well: Escrito M32-2408 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito M32-2408 01H
TVD Reference: 18' KB @ 6932.0usft (A1099)
MD Reference: 18' KB @ 6932.0usft (A1099)
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
4,518.0	8.10	67.50	4,465.1	-3.5	369.6	-369.6	13.08	-12.19	
4,549.0	6.70	60.40	4,495.9	-1.8	373.2	-373.2	5.39	-4.52	
4,581.0	6.00	53.40	4,527.7	0.1	376.1	-376.1	3.26	-2.19	
4,613.0	3.40	36.70	4,559.6	1.9	378.1	-378.1	9.10	-8.12	
4,644.0	2.90	333.30	4,590.5	3.3	378.3	-378.3	10.76	-1.61	
4,676.0	2.30	345.00	4,622.5	4.6	377.7	-377.7	2.49	-1.87	
4,707.0	1.90	326.50	4,653.5	5.7	377.3	-377.3	2.52	-1.29	
4,739.0	4.00	320.50	4,685.4	7.0	376.3	-376.3	6.62	6.56	
4,771.0	6.60	310.80	4,717.3	9.0	374.2	-374.2	8.57	8.12	
4,802.0	9.70	312.70	4,748.0	12.0	370.9	-370.9	10.04	10.00	
4,834.0	13.00	310.60	4,779.4	16.1	366.2	-366.2	10.39	10.31	
4,866.0	15.40	308.10	4,810.4	21.1	360.1	-360.2	7.74	7.50	
4,897.0	18.00	306.00	4,840.1	26.5	353.0	-353.1	8.61	8.39	
4,929.0	20.20	305.30	4,870.3	32.6	344.5	-344.6	6.91	6.87	
4,960.0	22.70	303.60	4,899.2	39.0	335.1	-335.3	8.31	8.06	
4,992.0	25.60	300.60	4,928.4	45.9	324.0	-324.2	9.84	9.06	
5,024.0	26.80	297.60	4,957.1	52.8	311.7	-311.9	5.58	3.75	
5,055.0	28.40	294.40	4,984.5	59.1	298.8	-299.0	7.03	5.16	
5,119.0	32.60	290.40	5,039.7	71.4	268.8	-269.0	7.29	6.56	
5,182.0	38.10	284.70	5,091.1	82.2	234.0	-234.3	10.17	8.73	
5,245.0	43.50	279.30	5,138.7	90.7	193.8	-194.1	10.23	8.57	
5,308.0	49.20	275.20	5,182.2	96.3	148.6	-148.9	10.20	9.05	
5,372.0	55.30	271.90	5,221.4	99.4	98.1	-98.5	10.36	9.53	
5,435.0	62.40	271.10	5,254.0	100.8	44.2	-44.6	11.32	11.27	
5,466.0	65.80	268.90	5,267.5	100.8	16.4	-16.7	12.69	10.97	
5,498.0	67.90	269.00	5,280.1	100.3	-13.1	12.7	6.57	6.56	
5,530.0	70.50	267.60	5,291.4	99.4	-43.0	42.6	9.10	8.12	
5,561.0	72.60	264.60	5,301.3	97.4	-72.3	71.9	11.41	6.77	
5,625.0	76.90	262.20	5,318.1	90.3	-133.6	133.3	7.63	6.72	
5,688.0	82.30	259.60	5,329.5	80.4	-194.8	194.5	9.48	8.57	
5,751.0	88.50	258.60	5,334.5	68.6	-256.4	256.1	9.97	9.84	
5,815.0	89.40	258.50	5,335.7	55.9	-319.1	318.9	1.41	1.41	
5,878.0	90.50	259.40	5,335.7	43.8	-380.9	380.8	2.26	1.75	
5,941.0	90.40	261.80	5,335.2	33.5	-443.1	443.0	3.81	-0.16	
6,005.0	90.90	261.60	5,334.5	24.3	-506.4	506.3	0.84	0.78	
6,068.0	92.00	264.40	5,332.9	16.6	-568.9	568.9	4.77	1.75	
6,131.0	90.70	265.20	5,331.4	10.9	-631.6	631.6	2.42	-2.06	
6,194.0	89.50	265.80	5,331.3	5.9	-694.4	694.4	2.13	-1.90	
6,257.0	90.70	266.30	5,331.2	1.6	-757.3	757.3	2.06	1.90	
6,321.0	90.60	266.60	5,330.5	-2.4	-821.2	821.2	0.49	-0.16	
6,384.0	89.50	266.70	5,330.4	-6.0	-884.1	884.1	1.75	-1.75	
6,447.0	90.40	268.20	5,330.5	-8.8	-947.0	947.0	2.78	1.43	
6,511.0	90.70	270.10	5,329.9	-9.8	-1,011.0	1,011.0	3.01	0.47	
6,574.0	90.20	271.90	5,329.4	-8.7	-1,074.0	1,074.0	2.97	-0.79	
6,637.0	88.90	270.30	5,329.9	-7.5	-1,136.9	1,137.0	3.27	-2.06	
6,700.0	87.80	269.00	5,331.7	-7.9	-1,199.9	1,199.9	2.70	-1.75	
6,764.0	87.90	268.80	5,334.1	-9.1	-1,263.9	1,263.9	0.35	0.16	
6,825.0	88.70	269.30	5,335.9	-10.1	-1,324.8	1,324.9	1.55	1.31	
6,887.0	89.40	269.50	5,336.9	-10.8	-1,386.8	1,386.8	1.17	1.13	
6,948.0	89.00	268.30	5,337.8	-11.9	-1,447.8	1,447.8	2.07	-0.66	
7,009.0	90.80	269.10	5,337.9	-13.3	-1,508.8	1,508.8	3.23	2.95	
7,071.0	92.50	269.50	5,336.1	-14.1	-1,570.7	1,570.8	2.82	2.74	
7,132.0	93.90	271.80	5,332.7	-13.4	-1,631.6	1,631.7	4.41	2.30	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito M32-2408 01H
Project:	San Juan County, NM	TVD Reference:	18' KB @ 6932.0usft (A1099)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	18' KB @ 6932.0usft (A1099)
