

CONFIDENTIAL

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

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

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 Drive
Santa Fe, NM 87505

☐ AMENDED REPORT
☒ As-Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35432	*Pool Code 5890	*Pool Name BISTI LOWER - GALLUP
*Property Code 39809	*Property Name ESCRITO E07-2409	*Well Number 01H
*OGRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.	*Elevation 6876'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	7	24N	9W	2	1640	NORTH	262	WEST	SAN JUAN

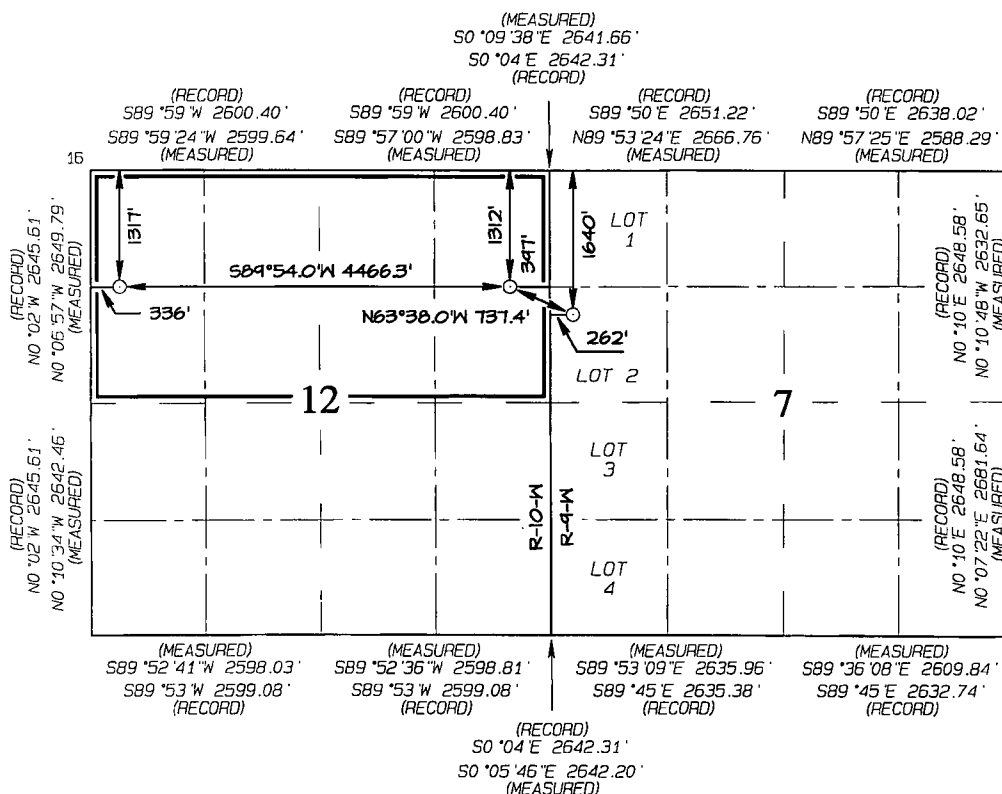
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	12	24N	10W		1317	NORTH	336	WEST	SAN JUAN

¹² Dedicated Acres 320.0 Acres N/2 - Section 12	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. RCVD APR 10 '14 OIL CONS. DIV.
--	-------------------------------	----------------------------------	--

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

DIST. 3



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.

Signature _____ Date **03/27/2014**

Printed Name

vy.nguyen@encana.com

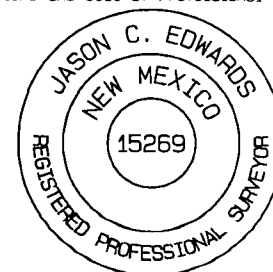
E-mail Address

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: **MARCH 18, 2014**
Date of Survey: **JULY 9, 2012**

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number **15269**

END-OF-LATERAL
1317' FNL 336' FWL
SECTION 12, T24N, R10W
LAT: 36.33218°N
LONG: 107.85518°W
DATUM: NAD1927

POINT-OF-ENTRY
1312' FNL 397' FEL
SECTION 12, T24N, R10W
LAT: 36.33221°N
LONG: 107.84002°W
DATUM: NAD1927

SURFACE LOCATION
1640' FNL 262' FWL
SECTION 7, T24N, R9W
LAT: 36.33131°N
LONG: 107.83777°W
DATUM: NAD1927

LAT: 36.33219°N
LONG: 107.85580°W
DATUM: NAD1983

LAT: 36.33222°N
LONG: 107.84063°W
DATUM: NAD1983

LAT: 36.33132°N
LONG: 107.83839°W
DATUM: NAD1983

AV

15

DEVIATION SURVEYS

CONFIDENTIAL

MD (Feet)	Inclination (Degree)
739	.8
1045	.7
1352	.7
1667	.4
1982	.8
2297	.6
2612	.9
2927	.8
3243	.5
3559	.4
3872	.6
4187	.4
4502	.2
4765	.4
4935	15.4

RCVD APR 10 '14
OIL CONS. DIV.
DIST. 3

OPERATOR CERTIFICATION

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



Vy Nguyen, Engineering Technologist

04/01/2014

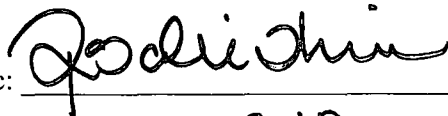
ACKNOWLEDGMENT

State of Colorado
City and County of Denver

This instrument was acknowledged before me on this 1st day of April, 2014 by Vy Nguyen as Attorney in Fact of Encana Oil & Gas (USA) Inc., on behalf of said corporation.

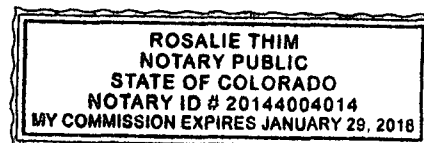
In witness whereof, I hereunto set my hand and official seal.

Notary Public:



My Commission Expires:

1.29.18



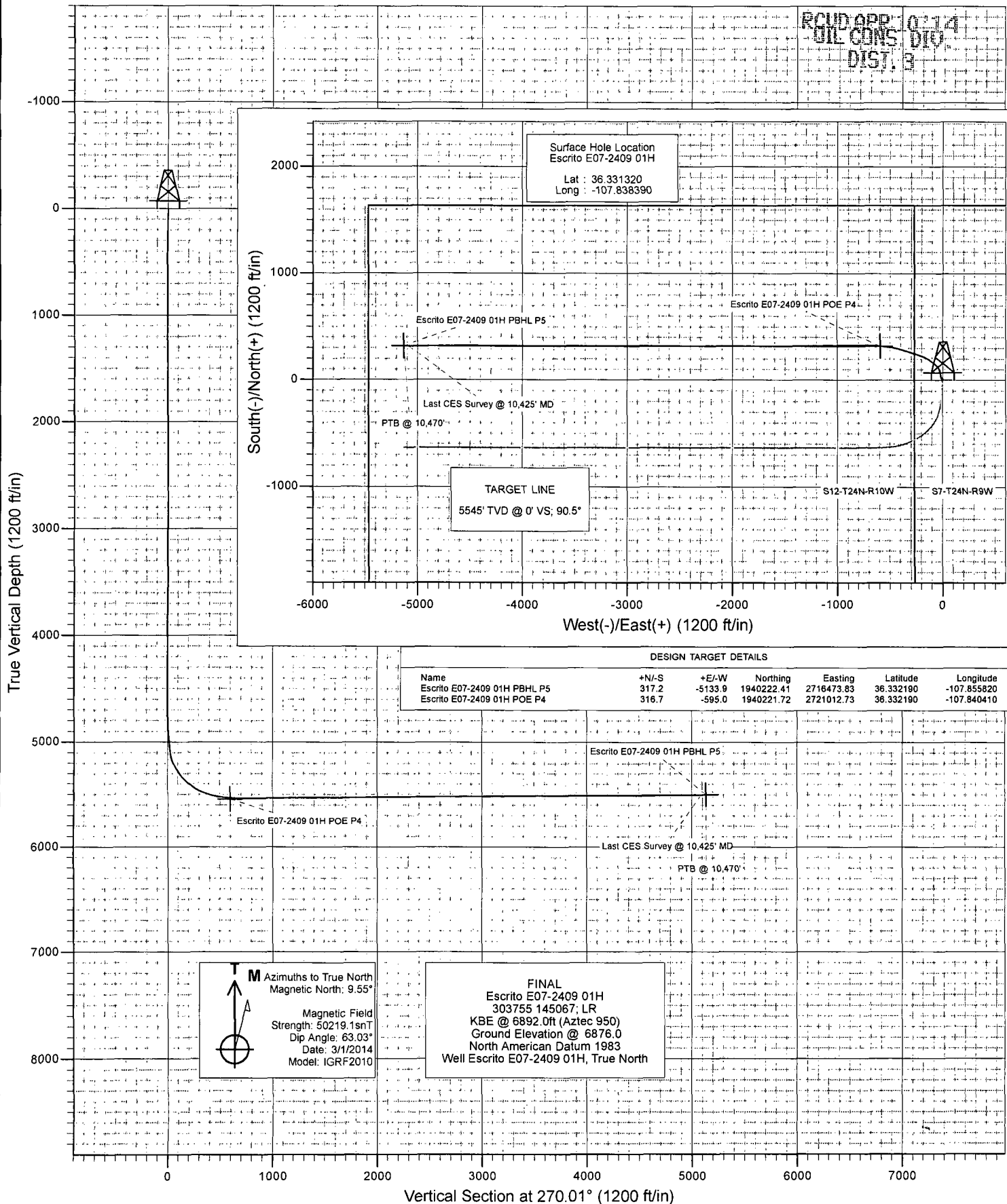
encana
natural gas

CONFIDENTIAL

Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL



RCUD APP 0114
OIL CONS DTG
DIST. 3

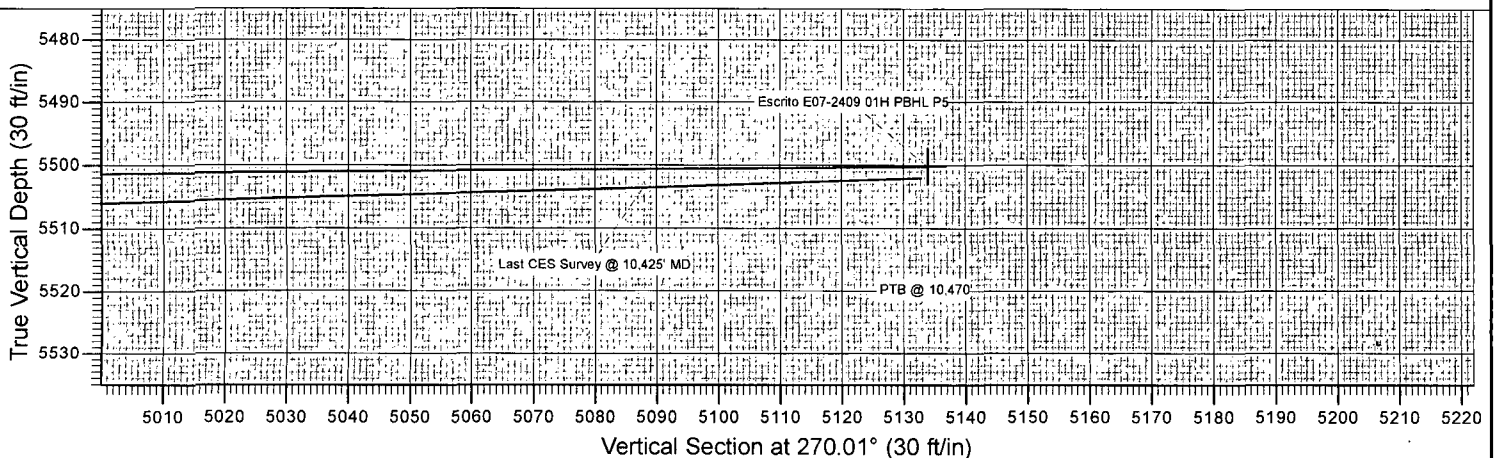
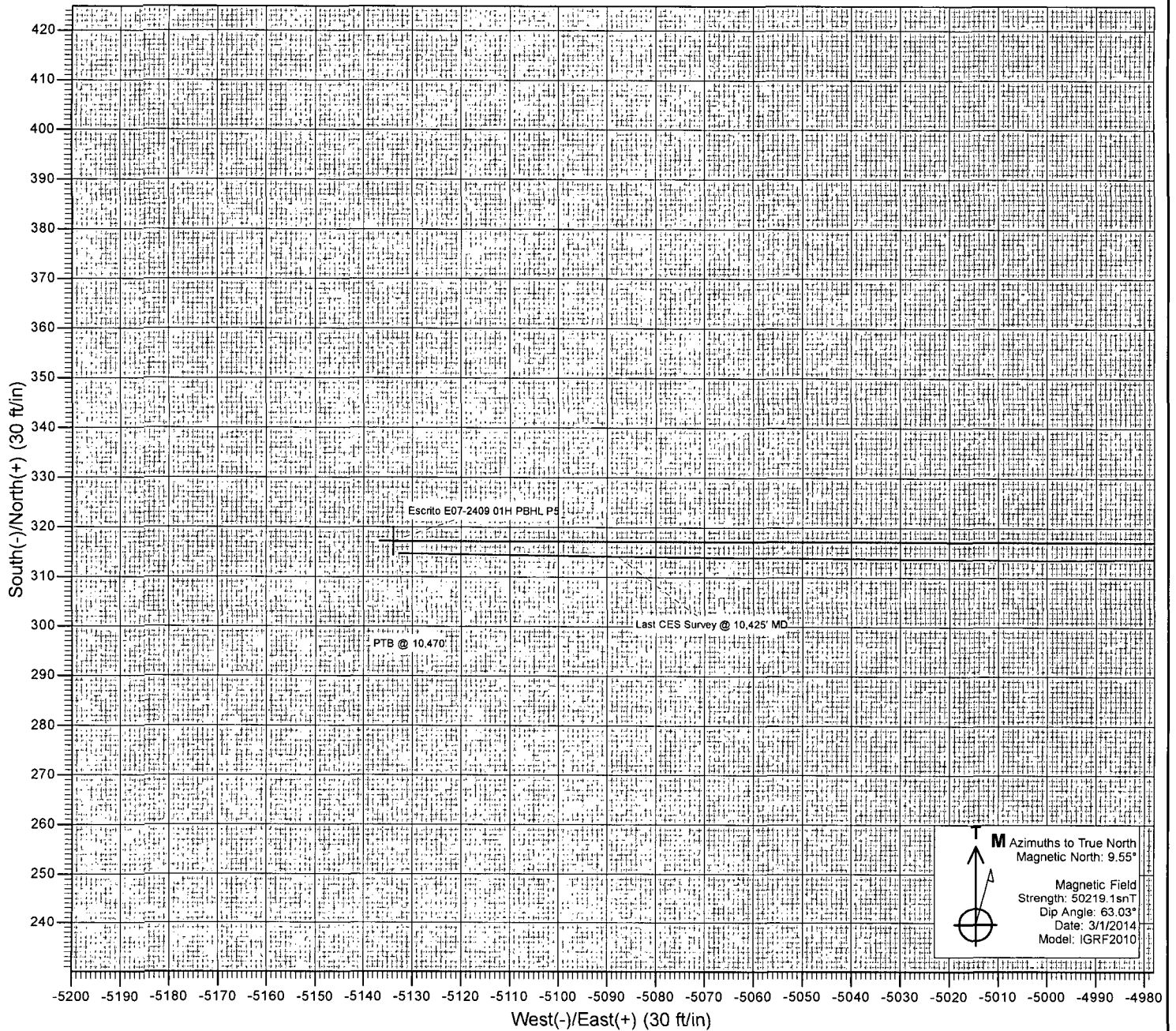


encana

natural gas

CONFIDENTIAL

Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL



CONFIDENTIAL

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
TVD Reference: KBE @ 6892.0ft (Aztec 950)
MD Reference: KBE @ 6892.0ft (Aztec 950)
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	S7- T24N-R9W				
Site Position:		Northing:	1,939,904.96 ft	Latitude:	36.331320
From:	Lat/Long	Easting:	2,721,607.69 ft	Longitude:	-107.838390
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.00 °

Well	Escrito E07-2409 01H					
Well Position	+N/-S	0.0 ft	Northing:	1,939,904.96 ft	Latitude:	36.331320
	+E/-W	0.0 ft	Easting:	2,721,607.69 ft	Longitude:	-107.838390
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,876.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/1/2014	9.55	63.03	50,219

