

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

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

☒ AS-DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30.045-35320		*Pool Code 96219	*Pool Name GREEK GALLUP
*Property Code 39121	*Property Name MEADOWS I08-3014		*Well Number 01H
*GRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.		*Elevation 5544'

¹⁰ Surface Location

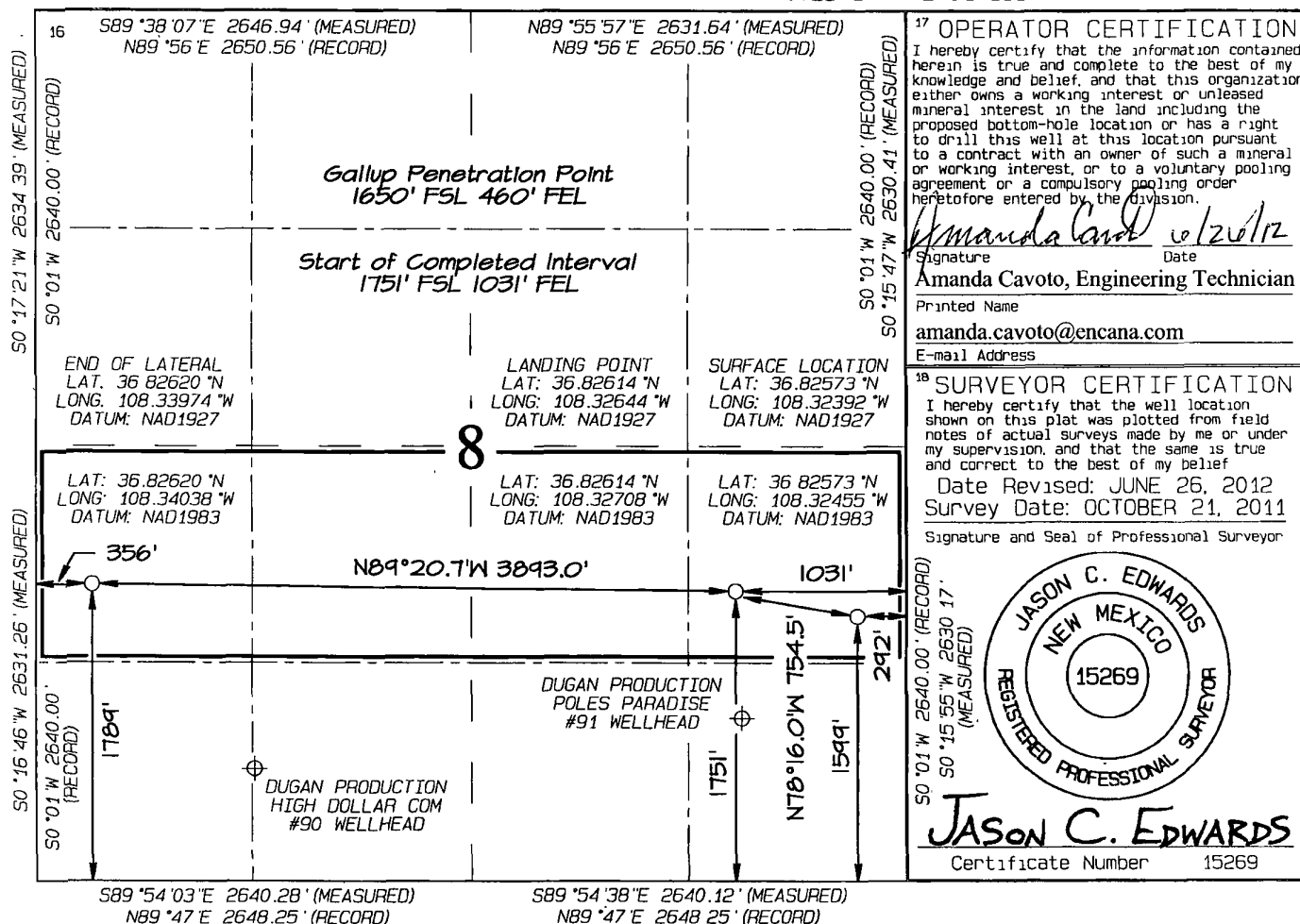
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	8	30N	14W		1599	SOUTH	292	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	8	30N	14W		1789	SOUTH	356	WEST	SAN JUAN

¹² Dedicated Acres 160.0 Acres (N/2 S/2) Section 8	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

MD (Feet)	Inclination (Degree)
253	1
490	1
738	0.5
1302	0.75
2243	1
2770	1
3238	1
3754	0.75
4284	0.25
4809	1

RCVD JUN 25 '12
OIL CONS. DIV.

DIST. 3

CONFIDENTIAL

OPERATOR CERTIFICATION

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


Brenda R. Linster, Regulatory Advisor

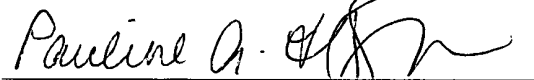
06/18/12

ACKNOWLEDGMENT

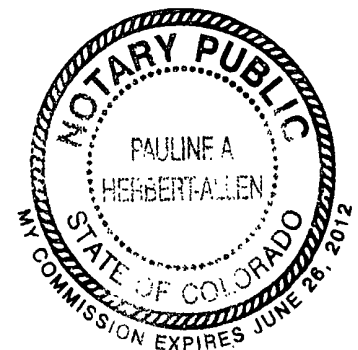
State of Colorado
City and County of Denver

This instrument was acknowledged before me on this 18th day of June, 2012 by Brenda R. Linster 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.

