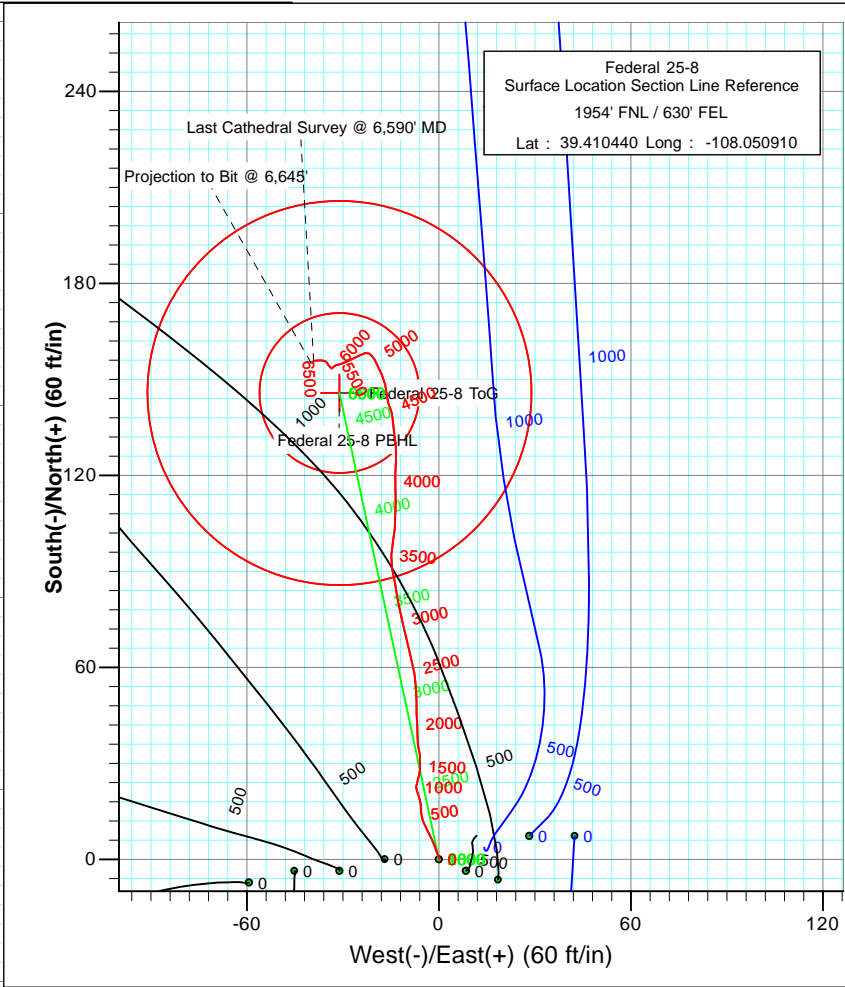
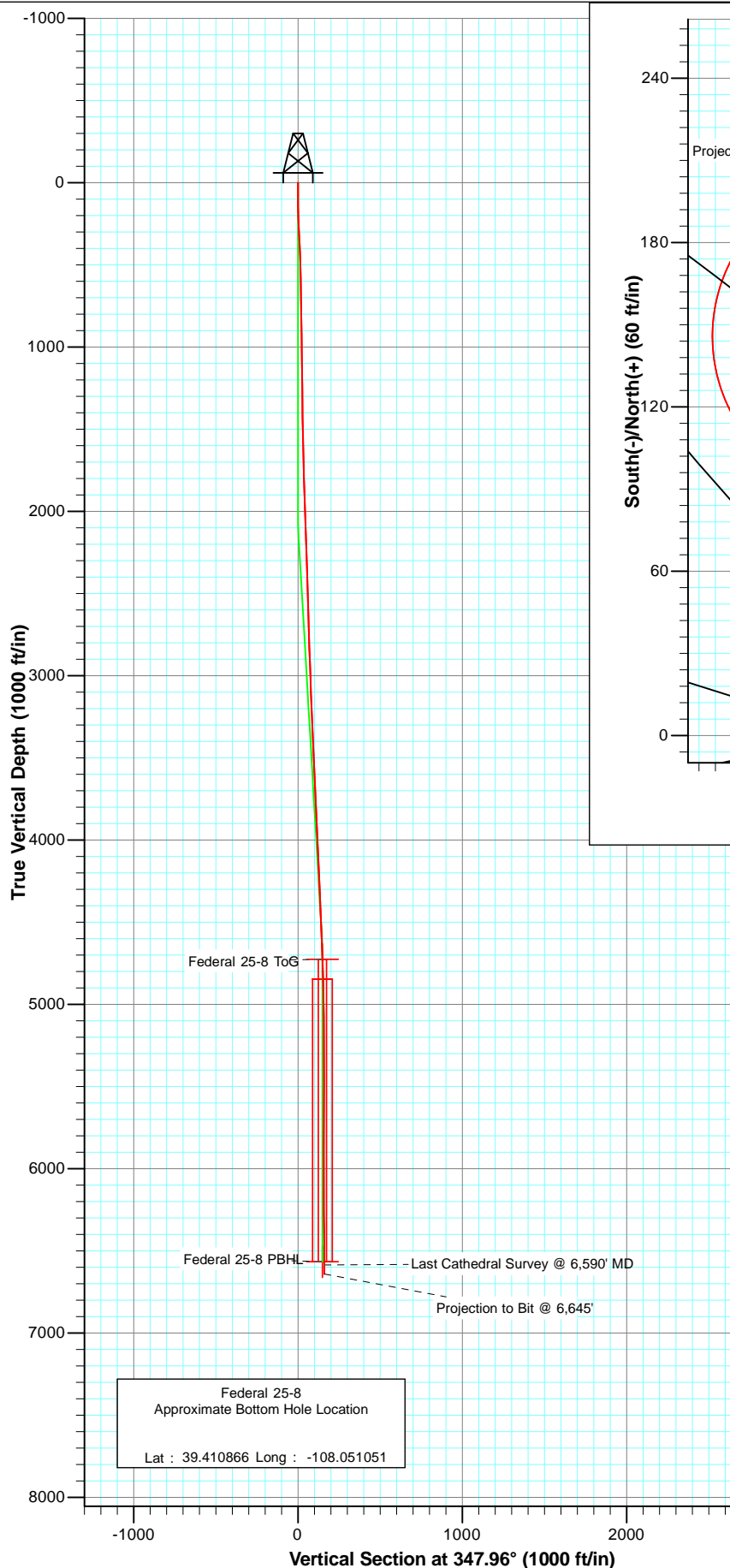