Well:	Escrito M32-2408 01H	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
7,193.0	92.90	271.60	5,329.1	-11.6	-1,692.5	1,692.5	1.67	-1.64	
7,255.0	92.20	272.40	5,326.3	-9.4	-1,754.4	1,754.4	1.71	-1.13	
7,316.0	90.30	271.60	5,325.0	-7.3	-1,815.3	1,815.4	3.38	-3.11	
7,377.0	89.60	270.40	5,325.0	-6.2	-1,876.3	1,876.3	2.28	-1.15	
7,439.0	90.70	270.80	5,324.9	-5.6	-1,938.3	1,938.3	1.89	1.77	
7,500.0	90.60	270.60	5,324.2	-4.8	-1,999.3	1,999.3	0.37	-0.16	
7,562.0	89.30	270.80	5,324.2	-4.1	-2,061.3	2,061.3	2.12	-2.10	
7,623.0	89.30	271.00	5,325.0	-3.1	-2,122.3	2,122.3	0.33	0.00	
7,685.0	89.70	271.30	5,325.5	-1.9	-2,184.3	2,184.3	0.81	0.65	
7,746.0	91.40	271.10	5,324.9	-0.6	-2,245.3	2,245.3	2.81	2.79	
7,807.0	91.00	270.40	5,323.7	0.2	-2,306.3	2,306.2	1.32	-0.66	
7,868.0	89.80	268.20	5,323.2	-0.5	-2,367.2	2,367.2	4.11	-1.97	
7,929.0	88.80	266.80	5,324.0	-3.2	-2,428.2	2,428.2	2.82	-1.64	
7,990.0	90.90	266.90	5,324.1	-6.5	-2,489.1	2,489.1	3.45	3.44	
8,053.0	91.40	269.00	5,322.9	-8.8	-2,552.0	2,552.0	3.43	0.79	
8,117.0	91.00	269.30	5,321.5	-9.7	-2,616.0	2,616.0	0.78	-0.62	
8,180.0	91.30	270.20	5,320.3	-10.0	-2,679.0	2,679.0	1.51	0.48	
8,243.0	90.30	270.80	5,319.4	-9.5	-2,742.0	2,742.0	1.85	-1.59	
8,306.0	90.00	269.70	5,319.2	-9.2	-2,805.0	2,805.0	1.81	-0.48	
8,369.0	90.70	269.40	5,318.8	-9.7	-2,868.0	2,868.0	1.21	1.11	
8,433.0	88.80	268.90	5,319.1	-10.6	-2,932.0	2,932.0	3.07	-2.97	
8,496.0	88.60	269.50	5,320.6	-11.5	-2,994.9	2,995.0	1.00	-0.32	
8,559.0	89.80	269.40	5,321.4	-12.1	-3,057.9	3,058.0	1.91	1.90	
8,622.0	90.40	271.70	5,321.3	-11.5	-3,120.9	3,120.9	3.77	0.95	
8,685.0	91.00	271.90	5,320.6	-9.5	-3,183.9	3,183.9	1.00	0.95	
8,749.0	91.60	271.80	5,319.1	-7.5	-3,247.8	3,247.8	0.95	0.94	
8,812.0	90.80	270.70	5,317.8	-6.1	-3,310.8	3,310.8	2.16	-1.27	
8,875.0	88.40	269.40	5,318.2	-6.0	-3,373.8	3,373.8	4.33	-3.81	
8,938.0	88.60	268.30	5,319.9	-7.3	-3,436.8	3,436.8	1.77	0.32	
9,001.0	89.70	268.70	5,320.8	-9.0	-3,499.7	3,499.7	1.86	1.75	
9,065.0	91.10	269.20	5,320.4	-10.1	-3,563.7	3,563.7	2.32	2.19	
9,128.0	91.00	269.10	5,319.2	-11.1	-3,626.7	3,626.7	0.22	-0.16	
9,191.0	90.00	268.60	5,318.7	-12.3	-3,689.7	3,689.7	1.77	-1.59	
9,254.0	90.30	268.60	5,318.5	-13.9	-3,752.7	3,752.7	0.48	0.48	
9,317.0	89.80	269.10	5,318.4	-15.1	-3,815.7	3,815.7	1.12	-0.79	
9,381.0	90.00	269.40	5,318.5	-16.0	-3,879.6	3,879.7	0.56	0.31	
9,444.0	89.70	269.70	5,318.7	-16.5	-3,942.6	3,942.7	0.67	-0.48	
9,507.0	87.90	269.40	5,320.0	-17.0	-4,005.6	4,005.7	2.90	-2.86	
9,570.0	87.60	269.00	5,322.5	-17.8	-4,068.6	4,068.6	0.79	-0.48	
9,633.0	88.50	268.90	5,324.7	-19.0	-4,131.5	4,131.6	1.44	1.43	
9,697.0	89.10	270.90	5,326.0	-19.1	-4,195.5	4,195.5	3.26	0.94	
9,760.0	90.40	271.90	5,326.3	-17.6	-4,258.5	4,258.5	2.60	2.06	
9,823.0	91.10	271.70	5,325.4	-15.6	-4,321.4	4,321.5	1.16	1.11	
9,886.0	91.30	271.00	5,324.1	-14.1	-4,384.4	4,384.4	1.16	0.32	
9,949.0	91.30	271.40	5,322.7	-12.8	-4,447.4	4,447.4	0.63	0.00	
10,013.0	90.10	271.50	5,321.9	-11.2	-4,511.4	4,511.4	1.88	-1.87	
10,076.0	90.30	271.00	5,321.7	-9.8	-4,574.3	4,574.3	0.85	0.32	
10,139.0	91.30	271.00	5,320.8	-8.7	-4,637.3	4,637.3	1.59	1.59	
10,202.0	91.40	271.60	5,319.3	-7.3	-4,700.3	4,700.3	0.97	0.16	
10,265.0	90.00	272.40	5,318.6	-5.1	-4,763.2	4,763.2	2.56	-2.22	
10,329.0	90.40	272.60	5,318.3	-2.3	-4,827.2	4,827.2	0.70	0.62	
10,392.0	90.20	271.90	5,318.0	0.2	-4,890.1	4,890.1	1.16	-0.32	
10,460.0	88.40	270.70	5,318.8	1.7	-4,958.1	4,958.1	3.18	-2.65	Last CES Survey @ 10,460' MD