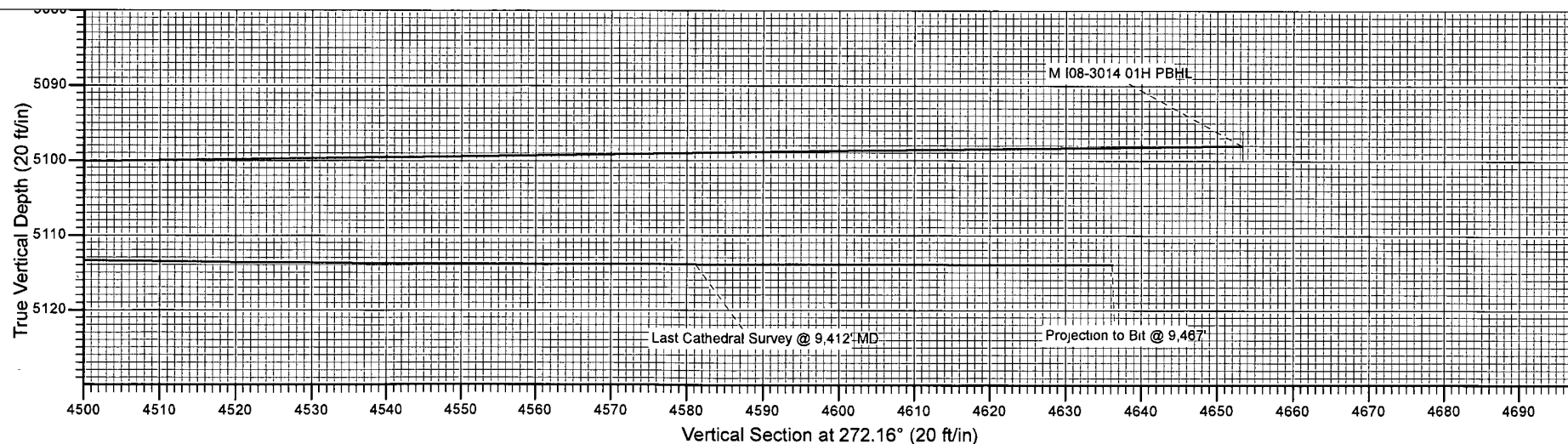
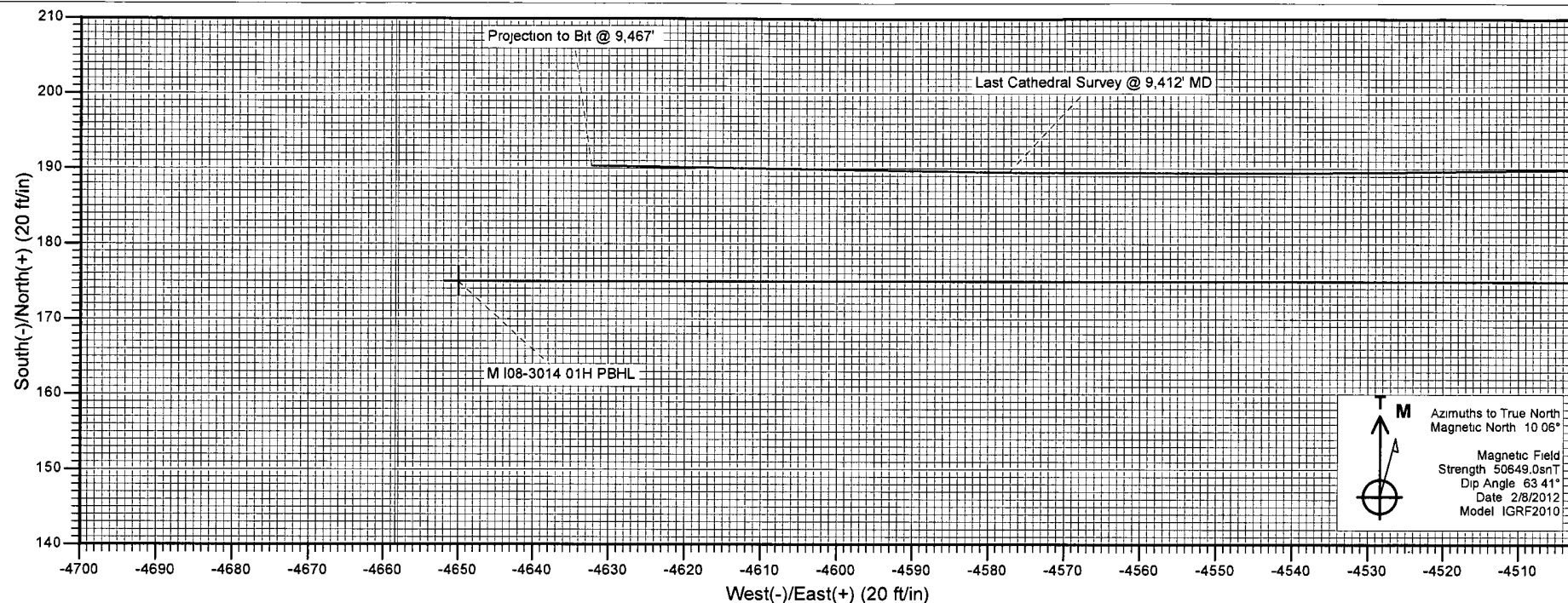
Notary Public: 

My Commission Expires: June 26, 2012





Project: San Juan Co, NM
Site: S8-T30N-R14W
Well: Meadows I08-3014 01H
Wellbore HZ
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Meadows I08-3014 01H
Project:	San Juan Co, NM	TVD Reference:	KBE @ 5557 0ft
Site:	S8-T30N-R14W	MD Reference:	KBE @ 5557 0ft
Well:	Meadows I08-3014 01H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	Database:	USA EDM 5000 Multi Users DB

