

DISTRICT I
1825 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) 476-3480 Fax: (505) 476-3482

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 30-045-35519	² Pool Code 97232	³ Pool Name BASIN MANCOS GAS
⁴ Property Code 313129	⁵ Property Name ESCRITO D32-2408	⁶ Well Number 01H
⁷ GRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.	⁹ Elevation 6947.9'

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
D	32	24N	8W		1308'	NORTH	282'	WEST	SAN JUAN

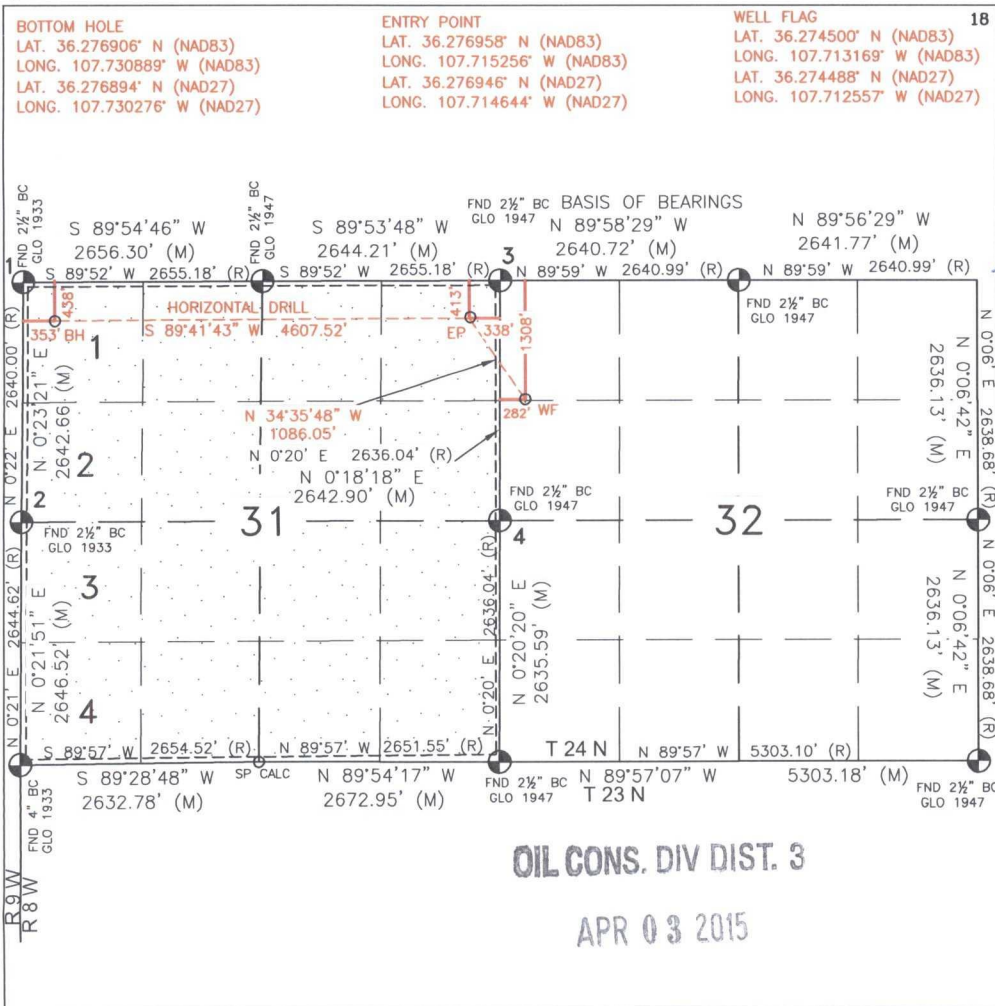
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	WEST/West line	County
D	31	24N	8W	1	438'	NORTH	353'	WEST	SAN JUAN

¹² Dedicated Acres 643.00 ACRES ALL OF SEC. 31	PROJECT AREA	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



CONFIDENTIAL

DEVIATION SURVEYS
Escrito D32-2408 01H
API #: 30-045-35519

MD (Feet)	Inclination (Degree)
763'	1.20
1079'	0.80
1395'	0.70
1711'	0.30
2020'	0.90
2327'	0.40
2634'	0.30
2941'	0.20
3251'	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

4/1/15
Date

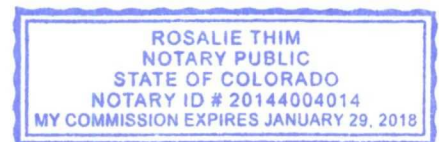
ACKNOWLEDGMENT

State of Colorado
City and County of Denver

This instrument was acknowledged before me on this 1st day of April, 2015 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