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S32-T24N-R8W (Escrito)
Well: Escrito M32-2408 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito M32-2408 01H
TVD Reference: 18' KB @ 6932.0usft (A1099)
MD Reference: 18' KB @ 6932.0usft (A1099)
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
10,520.0	88.40	270.70	5,320.5	2.5	-5,018.1	5,018.0	0.00	0.00	PTB @ 10,520'

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 M32-2408 01H P - actual wellpath misses target center by 54.6usft at 5896.1usft MD (5335.6 TVD, 40.6 N, -398.8 E) - Point	0.00	0.00	5,343.3	-12.7	-390.0	1,915,670.85	2,757,883.57	36.264700	-107.715313
Escrito M32-2408 01H P - actual wellpath misses target center by 37.1usft at 10520.0usft MD (5320.5 TVD, 2.5 N, -5018.1 E) - Point	0.00	0.00	5,310.8	-29.8	-5,033.6	1,915,648.10	2,753,239.96	36.264652	-107.731065
Escrito M32-2408 01H P - actual wellpath misses target center by 35.9usft at 10520.0usft MD (5320.5 TVD, 2.5 N, -5018.1 E) - Point	0.00	0.00	5,322.6	-29.8	-5,033.6	1,915,648.10	2,753,239.96	36.264652	-107.731065
Escrito M32-2408 01H P - actual wellpath misses target center by 55.2usft at 5896.1usft MD (5335.6 TVD, 40.6 N, -398.8 E) - Point	0.00	0.00	5,346.9	-12.7	-390.0	1,915,670.85	2,757,883.57	36.264700	-107.715313

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
10,460.0	5,318.8	1.7	-4,958.1	Last CES Survey @ 10,460' MD
10,520.0	5,320.5	2.5	-5,018.1	PTB @ 10,520'

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

San Juan County, NM

S32-T24N-R8W (Escrito)

Escrito M32-2408 01H

Hz

Design: FINAL

Survey Report - Geographic

17 October, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito M32-2408 01H
Project:	San Juan County, NM	TVD Reference:	18' KB @ 6932.0usft (A1099)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	18' KB @ 6932.0usft (A1099)
Well:	Escrito M32-2408 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	S32-T24N-R8W (Escrito)		
Site Position:		Northing:	1,917,171.32 usft
From:	Lat/Long	Easting:	2,758,442.71 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	36.268820
		Longitude:	-107.713410
		Grid Convergence:	0.07 °

Well	Escrito M32-2408 01H		
Well Position	+N/-S	0.0 usft	Northing: 1,915,684.07 usft
	+E/-W	0.0 usft	Easting: 2,758,273.57 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	36.264735
		Longitude:	-107.713990
		Ground Level:	6,914.0 usft

Wellbore	Hz		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	10/4/2014	(°)
			9.41
			Dip Angle (°)
			62.98
			Field Strength (nT)
			50,139

Design	FINAL		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction (°)
			269.79

Survey Program	Date 10/17/2014		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
566.0	10,520.0	Survey #1 (Hz)	Geolink MWD
			Description
			Geolink MWD