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	270.01	

Survey Program		Date	3/10/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
556.0	10,470.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
556.0	1.20	67.60	556.0	2.2	5.4	-5.4	0.22	0.22	
618.0	0.60	349.90	618.0	2.8	5.9	-5.9	1.97	-0.97	
678.0	1.00	329.20	677.9	3.5	5.6	-5.6	0.81	0.67	
739.0	0.80	338.00	738.9	4.4	5.2	-5.2	0.40	-0.33	
800.0	0.70	321.30	799.9	5.1	4.8	-4.8	0.39	-0.16	
861.0	0.70	308.70	860.9	5.6	4.3	-4.3	0.25	0.00	
923.0	0.70	289.50	922.9	6.0	3.6	-3.6	0.38	0.00	
984.0	0.70	304.10	983.9	6.3	2.9	-2.9	0.29	0.00	
1,045.0	0.70	283.80	1,044.9	6.6	2.3	-2.3	0.40	0.00	
1,106.0	0.30	24.40	1,105.9	6.8	2.0	-2.0	1.33	-0.66	
1,167.0	0.30	63.60	1,166.9	7.1	2.2	-2.2	0.33	0.00	
1,228.0	0.40	84.20	1,227.9	7.1	2.5	-2.5	0.26	0.16	

CONFIDENTIAL

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
TVD Reference: KBE @ 6892.0ft (Aztec 950)
MD Reference: KBE @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,289.0	0.70	32.80	1,288.9	7.5	3.0	-3.0	0.90	0.49	
1,352.0	0.70	229.80	1,351.9	7.6	2.9	-2.9	2.20	0.00	
1,415.0	0.40	250.60	1,414.9	7.2	2.4	-2.4	0.56	-0.48	
1,478.0	0.60	241.80	1,477.9	7.0	1.9	-1.9	0.34	0.32	
1,541.0	0.40	232.00	1,540.9	6.7	1.4	-1.4	0.34	-0.32	
1,604.0	0.40	198.00	1,603.9	6.4	1.2	-1.2	0.37	0.00	
1,667.0	0.40	141.00	1,666.9	6.0	1.2	-1.2	0.61	0.00	
1,730.0	0.30	166.40	1,729.9	5.7	1.4	-1.4	0.29	-0.16	
1,793.0	0.60	260.20	1,792.9	5.4	1.1	-1.1	1.09	0.48	
1,856.0	0.90	281.20	1,855.9	5.5	0.3	-0.3	0.64	0.48	
1,919.0	1.10	288.30	1,918.9	5.8	-0.7	0.7	0.37	0.32	
1,982.0	0.80	275.70	1,981.9	6.0	-1.8	1.8	0.58	-0.48	
2,045.0	0.70	281.90	2,044.9	6.1	-2.6	2.6	0.20	-0.16	
2,108.0	0.70	277.30	2,107.9	6.3	-3.3	3.3	0.09	0.00	
2,171.0	0.90	289.90	2,170.9	6.5	-4.2	4.2	0.42	0.32	
2,234.0	0.50	211.10	2,233.9	6.4	-4.8	4.8	1.49	-0.63	
2,297.0	0.60	207.70	2,296.9	5.9	-5.1	5.1	0.17	0.16	
2,360.0	0.70	155.60	2,359.9	5.2	-5.1	5.1	0.92	0.16	
2,423.0	0.50	141.60	2,422.8	4.7	-4.7	4.7	0.39	-0.32	
2,486.0	0.50	147.60	2,485.8	4.2	-4.4	4.4	0.08	0.00	
2,549.0	0.70	154.60	2,548.8	3.6	-4.1	4.1	0.34	0.32	
2,612.0	0.90	165.30	2,611.8	2.8	-3.8	3.8	0.39	0.32	
2,675.0	0.90	162.00	2,674.8	1.9	-3.5	3.5	0.08	0.00	
2,738.0	0.90	172.40	2,737.8	0.9	-3.3	3.3	0.26	0.00	
2,801.0	0.90	171.80	2,800.8	-0.1	-3.2	3.2	0.01	0.00	
2,864.0	1.00	162.00	2,863.8	-1.1	-2.9	2.9	0.30	0.16	
2,927.0	0.80	178.50	2,926.8	-2.1	-2.8	2.8	0.52	-0.32	
2,991.0	0.90	179.10	2,990.8	-3.0	-2.7	2.7	0.16	0.16	
3,054.0	1.10	190.70	3,053.8	-4.1	-2.9	2.9	0.45	0.32	
3,117.0	1.10	180.10	3,116.8	-5.3	-3.0	3.0	0.32	0.00	
3,180.0	0.80	176.80	3,179.8	-6.3	-2.9	2.9	0.48	-0.48	
3,243.0	0.50	99.60	3,242.8	-6.8	-2.6	2.6	1.34	-0.48	
3,306.0	0.50	112.30	3,305.8	-7.0	-2.1	2.1	0.18	0.00	
3,370.0	0.70	68.40	3,369.8	-6.9	-1.5	1.5	0.76	0.31	
3,433.0	0.40	49.40	3,432.7	-6.6	-1.0	1.0	0.55	-0.48	
3,496.0	0.50	56.80	3,495.7	-6.4	-0.6	0.6	0.18	0.16	
3,559.0	0.40	65.10	3,558.7	-6.1	-0.1	0.1	0.19	-0.16	
3,622.0	0.30	78.20	3,621.7	-6.0	0.2	-0.2	0.20	-0.16	
3,685.0	0.40	57.80	3,684.7	-5.8	0.6	-0.6	0.25	0.16	
3,748.0	0.40	23.00	3,747.7	-5.5	0.8	-0.8	0.38	0.00	
3,809.0	0.60	20.60	3,808.7	-5.0	1.0	-1.0	0.33	0.33	
3,872.0	0.60	26.20	3,871.7	-4.4	1.3	-1.3	0.09	0.00	
3,935.0	0.50	359.50	3,934.7	-3.8	1.4	-1.4	0.43	-0.16	
3,998.0	0.30	355.80	3,997.7	-3.4	1.4	-1.4	0.32	-0.32	
4,061.0	0.40	288.30	4,060.7	-3.2	1.2	-1.2	0.63	0.16	
4,124.0	0.40	292.20	4,123.7	-3.0	0.8	-0.8	0.04	0.00	
4,187.0	0.40	259.20	4,186.7	-3.0	0.4	-0.4	0.36	0.00	
4,250.0	0.40	254.40	4,249.7	-3.1	-0.1	0.1	0.05	0.00	
4,313.0	0.30	329.10	4,312.7	-3.0	-0.4	0.4	0.69	-0.16	
4,376.0	0.40	30.60	4,375.7	-2.7	-0.3	0.3	0.58	0.16	
4,440.0	0.50	65.80	4,439.7	-2.4	0.0	0.0	0.45	0.16	
4,502.0	0.20	345.90	4,501.7	-2.1	0.3	-0.3	0.81	-0.48	
4,565.0	0.20	343.20	4,564.7	-1.9	0.2	-0.2	0.01	0.00	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
TVD Reference: KBE @ 6892.0ft (Aztec 950)
MD Reference: KBE @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
4,628.0	0.20	243.30	4,627.7	-1.9	0.1	-0.1	0.49	0.00	
4,691.0	0.60	290.90	4,690.7	-1.8	-0.3	0.3	0.77	0.63	
4,754.0	0.40	239.00	4,753.7	-1.8	-0.8	0.8	0.75	-0.32	
4,765.0	0.40	248.20	4,764.7	-1.8	-0.9	0.9	0.58	0.00	
4,809.0	0.90	295.20	4,808.7	-1.7	-1.4	1.4	1.57	1.14	
4,841.0	4.60	325.20	4,840.7	-0.6	-2.3	2.3	12.02	11.56	
4,872.0	9.00	330.80	4,871.4	2.6	-4.2	4.2	14.34	14.19	
4,904.0	12.20	332.10	4,902.9	7.7	-7.0	7.0	10.03	10.00	
4,935.0	15.40	335.70	4,933.0	14.4	-10.2	10.2	10.68	10.32	
4,967.0	18.90	340.10	4,963.6	23.1	-13.8	13.8	11.66	10.94	
4,998.0	22.20	345.20	4,992.6	33.5	-17.0	17.0	12.10	10.65	
5,030.0	24.20	350.30	5,022.0	45.8	-19.6	19.6	8.85	6.25	
5,061.0	26.00	353.80	5,050.1	58.8	-21.4	21.4	7.52	5.81	
5,092.0	26.00	349.30	5,077.9	72.3	-23.4	23.4	6.36	0.00	
5,124.0	26.10	341.00	5,106.7	85.8	-27.0	27.0	11.39	0.31	
5,155.0	27.90	332.10	5,134.3	98.7	-32.6	32.6	14.25	5.81	
5,187.0	30.70	323.80	5,162.2	111.9	-41.0	41.0	15.40	8.75	
5,219.0	32.80	319.00	5,189.5	125.0	-51.5	51.5	10.26	6.56	
5,251.0	34.70	313.90	5,216.1	137.9	-63.7	63.7	10.66	5.94	
5,282.0	36.50	309.00	5,241.3	149.8	-77.3	77.3	10.88	5.81	
5,314.0	38.20	304.90	5,266.7	161.5	-92.8	92.8	9.41	5.31	
5,345.0	40.00	305.50	5,290.8	172.8	-108.7	108.8	5.93	5.81	
5,377.0	42.30	304.20	5,314.9	184.8	-126.0	126.1	7.67	7.19	
5,408.0	44.10	300.80	5,337.5	196.2	-143.9	144.0	9.49	5.81	
5,440.0	46.70	297.30	5,359.9	207.2	-163.8	163.9	11.25	8.12	
5,471.0	49.30	293.00	5,380.7	217.0	-184.7	184.7	13.29	8.39	
5,503.0	52.40	289.70	5,400.9	226.0	-207.8	207.8	12.56	9.69	
5,535.0	55.60	288.40	5,419.7	234.4	-232.3	232.3	10.53	10.00	
5,566.0	58.30	287.60	5,436.6	242.5	-257.0	257.0	8.97	8.71	
5,598.0	61.00	287.10	5,452.8	250.7	-283.3	283.4	8.54	8.44	
5,629.0	63.90	287.20	5,467.1	258.8	-309.6	309.6	9.36	9.35	
5,661.0	66.80	287.20	5,480.5	267.4	-337.4	337.4	9.06	9.06	
5,692.0	69.80	286.30	5,491.9	275.7	-365.0	365.0	10.05	9.68	
5,723.0	72.60	285.70	5,501.9	283.8	-393.2	393.2	9.22	9.03	
5,755.0	75.50	284.50	5,510.7	291.8	-422.9	422.9	9.75	9.06	
5,786.0	78.10	282.40	5,517.8	298.8	-452.2	452.3	10.67	8.39	
5,816.0	80.60	280.70	5,523.3	304.7	-481.1	481.1	10.02	8.33	
5,855.0	83.80	277.50	5,528.6	310.8	-519.2	519.3	11.55	8.21	
5,886.0	85.60	275.60	5,531.5	314.3	-549.9	550.0	8.42	5.81	
5,916.0	86.10	274.70	5,533.7	317.0	-579.7	579.8	3.42	1.67	
5,947.0	86.90	274.10	5,535.5	319.4	-610.6	610.6	3.22	2.58	
5,977.0	88.10	273.20	5,536.9	321.3	-640.5	640.5	5.00	4.00	
6,007.0	89.20	273.10	5,537.6	323.0	-670.4	670.5	3.68	3.67	
6,068.0	90.50	271.60	5,537.7	325.5	-731.4	731.4	3.25	2.13	
6,129.0	90.90	270.20	5,537.0	326.4	-792.3	792.4	2.39	0.66	
6,190.0	90.30	270.20	5,536.3	326.6	-853.3	853.4	0.98	-0.98	
6,250.0	90.80	268.90	5,535.8	326.2	-913.3	913.4	2.32	0.83	
6,311.0	90.70	268.70	5,535.0	324.9	-974.3	974.4	0.37	-0.16	
6,372.0	90.50	268.30	5,534.3	323.3	-1,035.3	1,035.3	0.73	-0.33	
6,433.0	90.70	268.50	5,533.7	321.6	-1,096.3	1,096.3	0.46	0.33	
6,494.0	91.20	269.60	5,532.7	320.6	-1,157.2	1,157.3	1.98	0.82	
6,557.0	90.90	269.80	5,531.5	320.2	-1,220.2	1,220.3	0.57	-0.48	
6,620.0	89.60	269.40	5,531.2	319.8	-1,283.2	1,283.3	2.16	-2.06	

