

CONFIDENTIAL

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) 476-3460 Fax: (505) 476-3462

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 30-045-35520	² Pool Code 97232	³ Pool Name BASIN MANCOS GAS
⁴ Property Code 313129	⁵ Property Name ESCRITO D32-2408	⁶ Well Number 02H
⁷ OGRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.	⁹ Elevation 6947.9'

¹⁰ Surface Location

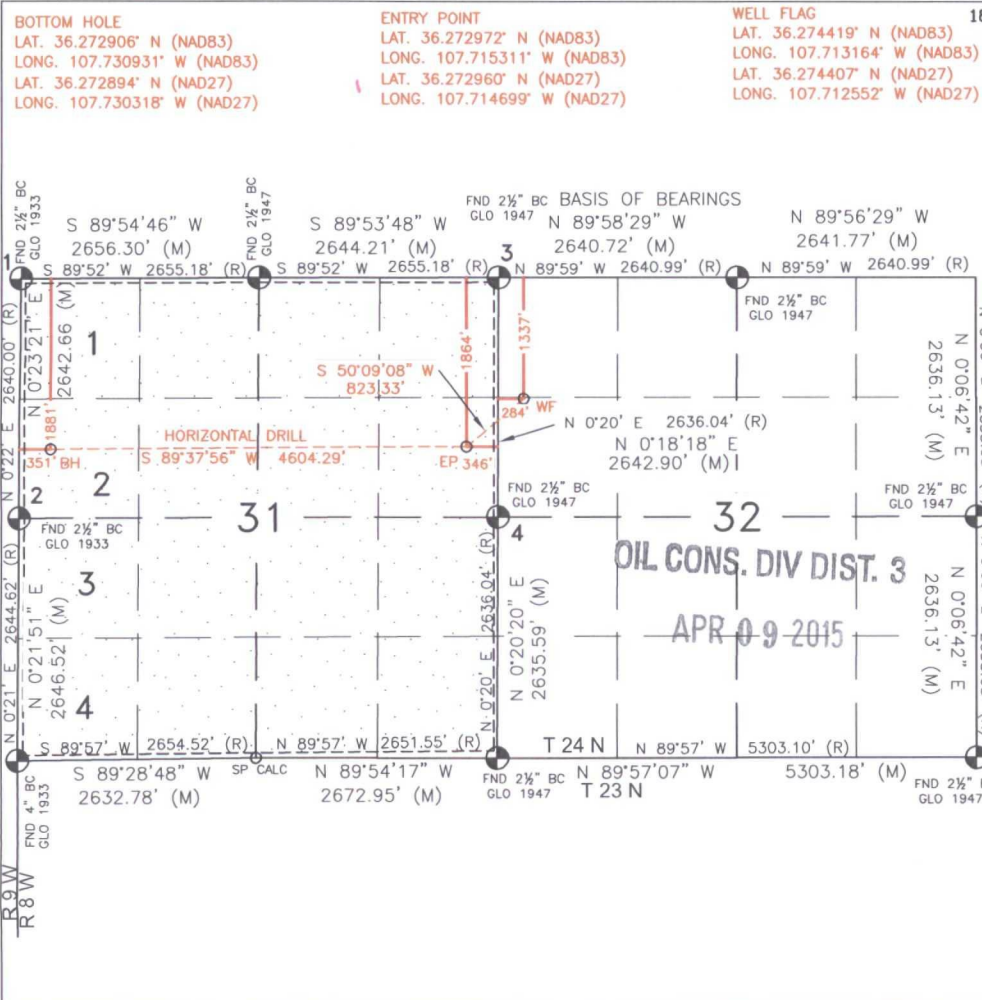
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	WEST/West line	County
D	32	24N	8W		1337'	NORTH	284'	WEST	SAN JUAN

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
E	31	24N	8W	2	1881'	NORTH	351'	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



DEVIATION SURVEYS
Escrito D32-2408 02H
30-045-35520

CONFIDENTIAL

MD (Feet)	Inclination (Degree)
301'	0.90
623'	1.60
939'	0.40
1255'	0.40
1571'	0.90
1882'	0.50
2189'	0.40
2496'	0.50
2803'	0.40
3110'	1.10
3427'	1.50
3742'	7.60

OIL CONS. DIV DIST. 3

APR 09 2015

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

4/7/15

Date

ACKNOWLEDGMENT

State of Colorado
City and County of Denver

This instrument was acknowledged before me on this ____ day of _____, 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.

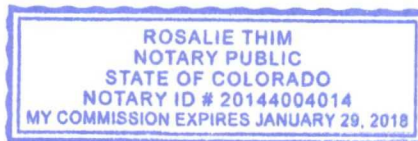
In witness whereof, I hereunto set my hand and official seal.

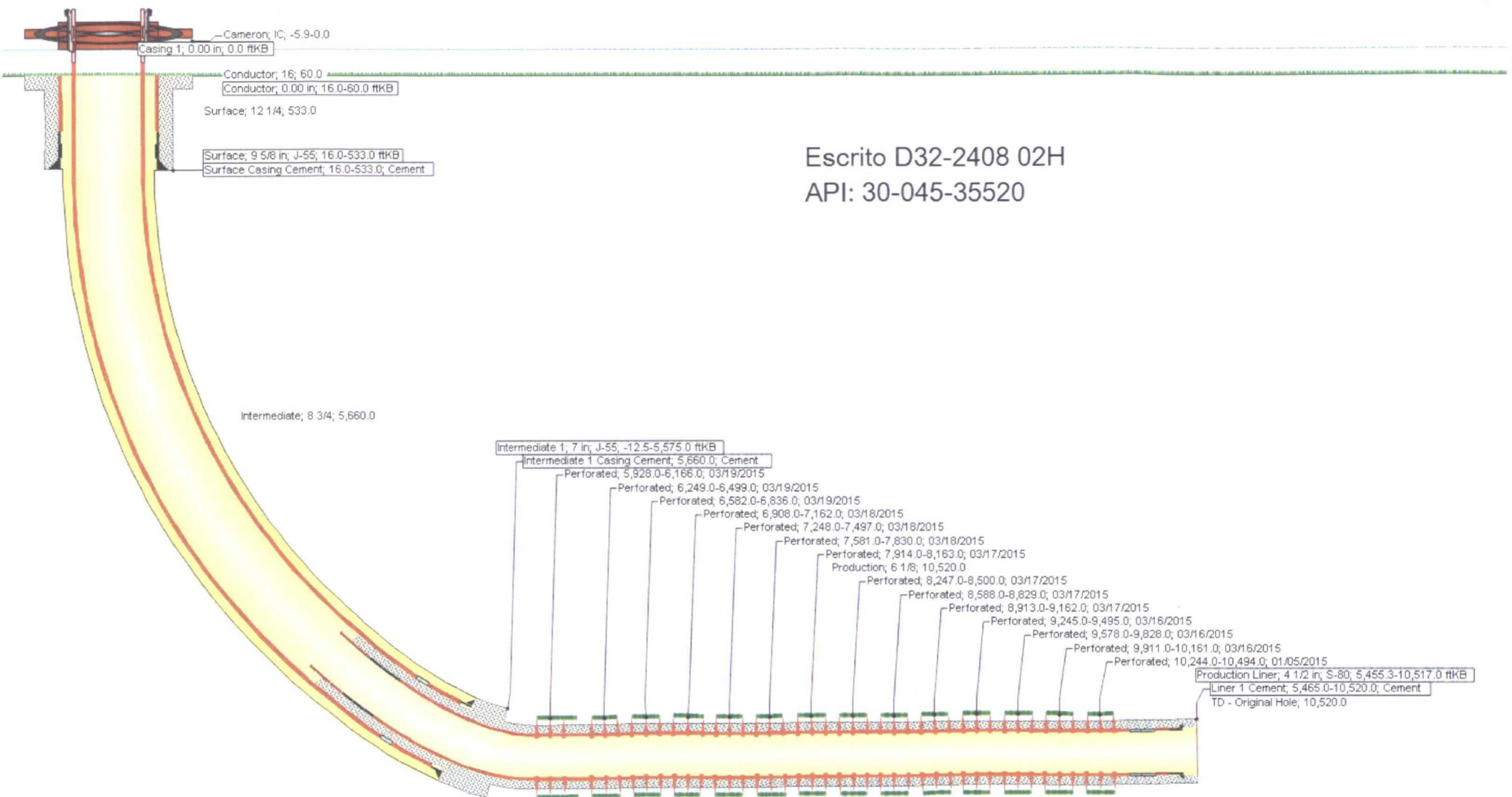
Notary Public:

Rosalie Thim

My Commission Expires:

1/29/18





Escrito D32-2408 02H

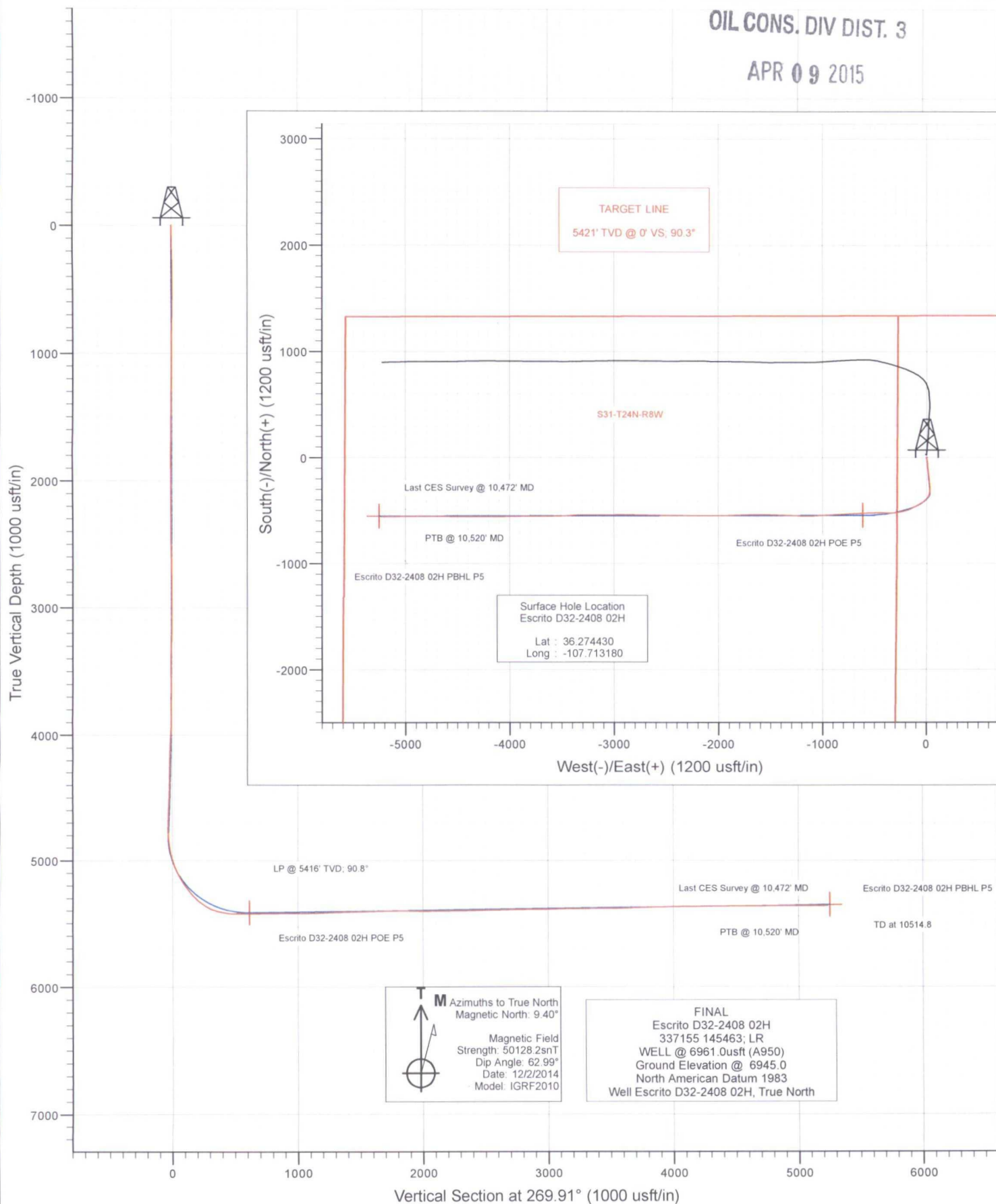
API: 30-045-35520

OIL CONS. DIV DIST. 3

APR 09 2015

OIL CONS. DIV DIST. 3

APR 09 2015



Cathedral Energy Services

Survey Report

APR 09 2015

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S32-T24N-R8W (Escrito)
 Well: Escrito D32-2408 02H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Escrito D32-2408 02H
 TVD Reference: WELL @ 6961.0usft (A950)
 MD Reference: WELL @ 6961.0usft (A950)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: USA EDM 5000 Multi Users DB

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

Site	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 D32-2408 02H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	36.274430
		Longitude:	-107.713180
		Ground Level:	6,945.0 usft

Wellbore	Hz		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	12/2/2014	9.40
			Dip Angle
			(°)
			Field Strength
			(nT)
			62.99
			50,128

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
			(°)
			269.91

Survey Program	Date 12/15/2014		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
110.0	10,520.0	Survey #1 (Hz)	Geolink MWD
			Description
			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	
110.0	1.40	268.30	110.0	0.0	-1.3	1.3	1.27	1.27	
140.0	1.40	268.90	140.0	-0.1	-2.1	2.1	0.05	0.00	
237.0	1.00	249.40	237.0	-0.4	-4.1	4.1	0.58	-0.41	
301.0	0.90	250.70	301.0	-0.7	-5.1	5.1	0.16	-0.16	
364.0	0.90	232.60	363.9	-1.2	-5.9	5.9	0.45	0.00	
427.0	0.50	207.20	426.9	-1.8	-6.4	6.4	0.79	-0.63	
473.0	0.40	167.00	472.9	-2.1	-6.5	6.5	0.70	-0.22	
559.0	0.70	149.40	558.9	-2.8	-6.1	6.2	0.40	0.35	
623.0	1.60	84.10	622.9	-3.1	-5.1	5.1	2.27	1.41	
686.0	1.30	88.90	685.9	-3.0	-3.5	3.5	0.51	-0.48	
749.0	0.50	84.20	748.9	-2.9	-2.5	2.5	1.27	-1.27	
812.0	0.60	160.80	811.9	-3.2	-2.1	2.1	1.09	0.16	