Project	San Juan Co, 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		S8-T30N-R14W			
Site Position:		Northing:		Latitude:	
From:		Easting:		Longitude:	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
Lat/Long		0.0 ft		36 825860	
		2,120,308.69 ft		-108.324680	
		2,579,292.57 ft		-0.29 °	
		13 200 in			

Well	Meadows I08-3014 01H					
Well Position	+N/-S	0 0 ft	Northing:	2,120,261 15 ft	Latitude:	36.825730
	+E/-W	0 0 ft	Easting:	2,579,330.38 ft	Longitude:	-108 324550
Position Uncertainty	0 0 ft	Wellhead Elevation:	ft	Ground Level:	5,544 0 ft	

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/8/2012	10 06	63 41	50,649

Design	HZ				
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	272.16	

Survey Program		Date	5/21/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
25 0	4,322 1	Survey #1 (HZ)	Gyro	Gyro	
4,414 0	9,467 0	Survey #2 (HZ)	MWD	Geolink MWD	

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
0 0	0 00	0.00	0 0	0 0	0 0	0.0	0 00	0 00	
25 0	0 07	21.49	25 0	0.0	0 0	0 0	0 28	0 28	
50.0	0 13	21.49	50.0	0 1	0 0	0.0	0.24	0 24	
75 0	0 20	21.49	75 0	0 1	0 0	0 0	0.28	0 28	
100 0	0 21	20 01	100 0	0 2	0 1	-0 1	0.05	0.04	
125 0	0 19	25 64	125.0	0 3	0.1	-0 1	0 11	-0 08	
150 0	0 34	355 75	150 0	0 4	0 1	-0 1	0 80	0 60	
175 0	0 33	356 53	175.0	0 5	0.1	-0 1	0.04	-0 04	
200 0	0.34	332 70	200 0	0 7	0 1	-0 1	0 55	0 04	
225 0	0 20	334 23	225.0	0 8	0.0	0 0	0 56	-0 56	
250 0	0 25	330 27	250.0	0 9	0.0	0 1	0 21	0 20	
275 0	0.52	295 70	275.0	1.0	-0 2	0 2	1 38	1 08	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc.	Local Co-ordinate Reference:	Well Meadows 108-3014 01H
Project:	San Juan Co, NM	TVD Reference:	KBE @ 5557 0ft
Site:	S8-T30N-R14W	MD Reference:	KBE @ 5557 0ft
Well:	Meadows 108-3014 01H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	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
300.0	0.49	297.64	300.0	1.1	-0.3	0.4	0.14	-0.12	
325.0	0.36	309.04	325.0	1.2	-0.5	0.5	0.62	-0.52	
350.0	0.31	305.81	350.0	1.3	-0.6	0.7	0.21	-0.20	
375.0	0.33	303.42	375.0	1.3	-0.7	0.8	0.10	0.08	
400.0	0.36	296.56	400.0	1.4	-0.9	0.9	0.20	0.12	
425.0	0.36	273.66	425.0	1.5	-1.0	1.1	0.57	0.00	
450.0	0.38	268.56	450.0	1.5	-1.2	1.2	0.15	0.08	
475.0	0.42	279.64	475.0	1.5	-1.3	1.4	0.35	0.16	
500.0	0.29	281.02	500.0	1.5	-1.5	1.6	0.52	-0.52	
525.0	0.24	284.41	525.0	1.5	-1.6	1.7	0.21	-0.20	
550.0	0.22	281.56	550.0	1.5	-1.7	1.8	0.09	-0.08	
575.0	0.20	206.78	575.0	1.5	-1.8	1.8	1.02	-0.08	
600.0	0.24	246.82	600.0	1.5	-1.8	1.9	0.62	0.16	
625.0	0.23	223.43	625.0	1.4	-1.9	2.0	0.38	-0.04	
650.0	0.36	215.71	650.0	1.3	-2.0	2.1	0.54	0.52	
675.0	0.37	220.82	675.0	1.2	-2.1	2.1	0.14	0.04	
700.0	0.26	228.70	700.0	1.1	-2.2	2.2	0.47	-0.44	
725.0	0.35	234.61	725.0	1.0	-2.3	2.3	0.38	0.36	
750.0	0.54	235.23	750.0	0.9	-2.5	2.5	0.76	0.76	
775.0	0.44	228.68	775.0	0.7	-2.6	2.7	0.46	-0.40	
800.0	0.38	247.17	800.0	0.7	-2.8	2.8	0.58	-0.24	
825.0	0.41	247.41	825.0	0.6	-2.9	3.0	0.12	0.12	
850.0	0.45	236.51	850.0	0.5	-3.1	3.1	0.36	0.16	
875.0	0.42	244.91	875.0	0.4	-3.3	3.3	0.28	-0.12	
900.0	0.49	260.23	900.0	0.3	-3.5	3.5	0.56	0.28	
925.0	0.41	236.77	925.0	0.3	-3.6	3.6	0.80	-0.32	
950.0	0.36	261.41	950.0	0.2	-3.8	3.8	0.69	-0.20	
975.0	0.43	247.40	975.0	0.2	-4.0	4.0	0.48	0.28	
1,000.0	0.41	249.58	1,000.0	0.1	-4.1	4.1	0.10	-0.08	
1,025.0	0.43	246.14	1,025.0	0.0	-4.3	4.3	0.13	0.08	
1,050.0	0.49	246.64	1,050.0	0.0	-4.5	4.5	0.24	0.24	
1,075.0	0.55	241.66	1,075.0	-0.1	-4.7	4.7	0.30	0.24	
1,100.0	0.83	246.26	1,100.0	-0.3	-5.0	4.9	1.14	1.12	
1,125.0	0.79	235.00	1,125.0	-0.4	-5.3	5.2	0.66	-0.16	
1,150.0	0.79	255.66	1,150.0	-0.6	-5.6	5.5	1.13	0.00	
1,175.0	0.87	266.09	1,175.0	-0.6	-5.9	5.9	0.68	0.32	
1,200.0	0.89	274.20	1,200.0	-0.6	-6.3	6.3	0.50	0.08	
1,225.0	0.94	286.84	1,225.0	-0.6	-6.7	6.7	0.83	0.20	
1,250.0	0.75	294.95	1,250.0	-0.4	-7.0	7.0	0.90	-0.76	
1,275.0	0.71	302.43	1,275.0	-0.3	-7.3	7.3	0.41	-0.16	
1,300.0	0.62	297.22	1,300.0	-0.1	-7.6	7.6	0.43	-0.36	