CONFIDENTIAL

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S7- T24N-R9W
 Well: Escrito E07-2409 01H
 Wellbore: Hz
 Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
 TVD Reference: KBE @ 6892.0ft (Aztec 950)
 MD Reference: KBE @ 6892.0ft (Aztec 950)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
6,683.0	90.20	268.70	5,531.4	318.8	-1,346.2	1,346.3	1.46	0.95	
6,746.0	90.40	269.80	5,531.0	317.9	-1,409.2	1,409.3	1.77	0.32	
6,809.0	89.90	269.10	5,530.9	317.3	-1,472.2	1,472.3	1.37	-0.79	
6,872.0	90.20	269.40	5,530.8	316.5	-1,535.2	1,535.3	0.67	0.48	
6,935.0	90.10	269.90	5,530.6	316.1	-1,598.2	1,598.3	0.81	-0.16	
6,998.0	90.30	270.70	5,530.4	316.5	-1,661.2	1,661.3	1.31	0.32	
7,060.0	90.10	270.60	5,530.2	317.2	-1,723.2	1,723.2	0.36	-0.32	
7,124.0	90.00	270.60	5,530.1	317.8	-1,787.2	1,787.2	0.16	-0.16	
7,187.0	90.40	270.10	5,529.9	318.2	-1,850.2	1,850.2	1.02	0.63	
7,249.0	91.50	270.20	5,528.9	318.4	-1,912.2	1,912.2	1.78	1.77	
7,313.0	91.10	270.70	5,527.4	318.9	-1,976.2	1,976.2	1.00	-0.62	
7,376.0	90.40	270.80	5,526.6	319.7	-2,039.1	2,039.2	1.12	-1.11	
7,439.0	90.70	269.90	5,526.0	320.1	-2,102.1	2,102.2	1.51	0.48	
7,502.0	90.40	269.60	5,525.4	319.8	-2,165.1	2,165.2	0.67	-0.48	
7,565.0	90.60	268.70	5,524.9	318.9	-2,228.1	2,228.2	1.46	0.32	
7,628.0	90.90	268.70	5,524.0	317.4	-2,291.1	2,291.2	0.48	0.48	
7,691.0	90.70	269.30	5,523.2	316.3	-2,354.1	2,354.1	1.00	-0.32	
7,754.0	90.90	270.40	5,522.3	316.2	-2,417.1	2,417.1	1.77	0.32	
7,817.0	89.80	270.40	5,521.9	316.6	-2,480.1	2,480.1	1.75	-1.75	
7,879.0	90.40	270.20	5,521.8	316.9	-2,542.1	2,542.1	1.02	0.97	
7,942.0	90.30	270.40	5,521.4	317.3	-2,605.1	2,605.1	0.35	-0.16	
8,005.0	89.80	270.40	5,521.3	317.7	-2,668.1	2,668.1	0.79	-0.79	
8,068.0	90.70	270.40	5,521.1	318.2	-2,731.1	2,731.1	1.43	1.43	
8,131.0	89.70	270.20	5,520.9	318.5	-2,794.1	2,794.1	1.62	-1.59	
8,194.0	90.10	269.00	5,521.0	318.0	-2,857.1	2,857.1	2.01	0.63	
8,257.0	90.80	270.30	5,520.5	317.7	-2,920.1	2,920.1	2.34	1.11	
8,320.0	88.60	269.50	5,520.8	317.6	-2,983.1	2,983.1	3.72	-3.49	
8,384.0	90.00	270.20	5,521.6	317.4	-3,047.0	3,047.1	2.45	2.19	
8,447.0	90.00	269.40	5,521.6	317.2	-3,110.0	3,110.1	1.27	0.00	
8,510.0	91.60	269.40	5,520.7	316.5	-3,173.0	3,173.1	2.54	2.54	
8,573.0	91.60	270.70	5,518.9	316.6	-3,236.0	3,236.1	2.06	0.00	
8,636.0	90.50	270.20	5,517.8	317.1	-3,299.0	3,299.1	1.92	-1.75	
8,699.0	90.60	270.40	5,517.2	317.4	-3,362.0	3,362.0	0.35	0.16	
8,762.0	91.00	270.00	5,516.3	317.6	-3,425.0	3,425.0	0.90	0.63	
8,825.0	91.50	270.90	5,514.9	318.1	-3,488.0	3,488.0	1.63	0.79	
8,887.0	90.60	270.80	5,513.8	319.0	-3,550.0	3,550.0	1.46	-1.45	
8,951.0	89.20	270.60	5,513.9	319.8	-3,613.9	3,614.0	2.21	-2.19	
9,014.0	89.90	270.20	5,514.4	320.2	-3,676.9	3,677.0	1.28	1.11	
9,077.0	91.00	269.70	5,513.9	320.2	-3,739.9	3,740.0	1.92	1.75	
9,140.0	90.00	269.40	5,513.4	319.7	-3,802.9	3,803.0	1.66	-1.59	
9,203.0	89.20	269.00	5,513.8	318.8	-3,865.9	3,866.0	1.42	-1.27	
9,266.0	89.80	268.70	5,514.3	317.5	-3,928.9	3,929.0	1.06	0.95	
9,329.0	90.10	270.60	5,514.4	317.2	-3,991.9	3,992.0	3.05	0.48	
9,392.0	90.30	269.70	5,514.2	317.3	-4,054.9	4,055.0	1.46	0.32	
9,455.0	90.60	270.40	5,513.7	317.4	-4,117.9	4,118.0	1.21	0.48	
9,518.0	90.00	270.90	5,513.4	318.1	-4,180.9	4,181.0	1.24	-0.95	
9,581.0	90.00	270.60	5,513.4	318.9	-4,243.9	4,244.0	0.48	0.00	
9,644.0	89.30	269.90	5,513.7	319.2	-4,306.9	4,307.0	1.57	-1.11	
9,707.0	90.70	270.00	5,513.7	319.1	-4,369.9	4,370.0	2.23	2.22	
9,770.0	90.80	270.20	5,512.9	319.3	-4,432.9	4,433.0	0.35	0.16	
9,833.0	89.90	269.90	5,512.5	319.3	-4,495.9	4,496.0	1.51	-1.43	
9,896.0	91.00	269.70	5,512.0	319.1	-4,558.9	4,558.9	1.77	1.75	
9,959.0	90.40	269.00	5,511.3	318.4	-4,621.9	4,621.9	1.46	-0.95	