Project: S. Piceance (Parachute)
 Site: SENE Sec25-T7S-R96W (PH-25)
 Well: Federal 25-8
 Wellbore: DD
 Plan: FINAL



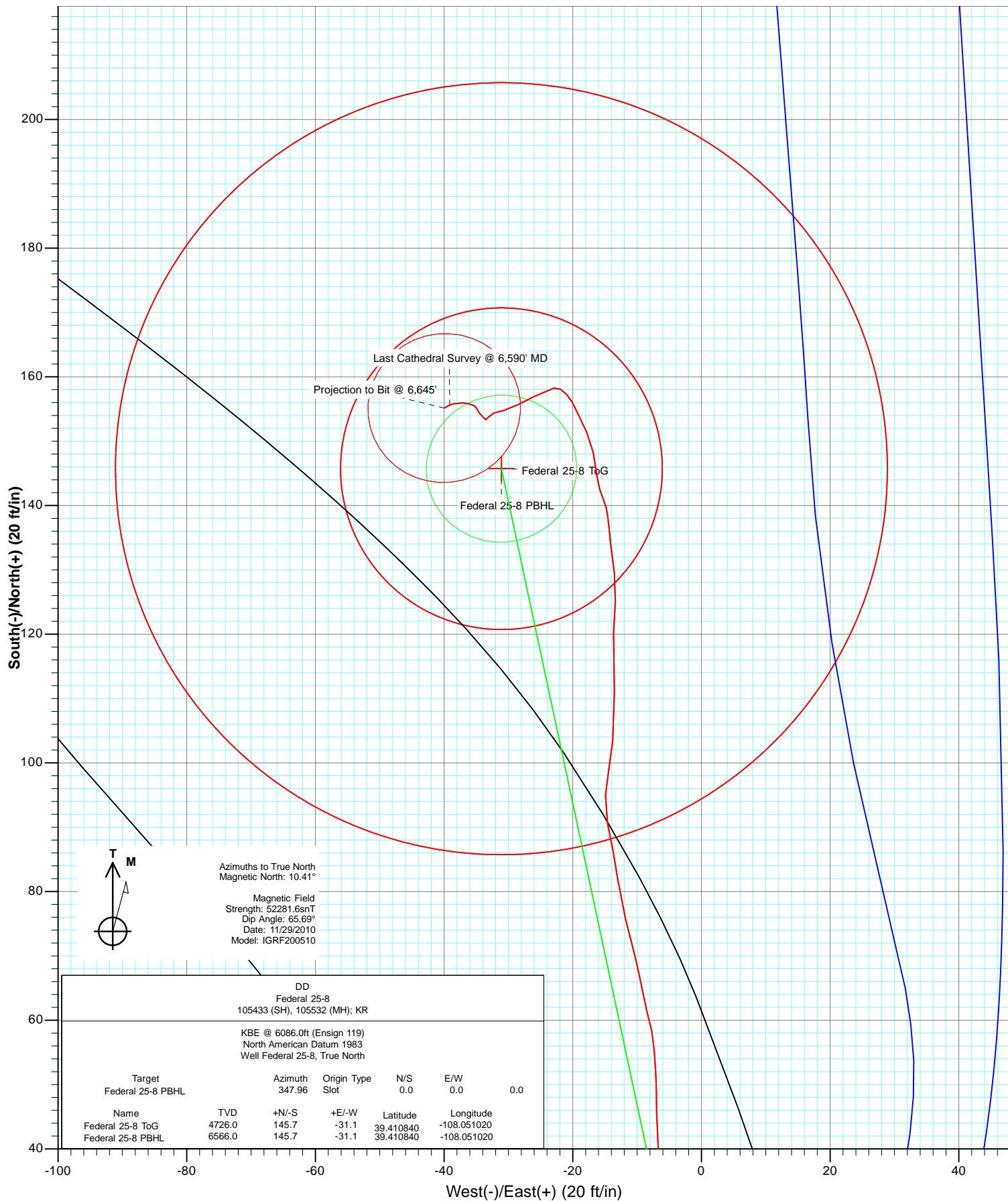
Azimuths to True North
 Magnetic North: 10.41°