1,325.0	0.48	283.98	1,325.0	-0.1	-7.8	7.8	0.75	-0.56	
1,350.0	0.47	263.18	1,350.0	0.0	-8.0	8.0	0.69	-0.04	
1,375.0	0.59	259.34	1,375.0	-0.1	-8.2	8.2	0.50	0.48	
1,400.0	0.67	261.10	1,400.0	-0.1	-8.5	8.5	0.33	0.32	
1,425.0	0.92	273.99	1,425.0	-0.1	-8.8	8.8	1.22	1.00	
1,450.0	1.01	295.05	1,449.9	0.0	-9.2	9.2	1.45	0.36	
1,475.0	0.90	292.22	1,474.9	0.1	-9.6	9.6	0.48	-0.44	
1,500.0	0.86	297.78	1,499.9	0.3	-10.0	10.0	0.38	-0.16	
1,525.0	0.74	299.50	1,524.9	0.5	-10.3	10.3	0.49	-0.48	
1,550.0	0.84	305.23	1,549.9	0.7	-10.6	10.6	0.51	0.40	
1,575.0	0.76	309.60	1,574.9	0.9	-10.8	10.9	0.40	-0.32	
1,600.0	0.74	298.29	1,599.9	1.0	-11.1	11.1	0.60	-0.08	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Meadows I08-3014 01H
Project:	San Juan Co, NM	TVD Reference:	KBE @ 5557 0ft
Site:	S8-T30N-R14W	MD Reference:	KBE @ 5557 0ft
Well:	Meadows I08-3014 01H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	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
1,625.0	0.49	294.67	1,624.9	1.2	-11.4	11.4	1.01	-1.00	
1,650.0	0.57	293.00	1,649.9	1.3	-11.6	11.6	0.33	0.32	
1,675.0	0.58	273.92	1,674.9	1.3	-11.8	11.9	0.76	0.04	
1,700.0	0.87	272.94	1,699.9	1.3	-12.1	12.2	1.16	1.16	
1,725.0	1.06	284.02	1,724.9	1.4	-12.5	12.6	1.06	0.76	
1,750.0	1.04	286.56	1,749.9	1.5	-13.0	13.0	0.20	-0.08	
1,775.0	0.94	307.14	1,774.9	1.7	-13.4	13.4	1.47	-0.40	
1,800.0	0.91	307.50	1,799.9	2.0	-13.7	13.7	0.12	-0.12	
1,825.0	0.70	301.67	1,824.9	2.2	-14.0	14.0	0.90	-0.84	
1,850.0	0.73	301.64	1,849.9	2.3	-14.2	14.3	0.12	0.12	
1,875.0	0.69	295.63	1,874.9	2.5	-14.5	14.6	0.34	-0.16	
1,900.0	0.74	282.20	1,899.9	2.6	-14.8	14.9	0.70	0.20	
1,925.0	0.84	272.11	1,924.9	2.6	-15.1	15.2	0.68	0.40	
1,950.0	1.11	278.93	1,949.9	2.7	-15.6	15.7	1.17	1.08	
1,975.0	1.15	289.96	1,974.9	2.8	-16.0	16.1	0.88	0.16	
2,000.0	1.08	301.30	1,999.9	3.0	-16.5	16.6	0.92	-0.28	
2,025.0	1.07	303.61	2,024.9	3.2	-16.9	17.0	0.18	-0.04	
2,050.0	0.90	303.06	2,049.9	3.5	-17.2	17.3	0.68	-0.68	
2,075.0	0.83	304.45	2,074.9	3.7	-17.5	17.7	0.29	-0.28	
2,100.0	0.75	305.97	2,099.9	3.9	-17.8	18.0	0.33	-0.32	
2,125.0	0.94	307.95	2,124.9	4.1	-18.1	18.3	0.77	0.76	
2,150.0	0.88	304.24	2,149.9	4.3	-18.4	18.6	0.34	-0.24	
2,175.0	0.76	300.13	2,174.9	4.5	-18.7	18.9	0.53	-0.48	
2,200.0	0.89	281.14	2,199.9	4.7	-19.1	19.2	1.20	0.52	
2,225.0	0.93	273.65	2,224.9	4.7	-19.5	19.6	0.50	0.16	
2,250.0	1.31	293.27	2,249.9	4.8	-19.9	20.1	2.14	1.52	
2,275.0	1.03	307.56	2,274.8	5.1	-20.4	20.6	1.61	-1.12	
2,300.0	0.99	304.84	2,299.8	5.3	-20.7	20.9	0.25	-0.16	
2,325.0	1.00	312.26	2,324.8	5.6	-21.1	21.3	0.52	0.04	
2,350.0	0.96	310.71	2,349.8	5.9	-21.4	21.6	0.19	-0.16	
2,375.0	1.00	311.30	2,374.8	6.2	-21.7	21.9	0.17	0.16	
2,400.0	0.87	309.16	2,399.8	6.4	-22.0	22.2	0.54	-0.52	
2,425.0	0.87	306.07	2,424.8	6.7	-22.3	22.6	0.19	0.00	
2,450.0	0.91	314.52	2,449.8	6.9	-22.6	22.9	0.55	0.16	
2,475.0	0.93	314.74	2,474.8	7.2	-22.9	23.2	0.08	0.08	
2,500.0	0.79	316.63	2,499.8	7.5	-23.2	23.4	0.57	-0.56	
2,525.0	0.76	315.99	2,524.8	7.7	-23.4	23.7	0.12	-0.12	
2,550.0	0.86	320.06	2,549.8	8.0	-23.6	23.9	0.46	0.40	
2,575.0	0.68	310.15	2,574.8	8.2	-23.9	24.2	0.89	-0.72	
2,600.0	0.56	313.37	2,599.8	8.4	-24.1	24.4	0.50	-0.48	
2,625.0	0.56	295.29	2,624.8	8.5	-24.3	24.6	0.70	0.00	
2,650.0	0.76	284.06	2,649.8	8.6	-24.5	24.8	0.95	0.80	
2,675.0	0.91	294.10	2,674.8	8.7	-24.9	25.2	0.84	0.60	
2,700.0	1.00	293.38	2,699.8	8.9	-25.3	25.6	0.36	0.36	
2,725.0	1.13	304.37	2,724.8	9.1	-25.7	26.0	0.97	0.52	
2,750.0	1.10	313.58	2,749.8	9.4	-26.0	26.4	0.73	-0.12	
2,775.0	1.12	310.67	2,774.8	9.8	-26.4	26.8	0.24	0.08	
2,800.0	0.85	319.29	2,799.8	10.1	-26.7	27.1	1.23	-1.08	
2,825.0	0.86	320.25	2,824.8	10.4	-27.0	27.3	0.07	0.04	
2,850.0	0.85	322.24	2,849.8	10.6	-27.2	27.6	0.13	-0.04	
2,875.0	0.45	313.53	2,874.8	10.9	-27.4	27.8	1.64	-1.60	
2,900.0	0.84	288.68	2,899.8	11.0	-27.6	28.0	1.89	1.56	
2,925.0	0.79	291.92	2,924.8	11.1	-27.9	28.3	0.27	-0.20	