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
TVD Reference: KBE @ 6892.0ft (Aztec 950)
MD Reference: KBE @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
10,021.0	90.10	269.50	5,511.0	317.6	-4,683.9	4,683.9	0.94	-0.48	
10,084.0	91.40	269.70	5,510.2	317.1	-4,746.9	4,746.9	2.09	2.06	
10,147.0	91.10	268.90	5,508.8	316.4	-4,809.8	4,809.9	1.36	-0.48	
10,211.0	91.00	269.10	5,507.6	315.2	-4,873.8	4,873.9	0.35	-0.16	
10,274.0	90.40	268.70	5,506.9	314.0	-4,936.8	4,936.9	1.14	-0.95	
10,337.0	91.20	270.20	5,506.0	313.4	-4,999.8	4,999.9	2.70	1.27	
10,425.0	91.90	270.70	5,503.6	314.1	-5,087.7	5,087.8	0.98	0.80	Last CES Survey @ 10,425' MD
10,470.0	91.90	270.70	5,502.1	314.7	-5,132.7	5,132.8	0.00	0.00	PTB @ 10,470'

Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Escrito E07-2409 01H P - actual wellpath misses target center by 2632.0ft at 10470.0ft MD (5502.1 TVD, 314.7 N, -5132.7 E) - Point	0.00	0.00	5,416.5	740.0	-7,728.7	1,940,645.40	2,713,879.05	36.333350	-107.864630
Escrito E07-2409 01H P - actual wellpath misses target center by 4.2ft at 10470.0ft MD (5502.1 TVD, 314.7 N, -5132.7 E) - Point	0.00	0.00	5,505.2	317.2	-5,133.9	1,940,222.41	2,716,473.83	36.332190	-107.855820
Escrito E07-2409 01H P - actual wellpath misses target center by 10.3ft at 5931.9ft MD (5534.7 TVD, 318.3 N, -595.5 E) - Point	0.00	0.00	5,544.8	316.7	-595.0	1,940,221.72	2,721,012.73	36.332190	-107.840410
Escrito E07-2409 01H P - actual wellpath misses target center by 3.4ft at 10470.0ft MD (5502.1 TVD, 314.7 N, -5132.7 E) - Point	0.00	0.00	5,500.2	317.2	-5,133.9	1,940,222.41	2,716,473.83	36.332190	-107.855820
Escrito E07-2409 01H P - actual wellpath misses target center by 430.8ft at 5956.1ft MD (5536.0 TVD, 320.0 N, -619.7 E) - Point	0.00	0.00	5,478.8	746.3	-595.0	1,940,651.27	2,721,012.77	36.333370	-107.840410

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
10,425.0	5,503.6	314.1	-5,087.7	Last CES Survey @ 10,425' MD
10,470.0	5,502.1	314.7	-5,132.7	PTB @ 10,470'

Checked By: _____ Approved By: _____ Date: _____

CONFIDENTIAL

Report
E07-2409
01H

EnCana Oil & Gas (USA) Inc

San Juan County, NM

S7- T24N-R9W

Escrito E07-2409 01H

Hz

Design: FINAL

Survey Report - Geographic

10 March, 2014

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
TVD Reference: KBE @ 6892.0ft (Aztec 950)
MD Reference: KBE @ 6892.0ft (Aztec 950)
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	S7- T24N-R9W		
Site Position:		Northing:	1,939,904.97 ft
From:	Lat/Long	Easting:	2,721,607.69 ft
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in
		Latitude:	36.331320
		Longitude:	-107.838390
		Grid Convergence:	0.00 °

Well	Escrito E07-2409 01H		
Well Position	+N/-S	0.0 ft	Northing: 1,939,904.97 ft
	+E/-W	0.0 ft	Easting: 2,721,607.69 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	36.331320
		Longitude:	-107.838390
		Ground Level:	6,876.0 ft

Wellbore	Hz		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	3/1/2014	(°)
			9.55
		Dip Angle	(°)
		63.03	
		Field Strength	(nT)
		50,219	

Design	FINAL		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
		Direction	(°)
		270.01	

Survey Program	Date 3/10/2014		
From	To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
556.0	10,470.0	Survey #1 (Hz)	Geolink MWD
			Description
			Geolink MWD

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map		
Depth	(°)	(°)	Depth	(ft)	(ft)	Northing	Easting	Latitude	Longitude
(ft)			(ft)			(ft)	(ft)		
0.0	0.00	0.00	0.0	0.0	0.0	1,939,904.97	2,721,607.69	36.331320	-107.838390
556.0	1.20	67.60	556.0	2.2	5.4	1,939,907.18	2,721,613.08	36.331326	-107.838372
618.0	0.60	349.90	618.0	2.8	5.9	1,939,907.75	2,721,613.62	36.331328	-107.838370
678.0	1.00	329.20	677.9	3.5	5.6	1,939,908.51	2,721,613.30	36.331330	-107.838371
739.0	0.80	338.00	738.9	4.4	5.2	1,939,909.36	2,721,612.87	36.331332	-107.838373
800.0	0.70	321.30	799.9	5.1	4.8	1,939,910.05	2,721,612.47	36.331334	-107.838374
861.0	0.70	308.70	860.9	5.6	4.3	1,939,910.57	2,721,611.95	36.331335	-107.838376
923.0	0.70	289.50	922.9	6.0	3.6	1,939,910.94	2,721,611.30	36.331336	-107.838378
984.0	0.70	304.10	983.9	6.3	2.9	1,939,911.27	2,721,610.64	36.331337	-107.838380
1,045.0	0.70	283.80	1,044.9	6.6	2.3	1,939,911.57	2,721,609.97	36.331338	-107.838383
1,106.0	0.30	24.40	1,105.9	6.8	2.0	1,939,911.80	2,721,609.67	36.331339	-107.838384
1,167.0	0.30	63.60	1,166.9	7.1	2.2	1,939,912.02	2,721,609.88	36.331339	-107.838383