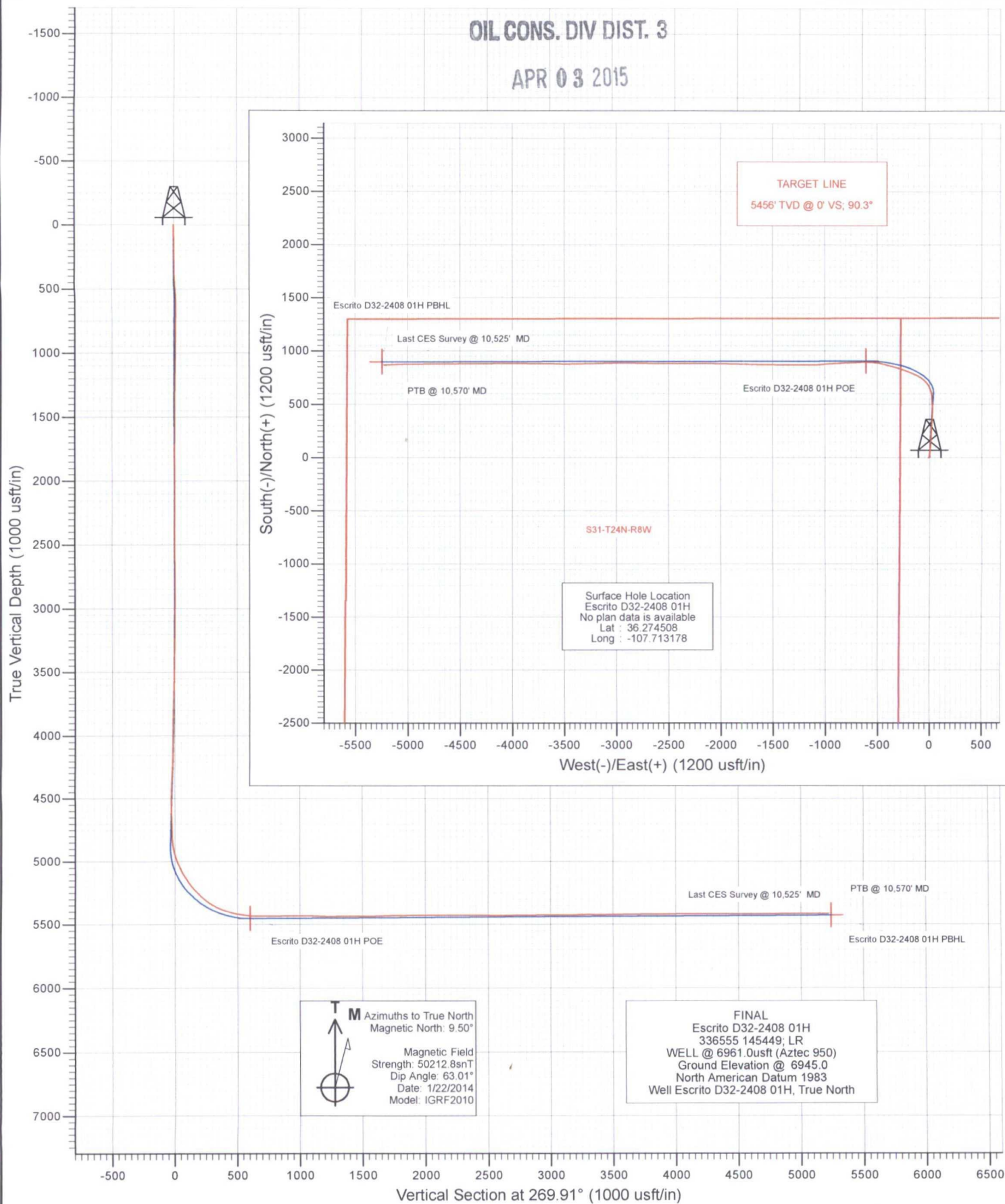


Project: San Juan County, NM
Site: S32-T24N-R8W (Escrito)
Well: Escrito D32-2408 01H
Wellbore: HZ
Design: FINAL



OIL CONS. DIV DIST. 3

APR 03 2015



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (Aztec 950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (Aztec 950)
Well:	Escrito D32-2408 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	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 D32-2408 01H					
Well Position	+N/-S	0.0 usft	Northing:	1,919,241.98 usft	Latitude:	36.274508
	+E/-W	0.0 usft	Easting:	2,758,508.53 usft	Longitude:	-107.713178
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,945.0 usft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	1/22/2014	9.50	63.01	50,213

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	269.91	

Survey Program	Date	12/1/2014			
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
560.0	10,570.0	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	
560.0	2.20	269.70	559.9	-0.1	-10.7	10.7	0.39	0.39	
636.0	1.00	209.30	635.8	-0.6	-12.5	12.5	2.52	-1.58	
699.0	0.80	16.70	698.8	-0.7	-12.7	12.7	2.84	-0.32	
763.0	1.20	19.00	762.8	0.4	-12.3	12.3	0.63	0.62	
826.0	0.60	86.50	825.8	1.0	-11.8	11.8	1.77	-0.95	
889.0	0.80	83.30	888.8	1.1	-11.0	11.0	0.32	0.32	
952.0	0.80	86.40	951.8	1.2	-10.1	10.1	0.07	0.00	
1,016.0	0.80	92.40	1,015.8	1.2	-9.3	9.2	0.13	0.00	
1,079.0	0.80	93.30	1,078.8	1.1	-8.4	8.4	0.02	0.00	
1,142.0	0.80	99.80	1,141.8	1.0	-7.5	7.5	0.14	0.00	
1,205.0	0.90	99.40	1,204.8	0.9	-6.6	6.6	0.16	0.16	
1,269.0	0.80	66.20	1,268.8	1.0	-5.7	5.7	0.77	-0.16	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (Aztec 950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (Aztec 950)
Well:	Escrito D32-2408 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
1,332.0	0.80	53.20	1,331.8	1.4	-4.9	4.9	0.29	0.00	
1,395.0	0.70	59.90	1,394.8	1.9	-4.2	4.2	0.21	-0.16	
1,458.0	0.30	116.70	1,457.8	2.0	-3.8	3.8	0.94	-0.63	
1,521.0	0.10	127.50	1,520.8	1.9	-3.6	3.6	0.32	-0.32	
1,584.0	0.40	99.40	1,583.8	1.8	-3.3	3.3	0.50	0.48	
1,648.0	0.40	129.60	1,647.8	1.6	-2.9	2.9	0.33	0.00	
1,711.0	0.30	132.30	1,710.8	1.4	-2.6	2.6	0.16	-0.16	
1,774.0	0.60	160.20	1,773.8	1.0	-2.4	2.4	0.58	0.48	
1,836.0	0.60	156.40	1,835.8	0.3	-2.1	2.1	0.06	0.00	
1,897.0	0.40	155.30	1,896.7	-0.1	-1.9	1.9	0.33	-0.33	
1,959.0	0.50	165.90	1,958.7	-0.6	-1.8	1.8	0.21	0.16	
2,020.0	0.90	168.10	2,019.7	-1.3	-1.6	1.6	0.66	0.66	
2,081.0	0.20	351.60	2,080.7	-1.7	-1.5	1.5	1.80	-1.15	
2,143.0	0.40	29.40	2,142.7	-1.4	-1.4	1.4	0.44	0.32	
2,204.0	0.40	353.70	2,203.7	-1.0	-1.4	1.4	0.40	0.00	
2,265.0	0.40	329.50	2,264.7	-0.6	-1.5	1.5	0.27	0.00	
2,327.0	0.40	324.50	2,326.7	-0.2	-1.7	1.7	0.06	0.00	
2,388.0	0.40	341.80	2,387.7	0.1	-1.9	1.9	0.20	0.00	
2,450.0	0.40	288.90	2,449.7	0.4	-2.2	2.2	0.57	0.00	
2,511.0	0.40	303.60	2,510.7	0.6	-2.6	2.6	0.17	0.00	
2,573.0	0.20	269.40	2,572.7	0.7	-2.8	2.8	0.42	-0.32	
2,634.0	0.30	299.60	2,633.7	0.8	-3.1	3.1	0.27	0.16	
2,697.0	0.40	279.40	2,696.7	0.9	-3.5	3.5	0.25	0.16	
2,759.0	0.60	270.30	2,758.7	1.0	-4.0	4.0	0.35	0.32	
2,819.0	0.10	248.20	2,818.7	0.9	-4.4	4.4	0.85	-0.83	
2,880.0	0.10	279.40	2,879.7	0.9	-4.5	4.5	0.09	0.00	
2,941.0	0.20	305.20	2,940.7	1.0	-4.6	4.6	0.19	0.16	
3,003.0	0.40	342.90	3,002.7	1.3	-4.7	4.7	0.44	0.32	
3,064.0	2.20	12.30	3,063.7	2.6	-4.6	4.6	3.05	2.95	
3,126.0	4.00	7.50	3,125.6	5.9	-4.0	4.0	2.93	2.90	
3,187.0	6.50	8.40	3,186.4	11.4	-3.2	3.2	4.10	4.10	
3,251.0	8.40	8.00	3,249.8	19.7	-2.1	2.0	2.97	2.97	
3,314.0	8.40	6.70	3,312.1	28.8	-0.9	0.8	0.30	0.00	
3,377.0	8.00	4.80	3,374.5	37.7	0.0	-0.1	0.77	-0.63	
3,440.0	8.90	4.80	3,436.8	46.9	0.8	-0.9	1.43	1.43	
3,504.0	10.50	8.00	3,499.9	57.7	2.0	-2.1	2.64	2.50	
3,567.0	11.50	8.70	3,561.7	69.5	3.8	-3.9	1.60	1.59	
3,630.0	11.40	6.70	3,623.5	81.9	5.4	-5.6	0.65	-0.16	
3,693.0	12.10	6.60	3,685.2	94.7	6.9	-7.1	1.11	1.11	
3,757.0	14.10	6.70	3,747.5	109.1	8.6	-8.8	3.13	3.12	
3,820.0	15.60	5.30	3,808.4	125.1	10.3	-10.5	2.45	2.38	
3,883.0	16.90	3.30	3,868.9	142.7	11.6	-11.8	2.25	2.06	
3,946.0	18.40	1.90	3,928.9	161.8	12.5	-12.7	2.47	2.38	
4,009.0	19.60	3.00	3,988.5	182.3	13.3	-13.6	1.99	1.90	
4,073.0	21.20	0.70	4,048.4	204.6	14.0	-14.4	2.80	2.50	
4,136.0	22.70	1.00	4,106.9	228.1	14.4	-14.7	2.39	2.38	
4,199.0	23.80	1.90	4,164.8	253.0	15.0	-15.4	1.83	1.75	
4,262.0	26.10	5.20	4,221.9	279.5	16.7	-17.1	4.27	3.65	
4,325.0	28.10	4.70	4,278.0	308.1	19.2	-19.7	3.20	3.17	
4,388.0	27.30	3.30	4,333.7	337.3	21.2	-21.7	1.64	-1.27	
4,452.0	27.30	3.60	4,390.6	366.6	23.0	-23.6	0.21	0.00	
4,515.0	27.80	4.10	4,446.5	395.7	24.9	-25.6	0.87	0.79	
4,578.0	28.40	2.20	4,502.0	425.3	26.6	-27.2	1.71	0.95	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S32-T24N-R8W (Escrito)
Well: Escrito D32-2408 01H
Wellbore: HZ
Design: FINAL