Cathedral Energy Services

Survey Report

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Project:	San Juan Co, NM	TVD Reference:	KBE @ 5557 0ft
Site:	S8-T30N-R14W	MD Reference:	KBE @ 5557 0ft
Well:	Meadows I08-3014 01H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	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
2,950.0	0.81	278.30	2,949.8	11.2	-28.3	28.7	0.76	0.08	
2,975.0	0.84	284.02	2,974.8	11.3	-28.6	29.0	0.35	0.12	
3,000.0	0.77	282.28	2,999.8	11.3	-29.0	29.4	0.30	-0.28	
3,025.0	0.86	280.16	3,024.8	11.4	-29.3	29.7	0.38	0.36	
3,050.0	0.92	273.38	3,049.8	11.5	-29.7	30.1	0.48	0.24	
3,075.0	0.94	280.00	3,074.8	11.5	-30.1	30.5	0.44	0.08	
3,100.0	0.98	275.99	3,099.8	11.6	-30.5	30.9	0.31	0.16	
3,125.0	1.01	275.03	3,124.7	11.6	-31.0	31.4	0.14	0.12	
3,150.0	0.80	290.46	3,149.7	11.7	-31.3	31.8	1.28	-0.84	
3,175.0	0.74	285.56	3,174.7	11.8	-31.7	32.1	0.36	-0.24	
3,200.0	0.88	276.76	3,199.7	11.9	-32.0	32.4	0.75	0.56	
3,225.0	0.88	283.99	3,224.7	11.9	-32.4	32.8	0.44	0.00	
3,250.0	0.87	280.50	3,249.7	12.0	-32.8	33.2	0.22	-0.04	
3,275.0	0.91	284.63	3,274.7	12.1	-33.1	33.6	0.30	0.16	
3,300.0	0.81	280.64	3,299.7	12.2	-33.5	33.9	0.47	-0.40	
3,325.0	0.95	281.36	3,324.7	12.2	-33.9	34.3	0.56	0.56	
3,350.0	0.89	282.42	3,349.7	12.3	-34.3	34.7	0.25	-0.24	
3,375.0	1.13	285.73	3,374.7	12.4	-34.7	35.1	0.99	0.96	
3,400.0	1.03	285.13	3,399.7	12.6	-35.2	35.6	0.40	-0.40	
3,425.0	1.08	287.61	3,424.7	12.7	-35.6	36.0	0.27	0.20	
3,450.0	1.04	285.69	3,449.7	12.8	-36.0	36.5	0.21	-0.16	
3,475.0	1.14	290.15	3,474.7	13.0	-36.5	37.0	0.52	0.40	
3,500.0	1.25	296.86	3,499.7	13.2	-37.0	37.4	0.71	0.44	
3,525.0	1.09	287.31	3,524.7	13.4	-37.4	37.9	1.01	-0.64	
3,550.0	0.88	287.03	3,549.7	13.5	-37.8	38.3	0.84	-0.84	
3,575.0	0.99	287.73	3,574.7	13.6	-38.2	38.7	0.44	0.44	
3,600.0	0.82	281.12	3,599.7	13.7	-38.6	39.1	0.80	-0.68	
3,625.0	0.80	283.05	3,624.7	13.8	-39.0	39.5	0.14	-0.08	
3,650.0	0.71	280.85	3,649.7	13.9	-39.3	39.8	0.38	-0.36	
3,675.0	0.81	285.37	3,674.7	13.9	-39.6	40.1	0.47	0.40	
3,700.0	0.89	278.64	3,699.7	14.0	-40.0	40.5	0.51	0.32	
3,725.0	0.66	282.97	3,724.7	14.1	-40.3	40.8	0.95	-0.92	
3,750.0	0.97	293.32	3,749.7	14.2	-40.6	41.1	1.37	1.24	
3,775.0	0.69	290.41	3,774.7	14.3	-41.0	41.5	1.13	-1.12	
3,800.0	0.62	292.97	3,799.7	14.4	-41.2	41.8	0.30	-0.28	
3,825.0	0.65	278.91	3,824.7	14.5	-41.5	42.0	0.63	0.12	
3,850.0	0.76	291.23	3,849.7	14.6	-41.8	42.3	0.75	0.44	
3,875.0	0.65	286.16	3,874.7	14.7	-42.1	42.6	0.51	-0.44	
3,900.0	0.50	299.92	3,899.7	14.8	-42.3	42.8	0.81	-0.60	
3,925.0	0.44	308.65	3,924.7	14.9	-42.5	43.0	0.37	-0.24	
3,950.0	0.73	337.77	3,949.7	15.1	-42.6	43.2	1.63	1.16	
3,975.0	0.81	321.18	3,974.7	15.4	-42.8	43.3	0.94	0.32	
4,000.0	1.00	317.01	3,999.6	15.7	-43.1	43.6	0.80	0.76	
4,025.0	1.01	306.61	4,024.6	16.0	-43.4	44.0	0.73	0.04	
4,050.0	0.56	295.30	4,049.6	16.2	-43.7	44.2	1.90	-1.80	
4,075.0	0.61	331.27	4,074.6	16.3	-43.8	44.4	1.46	0.20	
4,100.0	0.90	323.20	4,099.6	16.6	-44.0	44.6	1.23	1.16	
4,125.0	1.04	307.27	4,124.6	16.9	-44.3	44.9	1.21	0.56	
4,150.0	1.02	307.74	4,149.6	17.2	-44.7	45.3	0.09	-0.08	
4,175.0	0.70	293.27	4,174.6	17.4	-45.0	45.6	1.54	-1.28	
4,200.0	0.76	324.35	4,199.6	17.6	-45.2	45.9	1.58	0.24	
4,225.0	1.10	299.19	4,224.6	17.8	-45.5	46.2	2.09	1.36	
4,250.0	0.89	294.42	4,249.6	18.0	-45.9	46.6	0.90	-0.84	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Meadows 108-3014 01H
Project:	San Juan Co, NM	TVD Reference:	KBE @ 5557.0ft
Site:	S8-T30N-R14W	MD Reference:	KBE @ 5557.0ft