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting		
(usft)			(usft)			(usft)	(usft)		
0.0	0.00	0.00	0.0	0.0	0.0	1,915,684.07	2,758,273.57	36.264735	-107.713990
566.0	1.10	303.30	566.0	3.0	-4.5	1,915,687.05	2,758,269.02	36.264743	-107.714006
630.0	1.00	312.10	630.0	3.7	-5.5	1,915,687.76	2,758,268.10	36.264745	-107.714009
693.0	0.90	315.40	692.9	4.4	-6.2	1,915,688.48	2,758,267.34	36.264747	-107.714011
756.0	1.10	300.40	755.9	5.1	-7.1	1,915,689.14	2,758,266.47	36.264749	-107.714014
819.0	1.10	303.90	818.9	5.7	-8.1	1,915,689.78	2,758,265.44	36.264751	-107.714018
883.0	1.10	295.70	882.9	6.3	-9.2	1,915,690.39	2,758,264.38	36.264752	-107.714021
946.0	1.40	289.00	945.9	6.8	-10.5	1,915,690.90	2,758,263.11	36.264754	-107.714026
1,009.0	1.80	288.40	1,008.9	7.4	-12.1	1,915,691.46	2,758,261.44	36.264755	-107.714031
1,072.0	2.20	298.60	1,071.8	8.3	-14.1	1,915,692.35	2,758,259.44	36.264758	-107.714038
1,136.0	0.04	279.40	1,135.8	8.9	-15.2	1,915,692.94	2,758,258.34	36.264759	-107.714042
1,199.0	0.70	111.50	1,198.8	8.7	-14.9	1,915,692.80	2,758,258.67	36.264759	-107.714041