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
TVD Reference: KBE @ 6892.0ft (Aztec 950)
MD Reference: KBE @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
1,228.0	0.40	84.20	1,227.9	7.1	2.5	1,939,912.11	2,721,610.23	36.331340	-107.838382
1,289.0	0.70	32.80	1,288.9	7.5	3.0	1,939,912.44	2,721,610.65	36.331341	-107.838380
1,352.0	0.70	229.80	1,351.9	7.6	2.9	1,939,912.52	2,721,610.56	36.331341	-107.838381
1,415.0	0.40	250.60	1,414.9	7.2	2.4	1,939,912.20	2,721,610.06	36.331340	-107.838382
1,478.0	0.60	241.80	1,477.9	7.0	1.9	1,939,911.97	2,721,609.56	36.331339	-107.838384
1,541.0	0.40	232.00	1,540.9	6.7	1.4	1,939,911.68	2,721,609.10	36.331338	-107.838386
1,604.0	0.40	198.00	1,603.9	6.4	1.2	1,939,911.33	2,721,608.86	36.331338	-107.838386
1,667.0	0.40	141.00	1,666.9	6.0	1.2	1,939,910.95	2,721,608.93	36.331337	-107.838386
1,730.0	0.30	166.40	1,729.9	5.7	1.4	1,939,910.62	2,721,609.11	36.331336	-107.838385
1,793.0	0.60	260.20	1,792.9	5.4	1.1	1,939,910.41	2,721,608.82	36.331335	-107.838386
1,856.0	0.90	281.20	1,855.9	5.5	0.3	1,939,910.45	2,721,608.01	36.331335	-107.838389
1,919.0	1.10	288.30	1,918.9	5.8	-0.7	1,939,910.73	2,721,606.95	36.331336	-107.838393
1,982.0	0.80	275.70	1,981.9	6.0	-1.8	1,939,910.97	2,721,605.94	36.331337	-107.838396
2,045.0	0.70	281.90	2,044.9	6.1	-2.6	1,939,911.09	2,721,605.12	36.331337	-107.838399
2,108.0	0.70	277.30	2,107.9	6.3	-3.3	1,939,911.22	2,721,604.36	36.331337	-107.838402
2,171.0	0.90	289.90	2,170.9	6.5	-4.2	1,939,911.43	2,721,603.52	36.331338	-107.838404
2,234.0	0.50	211.10	2,233.9	6.4	-4.8	1,939,911.37	2,721,602.91	36.331338	-107.838407
2,297.0	0.60	207.70	2,296.9	5.9	-5.1	1,939,910.84	2,721,602.62	36.331336	-107.838408
2,360.0	0.70	155.60	2,359.9	5.2	-5.1	1,939,910.20	2,721,602.62	36.331334	-107.838407
2,423.0	0.50	141.60	2,422.8	4.7	-4.7	1,939,909.63	2,721,602.95	36.331333	-107.838406
2,486.0	0.50	147.60	2,485.8	4.2	-4.4	1,939,909.18	2,721,603.27	36.331332	-107.838405
2,549.0	0.70	154.60	2,548.8	3.6	-4.1	1,939,908.60	2,721,603.58	36.331330	-107.838404
2,612.0	0.90	165.30	2,611.8	2.8	-3.8	1,939,907.78	2,721,603.87	36.331328	-107.838403
2,675.0	0.90	162.00	2,674.8	1.9	-3.5	1,939,906.83	2,721,604.15	36.331325	-107.838402
2,738.0	0.90	172.40	2,737.8	0.9	-3.3	1,939,905.87	2,721,604.37	36.331323	-107.838402
2,801.0	0.90	171.80	2,800.8	-0.1	-3.2	1,939,904.89	2,721,604.50	36.331320	-107.838401
2,864.0	1.00	162.00	2,863.8	-1.1	-2.9	1,939,903.87	2,721,604.74	36.331317	-107.838400
2,927.0	0.80	178.50	2,926.8	-2.1	-2.8	1,939,902.91	2,721,604.93	36.331314	-107.838400
2,991.0	0.90	179.10	2,990.8	-3.0	-2.7	1,939,901.96	2,721,604.95	36.331312	-107.838400
3,054.0	1.10	190.70	3,053.8	-4.1	-2.9	1,939,900.87	2,721,604.84	36.331309	-107.838400
3,117.0	1.10	180.10	3,116.8	-5.3	-3.0	1,939,899.68	2,721,604.73	36.331306	-107.838400
3,180.0	0.80	176.80	3,179.8	-6.3	-2.9	1,939,898.63	2,721,604.75	36.331303	-107.838400
3,243.0	0.50	99.60	3,242.8	-6.8	-2.6	1,939,898.15	2,721,605.05	36.331301	-107.838399
3,306.0	0.50	112.30	3,305.8	-7.0	-2.1	1,939,898.00	2,721,605.57	36.331301	-107.838397
3,370.0	0.70	68.40	3,369.8	-6.9	-1.5	1,939,898.03	2,721,606.19	36.331301	-107.838395
3,433.0	0.40	49.40	3,432.7	-6.6	-1.0	1,939,898.32	2,721,606.72	36.331302	-107.838394
3,496.0	0.50	56.80	3,495.7	-6.4	-0.6	1,939,898.61	2,721,607.12	36.331303	-107.838392
3,559.0	0.40	65.10	3,558.7	-6.1	-0.1	1,939,898.86	2,721,607.54	36.331303	-107.838391
3,622.0	0.30	78.20	3,621.7	-6.0	0.2	1,939,898.98	2,721,607.91	36.331304	-107.838390
3,685.0	0.40	57.80	3,684.7	-5.8	0.6	1,939,899.13	2,721,608.25	36.331304	-107.838388
3,748.0	0.40	23.00	3,747.7	-5.5	0.8	1,939,899.45	2,721,608.53	36.331305	-107.838387
3,809.0	0.60	20.60	3,808.7	-5.0	1.0	1,939,899.95	2,721,608.72	36.331306	-107.838387
3,872.0	0.60	26.20	3,871.7	-4.4	1.3	1,939,900.55	2,721,608.98	36.331308	-107.838386
3,935.0	0.50	359.50	3,934.7	-3.8	1.4	1,939,901.12	2,721,609.13	36.331310	-107.838385
3,998.0	0.30	355.80	3,997.7	-3.4	1.4	1,939,901.56	2,721,609.11	36.331311	-107.838385
4,061.0	0.40	288.30	4,060.7	-3.2	1.2	1,939,901.80	2,721,608.89	36.331311	-107.838386
4,124.0	0.40	292.20	4,123.7	-3.0	0.8	1,939,901.95	2,721,608.48	36.331312	-107.838388
4,187.0	0.40	259.20	4,186.7	-3.0	0.4	1,939,901.99	2,721,608.06	36.331312	-107.838389
4,250.0	0.40	254.40	4,249.7	-3.1	-0.1	1,939,901.89	2,721,607.63	36.331312	-107.838390
4,313.0	0.30	329.10	4,312.7	-3.0	-0.4	1,939,901.97	2,721,607.33	36.331312	-107.838391
4,376.0	0.40	30.60	4,375.7	-2.7	-0.3	1,939,902.30	2,721,607.36	36.331313	-107.838391
4,440.0	0.50	65.80	4,439.7	-2.4	0.0	1,939,902.61	2,721,607.73	36.331314	-107.838390
4,502.0	0.20	345.90	4,501.7	-2.1	0.3	1,939,902.83	2,721,607.95	36.331314	-107.838389
4,565.0	0.20	343.20	4,564.7	-1.9	0.2	1,939,903.04	2,721,607.89	36.331315	-107.838390
4,628.0	0.20	243.30	4,627.7	-1.9	0.1	1,939,903.09	2,721,607.76	36.331315	-107.838390