Cathedral Energy Services

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MD Reference: WELL @ 6961.0usft (A950)
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
876.0	0.70	134.20	875.9	-3.8	-1.7	1.7	0.49	0.16	
939.0	0.40	180.50	938.9	-4.3	-1.4	1.4	0.81	-0.48	
1,002.0	0.30	99.40	1,001.9	-4.5	-1.3	1.3	0.73	-0.16	
1,065.0	0.50	135.70	1,064.9	-4.8	-0.9	0.9	0.50	0.32	
1,128.0	0.50	123.00	1,127.9	-5.1	-0.5	0.5	0.18	0.00	
1,192.0	0.10	246.40	1,191.9	-5.3	-0.3	0.3	0.88	-0.62	
1,255.0	0.40	46.80	1,254.9	-5.2	-0.2	0.2	0.79	0.48	
1,318.0	0.50	14.20	1,317.9	-4.7	0.0	0.0	0.43	0.16	
1,382.0	0.30	22.90	1,381.9	-4.3	0.2	-0.1	0.33	-0.31	
1,445.0	0.40	35.20	1,444.9	-4.0	0.3	-0.3	0.20	0.16	
1,508.0	0.90	46.80	1,507.9	-3.5	0.8	-0.8	0.82	0.79	
1,571.0	0.90	34.80	1,570.9	-2.7	1.5	-1.5	0.30	0.00	
1,634.0	0.80	62.00	1,633.9	-2.1	2.1	-2.1	0.65	-0.16	
1,698.0	1.00	60.60	1,697.8	-1.6	3.0	-3.0	0.31	0.31	
1,759.0	0.70	50.50	1,758.8	-1.1	3.8	-3.8	0.55	-0.49	
1,821.0	0.50	47.80	1,820.8	-0.7	4.3	-4.3	0.33	-0.32	
1,882.0	0.50	34.80	1,881.8	-0.3	4.6	-4.6	0.19	0.00	
1,943.0	0.80	18.50	1,942.8	0.3	4.9	-4.9	0.57	0.49	
2,005.0	0.70	343.50	2,004.8	1.1	4.9	-4.9	0.74	-0.16	
2,066.0	0.60	326.20	2,065.8	1.7	4.7	-4.7	0.36	-0.16	
2,127.0	0.10	279.40	2,126.8	2.0	4.4	-4.4	0.88	-0.82	
2,189.0	0.40	307.80	2,188.8	2.1	4.2	-4.2	0.51	0.48	
2,250.0	0.70	296.30	2,249.8	2.4	3.7	-3.7	0.52	0.49	
2,312.0	0.50	263.40	2,311.8	2.6	3.1	-3.1	0.63	-0.32	
2,373.0	0.50	279.40	2,372.8	2.6	2.6	-2.6	0.23	0.00	
2,435.0	0.40	267.80	2,434.8	2.6	2.1	-2.1	0.22	-0.16	
2,496.0	0.50	269.40	2,495.8	2.6	1.6	-1.6	0.17	0.16	
2,558.0	0.80	279.40	2,557.8	2.7	0.9	-0.9	0.52	0.48	
2,619.0	0.50	264.30	2,618.8	2.7	0.2	-0.2	0.56	-0.49	
2,681.0	0.80	279.40	2,680.8	2.8	-0.5	0.5	0.55	0.48	
2,742.0	0.70	284.30	2,741.8	2.9	-1.3	1.3	0.19	-0.16	
2,803.0	0.40	278.70	2,802.8	3.0	-1.8	1.8	0.50	-0.49	
2,865.0	0.80	279.40	2,864.8	3.1	-2.5	2.5	0.65	0.65	
2,926.0	0.90	263.80	2,925.8	3.2	-3.4	3.4	0.41	0.16	
2,988.0	1.00	139.70	2,987.8	2.7	-3.5	3.5	2.71	0.16	
3,049.0	1.30	148.50	3,048.8	1.7	-2.8	2.8	0.57	0.49	
3,110.0	1.10	145.60	3,109.7	0.6	-2.1	2.1	0.34	-0.33	
3,174.0	1.00	114.40	3,173.7	-0.1	-1.2	1.2	0.90	-0.16	
3,237.0	0.80	84.90	3,236.7	-0.3	-0.3	0.3	0.79	-0.32	
3,300.0	0.60	63.70	3,299.7	-0.1	0.4	-0.4	0.51	-0.32	
3,363.0	0.40	58.10	3,362.7	0.2	0.9	-0.9	0.33	-0.32	
3,427.0	1.50	183.90	3,426.7	-0.6	1.0	-1.0	2.76	1.72	
3,490.0	2.20	181.40	3,489.7	-2.6	1.0	-0.9	1.12	1.11	
3,553.0	3.20	171.30	3,552.6	-5.5	1.2	-1.2	1.75	1.59	
3,616.0	4.40	177.70	3,615.5	-9.7	1.6	-1.5	2.02	1.90	
3,679.0	6.50	177.10	3,678.2	-15.7	1.8	-1.8	3.33	3.33	
3,742.0	7.60	177.20	3,740.7	-23.4	2.2	-2.2	1.75	1.75	
3,806.0	9.20	174.20	3,804.0	-32.7	2.9	-2.9	2.59	2.50	
3,869.0	9.80	177.80	3,866.2	-43.1	3.7	-3.6	1.34	0.95	
3,932.0	10.60	171.40	3,928.2	-54.2	4.7	-4.6	2.20	1.27	
3,995.0	12.00	167.70	3,989.9	-66.3	7.0	-6.9	2.50	2.22	
4,058.0	12.70	169.60	4,051.5	-79.5	9.6	-9.5	1.28	1.11	
4,122.0	13.30	173.60	4,113.8	-93.7	11.7	-11.6	1.69	0.94	

Cathedral Energy Services

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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
4,185.0	14.60	174.60	4,175.0	-108.9	13.3	-13.1	2.10	2.06	
4,248.0	17.00	174.30	4,235.6	-125.9	14.9	-14.7	3.81	3.81	
4,311.0	18.80	175.70	4,295.5	-145.2	16.6	-16.4	2.94	2.86	
4,374.0	19.30	174.40	4,355.1	-165.7	18.4	-18.1	1.04	0.79	
4,437.0	20.10	174.60	4,414.4	-186.8	20.4	-20.1	1.27	1.27	
4,501.0	20.30	174.80	4,474.5	-208.8	22.5	-22.1	0.33	0.31	
4,564.0	19.80	174.00	4,533.7	-230.3	24.6	-24.2	0.91	-0.79	
4,627.0	18.70	173.50	4,593.1	-251.0	26.8	-26.4	1.77	-1.75	
4,690.0	17.70	174.20	4,653.0	-270.5	28.9	-28.5	1.62	-1.59	
4,754.0	18.20	175.70	4,713.9	-290.2	30.7	-30.2	1.06	0.78	
4,785.0	18.10	175.00	4,743.3	-299.8	31.5	-31.0	0.77	-0.32	
4,817.0	18.50	180.90	4,773.7	-309.8	31.8	-31.3	5.92	1.25	
4,848.0	18.90	186.20	4,803.1	-319.8	31.2	-30.7	5.63	1.29	
4,880.0	19.50	190.80	4,833.3	-330.2	29.6	-29.1	5.08	1.87	
4,911.0	20.40	196.50	4,862.4	-340.4	27.1	-26.6	6.91	2.90	
4,943.0	21.80	202.30	4,892.3	-351.3	23.3	-22.7	7.85	4.37	
4,975.0	22.90	207.30	4,921.9	-362.3	18.2	-17.6	6.86	3.44	
5,006.0	23.60	213.30	4,950.4	-372.8	12.0	-11.4	7.97	2.26	
5,038.0	24.60	219.30	4,979.6	-383.3	4.3	-3.7	8.27	3.13	
5,069.0	25.40	224.20	5,007.7	-393.1	-4.5	5.1	7.16	2.58	
5,101.0	27.00	228.10	5,036.4	-402.9	-14.6	15.3	7.34	5.00	
5,133.0	28.70	231.30	5,064.7	-412.5	-26.1	26.7	7.07	5.31	
5,164.0	30.20	235.40	5,091.7	-421.6	-38.3	38.9	8.10	4.84	
5,196.0	32.00	238.30	5,119.1	-430.6	-52.1	52.8	7.32	5.63	
5,228.0	33.40	240.00	5,146.0	-439.5	-67.0	67.7	5.23	4.38	
5,259.0	35.70	241.90	5,171.5	-448.0	-82.3	83.0	8.19	7.42	
5,291.0	37.40	243.00	5,197.2	-456.8	-99.2	99.9	5.69	5.31	
5,322.0	39.70	243.90	5,221.5	-465.5	-116.5	117.2	7.64	7.42	
5,354.0	42.20	245.60	5,245.7	-474.4	-135.5	136.2	8.55	7.81	
5,386.0	43.80	246.30	5,269.1	-483.3	-155.4	156.2	5.22	5.00	
5,416.0	45.50	248.60	5,290.4	-491.4	-174.9	175.7	7.82	5.66	
5,448.0	47.90	251.50	5,312.4	-499.3	-196.8	197.6	9.99	7.50	
5,479.0	51.70	255.00	5,332.4	-506.1	-219.4	220.2	14.98	12.26	
5,511.0	56.00	259.00	5,351.2	-511.9	-244.6	245.4	16.80	13.44	
5,542.0	60.30	262.20	5,367.6	-516.2	-270.6	271.4	16.41	13.87	
5,574.0	65.00	264.30	5,382.3	-519.5	-298.8	299.6	15.80	14.69	
5,611.0	70.50	267.50	5,396.3	-521.9	-332.9	333.8	16.88	14.86	
5,625.0	71.70	267.10	5,400.8	-522.6	-346.2	347.0	8.99	8.57	
5,656.0	76.70	269.60	5,409.3	-523.4	-376.0	376.8	17.90	16.13	
5,688.0	79.20	270.60	5,416.0	-523.4	-407.3	408.1	8.39	7.81	
5,720.0	82.30	269.90	5,421.1	-523.2	-438.8	439.7	9.93	9.69	
5,751.0	85.70	269.10	5,424.3	-523.5	-469.7	470.5	11.26	10.97	
5,783.0	89.00	269.80	5,425.8	-523.8	-501.6	502.5	10.54	10.31	
5,846.0	91.50	268.60	5,425.6	-524.7	-564.6	565.4	4.40	3.97	
5,909.0	90.40	267.00	5,424.5	-527.1	-627.6	628.4	3.08	-1.75	
5,973.0	89.60	266.50	5,424.5	-530.7	-691.5	692.3	1.47	-1.25	
6,036.0	90.00	266.50	5,424.7	-534.6	-754.3	755.2	0.63	0.63	
6,099.0	91.60	267.50	5,423.8	-537.9	-817.2	818.1	2.99	2.54	
6,162.0	90.80	267.50	5,422.5	-540.6	-880.2	881.0	1.27	-1.27	
6,225.0	90.60	266.90	5,421.8	-543.7	-943.1	943.9	1.00	-0.32	
6,289.0	90.00	267.40	5,421.4	-546.9	-1,007.0	1,007.9	1.22	-0.94	
6,352.0	90.90	267.80	5,420.9	-549.5	-1,069.9	1,070.8	1.56	1.43	
6,415.0	91.40	269.40	5,419.7	-551.1	-1,132.9	1,133.8	2.66	0.79	