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito M32-2408 01H
Project:	San Juan County, NM	TVD Reference:	18' KB @ 6932.0usft (A1099)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	18' KB @ 6932.0usft (A1099)
Well:	Escrito M32-2408 01H	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
1,262.0	0.40	99.90	1,261.8	8.6	-14.3	1,915,692.62	2,758,259.25	36.264759	-107.714039
1,325.0	0.30	125.90	1,324.8	8.4	-14.0	1,915,692.49	2,758,259.60	36.264758	-107.714038
1,389.0	0.80	141.50	1,388.8	8.0	-13.5	1,915,692.04	2,758,260.01	36.264757	-107.714036
1,452.0	0.80	116.10	1,451.8	7.4	-12.9	1,915,691.51	2,758,260.68	36.264756	-107.714034
1,515.0	0.60	99.10	1,514.8	7.2	-12.2	1,915,691.26	2,758,261.40	36.264755	-107.714032
1,578.0	1.50	98.40	1,577.8	7.0	-11.0	1,915,691.09	2,758,262.55	36.264754	-107.714028
1,642.0	1.40	100.60	1,641.8	6.8	-9.4	1,915,690.83	2,758,264.14	36.264754	-107.714022
1,705.0	1.10	96.40	1,704.8	6.6	-8.1	1,915,690.62	2,758,265.50	36.264753	-107.714018
1,768.0	1.20	115.40	1,767.7	6.2	-6.9	1,915,690.27	2,758,266.70	36.264752	-107.714014
1,831.0	1.10	127.90	1,830.7	5.5	-5.8	1,915,689.62	2,758,267.77	36.264750	-107.714010
1,894.0	1.20	132.90	1,893.7	4.7	-4.8	1,915,688.80	2,758,268.73	36.264748	-107.714007
1,958.0	1.30	112.90	1,957.7	4.0	-3.7	1,915,688.06	2,758,269.89	36.264746	-107.714003
2,021.0	0.70	129.60	2,020.7	3.5	-2.7	1,915,687.54	2,758,270.85	36.264745	-107.713999
2,084.0	0.20	129.00	2,083.7	3.2	-2.3	1,915,687.22	2,758,271.23	36.264744	-107.713998
2,147.0	0.30	132.90	2,146.7	3.0	-2.1	1,915,687.04	2,758,271.44	36.264743	-107.713997
2,210.0	0.20	210.20	2,209.7	2.8	-2.1	1,915,686.83	2,758,271.50	36.264743	-107.713997
2,274.0	0.30	160.30	2,273.7	2.5	-2.1	1,915,686.58	2,758,271.50	36.264742	-107.713997
2,337.0	0.40	181.80	2,336.7	2.1	-2.0	1,915,686.21	2,758,271.55	36.264741	-107.713997
2,400.0	0.30	220.80	2,399.7	1.8	-2.1	1,915,685.86	2,758,271.44	36.264740	-107.713997
2,463.0	0.50	196.00	2,462.7	1.4	-2.3	1,915,685.47	2,758,271.26	36.264739	-107.713998
2,526.0	0.40	192.20	2,525.7	0.9	-2.4	1,915,684.99	2,758,271.13	36.264738	-107.713999
2,590.0	0.80	324.80	2,589.7	1.1	-2.7	1,915,685.14	2,758,270.83	36.264738	-107.714000
2,653.0	0.50	187.80	2,652.7	1.2	-3.0	1,915,685.22	2,758,270.54	36.264738	-107.714001
2,716.0	0.50	195.00	2,715.7	0.6	-3.1	1,915,684.69	2,758,270.43	36.264737	-107.714001
2,779.0	0.70	211.70	2,778.7	0.0	-3.4	1,915,684.09	2,758,270.16	36.264735	-107.714002
2,843.0	0.40	223.40	2,842.7	-0.5	-3.8	1,915,683.60	2,758,269.80	36.264734	-107.714003
2,906.0	1.70	123.60	2,905.7	-1.1	-3.1	1,915,682.92	2,758,270.43	36.264732	-107.714001
2,969.0	2.20	122.40	2,968.6	-2.3	-1.3	1,915,681.76	2,758,272.23	36.264729	-107.713995
3,032.0	2.70	107.00	3,031.6	-3.4	1.1	1,915,680.68	2,758,274.67	36.264726	-107.713987
3,095.0	4.40	104.60	3,094.4	-4.4	4.9	1,915,679.64	2,758,278.43	36.264723	-107.713974
3,159.0	6.30	105.70	3,158.2	-6.0	10.6	1,915,678.08	2,758,284.19	36.264719	-107.713954
3,222.0	6.40	108.80	3,220.8	-8.1	17.3	1,915,676.02	2,758,290.84	36.264713	-107.713932
3,285.0	8.40	97.50	3,283.2	-9.8	25.2	1,915,674.30	2,758,298.73	36.264708	-107.713905
3,349.0	10.70	95.90	3,346.4	-11.0	35.7	1,915,673.09	2,758,309.28	36.264705	-107.713869
3,412.0	12.60	97.40	3,408.1	-12.5	48.3	1,915,671.62	2,758,321.91	36.264701	-107.713826
3,475.0	14.00	92.60	3,469.4	-13.7	62.8	1,915,670.41	2,758,336.34	36.264697	-107.713777
3,538.0	15.30	91.00	3,530.3	-14.2	78.7	1,915,669.94	2,758,352.27	36.264696	-107.713723
3,601.0	16.70	88.30	3,590.9	-14.1	96.0	1,915,670.08	2,758,369.63	36.264696	-107.713664
3,665.0	17.10	87.00	3,652.1	-13.3	114.6	1,915,670.87	2,758,388.22	36.264698	-107.713601
3,728.0	16.70	85.60	3,712.4	-12.2	132.9	1,915,672.07	2,758,406.49	36.264702	-107.713539
3,791.0	16.10	85.30	3,772.8	-10.8	150.6	1,915,673.50	2,758,424.22	36.264706	-107.713479
3,854.0	15.50	88.60	3,833.5	-9.8	167.8	1,915,674.44	2,758,441.34	36.264708	-107.713421
3,918.0	16.20	90.40	3,895.0	-9.7	185.2	1,915,674.61	2,758,458.82	36.264708	-107.713362
3,981.0	18.10	89.70	3,955.2	-9.7	203.8	1,915,674.63	2,758,477.39	36.264708	-107.713299
4,044.0	19.70	91.10	4,014.8	-9.9	224.2	1,915,674.50	2,758,497.80	36.264708	-107.713230
4,107.0	20.00	90.60	4,074.1	-10.2	245.6	1,915,674.21	2,758,519.19	36.264707	-107.713157
4,170.0	19.70	91.10	4,133.3	-10.5	267.0	1,915,673.92	2,758,540.58	36.264706	-107.713085
4,233.0	19.70	91.00	4,192.6	-10.9	288.2	1,915,673.55	2,758,561.81	36.264705	-107.713013
4,296.0	19.20	89.50	4,252.0	-11.0	309.2	1,915,673.49	2,758,582.79	36.264705	-107.712941
4,360.0	18.50	85.40	4,312.6	-10.1	329.9	1,915,674.42	2,758,603.43	36.264707	-107.712871
4,391.0	18.10	83.00	4,342.0	-9.1	339.5	1,915,675.41	2,758,613.11	36.264710	-107.712839
4,423.0	16.30	82.70	4,372.6	-7.9	348.9	1,915,676.60	2,758,622.50	36.264713	-107.712807
4,455.0	14.50	79.90	4,403.5	-6.6	357.3	1,915,677.88	2,758,630.90	36.264717	-107.712778
4,486.0	12.00	76.40	4,433.6	-5.2	364.3	1,915,679.33	2,758,637.85	36.264721	-107.712755
4,518.0	8.10	67.50	4,465.1	-3.5	369.6	1,915,680.98	2,758,643.17	36.264725	-107.712737