Local Co-ordinate Reference: Well Escrito D32-2408 01H
TVD Reference: WELL @ 6961.0usft (Aztec 950)
MD Reference: WELL @ 6961.0usft (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
4,641.0	26.90	0.00	4,557.8	454.5	27.1	-27.9	2.88	-2.38	
4,704.0	26.90	357.50	4,614.0	483.0	26.5	-27.3	1.80	0.00	
4,768.0	27.30	356.30	4,671.0	512.1	24.9	-25.7	1.06	0.62	
4,831.0	27.20	356.30	4,727.0	540.9	23.1	-23.9	0.16	-0.16	
4,894.0	27.30	356.70	4,783.0	569.7	21.3	-22.2	0.33	0.16	
4,926.0	26.90	356.70	4,811.5	584.3	20.5	-21.4	1.25	-1.25	
4,958.0	27.60	351.30	4,840.0	598.8	18.9	-19.9	8.03	2.19	
4,989.0	29.10	345.70	4,867.3	613.2	16.0	-17.0	9.84	4.84	
5,021.0	30.30	340.70	4,895.1	628.4	11.4	-12.4	8.60	3.75	
5,053.0	31.80	336.90	4,922.5	643.8	5.4	-6.4	7.71	4.69	
5,084.0	33.10	332.90	4,948.6	658.8	-1.6	0.6	8.09	4.19	
5,116.0	33.60	328.10	4,975.4	674.1	-10.3	9.2	8.39	1.56	
5,147.0	33.90	324.10	5,001.1	688.4	-19.9	18.8	7.23	0.97	
5,179.0	34.00	319.10	5,027.7	702.4	-31.0	29.9	8.73	0.31	
5,211.0	34.90	314.70	5,054.1	715.6	-43.4	42.2	8.27	2.81	
5,242.0	35.60	311.10	5,079.4	727.8	-56.5	55.3	7.07	2.26	
5,274.0	36.60	307.00	5,105.3	739.6	-71.1	69.9	8.17	3.13	
5,305.0	37.20	302.50	5,130.0	750.2	-86.4	85.2	8.93	1.94	
5,337.0	38.60	299.40	5,155.3	760.3	-103.2	102.0	7.38	4.38	
5,369.0	40.30	297.40	5,180.0	770.0	-121.1	119.9	6.63	5.31	
5,400.0	41.80	294.40	5,203.4	778.9	-139.4	138.2	7.99	4.84	
5,432.0	44.10	292.40	5,226.8	787.5	-159.5	158.2	8.35	7.19	
5,463.0	46.20	291.40	5,248.7	795.7	-179.8	178.6	7.15	6.77	
5,495.0	48.80	290.50	5,270.3	804.2	-201.9	200.6	8.39	8.13	
5,527.0	51.60	290.00	5,290.8	812.7	-224.9	223.7	8.83	8.75	
5,558.0	54.00	289.10	5,309.5	820.9	-248.2	246.9	8.08	7.74	
5,590.0	56.50	288.00	5,327.8	829.3	-273.1	271.8	8.31	7.81	
5,622.0	59.80	287.20	5,344.6	837.5	-299.0	297.7	10.53	10.31	
5,661.0	64.10	285.60	5,363.0	847.2	-332.1	330.7	11.60	11.03	
5,692.0	67.60	285.90	5,375.7	854.9	-359.3	357.9	11.32	11.29	
5,724.0	69.90	285.20	5,387.3	862.9	-388.0	386.6	7.47	7.19	
5,756.0	72.60	284.30	5,397.5	870.6	-417.3	415.9	8.85	8.44	
5,787.0	75.50	283.10	5,406.1	877.6	-446.3	444.9	10.07	9.35	
5,819.0	78.60	280.80	5,413.2	884.1	-476.8	475.4	11.95	9.69	
5,850.0	80.20	277.80	5,418.9	889.0	-506.8	505.4	10.82	5.16	
5,882.0	81.60	275.00	5,424.0	892.5	-538.2	536.8	9.68	4.38	
5,914.0	82.70	271.80	5,428.4	894.4	-569.9	568.5	10.49	3.44	
5,945.0	84.70	268.70	5,431.8	894.5	-600.7	599.3	11.85	6.45	
5,977.0	88.00	267.70	5,433.8	893.5	-632.6	631.2	10.77	10.31	
6,040.0	90.10	268.30	5,434.8	891.3	-695.5	694.1	3.47	3.33	
6,104.0	90.90	268.40	5,434.3	889.5	-759.5	758.1	1.26	1.25	
6,167.0	91.00	267.50	5,433.2	887.2	-822.5	821.1	1.44	0.16	
6,230.0	89.30	266.30	5,433.1	883.8	-885.4	884.0	3.30	-2.70	
6,293.0	90.10	266.20	5,433.4	879.7	-948.2	946.8	1.28	1.27	
6,356.0	90.20	265.80	5,433.2	875.3	-1,011.1	1,009.7	0.65	0.16	
6,420.0	89.20	267.50	5,433.6	871.6	-1,075.0	1,073.6	3.08	-1.56	
6,483.0	89.00	269.70	5,434.6	870.0	-1,137.9	1,136.6	3.51	-0.32	
6,546.0	88.90	269.00	5,435.7	869.3	-1,200.9	1,199.5	1.12	-0.16	
6,609.0	90.00	270.00	5,436.3	868.8	-1,263.9	1,262.5	2.36	1.75	
6,673.0	91.90	271.20	5,435.3	869.5	-1,327.9	1,326.5	3.51	2.97	
6,734.0	90.10	270.30	5,434.2	870.2	-1,388.9	1,387.5	3.30	-2.95	
6,796.0	89.50	269.10	5,434.4	869.9	-1,450.9	1,449.5	2.16	-0.97	
6,857.0	89.50	270.80	5,435.0	869.9	-1,511.9	1,510.5	2.79	0.00	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (Aztec 950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (Aztec 950)
Well:	Escrito D32-2408 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
6,919.0	91.20	272.50	5,434.6	871.7	-1,573.8	1,572.5	3.88	2.74	
6,980.0	91.00	271.80	5,433.4	873.9	-1,634.8	1,633.4	1.19	-0.33	
7,041.0	91.10	270.90	5,432.3	875.4	-1,695.8	1,694.4	1.48	0.16	
7,102.0	91.50	270.40	5,430.9	876.1	-1,756.7	1,755.4	1.05	0.66	