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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
6,478.0	92.80	271.50	5,417.4	-550.6	-1,195.9	1,196.7	4.00	2.22	
6,542.0	93.10	272.50	5,414.1	-548.3	-1,259.7	1,260.6	1.63	0.47	
6,605.0	91.90	272.50	5,411.3	-545.6	-1,322.6	1,323.5	1.90	-1.90	
6,668.0	90.80	271.10	5,409.8	-543.6	-1,385.6	1,386.4	2.83	-1.75	
6,729.0	91.30	271.30	5,408.7	-542.3	-1,446.5	1,447.4	0.88	0.82	
6,791.0	90.80	270.40	5,407.6	-541.4	-1,508.5	1,509.4	1.66	-0.81	
6,852.0	91.00	270.20	5,406.6	-541.1	-1,569.5	1,570.4	0.46	0.33	
6,914.0	91.30	269.80	5,405.4	-541.1	-1,631.5	1,632.4	0.81	0.48	
6,975.0	91.50	269.50	5,403.9	-541.5	-1,692.5	1,693.3	0.59	0.33	
7,036.0	91.80	269.40	5,402.1	-542.1	-1,753.5	1,754.3	0.52	0.49	
7,098.0	90.00	268.70	5,401.2	-543.1	-1,815.4	1,816.3	3.11	-2.90	
7,159.0	88.10	267.40	5,402.2	-545.2	-1,876.4	1,877.2	3.77	-3.11	
7,221.0	89.60	267.70	5,403.4	-547.8	-1,938.3	1,939.2	2.47	2.42	
7,282.0	90.90	270.40	5,403.1	-548.8	-1,999.3	2,000.2	4.91	2.13	
7,344.0	91.10	271.00	5,402.1	-548.1	-2,061.3	2,062.1	1.02	0.32	
7,405.0	89.50	269.50	5,401.7	-547.8	-2,122.3	2,123.1	3.60	-2.62	
7,466.0	90.20	269.80	5,401.9	-548.2	-2,183.3	2,184.1	1.25	1.15	
7,528.0	91.40	271.40	5,401.0	-547.5	-2,245.3	2,246.1	3.23	1.94	
7,589.0	90.80	270.30	5,399.9	-546.6	-2,306.3	2,307.1	2.05	-0.98	
7,651.0	90.30	270.70	5,399.3	-546.1	-2,368.2	2,369.1	1.03	-0.81	
7,712.0	90.90	270.10	5,398.6	-545.6	-2,429.2	2,430.1	1.39	0.98	
7,774.0	91.20	270.60	5,397.5	-545.3	-2,491.2	2,492.1	0.94	0.48	
7,835.0	93.20	271.50	5,395.2	-544.1	-2,552.2	2,553.0	3.59	3.28	
7,896.0	91.60	270.70	5,392.6	-543.0	-2,613.1	2,614.0	2.93	-2.62	
7,958.0	90.90	270.40	5,391.2	-542.4	-2,675.1	2,675.9	1.23	-1.13	
8,019.0	90.90	271.00	5,390.3	-541.6	-2,736.1	2,736.9	0.98	0.00	
8,081.0	90.70	271.00	5,389.4	-540.6	-2,798.1	2,798.9	0.32	-0.32	
8,144.0	89.90	269.60	5,389.1	-540.2	-2,861.1	2,861.9	2.56	-1.27	
8,207.0	91.10	270.50	5,388.5	-540.2	-2,924.0	2,924.9	2.38	1.90	
8,270.0	91.20	270.10	5,387.3	-539.8	-2,987.0	2,987.9	0.65	0.16	
8,333.0	91.30	269.80	5,385.9	-539.9	-3,050.0	3,050.9	0.50	0.16	
8,397.0	91.20	270.10	5,384.5	-540.0	-3,114.0	3,114.8	0.49	-0.16	
8,460.0	91.10	269.70	5,383.2	-540.1	-3,177.0	3,177.8	0.65	-0.16	
8,523.0	90.60	268.90	5,382.3	-540.8	-3,240.0	3,240.8	1.50	-0.79	
8,586.0	89.80	268.20	5,382.1	-542.4	-3,303.0	3,303.8	1.69	-1.27	
8,650.0	90.60	268.20	5,381.9	-544.4	-3,366.9	3,367.8	1.25	1.25	
8,713.0	90.30	267.90	5,381.4	-546.6	-3,429.9	3,430.7	0.67	-0.48	
8,776.0	89.60	267.10	5,381.4	-549.3	-3,492.8	3,493.7	1.69	-1.11	
8,839.0	90.90	267.10	5,381.2	-552.5	-3,555.7	3,556.6	2.06	2.06	
8,902.0	92.20	270.00	5,379.4	-554.1	-3,618.7	3,619.6	5.04	2.06	
8,966.0	91.80	270.30	5,377.2	-553.9	-3,682.7	3,683.5	0.78	-0.62	
9,029.0	92.00	269.70	5,375.1	-553.9	-3,745.6	3,746.5	1.00	0.32	
9,092.0	91.90	269.70	5,373.0	-554.3	-3,808.6	3,809.4	0.16	-0.16	
9,155.0	92.20	270.00	5,370.7	-554.4	-3,871.5	3,872.4	0.67	0.48	
9,218.0	90.80	268.90	5,369.1	-555.0	-3,934.5	3,935.4	2.83	-2.22	
9,282.0	91.30	269.30	5,367.9	-556.0	-3,998.5	3,999.4	1.00	0.78	
9,345.0	91.80	268.60	5,366.2	-557.2	-4,061.5	4,062.3	1.37	0.79	
9,408.0	89.90	268.60	5,365.3	-558.7	-4,124.4	4,125.3	3.02	-3.02	
9,471.0	90.20	270.30	5,365.2	-559.3	-4,187.4	4,188.3	2.74	0.48	
9,535.0	90.70	270.60	5,364.7	-558.8	-4,251.4	4,252.3	0.91	0.78	
9,598.0	90.40	270.30	5,364.1	-558.3	-4,314.4	4,315.3	0.67	-0.48	
9,661.0	90.40	270.10	5,363.7	-558.1	-4,377.4	4,378.3	0.32	0.00	
9,724.0	90.80	270.40	5,363.0	-557.9	-4,440.4	4,441.3	0.79	0.63	