Well:	Meadows 108-3014 01H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	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
4,275.0	0.58	306.39	4,274.6	18.2	-46.2	46.9	1.38	-1.24	
4,300.0	0.95	319.18	4,299.6	18.4	-46.4	47.1	1.62	1.48	
4,322.1	1.06	308.39	4,321.7	18.7	-46.7	47.4	0.99	0.50	
4,414.0	1.10	303.30	4,413.6	19.7	-48.1	48.8	0.11	0.04	
4,446.0	1.10	303.00	4,445.6	20.0	-48.6	49.4	0.02	0.00	
4,458.0	1.50	297.90	4,457.6	20.2	-48.9	49.6	3.47	3.33	
4,478.0	3.80	291.80	4,477.6	20.5	-49.7	50.5	11.57	11.50	
4,509.0	8.60	295.60	4,508.4	21.9	-52.8	53.6	15.53	15.48	
4,541.0	9.70	296.40	4,540.0	24.1	-57.3	58.2	3.46	3.44	
4,573.0	10.60	288.70	4,571.5	26.3	-62.5	63.5	5.08	2.81	
4,605.0	11.70	282.50	4,602.9	27.9	-68.5	69.5	5.08	3.44	
4,637.0	14.00	278.20	4,634.1	29.2	-75.5	76.5	7.78	7.19	
4,669.0	16.20	280.50	4,665.0	30.6	-83.7	84.8	7.12	6.87	
4,700.0	17.60	283.00	4,694.6	32.4	-92.5	93.7	5.09	4.52	
4,731.0	19.70	284.90	4,724.0	34.8	-102.2	103.4	7.05	6.77	
4,762.0	22.20	285.70	4,752.9	37.7	-112.8	114.2	8.12	8.06	
4,793.0	23.80	285.70	4,781.5	41.0	-124.5	126.0	5.16	5.16	
4,825.0	26.20	284.20	4,810.5	44.5	-137.6	139.1	7.76	7.50	
4,857.0	29.30	282.30	4,838.8	47.9	-152.1	153.8	10.07	9.69	
4,888.0	31.50	280.30	4,865.5	50.9	-167.5	169.3	7.81	7.10	
4,920.0	32.60	279.40	4,892.6	53.8	-184.2	186.1	3.75	3.44	
4,952.0	34.90	278.50	4,919.3	56.6	-201.7	203.7	7.36	7.19	
4,983.0	38.00	278.40	4,944.2	59.3	-220.0	222.0	10.00	10.00	
5,015.0	42.10	280.20	4,968.7	62.7	-240.3	242.5	13.31	12.81	
5,046.0	46.00	283.40	4,991.0	67.1	-261.4	263.7	14.48	12.58	
5,078.0	49.50	284.00	5,012.5	72.7	-284.4	286.9	11.03	10.94	
5,108.0	53.60	282.80	5,031.1	78.1	-307.2	309.9	14.02	13.67	
5,140.0	57.80	281.80	5,049.1	83.8	-333.0	336.0	13.38	13.12	
5,172.0	62.20	281.80	5,065.1	89.4	-360.2	363.3	13.75	13.75	
5,204.0	65.40	281.80	5,079.3	95.3	-388.3	391.6	10.00	10.00	
5,235.0	68.00	281.40	5,091.5	101.0	-416.2	419.7	8.47	8.39	
5,267.0	69.40	281.40	5,103.2	106.9	-445.4	449.1	4.37	4.37	
5,299.0	71.20	281.40	5,113.9	112.9	-474.9	478.8	5.62	5.62	
5,330.0	73.30	280.90	5,123.4	118.6	-503.9	508.0	6.95	6.77	
5,362.0	75.50	280.30	5,132.0	124.2	-534.2	538.5	7.11	6.87	
5,393.0	78.10	280.30	5,139.1	129.6	-563.9	568.3	8.39	8.39	
5,423.0	79.80	279.80	5,144.8	134.8	-592.9	597.5	5.90	5.67	
5,454.0	81.00	278.00	5,150.0	139.5	-623.0	627.9	6.91	3.87	
5,486.0	82.50	277.20	5,154.6	143.7	-654.4	659.4	5.30	4.69	
5,508.0	82.50	277.20	5,157.5	146.4	-676.1	681.1	0.00	0.00	
5,541.0	84.10	274.40	5,161.3	149.7	-708.7	713.8	9.72	4.85	
5,571.0	87.40	274.00	5,163.5	151.9	-738.5	743.7	11.08	11.00	
5,603.0	88.80	273.90	5,164.6	154.1	-770.4	775.7	4.39	4.37	
5,634.0	90.00	274.00	5,164.9	156.3	-801.3	806.7	3.88	3.87	
5,666.0	91.60	274.20	5,164.5	158.6	-833.3	838.6	5.04	5.00	
5,698.0	92.30	274.20	5,163.4	160.9	-865.2	870.6	2.19	2.19	
5,730.0	92.90	273.80	5,161.9	163.1	-897.0	902.5	2.25	1.87	
5,792.0	92.90	271.80	5,158.8	166.1	-958.9	964.5	3.22	0.00	
5,854.0	92.60	272.30	5,155.8	168.4	-1,020.8	1,026.4	0.94	-0.48	
5,917.0	91.40	271.80	5,153.6	170.6	-1,083.7	1,089.3	2.06	-1.90	
5,981.0	90.30	271.00	5,152.7	172.2	-1,147.7	1,153.3	2.13	-1.72	
6,043.0	90.70	270.70	5,152.1	173.1	-1,209.7	1,215.3	0.81	0.65	
6,106.0	91.60	270.30	5,150.9	173.6	-1,272.6	1,278.3	1.56	1.43	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Meadows I08-3014 01H
Project:	San Juan Co, NM	TVD Reference:	KBE @ 5557.0ft
Site:	S8-T30N-R14W	MD Reference:	KBE @ 5557.0ft