7,164.0	90.80	270.30	5,429.7	876.5	-1,818.7	1,817.3	1.14	-1.13	
7,225.0	91.70	270.70	5,428.3	877.0	-1,879.7	1,878.3	1.61	1.48	
7,287.0	90.40	270.90	5,427.2	877.8	-1,941.7	1,940.3	2.12	-2.10	
7,348.0	90.10	271.10	5,426.9	878.9	-2,002.7	2,001.3	0.59	-0.49	
7,410.0	89.20	271.80	5,427.3	880.5	-2,064.7	2,063.3	1.84	-1.45	
7,471.0	89.80	271.40	5,427.8	882.2	-2,125.6	2,124.2	1.18	0.98	
7,532.0	90.00	270.70	5,427.9	883.3	-2,186.6	2,185.2	1.19	0.33	
7,594.0	90.00	270.10	5,427.9	883.7	-2,248.6	2,247.2	0.97	0.00	
7,655.0	90.30	269.60	5,427.8	883.6	-2,309.6	2,308.2	0.96	0.49	
7,717.0	90.30	268.70	5,427.5	882.7	-2,371.6	2,370.2	1.45	0.00	
7,778.0	89.30	269.60	5,427.7	881.8	-2,432.6	2,431.2	2.21	-1.64	
7,840.0	89.40	270.70	5,428.4	881.9	-2,494.6	2,493.2	1.78	0.16	
7,901.0	89.70	270.40	5,428.9	882.5	-2,555.6	2,554.2	0.70	0.49	
7,963.0	89.90	270.60	5,429.1	883.0	-2,617.6	2,616.2	0.46	0.32	
8,024.0	90.00	270.60	5,429.1	883.7	-2,678.6	2,677.2	0.16	0.16	
8,086.0	91.20	271.10	5,428.5	884.6	-2,740.6	2,739.2	2.10	1.94	
8,149.0	90.30	270.90	5,427.6	885.7	-2,803.6	2,802.2	1.46	-1.43	
8,212.0	90.70	270.80	5,427.1	886.6	-2,866.6	2,865.2	0.65	0.63	
8,276.0	90.30	269.30	5,426.5	886.7	-2,930.5	2,929.1	2.43	-0.62	
8,339.0	90.90	269.40	5,425.9	886.0	-2,993.5	2,992.1	0.97	0.95	
8,402.0	89.90	268.80	5,425.4	885.0	-3,056.5	3,055.1	1.85	-1.59	
8,465.0	90.20	269.10	5,425.4	883.8	-3,119.5	3,118.1	0.67	0.48	
8,528.0	90.30	268.50	5,425.1	882.5	-3,182.5	3,181.1	0.97	0.16	
8,592.0	90.90	267.80	5,424.4	880.4	-3,246.5	3,245.1	1.44	0.94	
8,655.0	89.90	268.60	5,424.0	878.5	-3,309.4	3,308.0	2.03	-1.59	
8,718.0	90.00	269.90	5,424.1	877.6	-3,372.4	3,371.0	2.07	0.16	
8,781.0	90.30	269.70	5,423.9	877.4	-3,435.4	3,434.0	0.57	0.48	
8,845.0	90.30	271.20	5,423.6	877.9	-3,499.4	3,498.0	2.34	0.00	
8,908.0	90.70	270.70	5,423.0	879.0	-3,562.4	3,561.0	1.02	0.63	
8,971.0	91.10	270.20	5,422.0	879.5	-3,625.4	3,624.0	1.02	0.63	
9,034.0	90.90	270.80	5,420.9	880.0	-3,688.4	3,687.0	1.00	-0.32	
9,097.0	89.70	270.30	5,420.6	880.6	-3,751.4	3,750.0	2.06	-1.90	
9,161.0	90.30	270.00	5,420.6	880.8	-3,815.4	3,814.0	1.05	0.94	
9,224.0	90.40	269.40	5,420.2	880.5	-3,878.4	3,877.0	0.97	0.16	
9,287.0	90.40	270.80	5,419.8	880.6	-3,941.4	3,940.0	2.22	0.00	
9,351.0	90.80	270.10	5,419.1	881.1	-4,005.4	4,004.0	1.26	0.62	
9,414.0	90.40	270.50	5,418.4	881.4	-4,068.4	4,067.0	0.90	-0.63	
9,477.0	89.10	270.50	5,418.7	881.9	-4,131.4	4,130.0	2.06	-2.06	
9,540.0	90.00	270.20	5,419.2	882.3	-4,194.4	4,193.0	1.51	1.43	
9,603.0	90.70	269.70	5,418.8	882.3	-4,257.4	4,256.0	1.37	1.11	
9,667.0	90.00	269.70	5,418.4	881.9	-4,321.3	4,319.9	1.09	-1.09	
9,730.0	90.50	269.10	5,418.1	881.3	-4,384.3	4,382.9	1.24	0.79	
9,793.0	89.10	268.40	5,418.4	879.9	-4,447.3	4,445.9	2.48	-2.22	
9,856.0	89.70	268.20	5,419.0	878.0	-4,510.3	4,508.9	1.00	0.95	
9,920.0	90.30	269.10	5,419.0	876.5	-4,574.3	4,572.9	1.69	0.94	
9,983.0	89.80	269.90	5,419.0	876.0	-4,637.3	4,635.9	1.50	-0.79	
10,046.0	90.80	269.90	5,418.6	875.9	-4,700.3	4,698.9	1.59	1.59	
10,109.0	90.40	270.30	5,418.0	876.0	-4,763.2	4,761.9	0.90	-0.63	
10,172.0	89.80	270.30	5,417.9	876.3	-4,826.2	4,824.9	0.95	-0.95	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (Aztec 950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (Aztec 950)
Well:	Escrito D32-2408 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
10,235.0	90.40	270.30	5,417.8	876.6	-4,889.2	4,887.9	0.95	0.95	
10,299.0	91.40	269.80	5,416.8	876.7	-4,953.2	4,951.9	1.75	1.56	
10,362.0	90.40	268.90	5,415.8	876.0	-5,016.2	5,014.8	2.14	-1.59	
10,425.0	89.00	268.60	5,416.1	874.6	-5,079.2	5,077.8	2.27	-2.22	
10,488.0	89.60	268.10	5,416.9	872.8	-5,142.2	5,140.8	1.24	0.95	
10,525.0	90.00	267.70	5,417.0	871.4	-5,179.2	5,177.8	1.53	1.08	Last CES Survey @ 10,525' MD
10,570.0	90.50	267.40	5,416.8	869.5	-5,224.1	5,222.7	1.30	1.11	PTB @ 10,570' MD