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 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito D32-2408 02H
TVD Reference: WELL @ 6961.0usft (A950)
MD Reference: WELL @ 6961.0usft (A950)
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
9,787.0	90.60	269.80	5,362.2	-557.7	-4,503.4	4,504.3	1.00	-0.32	
9,850.0	90.00	270.70	5,361.9	-557.5	-4,566.4	4,567.3	1.72	-0.95	
9,914.0	90.10	270.30	5,361.8	-556.9	-4,630.4	4,631.3	0.64	0.16	
9,977.0	90.00	270.00	5,361.8	-556.7	-4,693.4	4,694.3	0.50	-0.16	
10,040.0	90.00	269.70	5,361.8	-556.9	-4,756.4	4,757.3	0.48	0.00	
10,103.0	90.30	270.80	5,361.6	-556.6	-4,819.4	4,820.3	1.81	0.48	
10,166.0	90.50	270.40	5,361.2	-556.0	-4,882.4	4,883.3	0.71	0.32	
10,230.0	90.40	270.20	5,360.7	-555.6	-4,946.4	4,947.3	0.35	-0.16	
10,293.0	90.00	270.00	5,360.5	-555.5	-5,009.4	5,010.3	0.71	-0.63	
10,356.0	89.20	268.90	5,360.9	-556.1	-5,072.4	5,073.3	2.16	-1.27	
10,419.0	91.20	269.90	5,360.7	-556.8	-5,135.4	5,136.2	3.55	3.17	
10,472.0	91.60	269.80	5,359.4	-556.9	-5,188.4	5,189.2	0.78	0.75	Last CES Survey @ 10,472' MD
10,520.0	91.60	269.80	5,358.1	-557.1	-5,236.3	5,237.2	0.00	0.00	PTB @ 10,520' 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 D32-2408 02H P	- survey misses target center by 46.7usft at 10520.0usft MD (5358.1 TVD, -557.1 N, -5236.3 E)	0.00	0.00	5,401.5	-553.2	-5,253.0	1,918,653.87	2,753,255.65	36.272909	-107.731001
- Point										
Escrito D32-2408 02H P	- survey misses target center by 18.1usft at 10520.0usft MD (5358.1 TVD, -557.1 N, -5236.3 E)	0.00	0.00	5,351.6	-552.8	-5,252.7	1,918,654.23	2,753,255.95	36.272910	-107.731000
- Point										
Escrito D32-2408 02H P	- survey misses target center by 21.3usft at 5895.4usft MD (5424.6 TVD, -526.4 N, -614.0 E)	0.00	0.00	5,416.4	-546.0	-613.1	1,918,666.79	2,757,895.54	36.272930	-107.715260
- Point										
Escrito D32-2408 02H P	- survey misses target center by 20.5usft at 5893.9usft MD (5424.6 TVD, -526.4 N, -612.5 E)	0.00	0.00	5,417.8	-545.7	-611.6	1,918,667.16	2,757,897.01	36.272931	-107.715255
- Point										
Escrito D32-2408 02H P	- survey misses target center by 39.4usft at 10520.0usft MD (5358.1 TVD, -557.1 N, -5236.3 E)	0.00	0.00	5,393.5	-553.2	-5,253.0	1,918,653.87	2,753,255.65	36.272909	-107.731001
- Point										
Escrito D32-2408 02H P	- survey misses target center by 19.4usft at 5893.8usft MD (5424.7 TVD, -526.4 N, -612.4 E)	0.00	0.00	5,425.8	-545.7	-611.6	1,918,667.16	2,757,897.01	36.272931	-107.715255
- Point										

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,472.0	5,359.4	-556.9	-5,188.4	Last CES Survey @ 10,472' MD PTB @ 10,520' MD
10,520.0	5,358.1	-557.1	-5,236.3	

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

San Juan County, NM

S32-T24N-R8W (Escrito)

Escrito D32-2408 02H

Hz

Survey: Survey #1

Survey Report - Geographic

15 December, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 02H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (A950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (A950)
Well:	Escrito D32-2408 02H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

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

Site	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 02H					
Well Position	+N/-S	0.0 usft	Northing:	1,919,213.58 usft	Latitude:	36.274430
	+E/-W	0.0 usft	Easting:	2,758,507.97 usft	Longitude:	-107.713180
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	12/2/2014	9.40	62.99	50,128

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	12/15/2014			
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
110.0	10,520.0	Survey #1 (Hz)	Geolink MWD	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	1,919,213.58	2,758,507.97	36.274430	-107.713180
110.0	1.40	268.30	110.0	0.0	-1.3	1,919,213.54	2,758,506.63	36.274430	-107.713185
140.0	1.40	268.90	140.0	-0.1	-2.1	1,919,213.52	2,758,505.90	36.274430	-107.713187
237.0	1.00	249.40	237.0	-0.4	-4.1	1,919,213.20	2,758,503.92	36.274429	-107.713194
301.0	0.90	250.70	301.0	-0.7	-5.1	1,919,212.84	2,758,502.93	36.274428	-107.713197
364.0	0.90	232.60	363.9	-1.2	-5.9	1,919,212.37	2,758,502.07	36.274427	-107.713200
427.0	0.50	207.20	426.9	-1.8	-6.4	1,919,211.83	2,758,501.55	36.274425	-107.713202
473.0	0.40	167.00	472.9	-2.1	-6.5	1,919,211.49	2,758,501.49	36.274424	-107.713202
559.0	0.70	149.40	558.9	-2.8	-6.1	1,919,210.75	2,758,501.83	36.274422	-107.713201
623.0	1.60	84.10	622.9	-3.1	-5.1	1,919,210.50	2,758,502.92	36.274422	-107.713197
686.0	1.30	88.90	685.9	-3.0	-3.5	1,919,210.61	2,758,504.51	36.274422	-107.713192
749.0	0.50	84.20	748.9	-2.9	-2.5	1,919,210.65	2,758,505.49	36.274422	-107.713189