Magnetic Field
 Strength: 52281.6snT
 Dip Angle: 65.69°
 Date: 11/29/2010
 Model: IGRF200510

DD Federal 25-8 105433 (SH), 105532 (MH); KR					
KBE @ 6086.0ft (Ensign 119) North American Datum 1983 Well Federal 25-8, True North					
Target Federal 25-8 PBHL	Azimuth 347.96	Origin Type Slot	N/S 0.0	E/W 0.0	
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Federal 25-8 ToG	4726.0	145.7	-31.1	39.410840	-108.051020
Federal 25-8 PBHL	6566.0	145.7	-31.1	39.410840	-108.051020



Project: S. Piceance (Parachute)
Site: SENE Sec25-T7S-R96W (PH-25)
Well: Federal 25-8
Wellbore: DD
Plan: FINAL



Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 25-8
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 6086.0ft (Ensign 119)
Site:	SENE Sec25-T7S-R96W (PH-25)	MD Reference:	KBE @ 6086.0ft (Ensign 119)
Well:	Federal 25-8	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Project	S. Piceance (Parachute), Garfield County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	SENE Sec25-T7S-R96W (PH-25)			
Site Position:		Northing:	1,584,503.36 ft	Latitude: 39.410440
From:	Lat/Long	Easting:	2,279,392.91 ft	Longitude: -108.050780
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence: -1.61 °

Well	Federal 25-8			
Well Position	+N/-S	0.0 ft	Northing:	1,584,504.36 ft
	+E/-W	0.0 ft	Easting:	2,279,356.20 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level: 6,064.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/29/2010	10.41	65.69	52,282