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito M32-2408 01H
Project:	San Juan County, NM	TVD Reference:	18' KB @ 6932.0usft (A1099)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	18' KB @ 6932.0usft (A1099)
Well:	Escrito M32-2408 01H	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
4,549.0	6.70	60.40	4,495.9	-1.8	373.2	1,915,682.71	2,758,646.75	36.264730	-107.712724
4,581.0	6.00	53.40	4,527.7	0.1	376.1	1,915,684.64	2,758,649.72	36.264735	-107.712714
4,613.0	3.40	36.70	4,559.6	1.9	378.1	1,915,686.40	2,758,651.63	36.264740	-107.712708
4,644.0	2.90	333.30	4,590.5	3.3	378.3	1,915,687.84	2,758,651.82	36.264744	-107.712707
4,676.0	2.30	345.00	4,622.5	4.6	377.7	1,915,689.18	2,758,651.29	36.264748	-107.712709
4,707.0	1.90	326.50	4,653.5	5.7	377.3	1,915,690.21	2,758,650.84	36.264751	-107.712710
4,739.0	4.00	320.50	4,685.4	7.0	376.3	1,915,691.51	2,758,649.84	36.264754	-107.712714
4,771.0	6.60	310.80	4,717.3	9.0	374.2	1,915,693.57	2,758,647.73	36.264760	-107.712721
4,802.0	9.70	312.70	4,748.0	12.0	370.9	1,915,696.50	2,758,644.46	36.264768	-107.712732
4,834.0	13.00	310.60	4,779.4	16.1	366.2	1,915,700.67	2,758,639.74	36.264779	-107.712748
4,866.0	15.40	308.10	4,810.4	21.1	360.1	1,915,705.63	2,758,633.66	36.264793	-107.712769
4,897.0	18.00	306.00	4,840.1	26.5	353.0	1,915,710.97	2,758,626.54	36.264808	-107.712793
4,929.0	20.20	305.30	4,870.3	32.6	344.5	1,915,717.06	2,758,618.02	36.264825	-107.712822
4,960.0	22.70	303.60	4,899.2	39.0	335.1	1,915,723.46	2,758,608.66	36.264842	-107.712853
4,992.0	25.60	300.60	4,928.4	45.9	324.0	1,915,730.38	2,758,597.55	36.264861	-107.712891
5,024.0	26.80	297.60	4,957.1	52.8	311.7	1,915,737.23	2,758,585.20	36.264880	-107.712933
5,055.0	28.40	294.40	4,984.5	59.1	298.8	1,915,743.49	2,758,572.28	36.264897	-107.712977
5,119.0	32.60	290.40	5,039.7	71.4	268.8	1,915,755.76	2,758,542.23	36.264931	-107.713079
5,182.0	38.10	284.70	5,091.1	82.2	234.0	1,915,766.58	2,758,507.48	36.264961	-107.713196
5,245.0	43.50	279.30	5,138.7	90.7	193.8	1,915,774.97	2,758,467.22	36.264984	-107.713333
5,308.0	49.20	275.20	5,182.2	96.3	148.6	1,915,780.59	2,758,422.02	36.265000	-107.713486
5,372.0	55.30	271.90	5,221.4	99.4	98.1	1,915,783.60	2,758,371.55	36.265008	-107.713657
5,435.0	62.40	271.10	5,254.0	100.8	44.2	1,915,784.93	2,758,317.68	36.265012	-107.713840
5,466.0	65.80	268.90	5,267.5	100.8	16.4	1,915,784.89	2,758,289.80	36.265012	-107.713935
5,498.0	67.90	269.00	5,280.1	100.3	-13.1	1,915,784.31	2,758,260.39	36.265010	-107.714035
5,530.0	70.50	267.60	5,291.4	99.4	-43.0	1,915,783.38	2,758,230.49	36.265008	-107.714136
5,561.0	72.60	264.60	5,301.3	97.4	-72.3	1,915,781.34	2,758,201.16	36.265003	-107.714235
5,625.0	76.90	262.20	5,318.1	90.3	-133.6	1,915,774.16	2,758,139.85	36.264983	-107.714443
5,688.0	82.30	259.60	5,329.5	80.4	-194.8	1,915,764.28	2,758,078.71	36.264956	-107.714651
5,751.0	88.50	258.60	5,334.5	68.6	-256.4	1,915,752.33	2,758,017.09	36.264923	-107.714860
5,815.0	89.40	258.50	5,335.7	55.9	-319.1	1,915,739.55	2,757,954.39	36.264889	-107.715073
5,878.0	90.50	259.40	5,335.7	43.8	-380.9	1,915,727.40	2,757,892.58	36.264855	-107.715282
5,941.0	90.40	261.80	5,335.2	33.5	-443.1	1,915,717.03	2,757,830.44	36.264827	-107.715493
6,005.0	90.90	261.60	5,334.5	24.3	-506.4	1,915,707.72	2,757,767.13	36.264802	-107.715708
6,068.0	92.00	264.40	5,332.9	16.6	-568.9	1,915,699.97	2,757,704.63	36.264781	-107.715920
6,131.0	90.70	265.20	5,331.4	10.9	-631.6	1,915,694.18	2,757,641.92	36.264765	-107.716133
6,194.0	89.50	265.80	5,331.3	5.9	-694.4	1,915,689.16	2,757,579.12	36.264751	-107.716346
6,257.0	90.70	266.30	5,331.2	1.6	-757.3	1,915,684.74	2,757,516.28	36.264739	-107.716559
6,321.0	90.60	266.60	5,330.5	-2.4	-821.2	1,915,680.70	2,757,452.41	36.264729	-107.716776
6,384.0	89.50	266.70	5,330.4	-6.0	-884.1	1,915,676.94	2,757,389.52	36.264718	-107.716989
6,447.0	90.40	268.20	5,330.5	-8.8	-947.0	1,915,674.06	2,757,326.59	36.264711	-107.717203
6,511.0	90.70	270.10	5,329.9	-9.8	-1,011.0	1,915,673.03	2,757,262.60	36.264708	-107.717420
6,574.0	90.20	271.90	5,329.4	-8.7	-1,074.0	1,915,674.06	2,757,199.62	36.264711	-107.717633
6,637.0	88.90	270.30	5,329.9	-7.5	-1,136.9	1,915,675.19	2,757,136.63	36.264714	-107.717847
6,700.0	87.80	269.00	5,331.7	-7.9	-1,199.9	1,915,674.73	2,757,073.66	36.264713	-107.718061
6,764.0	87.90	268.80	5,334.1	-9.1	-1,263.9	1,915,673.42	2,757,009.72	36.264710	-107.718278
6,825.0	88.70	269.30	5,335.9	-10.1	-1,324.8	1,915,672.33	2,756,948.76	36.264707	-107.718484
6,887.0	89.40	269.50	5,336.9	-10.8	-1,386.8	1,915,671.61	2,756,886.77	36.264705	-107.718695
6,948.0	89.00	268.30	5,337.8	-11.9	-1,447.8	1,915,670.36	2,756,825.79	36.264702	-107.718901
7,009.0	90.80	269.10	5,337.9	-13.3	-1,508.8	1,915,668.90	2,756,764.81	36.264698	-107.719108
7,071.0	92.50	269.50	5,336.1	-14.1	-1,570.7	1,915,668.07	2,756,702.85	36.264696	-107.719318
7,132.0	93.90	271.80	5,332.7	-13.4	-1,631.6	1,915,668.68	2,756,641.95	36.264698	-107.719525
7,193.0	92.90	271.60	5,329.1	-11.6	-1,692.5	1,915,670.42	2,756,581.08	36.264703	-107.719732
7,255.0	92.20	272.40	5,326.3	-9.4	-1,754.4	1,915,672.50	2,756,519.18	36.264709	-107.719942
7,316.0	90.30	271.60	5,325.0	-7.3	-1,815.3	1,915,674.55	2,756,458.23	36.264715	-107.720148