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 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito D32-2408 02H
TVD Reference: WELL @ 6961.0usft (A950)
MD Reference: WELL @ 6961.0usft (A950)
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
812.0	0.60	160.80	811.9	-3.2	-2.1	1,919,210.37	2,758,505.88	36.274421	-107.713187
876.0	0.70	134.20	875.9	-3.8	-1.7	1,919,209.78	2,758,506.27	36.274420	-107.713186
939.0	0.40	180.50	938.9	-4.3	-1.4	1,919,209.29	2,758,506.54	36.274418	-107.713185
1,002.0	0.30	99.40	1,001.9	-4.5	-1.3	1,919,209.05	2,758,506.70	36.274418	-107.713185
1,065.0	0.50	135.70	1,064.9	-4.8	-0.9	1,919,208.82	2,758,507.06	36.274417	-107.713183
1,128.0	0.50	123.00	1,127.9	-5.1	-0.5	1,919,208.48	2,758,507.48	36.274416	-107.713182
1,192.0	0.10	246.40	1,191.9	-5.3	-0.3	1,919,208.30	2,758,507.66	36.274416	-107.713181
1,255.0	0.40	46.80	1,254.9	-5.2	-0.2	1,919,208.43	2,758,507.77	36.274416	-107.713181
1,318.0	0.50	14.20	1,317.9	-4.7	0.0	1,919,208.85	2,758,508.00	36.274417	-107.713180
1,382.0	0.30	22.90	1,381.9	-4.3	0.2	1,919,209.27	2,758,508.13	36.274418	-107.713180
1,445.0	0.40	35.20	1,444.9	-4.0	0.3	1,919,209.61	2,758,508.33	36.274419	-107.713179
1,508.0	0.90	46.80	1,507.9	-3.5	0.8	1,919,210.12	2,758,508.81	36.274421	-107.713177
1,571.0	0.90	34.80	1,570.9	-2.7	1.5	1,919,210.87	2,758,509.45	36.274423	-107.713175
1,634.0	0.80	62.00	1,633.9	-2.1	2.1	1,919,211.48	2,758,510.12	36.274424	-107.713173
1,698.0	1.00	60.60	1,697.8	-1.6	3.0	1,919,211.97	2,758,511.00	36.274426	-107.713170
1,759.0	0.70	50.50	1,758.8	-1.1	3.8	1,919,212.47	2,758,511.76	36.274427	-107.713167
1,821.0	0.50	47.80	1,820.8	-0.7	4.3	1,919,212.89	2,758,512.25	36.274428	-107.713166
1,882.0	0.50	34.80	1,881.8	-0.3	4.6	1,919,213.29	2,758,512.60	36.274429	-107.713165
1,943.0	0.80	18.50	1,942.8	0.3	4.9	1,919,213.91	2,758,512.88	36.274431	-107.713164
2,005.0	0.70	343.50	2,004.8	1.1	4.9	1,919,214.69	2,758,512.91	36.274433	-107.713164
2,066.0	0.60	326.20	2,065.8	1.7	4.7	1,919,215.31	2,758,512.63	36.274435	-107.713164
2,127.0	0.10	279.40	2,126.8	2.0	4.4	1,919,215.58	2,758,512.40	36.274436	-107.713165
2,189.0	0.40	307.80	2,188.8	2.1	4.2	1,919,215.72	2,758,512.17	36.274436	-107.713166
2,250.0	0.70	296.30	2,249.8	2.4	3.7	1,919,216.02	2,758,511.67	36.274437	-107.713168
2,312.0	0.50	263.40	2,311.8	2.6	3.1	1,919,216.15	2,758,511.06	36.274437	-107.713170
2,373.0	0.50	279.40	2,372.8	2.6	2.6	1,919,216.17	2,758,510.53	36.274437	-107.713172
2,435.0	0.40	267.80	2,434.8	2.6	2.1	1,919,216.20	2,758,510.05	36.274437	-107.713173
2,496.0	0.50	269.40	2,495.8	2.6	1.6	1,919,216.19	2,758,509.57	36.274437	-107.713175
2,558.0	0.80	279.40	2,557.8	2.7	0.9	1,919,216.26	2,758,508.87	36.274437	-107.713177
2,619.0	0.50	264.30	2,618.8	2.7	0.2	1,919,216.30	2,758,508.19	36.274438	-107.713180
2,681.0	0.80	279.40	2,680.8	2.8	-0.5	1,919,216.34	2,758,507.49	36.274438	-107.713182
2,742.0	0.70	284.30	2,741.8	2.9	-1.3	1,919,216.50	2,758,506.71	36.274438	-107.713185
2,803.0	0.40	278.70	2,802.8	3.0	-1.8	1,919,216.63	2,758,506.14	36.274438	-107.713186
2,865.0	0.80	279.40	2,864.8	3.1	-2.5	1,919,216.73	2,758,505.50	36.274439	-107.713189
2,926.0	0.90	263.80	2,925.8	3.2	-3.4	1,919,216.75	2,758,504.60	36.274439	-107.713192
2,988.0	1.00	139.70	2,987.8	2.7	-3.5	1,919,216.28	2,758,504.47	36.274438	-107.713192
3,049.0	1.30	148.50	3,048.8	1.7	-2.8	1,919,215.29	2,758,505.18	36.274435	-107.713190
3,110.0	1.10	145.60	3,109.7	0.6	-2.1	1,919,214.21	2,758,505.87	36.274432	-107.713187
3,174.0	1.00	114.40	3,173.7	-0.1	-1.2	1,919,213.48	2,758,506.73	36.274430	-107.713185
3,237.0	0.80	84.90	3,236.7	-0.3	-0.3	1,919,213.29	2,758,507.66	36.274429	-107.713181
3,300.0	0.60	63.70	3,299.7	-0.1	0.4	1,919,213.48	2,758,508.40	36.274430	-107.713179
3,363.0	0.40	58.10	3,362.7	0.2	0.9	1,919,213.74	2,758,508.88	36.274431	-107.713177
3,427.0	1.50	183.90	3,426.7	-0.6	1.0	1,919,213.02	2,758,509.01	36.274429	-107.713177
3,490.0	2.20	181.40	3,489.7	-2.6	1.0	1,919,210.99	2,758,508.93	36.274423	-107.713177
3,553.0	3.20	171.30	3,552.6	-5.5	1.2	1,919,208.04	2,758,509.17	36.274415	-107.713176
3,616.0	4.40	177.70	3,615.5	-9.7	1.6	1,919,203.89	2,758,509.54	36.274403	-107.713175
3,679.0	6.50	177.10	3,678.2	-15.7	1.8	1,919,197.91	2,758,509.82	36.274387	-107.713174
3,742.0	7.60	177.20	3,740.7	-23.4	2.2	1,919,190.19	2,758,510.22	36.274366	-107.713173
3,806.0	9.20	174.20	3,804.0	-32.7	2.9	1,919,180.87	2,758,510.95	36.274340	-107.713170
3,869.0	9.80	177.80	3,866.2	-43.1	3.7	1,919,170.51	2,758,511.68	36.274312	-107.713168
3,932.0	10.60	171.40	3,928.2	-54.2	4.7	1,919,159.42	2,758,512.77	36.274281	-107.713164
3,995.0	12.00	167.70	3,989.9	-66.3	7.0	1,919,147.29	2,758,515.04	36.274248	-107.713157
4,058.0	12.70	169.60	4,051.5	-79.5	9.6	1,919,134.09	2,758,517.71	36.274212	-107.713148
4,122.0	13.30	173.60	4,113.8	-93.7	11.7	1,919,119.85	2,758,519.81	36.274173	-107.713141
4,185.0	14.60	174.60	4,175.0	-108.9	13.3	1,919,104.75	2,758,521.39	36.274131	-107.713135