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 D32-2408 01H P	0.00	0.00	5,452.8	905.3	-604.2	1,920,146.56	2,757,903.17	36.276995	-107.715228
- survey misses target center by 23.4usft at 5949.5usft MD (5432.2 TVD, 894.4 N, -605.2 E)									
- Point									
Escrito D32-2408 01H P	0.00	0.00	5,428.5	897.8	-5,243.6	1,920,133.27	2,753,263.82	36.276973	-107.730968
- survey misses target center by 36.3usft at 10570.0usft MD (5416.8 TVD, 869.5 N, -5224.1 E)									
- Point									

Survey Annotations

Measured	Vertical	Local Coordinates		Comment
Depth (usft)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	
10,525.0	5,417.0	871.4	-5,179.2	Last CES Survey @ 10,525' MD
10,570.0	5,416.8	869.5	-5,224.1	PTB @ 10,570' MD

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

San Juan County, NM

S32-T24N-R8W (Escrito)

Escrito D32-2408 01H

HZ

Survey: Survey #1

Survey Report - Geographic

01 December, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (Aztec 950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (Aztec 950)
Well:	Escrito D32-2408 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	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 D32-2408 01H					
Well Position	+N/-S	0.0 usft	Northing:	1,919,241.98 usft	Latitude:	36.274508
	+E/-W	0.0 usft	Easting:	2,758,508.53 usft	Longitude:	-107.713178
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,945.0 usft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/22/2014	9.50	63.01	50,213

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	269.91	

Survey Program		Date	12/1/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
560.0	10,570.0	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	1,919,241.98	2,758,508.53	36.274508	-107.713178
560.0	2.20	269.70	559.9	-0.1	-10.7	1,919,241.91	2,758,497.78	36.274508	-107.713215
636.0	1.00	209.30	635.8	-0.6	-12.5	1,919,241.32	2,758,496.00	36.274506	-107.713221
699.0	0.80	16.70	698.8	-0.7	-12.7	1,919,241.26	2,758,495.85	36.274506	-107.713221
763.0	1.20	19.00	762.8	0.4	-12.3	1,919,242.32	2,758,496.20	36.274509	-107.713220
826.0	0.60	86.50	825.8	1.0	-11.8	1,919,242.97	2,758,496.74	36.274511	-107.713218
889.0	0.80	83.30	888.8	1.1	-11.0	1,919,243.04	2,758,497.51	36.274511	-107.713216
952.0	0.80	86.40	951.8	1.2	-10.1	1,919,243.12	2,758,498.38	36.274511	-107.713213
1,016.0	0.80	92.40	1,015.8	1.2	-9.3	1,919,243.13	2,758,499.28	36.274511	-107.713210
1,079.0	0.80	93.30	1,078.8	1.1	-8.4	1,919,243.09	2,758,500.16	36.274511	-107.713207
1,142.0	0.80	99.80	1,141.8	1.0	-7.5	1,919,242.99	2,758,501.03	36.274511	-107.713204
1,205.0	0.90	99.40	1,204.8	0.9	-6.6	1,919,242.84	2,758,501.95	36.274510	-107.713201