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito M32-2408 01H
Project:	San Juan County, NM	TVD Reference:	18' KB @ 6932.0usft (A1099)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	18' KB @ 6932.0usft (A1099)
Well:	Escrito M32-2408 01H	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
7,377.0	89.60	270.40	5,325.0	-6.2	-1,876.3	1,915,675.54	2,756,397.24	36.264718	-107.720355
7,439.0	90.70	270.80	5,324.9	-5.6	-1,938.3	1,915,676.12	2,756,335.25	36.264720	-107.720565
7,500.0	90.60	270.60	5,324.2	-4.8	-1,999.3	1,915,676.79	2,756,274.25	36.264722	-107.720772
7,562.0	89.30	270.80	5,324.2	-4.1	-2,061.3	1,915,677.47	2,756,212.26	36.264724	-107.720983
7,623.0	89.30	271.00	5,325.0	-3.1	-2,122.3	1,915,678.35	2,756,151.27	36.264726	-107.721189
7,685.0	89.70	271.30	5,325.5	-1.9	-2,184.3	1,915,679.52	2,756,089.28	36.264730	-107.721400
7,746.0	91.40	271.10	5,324.9	-0.6	-2,245.3	1,915,680.72	2,756,028.30	36.264733	-107.721607
7,807.0	91.00	270.40	5,323.7	0.2	-2,306.3	1,915,681.44	2,755,967.32	36.264735	-107.721813
7,868.0	89.80	268.20	5,323.2	-0.5	-2,367.2	1,915,680.62	2,755,906.33	36.264733	-107.722020
7,929.0	88.80	266.80	5,324.0	-3.2	-2,428.2	1,915,677.89	2,755,845.40	36.264726	-107.722227
7,990.0	90.90	266.90	5,324.1	-6.5	-2,489.1	1,915,674.46	2,755,784.50	36.264717	-107.722434
8,053.0	91.40	269.00	5,322.9	-8.8	-2,552.0	1,915,672.13	2,755,721.56	36.264711	-107.722647
8,117.0	91.00	269.30	5,321.5	-9.7	-2,616.0	1,915,671.10	2,755,657.58	36.264708	-107.722864
8,180.0	91.30	270.20	5,320.3	-10.0	-2,679.0	1,915,670.75	2,755,594.60	36.264707	-107.723078
8,243.0	90.30	270.80	5,319.4	-9.5	-2,742.0	1,915,671.22	2,755,531.60	36.264709	-107.723292
8,306.0	90.00	269.70	5,319.2	-9.2	-2,805.0	1,915,671.42	2,755,468.61	36.264709	-107.723505
8,369.0	90.70	269.40	5,318.8	-9.7	-2,868.0	1,915,670.85	2,755,405.61	36.264708	-107.723719
8,433.0	88.80	268.90	5,319.1	-10.6	-2,932.0	1,915,669.82	2,755,341.62	36.264705	-107.723936
8,496.0	88.60	269.50	5,320.6	-11.5	-2,994.9	1,915,668.86	2,755,278.65	36.264703	-107.724150
8,559.0	89.80	269.40	5,321.4	-12.1	-3,057.9	1,915,668.18	2,755,215.66	36.264701	-107.724363
8,622.0	90.40	271.70	5,321.3	-11.5	-3,120.9	1,915,668.71	2,755,152.66	36.264703	-107.724577
8,685.0	91.00	271.90	5,320.6	-9.5	-3,183.9	1,915,670.61	2,755,089.70	36.264708	-107.724791
8,749.0	91.60	271.80	5,319.1	-7.5	-3,247.8	1,915,672.59	2,755,025.74	36.264714	-107.725007
8,812.0	90.80	270.70	5,317.8	-6.1	-3,310.8	1,915,673.89	2,754,962.77	36.264718	-107.725221
8,875.0	88.40	269.40	5,318.2	-6.0	-3,373.8	1,915,673.87	2,754,899.78	36.264718	-107.725435
8,938.0	88.60	268.30	5,319.9	-7.3	-3,436.8	1,915,672.53	2,754,836.82	36.264714	-107.725648
9,001.0	89.70	268.70	5,320.8	-9.0	-3,499.7	1,915,670.80	2,754,773.85	36.264710	-107.725862
9,065.0	91.10	269.20	5,320.4	-10.1	-3,563.7	1,915,669.55	2,754,709.87	36.264707	-107.726079
9,128.0	91.00	269.10	5,319.2	-11.1	-3,626.7	1,915,668.54	2,754,646.88	36.264704	-107.726293
9,191.0	90.00	268.60	5,318.7	-12.3	-3,689.7	1,915,667.19	2,754,583.90	36.264701	-107.726506