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 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito D32-2408 02H
TVD Reference: WELL @ 6961.0usft (A950)
MD Reference: WELL @ 6961.0usft (A950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,248.0	17.00	174.30	4,235.6	-125.9	14.9	1,919,087.68	2,758,523.07	36.274084	-107.713130
4,311.0	18.80	175.70	4,295.5	-145.2	16.6	1,919,068.39	2,758,524.77	36.274031	-107.713124
4,374.0	19.30	174.40	4,355.1	-165.7	18.4	1,919,047.91	2,758,526.57	36.273975	-107.713118
4,437.0	20.10	174.60	4,414.4	-186.8	20.4	1,919,026.77	2,758,528.63	36.273917	-107.713111
4,501.0	20.30	174.80	4,474.5	-208.8	22.5	1,919,004.77	2,758,530.70	36.273856	-107.713104
4,564.0	19.80	174.00	4,533.7	-230.3	24.6	1,918,983.28	2,758,532.83	36.273797	-107.713097
4,627.0	18.70	173.50	4,593.1	-251.0	26.8	1,918,962.64	2,758,535.12	36.273741	-107.713089
4,690.0	17.70	174.20	4,653.0	-270.5	28.9	1,918,943.08	2,758,537.25	36.273687	-107.713082
4,754.0	18.20	175.70	4,713.9	-290.2	30.7	1,918,923.43	2,758,539.01	36.273633	-107.713076
4,785.0	18.10	175.00	4,743.3	-299.8	31.5	1,918,913.81	2,758,539.81	36.273606	-107.713074
4,817.0	18.50	180.90	4,773.7	-309.8	31.8	1,918,903.78	2,758,540.17	36.273579	-107.713072
4,848.0	18.90	186.20	4,803.1	-319.8	31.2	1,918,893.87	2,758,539.56	36.273552	-107.713074
4,880.0	19.50	190.80	4,833.3	-330.2	29.6	1,918,883.47	2,758,538.02	36.273523	-107.713080
4,911.0	20.40	196.50	4,862.4	-340.4	27.1	1,918,873.20	2,758,535.53	36.273495	-107.713088
4,943.0	21.80	202.30	4,892.3	-351.3	23.3	1,918,862.35	2,758,531.70	36.273465	-107.713101
4,975.0	22.90	207.30	4,921.9	-362.3	18.2	1,918,851.31	2,758,526.60	36.273435	-107.713119
5,006.0	23.60	213.30	4,950.4	-372.8	12.0	1,918,840.76	2,758,520.44	36.273406	-107.713140
5,038.0	24.60	219.30	4,979.6	-383.3	4.3	1,918,830.24	2,758,512.72	36.273377	-107.713166
5,069.0	25.40	224.20	5,007.7	-393.1	-4.5	1,918,820.47	2,758,504.01	36.273350	-107.713195
5,101.0	27.00	228.10	5,036.4	-402.9	-14.6	1,918,810.68	2,758,493.83	36.273323	-107.713230
5,133.0	28.70	231.30	5,064.7	-412.5	-26.1	1,918,801.01	2,758,482.44	36.273297	-107.713269
5,164.0	30.20	235.40	5,091.7	-421.6	-38.3	1,918,791.91	2,758,470.22	36.273272	-107.713310
5,196.0	32.00	238.30	5,119.1	-430.6	-52.1	1,918,782.87	2,758,456.39	36.273247	-107.713357
5,228.0	33.40	240.00	5,146.0	-439.5	-67.0	1,918,773.99	2,758,441.56	36.273223	-107.713407
5,259.0	35.70	241.90	5,171.5	-448.0	-82.3	1,918,765.45	2,758,426.20	36.273199	-107.713460
5,291.0	37.40	243.00	5,197.2	-456.8	-99.2	1,918,756.61	2,758,409.31	36.273175	-107.713517
5,322.0	39.70	243.90	5,221.5	-465.5	-116.5	1,918,747.96	2,758,392.04	36.273151	-107.713576
5,354.0	42.20	245.60	5,245.7	-474.4	-135.5	1,918,739.00	2,758,373.08	36.273127	-107.713640
5,386.0	43.80	246.30	5,269.1	-483.3	-155.4	1,918,730.08	2,758,353.16	36.273102	-107.713708
5,416.0	45.50	248.60	5,290.4	-491.4	-174.9	1,918,721.98	2,758,333.70	36.273080	-107.713774
5,448.0	47.90	251.50	5,312.4	-499.3	-196.8	1,918,714.02	2,758,311.82	36.273058	-107.713848
5,479.0	51.70	255.00	5,332.4	-506.1	-219.4	1,918,707.19	2,758,289.16	36.273040	-107.713925
5,511.0	56.00	259.00	5,351.2	-511.9	-244.6	1,918,701.37	2,758,264.00	36.273024	-107.714010
5,542.0	60.30	262.20	5,367.6	-516.2	-270.6	1,918,697.06	2,758,238.03	36.273012	-107.714098
5,574.0	65.00	264.30	5,382.3	-519.5	-298.8	1,918,693.70	2,758,209.82	36.273003	-107.714194
5,611.0	70.50	267.50	5,396.3	-521.9	-332.9	1,918,691.22	2,758,175.68	36.272996	-107.714310
5,625.0	71.70	267.10	5,400.8	-522.6	-346.2	1,918,690.58	2,758,162.45	36.272995	-107.714355
5,656.0	76.70	269.60	5,409.3	-523.4	-376.0	1,918,689.70	2,758,132.65	36.272992	-107.714456
5,688.0	79.20	270.60	5,416.0	-523.4	-407.3	1,918,689.71	2,758,101.36	36.272992	-107.714562
5,720.0	82.30	269.90	5,421.1	-523.2	-438.8	1,918,689.81	2,758,069.78	36.272993	-107.714669
5,751.0	85.70	269.10	5,424.3	-523.5	-469.7	1,918,689.50	2,758,038.95	36.272992	-107.714774
5,783.0	89.00	269.80	5,425.8	-523.8	-501.6	1,918,689.16	2,758,007.00	36.272991	-107.714882
5,846.0	91.50	268.60	5,425.6	-524.7	-564.6	1,918,688.20	2,757,944.01	36.272989	-107.715096
5,909.0	90.40	267.00	5,424.5	-527.1	-627.6	1,918,685.70	2,757,881.07	36.272982	-107.715309
5,973.0	89.60	266.50	5,424.5	-530.7	-691.5	1,918,682.00	2,757,817.18	36.272972	-107.715526
6,036.0	90.00	266.50	5,424.7	-534.6	-754.3	1,918,678.07	2,757,754.30	36.272962	-107.715739
6,099.0	91.60	267.50	5,423.8	-537.9	-817.2	1,918,674.70	2,757,691.40	36.272952	-107.715953
6,162.0	90.80	267.50	5,422.5	-540.6	-880.2	1,918,671.87	2,757,628.48	36.272945	-107.716166
6,225.0	90.60	266.90	5,421.8	-543.7	-943.1	1,918,668.72	2,757,565.56	36.272936	-107.716380
6,289.0	90.00	267.40	5,421.4	-546.9	-1,007.0	1,918,665.45	2,757,501.65	36.272928	-107.716597
6,352.0	90.90	267.80	5,420.9	-549.5	-1,069.9	1,918,662.74	2,757,438.71	36.272920	-107.716810
6,415.0	91.40	269.40	5,419.7	-551.1	-1,132.9	1,918,661.12	2,757,375.74	36.272916	-107.717024
6,478.0	92.80	271.50	5,417.4	-550.6	-1,195.9	1,918,661.54	2,757,312.79	36.272918	-107.717237
6,542.0	93.10	272.50	5,414.1	-548.3	-1,259.7	1,918,663.69	2,757,248.91	36.272924	-107.717454
6,605.0	91.90	272.50	5,411.3	-545.6	-1,322.6	1,918,666.36	2,757,186.03	36.272931	-107.717667