Well:	Meadows I08-3014 01H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	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
6,170.0	91.90	269.30	5,148.9	173.4	-1,336.6	1,342.2	1.63	0.47	
6,231.0	91.20	269.00	5,147.3	172.5	-1,397.6	1,403.1	1.25	-1.15	
6,294.0	90.50	269.30	5,146.3	171.6	-1,460.6	1,466.0	1.21	-1.11	
6,357.0	89.40	269.70	5,146.4	171.0	-1,523.6	1,528.9	1.86	-1.75	
6,420.0	89.90	270.20	5,146.8	171.0	-1,586.6	1,591.9	1.12	0.79	
6,483.0	91.10	270.50	5,146.2	171.4	-1,649.6	1,654.8	1.96	1.90	
6,546.0	92.80	271.20	5,144.1	172.3	-1,712.5	1,717.8	2.92	2.70	
6,609.0	92.10	271.80	5,141.4	173.9	-1,775.4	1,780.7	1.46	-1.11	
6,671.0	91.00	271.00	5,139.7	175.5	-1,837.4	1,842.7	2.19	-1.77	
6,735.0	91.20	270.30	5,138.5	176.2	-1,901.4	1,906.7	1.14	0.31	
6,798.0	91.60	269.50	5,136.9	176.1	-1,964.3	1,969.6	1.42	0.63	
6,861.0	91.40	269.40	5,135.3	175.5	-2,027.3	2,032.5	0.35	-0.32	
6,924.0	92.10	269.40	5,133.4	174.8	-2,090.3	2,095.4	1.11	1.11	
6,988.0	91.20	272.50	5,131.5	175.9	-2,154.2	2,159.3	5.04	-1.41	
7,050.0	91.70	269.80	5,129.9	177.1	-2,216.2	2,221.3	4.43	0.81	
7,114.0	91.90	269.60	5,127.9	176.8	-2,280.2	2,285.2	0.44	0.31	
7,177.0	91.50	270.60	5,126.1	176.9	-2,343.1	2,348.1	1.71	-0.63	
7,240.0	90.30	271.80	5,125.1	178.2	-2,406.1	2,411.1	2.69	-1.90	
7,304.0	90.70	271.60	5,124.5	180.1	-2,470.1	2,475.1	0.70	0.62	
7,367.0	89.20	273.00	5,124.6	182.6	-2,533.0	2,538.1	3.26	-2.38	
7,430.0	89.90	273.00	5,125.1	185.9	-2,596.0	2,601.1	1.11	1.11	
7,491.0	89.70	272.10	5,125.3	188.6	-2,656.9	2,662.1	1.51	-0.33	
7,554.0	89.80	271.80	5,125.6	190.8	-2,719.9	2,725.1	0.50	0.16	
7,617.0	90.40	270.80	5,125.4	192.2	-2,782.8	2,788.1	1.85	0.95	
7,679.0	90.40	271.20	5,125.0	193.3	-2,844.8	2,850.1	0.65	0.00	
7,742.0	90.80	271.90	5,124.4	195.0	-2,907.8	2,913.1	1.28	0.63	
7,806.0	90.60	271.90	5,123.6	197.1	-2,971.8	2,977.1	0.31	-0.31	
7,869.0	90.30	271.60	5,123.1	199.1	-3,034.7	3,040.1	0.67	-0.48	
7,930.0	90.40	271.40	5,122.7	200.7	-3,095.7	3,101.1	0.37	0.16	
7,993.0	90.00	270.10	5,122.5	201.5	-3,158.7	3,164.0	2.16	-0.63	
8,055.0	90.10	268.80	5,122.4	200.9	-3,220.7	3,226.0	2.10	0.16	
8,119.0	90.50	268.00	5,122.1	199.1	-3,284.7	3,289.8	1.40	0.62	
8,182.0	90.70	268.10	5,121.4	196.9	-3,347.6	3,352.7	0.35	0.32	
8,245.0	90.50	269.00	5,120.8	195.4	-3,410.6	3,415.5	1.46	-0.32	
8,308.0	90.00	269.70	5,120.5	194.6	-3,473.6	3,478.5	1.37	-0.79	
8,370.0	90.00	269.20	5,120.5	194.0	-3,535.6	3,540.4	0.81	0.00	
8,432.0	90.90	268.50	5,120.0	192.8	-3,597.6	3,602.3	1.84	1.45	
8,496.0	90.90	268.20	5,119.0	191.0	-3,661.5	3,666.1	0.47	0.00	
8,558.0	91.40	267.60	5,117.8	188.7	-3,723.5	3,728.0	1.26	0.81	
8,622.0	91.50	268.30	5,116.1	186.4	-3,787.4	3,791.8	1.10	0.16	
8,684.0	90.60	269.30	5,115.0	185.1	-3,849.4	3,853.6	2.17	-1.45	
8,747.0	91.40	269.70	5,113.9	184.6	-3,912.4	3,916.6	1.42	1.27	
8,810.0	89.70	270.20	5,113.3	184.5	-3,975.4	3,979.5	2.81	-2.70	
8,874.0	90.90	271.20	5,113.0	185.3	-4,039.4	4,043.5	2.44	1.87	
8,937.0	90.50	270.70	5,112.2	186.3	-4,102.4	4,106.5	1.02	-0.63	
8,999.0	90.20	269.80	5,111.8	186.6	-4,164.4	4,168.4	1.53	-0.48	
9,062.0	89.80	270.90	5,111.8	187.0	-4,227.4	4,231.4	1.86	-0.63	
9,124.0	90.60	271.80	5,111.6	188.4	-4,289.3	4,293.4	1.94	1.29	
9,187.0	88.70	270.40	5,112.0	189.6	-4,352.3	4,356.4	3.75	-3.02	
9,251.0	90.20	270.40	5,112.6	190.1	-4,416.3	4,420.3	2.34	2.34	
9,313.0	88.90	269.50	5,113.1	190.0	-4,478.3	4,482.3	2.55	-2.10	
9,376.0	89.80	269.30	5,113.8	189.4	-4,541.3	4,545.2	1.46	1.43	
9,412.0	89.90	270.90	5,113.9	189.4	-4,577.3	4,581.2	4.45	0.28	Last Cathedral Survey @ 9,412' MD