CONFIDENTIAL

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
TVD Reference: KBE @ 6892.0ft (Aztec 950)
MD Reference: KBE @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,691.0	0.60	290.90	4,690.7	-1.8	-0.3	1,939,903.16	2,721,607.36	36.331315	-107.838391
4,754.0	0.40	239.00	4,753.7	-1.8	-0.8	1,939,903.17	2,721,606.86	36.331315	-107.838393
4,765.0	0.40	248.20	4,764.7	-1.8	-0.9	1,939,903.13	2,721,606.79	36.331315	-107.838393
4,809.0	0.90	295.20	4,808.7	-1.7	-1.4	1,939,903.22	2,721,606.34	36.331315	-107.838395
4,841.0	4.60	325.20	4,840.7	-0.6	-2.3	1,939,904.38	2,721,605.38	36.331318	-107.838398
4,872.0	9.00	330.80	4,871.4	2.6	-4.2	1,939,907.52	2,721,603.48	36.331327	-107.838405
4,904.0	12.20	332.10	4,902.9	7.7	-7.0	1,939,912.70	2,721,600.68	36.331341	-107.838414
4,935.0	15.40	335.70	4,933.0	14.4	-10.2	1,939,919.34	2,721,597.45	36.331360	-107.838425
4,967.0	18.90	340.10	4,963.6	23.1	-13.8	1,939,928.09	2,721,593.94	36.331384	-107.838437
4,998.0	22.20	345.20	4,992.6	33.5	-17.0	1,939,938.48	2,721,590.73	36.331412	-107.838448
5,030.0	24.20	350.30	5,022.0	45.8	-19.6	1,939,950.79	2,721,588.08	36.331446	-107.838457
5,061.0	26.00	353.80	5,050.1	58.8	-21.4	1,939,963.81	2,721,586.28	36.331482	-107.838463
5,092.0	26.00	349.30	5,077.9	72.3	-23.4	1,939,977.25	2,721,584.28	36.331519	-107.838470
5,124.0	26.10	341.00	5,106.7	85.8	-27.0	1,939,990.80	2,721,580.69	36.331556	-107.838482
5,155.0	27.90	332.10	5,134.3	98.7	-32.6	1,940,003.66	2,721,575.07	36.331591	-107.838501
5,187.0	30.70	323.80	5,162.2	111.9	-41.0	1,940,016.88	2,721,566.74	36.331627	-107.838529
5,219.0	32.80	319.00	5,189.5	125.0	-51.5	1,940,030.02	2,721,556.23	36.331664	-107.838565
5,251.0	34.70	313.90	5,216.1	137.9	-63.7	1,940,042.88	2,721,543.98	36.331699	-107.838607
5,282.0	36.50	309.00	5,241.3	149.8	-77.3	1,940,054.80	2,721,530.45	36.331732	-107.838653
5,314.0	38.20	304.90	5,266.7	161.5	-92.8	1,940,066.46	2,721,514.94	36.331764	-107.838705
5,345.0	40.00	305.50	5,290.8	172.8	-108.7	1,940,077.73	2,721,498.96	36.331795	-107.838759
5,377.0	42.30	304.20	5,314.9	184.8	-126.0	1,940,089.76	2,721,481.68	36.331828	-107.838818
5,408.0	44.10	300.80	5,337.5	196.2	-143.9	1,940,101.15	2,721,463.78	36.331859	-107.838879
5,440.0	46.70	297.30	5,359.9	207.2	-163.8	1,940,112.19	2,721,443.87	36.331889	-107.838947
5,471.0	49.30	293.00	5,380.7	217.0	-184.7	1,940,121.96	2,721,423.02	36.331916	-107.839017
5,503.0	52.40	289.70	5,400.9	226.0	-207.8	1,940,130.98	2,721,399.91	36.331941	-107.839096
5,535.0	55.60	288.40	5,419.7	234.4	-232.3	1,940,139.43	2,721,375.44	36.331964	-107.839179
5,566.0	58.30	287.60	5,436.6	242.5	-257.0	1,940,147.45	2,721,350.73	36.331986	-107.839263
5,598.0	61.00	287.10	5,452.8	250.7	-283.3	1,940,155.69	2,721,324.37	36.332009	-107.839352
5,629.0	63.90	287.20	5,467.1	258.8	-309.6	1,940,163.79	2,721,298.11	36.332031	-107.839441
5,661.0	66.80	287.20	5,480.5	267.4	-337.4	1,940,172.39	2,721,270.33	36.332055	-107.839536
5,692.0	69.80	286.30	5,491.9	275.7	-365.0	1,940,180.69	2,721,242.76	36.332077	-107.839629
5,723.0	72.60	285.70	5,501.9	283.8	-393.2	1,940,188.78	2,721,214.55	36.332100	-107.839725
5,755.0	75.50	284.50	5,510.7	291.8	-422.9	1,940,196.79	2,721,184.85	36.332122	-107.839826
5,786.0	78.10	282.40	5,517.8	298.8	-452.2	1,940,203.81	2,721,155.50	36.332141	-107.839926
5,816.0	80.60	280.70	5,523.3	304.7	-481.1	1,940,209.71	2,721,126.62	36.332157	-107.840024
5,855.0	83.80	277.50	5,528.6	310.8	-519.2	1,940,215.82	2,721,088.47	36.332174	-107.840153
5,886.0	85.60	275.60	5,531.5	314.3	-549.9	1,940,219.34	2,721,057.81	36.332184	-107.840257
5,916.0	86.10	274.70	5,533.7	317.0	-579.7	1,940,222.03	2,721,028.01	36.332191	-107.840358
5,947.0	86.90	274.10	5,535.5	319.4	-610.6	1,940,224.41	2,720,997.16	36.332197	-107.840463
5,977.0	88.10	273.20	5,536.9	321.3	-640.5	1,940,226.32	2,720,967.25	36.332203	-107.840565
6,007.0	89.20	273.10	5,537.6	323.0	-670.4	1,940,227.96	2,720,937.30	36.332207	-107.840666
6,068.0	90.50	271.60	5,537.7	325.5	-731.4	1,940,230.47	2,720,876.36	36.332214	-107.840873
6,129.0	90.90	270.20	5,537.0	326.4	-792.3	1,940,231.43	2,720,815.37	36.332217	-107.841080
6,190.0	90.30	270.20	5,536.3	326.6	-853.3	1,940,231.65	2,720,754.38	36.332217	-107.841287
6,250.0	90.80	268.90	5,535.8	326.2	-913.3	1,940,231.18	2,720,694.38	36.332216	-107.841491
6,311.0	90.70	268.70	5,535.0	324.9	-974.3	1,940,229.90	2,720,633.40	36.332212	-107.841698
6,372.0	90.50	268.30	5,534.3	323.3	-1,035.3	1,940,228.31	2,720,572.43	36.332208	-107.841905
6,433.0	90.70	268.50	5,533.7	321.6	-1,096.3	1,940,226.61	2,720,511.45	36.332203	-107.842112
6,494.0	91.20	269.60	5,532.7	320.6	-1,157.2	1,940,225.60	2,720,450.47	36.332201	-107.842319
6,557.0	90.90	269.80	5,531.5	320.2	-1,220.2	1,940,225.28	2,720,387.48	36.332200	-107.842533
6,620.0	89.60	269.40	5,531.2	319.8	-1,283.2	1,940,224.84	2,720,324.49	36.332199	-107.842747
6,683.0	90.20	268.70	5,531.4	318.8	-1,346.2	1,940,223.80	2,720,261.50	36.332196	-107.842961
6,746.0	90.40	269.80	5,531.0	317.9	-1,409.2	1,940,222.98	2,720,198.50	36.332193	-107.843175
6,809.0	89.90	269.10	5,530.9	317.3	-1,472.2	1,940,222.38	2,720,135.51	36.332192	-107.843389