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (Aztec 950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (Aztec 950)
Well:	Escrito D32-2408 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
1,269.0	0.80	66.20	1,268.8	1.0	-5.7	1,919,242.93	2,758,502.85	36.274511	-107.713198
1,332.0	0.80	53.20	1,331.8	1.4	-4.9	1,919,243.38	2,758,503.61	36.274512	-107.713195
1,395.0	0.70	59.90	1,394.8	1.9	-4.2	1,919,243.83	2,758,504.29	36.274513	-107.713193
1,458.0	0.30	116.70	1,457.8	2.0	-3.8	1,919,243.95	2,758,504.77	36.274514	-107.713191
1,521.0	0.10	127.50	1,520.8	1.9	-3.6	1,919,243.85	2,758,504.96	36.274513	-107.713190
1,584.0	0.40	99.40	1,583.8	1.8	-3.3	1,919,243.78	2,758,505.22	36.274513	-107.713189
1,648.0	0.40	129.60	1,647.8	1.6	-2.9	1,919,243.60	2,758,505.62	36.274513	-107.713188
1,711.0	0.30	132.30	1,710.8	1.4	-2.6	1,919,243.35	2,758,505.91	36.274512	-107.713187
1,774.0	0.60	160.20	1,773.8	1.0	-2.4	1,919,242.93	2,758,506.14	36.274511	-107.713186
1,836.0	0.60	156.40	1,835.8	0.3	-2.1	1,919,242.32	2,758,506.38	36.274509	-107.713186
1,897.0	0.40	155.30	1,896.7	-0.1	-1.9	1,919,241.84	2,758,506.60	36.274508	-107.713185
1,959.0	0.50	165.90	1,958.7	-0.6	-1.8	1,919,241.38	2,758,506.76	36.274506	-107.713184
2,020.0	0.90	168.10	2,019.7	-1.3	-1.6	1,919,240.65	2,758,506.92	36.274504	-107.713184
2,081.0	0.20	351.60	2,080.7	-1.7	-1.5	1,919,240.29	2,758,507.01	36.274503	-107.713183
2,143.0	0.40	29.40	2,142.7	-1.4	-1.4	1,919,240.59	2,758,507.10	36.274504	-107.713183
2,204.0	0.40	353.70	2,203.7	-1.0	-1.4	1,919,240.98	2,758,507.18	36.274505	-107.713183
2,265.0	0.40	329.50	2,264.7	-0.6	-1.5	1,919,241.38	2,758,507.05	36.274506	-107.713183
2,327.0	0.40	324.50	2,326.7	-0.2	-1.7	1,919,241.74	2,758,506.81	36.274507	-107.713184
2,388.0	0.40	341.80	2,387.7	0.1	-1.9	1,919,242.12	2,758,506.62	36.274508	-107.713185
2,450.0	0.40	288.90	2,449.7	0.4	-2.2	1,919,242.39	2,758,506.35	36.274509	-107.713186
2,511.0	0.40	303.60	2,510.7	0.6	-2.6	1,919,242.58	2,758,505.97	36.274510	-107.713187
2,573.0	0.20	269.40	2,572.7	0.7	-2.8	1,919,242.70	2,758,505.68	36.274510	-107.713188
2,634.0	0.30	299.60	2,633.7	0.8	-3.1	1,919,242.77	2,758,505.43	36.274510	-107.713189
2,697.0	0.40	279.40	2,696.7	0.9	-3.5	1,919,242.89	2,758,505.07	36.274511	-107.713190
2,759.0	0.60	270.30	2,758.7	1.0	-4.0	1,919,242.93	2,758,504.53	36.274511	-107.713192
2,819.0	0.10	248.20	2,818.7	0.9	-4.4	1,919,242.91	2,758,504.17	36.274511	-107.713193
2,880.0	0.10	279.40	2,879.7	0.9	-4.5	1,919,242.90	2,758,504.07	36.274511	-107.713193
2,941.0	0.20	305.20	2,940.7	1.0	-4.6	1,919,242.97	2,758,503.93	36.274511	-107.713194
3,003.0	0.40	342.90	3,002.7	1.3	-4.7	1,919,243.24	2,758,503.78	36.274512	-107.713194
3,064.0	2.20	12.30	3,063.7	2.6	-4.6	1,919,244.58	2,758,503.96	36.274515	-107.713194
3,126.0	4.00	7.50	3,125.6	5.9	-4.0	1,919,247.89	2,758,504.49	36.274524	-107.713192
3,187.0	6.50	8.40	3,186.4	11.4	-3.2	1,919,253.42	2,758,505.27	36.274540	-107.713189
3,251.0	8.40	8.00	3,249.8	19.7	-2.1	1,919,261.63	2,758,506.44	36.274562	-107.713185
3,314.0	8.40	6.70	3,312.1	28.8	-0.9	1,919,270.76	2,758,507.61	36.274587	-107.713181
3,377.0	8.00	4.80	3,374.5	37.7	0.0	1,919,279.70	2,758,508.50	36.274612	-107.713178
3,440.0	8.90	4.80	3,436.8	46.9	0.8	1,919,288.93	2,758,509.26	36.274637	-107.713176
3,504.0	10.50	8.00	3,499.9	57.7	2.0	1,919,299.64	2,758,510.47	36.274666	-107.713171
3,567.0	11.50	8.70	3,561.7	69.5	3.8	1,919,311.53	2,758,512.21	36.274699	-107.713165
3,630.0	11.40	6.70	3,623.5	81.9	5.4	1,919,323.93	2,758,513.87	36.274733	-107.713160
3,693.0	12.10	6.60	3,685.2	94.7	6.9	1,919,336.67	2,758,515.34	36.274768	-107.713155
3,757.0	14.10	6.70	3,747.5	109.1	8.6	1,919,351.08	2,758,517.00	36.274808	-107.713149
3,820.0	15.60	5.30	3,808.4	125.1	10.3	1,919,367.14	2,758,518.66	36.274852	-107.713143
3,883.0	16.90	3.30	3,868.9	142.7	11.6	1,919,384.72	2,758,519.95	36.274900	-107.713139
3,946.0	18.40	1.90	3,928.9	161.8	12.5	1,919,403.80	2,758,520.78	36.274953	-107.713136
4,009.0	19.60	3.00	3,988.5	182.3	13.3	1,919,424.29	2,758,521.64	36.275009	-107.713133
4,073.0	21.20	0.70	4,048.4	204.6	14.0	1,919,446.59	2,758,522.31	36.275070	-107.713131
4,136.0	22.70	1.00	4,106.9	228.1	14.4	1,919,470.13	2,758,522.64	36.275135	-107.713129
4,199.0	23.80	1.90	4,164.8	253.0	15.0	1,919,494.99	2,758,523.24	36.275203	-107.713127
4,262.0	26.10	5.20	4,221.9	279.5	16.7	1,919,521.51	2,758,524.88	36.275276	-107.713122
4,325.0	28.10	4.70	4,278.0	308.1	19.2	1,919,550.10	2,758,527.32	36.275354	-107.713113
4,388.0	27.30	3.30	4,333.7	337.3	21.2	1,919,579.31	2,758,529.33	36.275435	-107.713106
4,452.0	27.30	3.60	4,390.6	366.6	23.0	1,919,608.62	2,758,531.06	36.275515	-107.713100
4,515.0	27.80	4.10	4,446.5	395.7	24.9	1,919,637.69	2,758,532.98	36.275595	-107.713094
4,578.0	28.40	2.20	4,502.0	425.3	26.6	1,919,667.32	2,758,534.57	36.275676	-107.713088
4,641.0	26.90	0.00	4,557.8	454.5	27.1	1,919,696.54	2,758,535.11	36.275757	-107.713086