Design	DD			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	347.96

Survey Program	Date	12/9/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
82.0	6,645.0	Survey #1 (DD)	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	
82.0	0.20	74.10	82.0	0.0	0.1	0.0	0.24	0.24	
112.0	0.30	342.10	112.0	0.1	0.2	0.1	1.22	0.33	
143.0	1.30	337.20	143.0	0.5	0.0	0.5	3.23	3.23	
173.0	2.10	339.10	173.0	1.4	-0.3	1.4	2.67	2.67	
203.0	2.20	339.80	203.0	2.4	-0.7	2.5	0.34	0.33	
233.0	2.40	338.70	232.9	3.5	-1.1	3.7	0.68	0.67	
263.0	2.60	341.90	262.9	4.8	-1.6	5.0	0.81	0.67	
293.0	2.80	333.50	292.9	6.1	-2.1	6.4	1.48	0.67	
323.0	2.80	335.00	322.8	7.4	-2.8	7.8	0.24	0.00	
354.0	2.90	332.00	353.8	8.8	-3.4	9.3	0.58	0.32	
384.0	2.80	332.80	383.8	10.1	-4.1	10.7	0.36	-0.33	
475.0	2.00	351.20	474.7	13.6	-5.4	14.5	1.21	-0.88	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 25-8
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 6086.0ft (Ensign 119)
Site:	SENE Sec25-T7S-R96W (PH-25)	MD Reference:	KBE @ 6086.0ft (Ensign 119)
Well:	Federal 25-8	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US 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
566.0	0.90	0.30	565.7	15.9	-5.6	16.7	1.23	-1.21	
656.0	0.80	351.60	655.6	17.2	-5.7	18.1	0.18	-0.11	
748.0	0.90	345.80	747.6	18.6	-6.0	19.4	0.14	0.11	
839.0	0.90	341.70	838.6	20.0	-6.4	20.9	0.07	0.00	
929.0	1.10	340.20	928.6	21.4	-6.9	22.4	0.22	0.22	
1,020.0	0.60	10.40	1,019.6	22.7	-7.1	23.7	0.72	-0.55	
1,088.0	0.70	17.90	1,087.6	23.5	-6.9	24.4	0.19	0.15	
1,242.0	0.70	9.50	1,241.6	25.3	-6.5	26.1	0.07	0.00	
1,336.0	0.60	25.70	1,335.6	26.3	-6.2	27.0	0.22	-0.11	
1,429.0	1.40	359.60	1,428.6	27.9	-6.0	28.5	0.97	0.86	
1,522.0	1.40	2.90	1,521.5	30.2	-5.9	30.7	0.09	0.00	
1,616.0	1.40	356.50	1,615.5	32.4	-5.9	33.0	0.17	0.00	
1,709.0	1.00	339.70	1,708.5	34.3	-6.3	34.9	0.57	-0.43	
1,802.0	1.10	358.70	1,801.5	36.0	-6.6	36.6	0.39	0.11	
1,896.0	2.20	358.20	1,895.4	38.7	-6.7	39.2	1.17	1.17	
1,989.0	2.20	357.00	1,988.4	42.3	-6.8	42.8	0.05	0.00	
2,082.0	2.00	358.60	2,081.3	45.7	-6.9	46.1	0.22	-0.22	
2,175.0	1.80	0.10	2,174.2	48.8	-7.0	49.1	0.22	-0.22	
2,269.0	2.10	355.60	2,268.2	52.0	-7.1	52.3	0.36	0.32	
2,362.0	1.90	357.00	2,361.1	55.2	-7.3	55.5	0.22	-0.22	
2,456.0	1.90	348.50	2,455.1	58.3	-7.7	58.6	0.30	0.00	
2,549.0	1.80	344.00	2,548.0	61.2	-8.4	61.6	0.19	-0.11	
2,642.0	1.50	352.20	2,641.0	63.8	-9.0	64.3	0.41	-0.32	
2,736.0	1.40	344.20	2,735.0	66.1	-9.5	66.6	0.24	-0.11	
2,829.0	2.20	350.10	2,827.9	69.0	-10.1	69.6	0.88	0.86	
2,922.0	2.10	342.00	2,920.9	72.4	-10.9	73.0	0.34	-0.11	
3,015.0	2.00	349.70	3,013.8	75.6	-11.7	76.4	0.31	-0.11	
3,109.0	1.80	347.80	3,107.7	78.6	-12.3	79.5	0.22	-0.21	
3,203.0	2.30	349.60	3,201.7	81.9	-13.0	82.8	0.54	0.53	
3,296.0	3.00	351.00	3,294.6	86.2	-13.7	87.1	0.76	0.75	
3,389.0	2.60	346.70	3,387.5	90.6	-14.6	91.7	0.49	-0.43	
3,482.0	2.90	4.10	3,480.4	95.0	-14.9	96.0	0.95	0.32	
3,576.0	2.60	10.80	3,574.3	99.5	-14.3	100.3	0.47	-0.32	
3,669.0	2.20	4.70	3,667.2	103.3	-13.8	103.9	0.51	-0.43	