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Meadows I08-3014 01H
Project:	San Juan Co, NM	TVD Reference:	KBE @ 5557 0ft
Site:	S8-T30N-R14W	MD Reference:	KBE @ 5557.0ft
Well:	Meadows I08-3014 01H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	Database:	USA EDM 5000 Multi Users DB

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
9,467 0	89.90	270 90	5,114.0	190 3	-4,632.3	4,636 2	0 00	0.00	Projection to Bit @ 9,467'

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
M I08-3014 01H LP (5 8 - hit/miss target - Shape - Point	0 00	0 00	5,155.2	175 0	-550 2	2,120,438.98	2,578,781 13	36 826211	-108.326430
- actual wellpath misses target center by 50.0ft at 5391 5ft MD (5138.8 TVD, 129 4 N, -562 4 E)									
M I08-3014 01H PBHL - actual wellpath misses target center by 28 3ft at 9467 0ft MD (5114 0 TVD, 190 3 N, -4632.3 E) - Point	0 00	0 00	5,098 0	175.0	-4,650 0	2,120,460 06	2,574,681 34	36.826210	-108 340438
M I08-3014 01H LP - actual wellpath misses target center by 47 9ft at 5389 5ft MD (5138.4 TVD, 129 0 N, -560 5 E) - Point	0 00	0 00	5,146.8	175.0	-550 2	2,120,438 99	2,578,781.13	36 826211	-108 326430

Design Annotations	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
	9,412.0	5,113 9	189 4	-4,577 3	Last Cathedral Survey @ 9,412' MD
	9,467 0	5,114 0	190 3	-4,632 3	Projection to Bit @ 9,467'

Checked By: _____	Approved By: _____	Date: _____
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