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (Aztec 950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (Aztec 950)
Well:	Escrito D32-2408 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
4,704.0	26.90	357.50	4,614.0	483.0	26.5	1,919,725.03	2,758,534.45	36.275835	-107.713088
4,768.0	27.30	356.30	4,671.0	512.1	24.9	1,919,754.14	2,758,532.84	36.275915	-107.713094
4,831.0	27.20	356.30	4,727.0	540.9	23.1	1,919,782.93	2,758,530.94	36.275994	-107.713100
4,894.0	27.30	356.70	4,783.0	569.7	21.3	1,919,811.72	2,758,529.14	36.276073	-107.713106
4,926.0	26.90	356.70	4,811.5	584.3	20.5	1,919,826.27	2,758,528.29	36.276113	-107.713109
4,958.0	27.60	351.30	4,840.0	598.8	18.9	1,919,840.82	2,758,526.73	36.276153	-107.713114
4,989.0	29.10	345.70	4,867.3	613.2	16.0	1,919,855.23	2,758,523.76	36.276193	-107.713124
5,021.0	30.30	340.70	4,895.1	628.4	11.4	1,919,870.38	2,758,519.15	36.276234	-107.713140
5,053.0	31.80	336.90	4,922.5	643.8	5.4	1,919,885.75	2,758,513.16	36.276277	-107.713160
5,084.0	33.10	332.90	4,948.6	658.8	-1.6	1,919,900.79	2,758,506.08	36.276318	-107.713184
5,116.0	33.60	328.10	4,975.4	674.1	-10.3	1,919,916.08	2,758,497.40	36.276360	-107.713213
5,147.0	33.90	324.10	5,001.1	688.4	-19.9	1,919,930.35	2,758,487.78	36.276399	-107.713246
5,179.0	34.00	319.10	5,027.7	702.4	-31.0	1,919,944.33	2,758,476.67	36.276438	-107.713283
5,211.0	34.90	314.70	5,054.1	715.6	-43.4	1,919,957.52	2,758,464.29	36.276474	-107.713325
5,242.0	35.60	311.10	5,079.4	727.8	-56.5	1,919,969.67	2,758,451.17	36.276507	-107.713370
5,274.0	36.60	307.00	5,105.3	739.6	-71.1	1,919,981.52	2,758,436.51	36.276540	-107.713419
5,305.0	37.20	302.50	5,130.0	750.2	-86.4	1,919,992.10	2,758,421.21	36.276569	-107.713471
5,337.0	38.60	299.40	5,155.3	760.3	-103.2	1,920,002.18	2,758,404.34	36.276597	-107.713529
5,369.0	40.30	297.40	5,180.0	770.0	-121.1	1,920,011.82	2,758,386.44	36.276623	-107.713589
5,400.0	41.80	294.40	5,203.4	778.9	-139.4	1,920,020.68	2,758,368.12	36.276648	-107.713651
5,432.0	44.10	292.40	5,226.8	787.5	-159.5	1,920,029.31	2,758,348.10	36.276671	-107.713719
5,463.0	46.20	291.40	5,248.7	795.7	-179.8	1,920,037.48	2,758,327.70	36.276694	-107.713788
5,495.0	48.80	290.50	5,270.3	804.2	-201.9	1,920,045.88	2,758,305.66	36.276717	-107.713863
5,527.0	51.60	290.00	5,290.8	812.7	-224.9	1,920,054.36	2,758,282.58	36.276741	-107.713941
5,558.0	54.00	289.10	5,309.5	820.9	-248.2	1,920,062.59	2,758,259.30	36.276763	-107.714020
5,590.0	56.50	288.00	5,327.8	829.3	-273.1	1,920,070.92	2,758,234.37	36.276786	-107.714105
5,622.0	59.80	287.20	5,344.6	837.5	-299.0	1,920,079.10	2,758,208.45	36.276809	-107.714193
5,661.0	64.10	285.60	5,363.0	847.2	-332.1	1,920,088.76	2,758,175.43	36.276835	-107.714305
5,692.0	67.60	285.90	5,375.7	854.9	-359.3	1,920,096.41	2,758,148.20	36.276856	-107.714397
5,724.0	69.90	285.20	5,387.3	862.9	-388.0	1,920,104.37	2,758,119.46	36.276878	-107.714495
5,756.0	72.60	284.30	5,397.5	870.6	-417.3	1,920,112.04	2,758,090.15	36.276900	-107.714594
5,787.0	75.50	283.10	5,406.1	877.6	-446.3	1,920,119.06	2,758,061.18	36.276919	-107.714692
5,819.0	78.60	280.80	5,413.2	884.1	-476.8	1,920,125.48	2,758,030.67	36.276937	-107.714796
5,850.0	80.20	277.80	5,418.9	889.0	-506.8	1,920,130.36	2,758,000.60	36.276950	-107.714898
5,882.0	81.60	275.00	5,424.0	892.5	-538.2	1,920,133.84	2,757,969.20	36.276960	-107.715004
5,914.0	82.70	271.80	5,428.4	894.4	-569.9	1,920,135.68	2,757,937.56	36.276965	-107.715112
5,945.0	84.70	268.70	5,431.8	894.5	-600.7	1,920,135.78	2,757,906.75	36.276965	-107.715216
5,977.0	88.00	267.70	5,433.8	893.5	-632.6	1,920,134.73	2,757,874.83	36.276963	-107.715324
6,040.0	90.10	268.30	5,434.8	891.3	-695.5	1,920,132.46	2,757,811.89	36.276957	-107.715538
6,104.0	90.90	268.40	5,434.3	889.5	-759.5	1,920,130.53	2,757,747.92	36.276952	-107.715755
6,167.0	91.00	267.50	5,433.2	887.2	-822.5	1,920,128.20	2,757,684.97	36.276945	-107.715969
6,230.0	89.30	266.30	5,433.1	883.8	-885.4	1,920,124.72	2,757,622.07	36.276936	-107.716182
6,293.0	90.10	266.20	5,433.4	879.7	-948.2	1,920,120.52	2,757,559.21	36.276925	-107.716395
6,356.0	90.20	265.80	5,433.2	875.3	-1,011.1	1,920,116.05	2,757,496.37	36.276913	-107.716609
6,420.0	89.20	267.50	5,433.6	871.6	-1,075.0	1,920,112.23	2,757,432.49	36.276902	-107.716825
6,483.0	89.00	269.70	5,434.6	870.0	-1,137.9	1,920,110.61	2,757,369.53	36.276898	-107.717039
6,546.0	88.90	269.00	5,435.7	869.3	-1,200.9	1,920,109.82	2,757,306.54	36.276896	-107.717253
6,609.0	90.00	270.00	5,436.3	868.8	-1,263.9	1,920,109.19	2,757,243.55	36.276895	-107.717466
6,673.0	91.90	271.20	5,435.3	869.5	-1,327.9	1,920,109.78	2,757,179.55	36.276896	-107.717683
6,734.0	90.10	270.30	5,434.2	870.2	-1,388.9	1,920,110.50	2,757,118.57	36.276899	-107.717890
6,796.0	89.50	269.10	5,434.4	869.9	-1,450.9	1,920,110.10	2,757,056.57	36.276898	-107.718101
6,857.0	89.50	270.80	5,435.0	869.9	-1,511.9	1,920,109.97	2,756,995.58	36.276898	-107.718308
6,919.0	91.20	272.50	5,434.6	871.7	-1,573.8	1,920,111.68	2,756,933.61	36.276902	-107.718518
6,980.0	91.00	271.80	5,433.4	873.9	-1,634.8	1,920,113.89	2,756,872.66	36.276909	-107.718725
7,041.0	91.10	270.90	5,432.3	875.4	-1,695.8	1,920,115.25	2,756,811.68	36.276913	-107.718931