9,254.0	90.30	268.60	5,318.5	-13.9	-3,752.7	1,915,665.58	2,754,520.92	36.264696	-107.726720
9,317.0	89.80	269.10	5,318.4	-15.1	-3,815.7	1,915,664.24	2,754,457.94	36.264693	-107.726934
9,381.0	90.00	269.40	5,318.5	-16.0	-3,879.6	1,915,663.32	2,754,393.94	36.264690	-107.727151
9,444.0	89.70	269.70	5,318.7	-16.5	-3,942.6	1,915,662.75	2,754,330.95	36.264689	-107.727364
9,507.0	87.90	269.40	5,320.0	-17.0	-4,005.6	1,915,662.17	2,754,267.97	36.264688	-107.727578
9,570.0	87.60	269.00	5,322.5	-17.8	-4,068.6	1,915,661.22	2,754,205.02	36.264685	-107.727792
9,633.0	88.50	268.90	5,324.7	-19.0	-4,131.5	1,915,659.99	2,754,142.07	36.264682	-107.728005
9,697.0	89.10	270.90	5,326.0	-19.1	-4,195.5	1,915,659.80	2,754,078.09	36.264682	-107.728222
9,760.0	90.40	271.90	5,326.3	-17.6	-4,258.5	1,915,661.26	2,754,015.11	36.264686	-107.728436
9,823.0	91.10	271.70	5,325.4	-15.6	-4,321.4	1,915,663.16	2,753,952.14	36.264691	-107.728649
9,886.0	91.30	271.00	5,324.1	-14.1	-4,384.4	1,915,664.56	2,753,889.17	36.264695	-107.728863
9,949.0	91.30	271.40	5,322.7	-12.8	-4,447.4	1,915,665.81	2,753,826.20	36.264699	-107.729077
10,013.0	90.10	271.50	5,321.9	-11.2	-4,511.4	1,915,667.35	2,753,762.23	36.264703	-107.729294
10,076.0	90.30	271.00	5,321.7	-9.8	-4,574.3	1,915,668.64	2,753,699.24	36.264707	-107.729507
10,139.0	91.30	271.00	5,320.8	-8.7	-4,637.3	1,915,669.67	2,753,636.26	36.264710	-107.729721
10,202.0	91.40	271.60	5,319.3	-7.3	-4,700.3	1,915,671.02	2,753,573.29	36.264714	-107.729934
10,265.0	90.00	272.40	5,318.6	-5.1	-4,763.2	1,915,673.14	2,753,510.33	36.264720	-107.730148
10,329.0	90.40	272.60	5,318.3	-2.3	-4,827.2	1,915,675.85	2,753,446.39	36.264728	-107.730365
10,392.0	90.20	271.90	5,318.0	0.2	-4,890.1	1,915,678.25	2,753,383.44	36.264734	-107.730578
10,460.0	88.40	270.70	5,318.8	1.7	-4,958.1	1,915,679.71	2,753,315.46	36.264739	-107.730809
Last CES Survey @ 10,460' MD									
10,520.0	88.40	270.70	5,320.5	2.5	-5,018.1	1,915,680.36	2,753,255.49	36.264741	-107.731012
PTB @ 10,520'									

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito M32-2408 01H
Project:	San Juan County, NM	TVD Reference:	18' KB @ 6932.0usft (A1099)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	18' KB @ 6932.0usft (A1099)
Well:	Escrito M32-2408 01H	North Reference:	True
Wellbore:	H2	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Escrito M32-2408 01H P	0.00	0.00	5,310.8	-29.8	-5,033.6	1,915,648.10	2,753,239.96	36.264652	-107.731065
- actual wellpath misses target center by 37.1usft at 10520.0usft MD (5320.5 TVD, 2.5 N, -5018.1 E)									
- Point									
Escrito M32-2408 01H P	0.00	0.00	5,343.3	-12.7	-390.0	1,915,670.85	2,757,883.57	36.264700	-107.715313
- actual wellpath misses target center by 54.6usft at 5896.1usft MD (5335.6 TVD, 40.6 N, -398.8 E)									
- Point									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
10,460.0	5,318.8	1.7	-4,958.1	Last CES Survey @ 10,460' MD
10,520.0	5,320.5	2.5	-5,018.1	PTB @ 10,520'

Checked By: _____	Approved By: _____	Date: _____
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