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 02H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito D32-2408 02H
TVD Reference: WELL @ 6961.0usft (A950)
MD Reference: WELL @ 6961.0usft (A950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,668.0	90.80	271.10	5,409.8	-543.6	-1,385.6	1,918,668.26	2,757,123.08	36.272937	-107.717881
6,729.0	91.30	271.30	5,408.7	-542.3	-1,446.5	1,918,669.46	2,757,062.10	36.272940	-107.718088
6,791.0	90.80	270.40	5,407.6	-541.4	-1,508.5	1,918,670.30	2,757,000.12	36.272943	-107.718298
6,852.0	91.00	270.20	5,406.6	-541.1	-1,569.5	1,918,670.54	2,756,939.13	36.272944	-107.718505
6,914.0	91.30	269.80	5,405.4	-541.1	-1,631.5	1,918,670.47	2,756,877.14	36.272944	-107.718715
6,975.0	91.50	269.50	5,403.9	-541.5	-1,692.5	1,918,670.02	2,756,816.16	36.272943	-107.718922
7,036.0	91.80	269.40	5,402.1	-542.1	-1,753.5	1,918,669.36	2,756,755.19	36.272941	-107.719129
7,098.0	90.00	268.70	5,401.2	-543.1	-1,815.4	1,918,668.25	2,756,693.21	36.272938	-107.719339
7,159.0	88.10	267.40	5,402.2	-545.2	-1,876.4	1,918,666.10	2,756,632.26	36.272932	-107.719546
7,221.0	89.60	267.70	5,403.4	-547.8	-1,938.3	1,918,663.38	2,756,570.34	36.272925	-107.719756
7,282.0	90.90	270.40	5,403.1	-548.8	-1,999.3	1,918,662.29	2,756,509.35	36.272922	-107.719963
7,344.0	91.10	271.00	5,402.1	-548.1	-2,061.3	1,918,662.97	2,756,447.37	36.272924	-107.720173
7,405.0	89.50	269.50	5,401.7	-547.8	-2,122.3	1,918,663.16	2,756,386.37	36.272925	-107.720380
7,466.0	90.20	269.80	5,401.9	-548.2	-2,183.3	1,918,662.71	2,756,325.37	36.272924	-107.720587
7,528.0	91.40	271.40	5,401.0	-547.5	-2,245.3	1,918,663.28	2,756,263.39	36.272926	-107.720797
7,589.0	90.80	270.30	5,399.9	-546.6	-2,306.3	1,918,664.11	2,756,202.40	36.272928	-107.721004
7,651.0	90.30	270.70	5,399.3	-546.1	-2,368.2	1,918,664.58	2,756,140.41	36.272930	-107.721215
7,712.0	90.90	270.10	5,398.6	-545.6	-2,429.2	1,918,664.93	2,756,079.41	36.272931	-107.721422
7,774.0	91.20	270.60	5,397.5	-545.3	-2,491.2	1,918,665.23	2,756,017.42	36.272932	-107.721632
7,835.0	93.20	271.50	5,395.2	-544.1	-2,552.2	1,918,666.27	2,755,956.48	36.272935	-107.721839
7,896.0	91.60	270.70	5,392.6	-543.0	-2,613.1	1,918,667.36	2,755,895.55	36.272938	-107.722045
7,958.0	90.90	270.40	5,391.2	-542.4	-2,675.1	1,918,667.88	2,755,833.57	36.272940	-107.722256
8,019.0	90.90	271.00	5,390.3	-541.6	-2,736.1	1,918,668.55	2,755,772.58	36.272942	-107.722462
8,081.0	90.70	271.00	5,389.4	-540.6	-2,798.1	1,918,669.56	2,755,710.59	36.272945	-107.722673
8,144.0	89.90	269.60	5,389.1	-540.2	-2,861.1	1,918,669.81	2,755,647.59	36.272946	-107.722886
8,207.0	91.10	270.50	5,388.5	-540.2	-2,924.0	1,918,669.78	2,755,584.60	36.272946	-107.723100
8,270.0	91.20	270.10	5,387.3	-539.8	-2,987.0	1,918,670.04	2,755,521.61	36.272947	-107.723314
8,333.0	91.30	269.80	5,385.9	-539.9	-3,050.0	1,918,669.90	2,755,458.63	36.272947	-107.723528
8,397.0	91.20	270.10	5,384.5	-540.0	-3,114.0	1,918,669.77	2,755,394.64	36.272946	-107.723745
8,460.0	91.10	269.70	5,383.2	-540.1	-3,177.0	1,918,669.58	2,755,331.66	36.272946	-107.723958
8,523.0	90.60	268.90	5,382.3	-540.8	-3,240.0	1,918,668.73	2,755,268.67	36.272944	-107.724172
8,586.0	89.80	268.20	5,382.1	-542.4	-3,303.0	1,918,667.06	2,755,205.69	36.272939	-107.724386
8,650.0	90.60	268.20	5,381.9	-544.4	-3,366.9	1,918,664.97	2,755,141.73	36.272934	-107.724603
8,713.0	90.30	267.90	5,381.4	-546.6	-3,429.9	1,918,662.75	2,755,078.77	36.272928	-107.724816
8,776.0	89.60	267.10	5,381.4	-549.3	-3,492.8	1,918,659.92	2,755,015.83	36.272920	-107.725030
8,839.0	90.90	267.10	5,381.2	-552.5	-3,555.7	1,918,656.66	2,754,952.92	36.272912	-107.725243
8,902.0	92.20	270.00	5,379.4	-554.1	-3,618.7	1,918,654.98	2,754,889.97	36.272907	-107.725457
8,966.0	91.80	270.30	5,377.2	-553.9	-3,682.7	1,918,655.07	2,754,826.01	36.272908	-107.725674
9,029.0	92.00	269.70	5,375.1	-553.9	-3,745.6	1,918,654.99	2,754,763.05	36.272908	-107.725887
9,092.0	91.90	269.70	5,373.0	-554.3	-3,808.6	1,918,654.59	2,754,700.09	36.272907	-107.726101
9,155.0	92.20	270.00	5,370.7	-554.4	-3,871.5	1,918,654.34	2,754,637.13	36.272906	-107.726315
9,218.0	90.80	268.90	5,369.1	-555.0	-3,934.5	1,918,653.66	2,754,574.15	36.272905	-107.726528
9,282.0	91.30	269.30	5,367.9	-556.0	-3,998.5	1,918,652.58	2,754,510.17	36.272902	-107.726745
9,345.0	91.80	268.60	5,366.2	-557.2	-4,061.5	1,918,651.34	2,754,447.21	36.272899	-107.726959
9,408.0	89.90	268.60	5,365.3	-558.7	-4,124.4	1,918,649.73	2,754,384.24	36.272894	-107.727173
9,471.0	90.20	270.30	5,365.2	-559.3	-4,187.4	1,918,649.04	2,754,321.25	36.272893	-107.727386
9,535.0	90.70	270.60	5,364.7	-558.8	-4,251.4	1,918,649.47	2,754,257.25	36.272894	-107.727603
9,598.0	90.40	270.30	5,364.1	-558.3	-4,314.4	1,918,649.88	2,754,194.25	36.272895	-107.727817
9,661.0	90.40	270.10	5,363.7	-558.1	-4,377.4	1,918,650.03	2,754,131.26	36.272896	-107.728031
9,724.0	90.80	270.40	5,363.0	-557.9	-4,440.4	1,918,650.22	2,754,068.26	36.272897	-107.728244
9,787.0	90.60	269.80	5,362.2	-557.7	-4,503.4	1,918,650.25	2,754,005.27	36.272897	-107.728458
9,850.0	90.00	270.70	5,361.9	-557.5	-4,566.4	1,918,650.45	2,753,942.27	36.272898	-107.728672
9,914.0	90.10	270.30	5,361.8	-556.9	-4,630.4	1,918,650.93	2,753,878.27	36.272899	-107.728889
9,977.0	90.00	270.00	5,361.8	-556.7	-4,693.4	1,918,651.02	2,753,815.27	36.272900	-107.729103
10,040.0	90.00	269.70	5,361.8	-556.9	-4,756.4	1,918,650.77	2,753,752.27	36.272899	-107.729316

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Escrito D32-2408 02H
Project:	San Juan County, NM	TVD Reference:	WELL @ 6961.0usft (A950)
Site:	S32-T24N-R8W (Escrito)	MD Reference:	WELL @ 6961.0usft (A950)
Well:	Escrito D32-2408 02H	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,103.0	90.30	270.80	5,361.6	-556.6	-4,819.4	1,918,650.97	2,753,689.27	36.272900	-107.729530
10,166.0	90.50	270.40	5,361.2	-556.0	-4,882.4	1,918,651.55	2,753,626.28	36.272902	-107.729744
10,230.0	90.40	270.20	5,360.7	-555.6	-4,946.4	1,918,651.81	2,753,562.28	36.272903	-107.729961
10,293.0	90.00	270.00	5,360.5	-555.5	-5,009.4	1,918,651.84	2,753,499.28	36.272903	-107.730175
10,356.0	89.20	268.90	5,360.9	-556.1	-5,072.4	1,918,651.16	2,753,436.29	36.272901	-107.730388
10,419.0	91.20	269.90	5,360.7	-556.8	-5,135.4	1,918,650.42	2,753,373.29	36.272899	-107.730602
10,472.0	91.60	269.80	5,359.4	-556.9	-5,188.4	1,918,650.21	2,753,320.31	36.272899	-107.730782
Last CES Survey @ 10,472' MD									
10,520.0	91.60	269.80	5,358.1	-557.1	-5,236.3	1,918,649.99	2,753,272.33	36.272898	-107.730945
PTB @ 10,520' 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 02H P	0.00	0.00	5,351.6	-552.8	-5,252.7	1,918,654.23	2,753,255.95	36.272910	-107.731000
- survey misses target center by 18.1usft at 10520.0usft MD (5358.1 TVD, -557.1 N, -5236.3 E)									
- Point									
Escrito D32-2408 02H P	0.00	0.00	5,416.4	-546.0	-613.1	1,918,666.79	2,757,895.54	36.272930	-107.715260
- survey misses target center by 21.3usft at 5895.4usft MD (5424.6 TVD, -526.4 N, -614.0 E)									
- Point									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,472.0	5,359.4	-556.9	-5,188.4	Last CES Survey @ 10,472' MD
10,520.0	5,358.1	-557.1	-5,236.3	PTB @ 10,520' MD

Checked By: _____ Approved By: _____ Date: _____