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 01H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (Aztec 950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (Aztec 950)
Well:	Escrito D32-2408 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
7,102.0	91.50	270.40	5,430.9	876.1	-1,756.7	1,920,115.87	2,756,750.70	36.276915	-107.719138
7,164.0	90.80	270.30	5,429.7	876.5	-1,818.7	1,920,116.17	2,756,688.72	36.276916	-107.719349
7,225.0	91.70	270.70	5,428.3	877.0	-1,879.7	1,920,116.63	2,756,627.73	36.276917	-107.719556
7,287.0	90.40	270.90	5,427.2	877.8	-1,941.7	1,920,117.42	2,756,565.75	36.276919	-107.719766
7,348.0	90.10	271.10	5,426.9	878.9	-2,002.7	1,920,118.41	2,756,504.76	36.276922	-107.719973
7,410.0	89.20	271.80	5,427.3	880.5	-2,064.7	1,920,119.90	2,756,442.78	36.276927	-107.720183
7,471.0	89.80	271.40	5,427.8	882.2	-2,125.6	1,920,121.53	2,756,381.80	36.276931	-107.720390
7,532.0	90.00	270.70	5,427.9	883.3	-2,186.6	1,920,122.57	2,756,320.81	36.276934	-107.720597
7,594.0	90.00	270.10	5,427.9	883.7	-2,248.6	1,920,122.92	2,756,258.81	36.276936	-107.720807
7,655.0	90.30	269.60	5,427.8	883.6	-2,309.6	1,920,122.69	2,756,197.81	36.276935	-107.721014
7,717.0	90.30	268.70	5,427.5	882.7	-2,371.6	1,920,121.69	2,756,135.82	36.276933	-107.721224
7,778.0	89.30	269.60	5,427.7	881.8	-2,432.6	1,920,120.71	2,756,074.83	36.276930	-107.721431
7,840.0	89.40	270.70	5,428.4	881.9	-2,494.6	1,920,120.80	2,756,012.84	36.276930	-107.721642
7,901.0	89.70	270.40	5,428.9	882.5	-2,555.6	1,920,121.31	2,755,951.84	36.276932	-107.721849
7,963.0	89.90	270.60	5,429.1	883.0	-2,617.6	1,920,121.77	2,755,889.85	36.276934	-107.722059
8,024.0	90.00	270.60	5,429.1	883.7	-2,678.6	1,920,122.33	2,755,828.85	36.276935	-107.722266
8,086.0	91.20	271.10	5,428.5	884.6	-2,740.6	1,920,123.18	2,755,766.86	36.276938	-107.722476
8,149.0	90.30	270.90	5,427.6	885.7	-2,803.6	1,920,124.20	2,755,703.87	36.276941	-107.722690
8,212.0	90.70	270.80	5,427.1	886.6	-2,866.6	1,920,125.05	2,755,640.88	36.276943	-107.722904
8,276.0	90.30	269.30	5,426.5	886.7	-2,930.5	1,920,125.03	2,755,576.89	36.276943	-107.723121
8,339.0	90.90	269.40	5,425.9	886.0	-2,993.5	1,920,124.24	2,755,513.89	36.276941	-107.723334
8,402.0	89.90	268.80	5,425.4	885.0	-3,056.5	1,920,123.17	2,755,450.91	36.276939	-107.723548
8,465.0	90.20	269.10	5,425.4	883.8	-3,119.5	1,920,121.94	2,755,387.92	36.276936	-107.723762
8,528.0	90.30	268.50	5,425.1	882.5	-3,182.5	1,920,120.54	2,755,324.93	36.276932	-107.723976
8,592.0	90.90	267.80	5,424.4	880.4	-3,246.5	1,920,118.39	2,755,260.97	36.276926	-107.724193
8,655.0	89.90	268.60	5,424.0	878.5	-3,309.4	1,920,116.34	2,755,198.01	36.276921	-107.724406
8,718.0	90.00	269.90	5,424.1	877.6	-3,372.4	1,920,115.43	2,755,135.02	36.276918	-107.724620
8,781.0	90.30	269.70	5,423.9	877.4	-3,435.4	1,920,115.14	2,755,072.02	36.276918	-107.724834
8,845.0	90.30	271.20	5,423.6	877.9	-3,499.4	1,920,115.56	2,755,008.02	36.276919	-107.725051
8,908.0	90.70	270.70	5,423.0	879.0	-3,562.4	1,920,116.53	2,754,945.03	36.276922	-107.725264
8,971.0	91.10	270.20	5,422.0	879.5	-3,625.4	1,920,116.94	2,754,882.04	36.276923	-107.725478
9,034.0	90.90	270.80	5,420.9	880.0	-3,688.4	1,920,117.41	2,754,819.06	36.276925	-107.725692
9,097.0	89.70	270.30	5,420.6	880.6	-3,751.4	1,920,117.94	2,754,756.06	36.276927	-107.725906
9,161.0	90.30	270.00	5,420.6	880.8	-3,815.4	1,920,118.03	2,754,692.06	36.276927	-107.726123
9,224.0	90.40	269.40	5,420.2	880.5	-3,878.4	1,920,117.62	2,754,629.06	36.276926	-107.726336
9,287.0	90.40	270.80	5,419.8	880.6	-3,941.4	1,920,117.65	2,754,566.07	36.276926	-107.726550
9,351.0	90.80	270.10	5,419.1	881.1	-4,005.4	1,920,118.08	2,754,502.07	36.276928	-107.726767
9,414.0	90.40	270.50	5,418.4	881.4	-4,068.4	1,920,118.33	2,754,439.08	36.276929	-107.726981
9,477.0	89.10	270.50	5,418.7	881.9	-4,131.4	1,920,118.80	2,754,376.08	36.276930	-107.727195
9,540.0	90.00	270.20	5,419.2	882.3	-4,194.4	1,920,119.11	2,754,313.08	36.276931	-107.727408
9,603.0	90.70	269.70	5,418.8	882.3	-4,257.4	1,920,118.97	2,754,250.08	36.276931	-107.727622
9,667.0	90.00	269.70	5,418.4	881.9	-4,321.3	1,920,118.56	2,754,186.11	36.276930	-107.727839
9,730.0	90.50	269.10	5,418.1	881.3	-4,384.3	1,920,117.82	2,754,123.11	36.276928	-107.728053
9,793.0	89.10	268.40	5,418.4	879.9	-4,447.3	1,920,116.37	2,754,060.13	36.276924	-107.728267
9,856.0	89.70	268.20	5,419.0	878.0	-4,510.3	1,920,114.42	2,753,997.17	36.276919	-107.728480
9,920.0	90.30	269.10	5,419.0	876.5	-4,574.3	1,920,112.83	2,753,933.19	36.276915	-107.728697
9,983.0	89.80	269.90	5,419.0	876.0	-4,637.3	1,920,112.21	2,753,870.19	36.276913	-107.728911
10,046.0	90.80	269.90	5,418.6	875.9	-4,700.3	1,920,112.02	2,753,807.19	36.276913	-107.729125
10,109.0	90.40	270.30	5,418.0	876.0	-4,763.2	1,920,112.05	2,753,744.20	36.276913	-107.729339
10,172.0	89.80	270.30	5,417.9	876.3	-4,826.2	1,920,112.30	2,753,681.20	36.276914	-107.729552
10,235.0	90.40	270.30	5,417.8	876.6	-4,889.2	1,920,112.55	2,753,618.20	36.276915	-107.729766
10,299.0	91.40	269.80	5,416.8	876.7	-4,953.2	1,920,112.53	2,753,554.21	36.276915	-107.729983
10,362.0	90.40	268.90	5,415.8	876.0	-5,016.2	1,920,111.74	2,753,491.22	36.276913	-107.730197
10,425.0	89.00	268.60	5,416.1	874.6	-5,079.2	1,920,110.28	2,753,428.24	36.276909	-107.730411
10,488.0	89.60	268.10	5,416.9	872.8	-5,142.2	1,920,108.39	2,753,365.27	36.276904	-107.730624

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S32-T24N-R8W (Escrito)
Well: Escrito D32-2408 01H
Wellbore: HZ
Design: FINAL

Local Co-ordinate Reference: Well Escrito D32-2408 01H
TVD Reference: WELL @ 6961.0usft (Aztec 950)
MD Reference: WELL @ 6961.0usft (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
10,525.0	90.00	267.70	5,417.0	871.4	-5,179.2	1,920,106.99	2,753,328.28	36.276901	-107.730750
Last CES Survey @ 10,525' MD									
10,570.0	90.50	267.40	5,416.8	869.5	-5,224.1	1,920,105.01	2,753,283.35	36.276895	-107.730902
PTB @ 10,570' 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 D32-2408 01H P	0.00	0.00	5,428.5	897.8	-5,243.6	1,920,133.27	2,753,263.82	36.276973	-107.730968
- survey misses target center by 36.3usft at 10570.0usft MD (5416.8 TVD, 869.5 N, -5224.1 E)									
- Point									
Escrito D32-2408 01H P	0.00	0.00	5,452.8	905.3	-604.2	1,920,146.56	2,757,903.17	36.276995	-107.715228
- survey misses target center by 23.4usft at 5949.5usft MD (5432.2 TVD, 894.4 N, -605.2 E)									
- Point									

Survey Annotations

	Measured	Vertical	Local Coordinates		
	Depth	Depth	+N/-S	+E/-W	Comment
	(usft)	(usft)	(usft)	(usft)	
	10,525.0	5,417.0	871.4	-5,179.2	Last CES Survey @ 10,525' MD
	10,570.0	5,416.8	869.5	-5,224.1	PTB @ 10,570' MD

Checked By: _____ Approved By: _____ Date: _____