CONFIDENTIAL

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
TVD Reference: KBE @ 6892.0ft (Aztec 950)
MD Reference: KBE @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
6,872.0	90.20	269.40	5,530.8	316.5	-1,535.2	1,940,221.55	2,720,072.51	36.332189	-107.843602
6,935.0	90.10	269.90	5,530.6	316.1	-1,598.2	1,940,221.17	2,720,009.51	36.332188	-107.843816
6,998.0	90.30	270.70	5,530.4	316.5	-1,661.2	1,940,221.51	2,719,946.52	36.332189	-107.844030
7,060.0	90.10	270.60	5,530.2	317.2	-1,723.2	1,940,222.21	2,719,884.52	36.332191	-107.844241
7,124.0	90.00	270.60	5,530.1	317.8	-1,787.2	1,940,222.89	2,719,820.52	36.332193	-107.844458
7,187.0	90.40	270.10	5,529.9	318.2	-1,850.2	1,940,223.27	2,719,757.52	36.332194	-107.844672
7,249.0	91.50	270.20	5,528.9	318.4	-1,912.2	1,940,223.44	2,719,695.53	36.332194	-107.844882
7,313.0	91.10	270.70	5,527.4	318.9	-1,976.2	1,940,223.95	2,719,631.55	36.332196	-107.845100
7,376.0	90.40	270.80	5,526.6	319.7	-2,039.1	1,940,224.77	2,719,568.56	36.332198	-107.845313
7,439.0	90.70	269.90	5,526.0	320.1	-2,102.1	1,940,225.16	2,719,505.57	36.332199	-107.845527
7,502.0	90.40	269.60	5,525.4	319.8	-2,165.1	1,940,224.89	2,719,442.57	36.332198	-107.845741
7,565.0	90.60	268.70	5,524.9	318.9	-2,228.1	1,940,223.96	2,719,379.58	36.332196	-107.845955
7,628.0	90.90	268.70	5,524.0	317.4	-2,291.1	1,940,222.53	2,719,316.60	36.332192	-107.846169
7,691.0	90.70	269.30	5,523.2	316.3	-2,354.1	1,940,221.44	2,719,253.62	36.332189	-107.846383
7,754.0	90.90	270.40	5,522.3	316.2	-2,417.1	1,940,221.28	2,719,190.63	36.332188	-107.846596
7,817.0	89.80	270.40	5,521.9	316.6	-2,480.1	1,940,221.72	2,719,127.63	36.332190	-107.846810
7,879.0	90.40	270.20	5,521.8	316.9	-2,542.1	1,940,222.05	2,719,065.63	36.332190	-107.847021
7,942.0	90.30	270.40	5,521.4	317.3	-2,605.1	1,940,222.38	2,719,002.64	36.332191	-107.847235
8,005.0	89.80	270.40	5,521.3	317.7	-2,668.1	1,940,222.82	2,718,939.64	36.332192	-107.847449
8,068.0	90.70	270.40	5,521.1	318.2	-2,731.1	1,940,223.27	2,718,876.64	36.332194	-107.847663
8,131.0	89.70	270.20	5,520.9	318.5	-2,794.1	1,940,223.60	2,718,813.64	36.332195	-107.847876
8,194.0	90.10	269.00	5,521.0	318.0	-2,857.1	1,940,223.16	2,718,750.64	36.332193	-107.848090
8,257.0	90.80	270.30	5,520.5	317.7	-2,920.1	1,940,222.78	2,718,687.65	36.332192	-107.848304
8,320.0	88.60	269.50	5,520.8	317.6	-2,983.1	1,940,222.67	2,718,624.65	36.332192	-107.848518
8,384.0	90.00	270.20	5,521.6	317.4	-3,047.0	1,940,222.51	2,718,560.66	36.332191	-107.848735
8,447.0	90.00	269.40	5,521.6	317.2	-3,110.0	1,940,222.29	2,718,497.66	36.332191	-107.848949
8,510.0	91.60	269.40	5,520.7	316.5	-3,173.0	1,940,221.64	2,718,434.67	36.332189	-107.849163
8,573.0	91.60	270.70	5,518.9	316.6	-3,236.0	1,940,221.70	2,718,371.70	36.332189	-107.849377
8,636.0	90.50	270.20	5,517.8	317.1	-3,299.0	1,940,222.19	2,718,308.71	36.332190	-107.849591
8,699.0	90.60	270.40	5,517.2	317.4	-3,362.0	1,940,222.53	2,718,245.72	36.332191	-107.849805
8,762.0	91.00	270.00	5,516.3	317.6	-3,425.0	1,940,222.75	2,718,182.72	36.332192	-107.850018
8,825.0	91.50	270.90	5,514.9	318.1	-3,488.0	1,940,223.25	2,718,119.74	36.332193	-107.850232
8,887.0	90.60	270.80	5,513.8	319.0	-3,550.0	1,940,224.17	2,718,057.76	36.332196	-107.850443
8,951.0	89.20	270.60	5,513.9	319.8	-3,613.9	1,940,224.96	2,717,993.77	36.332198	-107.850660
9,014.0	89.90	270.20	5,514.4	320.2	-3,676.9	1,940,225.40	2,717,930.77	36.332199	-107.850874
9,077.0	91.00	269.70	5,513.9	320.2	-3,739.9	1,940,225.35	2,717,867.77	36.332199	-107.851088
9,140.0	90.00	269.40	5,513.4	319.7	-3,802.9	1,940,224.86	2,717,804.78	36.332198	-107.851302
9,203.0	89.20	269.00	5,513.8	318.8	-3,865.9	1,940,223.98	2,717,741.79	36.332195	-107.851515
9,266.0	89.80	268.70	5,514.3	317.5	-3,928.9	1,940,222.72	2,717,678.80	36.332192	-107.851729
9,329.0	90.10	270.60	5,514.4	317.2	-3,991.9	1,940,222.34	2,717,615.81	36.332191	-107.851943
9,392.0	90.30	269.70	5,514.2	317.3	-4,054.9	1,940,222.50	2,717,552.79	36.332191	-107.852157
9,455.0	90.60	270.40	5,513.7	317.4	-4,117.9	1,940,222.56	2,717,489.79	36.332191	-107.852371
9,518.0	90.00	270.90	5,513.4	318.1	-4,180.9	1,940,223.28	2,717,426.80	36.332193	-107.852585
9,581.0	90.00	270.60	5,513.4	318.9	-4,243.9	1,940,224.11	2,717,363.80	36.332195	-107.852799
9,644.0	89.30	269.90	5,513.7	319.2	-4,306.9	1,940,224.39	2,717,300.80	36.332196	-107.853013
9,707.0	90.70	270.00	5,513.7	319.1	-4,369.9	1,940,224.34	2,717,237.81	36.332196	-107.853227
9,770.0	90.80	270.20	5,512.9	319.3	-4,432.9	1,940,224.45	2,717,174.81	36.332196	-107.853440
9,833.0	89.90	269.90	5,512.5	319.3	-4,495.9	1,940,224.51	2,717,111.81	36.332196	-107.853654
9,896.0	91.00	269.70	5,512.0	319.1	-4,558.9	1,940,224.29	2,717,048.82	36.332196	-107.853868
9,959.0	90.40	269.00	5,511.3	318.4	-4,621.9	1,940,223.58	2,716,985.83	36.332194	-107.854082
10,021.0	90.10	269.50	5,511.0	317.6	-4,683.9	1,940,222.77	2,716,923.83	36.332191	-107.854292
10,084.0	91.40	269.70	5,510.2	317.1	-4,746.9	1,940,222.33	2,716,860.84	36.332190	-107.854506
10,147.0	91.10	268.90	5,508.8	316.4	-4,809.8	1,940,221.57	2,716,797.86	36.332188	-107.854720
10,211.0	91.00	269.10	5,507.6	315.2	-4,873.8	1,940,220.45	2,716,733.88	36.332185	-107.854937
10,274.0	90.40	268.70	5,506.9	314.0	-4,936.8	1,940,219.25	2,716,670.90	36.332182	-107.855151

Cathedral Energy Services
Survey Report - Geographic

CONFIDENTIAL

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S7- T24N-R9W
Well: Escrito E07-2409 01H
Wellbore: Hz
Design: FINAL

Local Co-ordinate Reference: Well Escrito E07-2409 01H
TVD Reference: KBE @ 6892.0ft (Aztec 950)
MD Reference: KBE @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
10,337.0	91.20	270.20	5,506.0	313.4	-4,999.8	1,940,218.65	2,716,607.91	36.332180	-107.855365
10,425.0	91.90	270.70	5,503.6	314.1	-5,087.7	1,940,219.34	2,716,519.96	36.332182	-107.855664
Last CES Survey @ 10,425' MD									
10,470.0	91.90	270.70	5,502.1	314.7	-5,132.7	1,940,219.89	2,716,474.99	36.332183	-107.855816
PTB @ 10,470'									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Escrito E07-2409 01H P - actual wellpath misses target center by 3.4ft at 10470.0ft MD (5502.1 TVD, 314.7 N, -5132.7 E) - Point	0.00	0.00	5,500.2	317.2	-5,133.9	1,940,222.41	2,716,473.83	36.332190	-107.855820
Escrito E07-2409 01H P - actual wellpath misses target center by 10.3ft at 5931.9ft MD (5534.7 TVD, 318.3 N, -595.5 E) - Point	0.00	0.00	5,544.8	316.7	-595.0	1,940,221.72	2,721,012.73	36.332190	-107.840410

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
10,425.0	5,503.6	314.1	-5,087.7	Last CES Survey @ 10,425' MD
10,470.0	5,502.1	314.7	-5,132.7	PTB @ 10,470'

Checked By: _____ Approved By: _____ Date: _____