3,763.0	2.20	359.40	3,761.1	106.9	-13.7	107.4	0.22	0.00	
3,856.0	2.90	3.50	3,854.0	111.1	-13.5	111.5	0.78	0.75	
3,950.0	2.60	354.60	3,947.9	115.6	-13.6	115.9	0.55	-0.32	
4,043.0	3.10	3.00	4,040.8	120.2	-13.7	120.4	0.70	0.54	
4,136.0	2.90	3.80	4,133.7	125.0	-13.4	125.1	0.22	-0.22	
4,230.0	2.50	351.40	4,227.6	129.4	-13.5	129.4	0.75	-0.43	
4,323.0	2.70	354.20	4,320.5	133.6	-14.0	133.6	0.25	0.22	
4,416.0	2.50	353.90	4,413.4	137.8	-14.5	137.8	0.22	-0.22	
4,510.0	1.70	334.70	4,507.3	141.1	-15.3	141.2	1.12	-0.85	
4,603.0	2.60	351.10	4,600.2	144.4	-16.2	144.7	1.16	0.97	
4,696.0	2.20	350.60	4,693.2	148.3	-16.8	148.5	0.43	-0.43	
4,790.0	1.90	332.50	4,787.1	151.5	-17.8	151.8	0.75	-0.32	
4,883.0	1.70	336.10	4,880.1	154.1	-19.1	154.7	0.25	-0.22	
4,977.0	1.10	330.40	4,974.0	156.1	-20.1	156.9	0.65	-0.64	
5,065.0	0.80	314.10	5,062.0	157.3	-21.0	158.2	0.46	-0.34	
5,158.0	0.70	305.10	5,155.0	158.1	-21.9	159.2	0.17	-0.11	
5,252.0	0.70	252.00	5,249.0	158.2	-22.9	159.5	0.67	0.00	
5,345.0	1.00	244.00	5,342.0	157.7	-24.2	159.3	0.35	0.32	
5,438.0	1.50	248.50	5,435.0	156.9	-26.1	158.9	0.55	0.54	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 25-8
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 6086.0ft (Ensign 119)
Site:	SENE Sec25-T7S-R96W (PH-25)	MD Reference:	KBE @ 6086.0ft (Ensign 119)
Well:	Federal 25-8	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US 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
5,532.0	1.80	239.20	5,528.9	155.7	-28.5	158.2	0.43	0.32	
5,625.0	1.30	258.90	5,621.9	154.7	-30.8	157.8	0.78	-0.54	
5,718.0	0.50	249.40	5,714.9	154.4	-32.2	157.7	0.87	-0.86	
5,812.0	0.80	226.30	5,808.9	153.8	-33.0	157.3	0.42	0.32	
5,905.0	0.00	280.40	5,901.9	153.4	-33.5	157.0	0.86	-0.86	
5,998.0	0.60	312.00	5,994.9	153.7	-33.9	157.4	0.65	0.65	
6,091.0	0.60	322.80	6,087.9	154.4	-34.5	158.2	0.12	0.00	
6,185.0	0.30	346.80	6,181.9	155.0	-34.9	158.9	0.37	-0.32	
6,278.0	0.50	305.20	6,274.9	155.5	-35.3	159.4	0.37	0.22	
6,371.0	0.60	280.40	6,367.9	155.8	-36.1	159.9	0.27	0.11	
6,465.0	0.70	274.10	6,461.9	155.9	-37.1	160.3	0.13	0.11	
6,558.0	1.10	258.70	6,554.8	155.8	-38.6	160.4	0.50	0.43	
6,590.0	1.00	241.00	6,586.8	155.6	-39.1	160.4	1.06	-0.31	Last Cathedral Survey @ 6,590' MD
6,645.0	1.00	241.00	6,641.8	155.2	-40.0	160.1	0.00	0.00	Projection to Bit @ 6,645'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Federal 25-8 PBHL	0.00	0.00	6,566.0	145.7	-31.1	1,584,650.90	2,279,329.22	39.410840	-108.051020
- survey misses target center by 12.7ft at 6569.1ft MD (6565.9 TVD, 155.8 N, -38.8 E)									
- Circle (radius 60.0)									
Federal 25-8 ToG	0.00	0.00	4,726.0	145.7	-31.1	1,584,650.90	2,279,329.22	39.410840	-108.051020
- survey misses target center by 14.5ft at 4728.9ft MD (4726.0 TVD, 149.5 N, -17.1 E)									
- Circle (radius 25.0)									

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
6,590.0	6,586.8	155.6	-39.1	Last Cathedral Survey @ 6,590' MD	
6,645.0	6,641.8	155.2	-40.0	Projection to Bit @ 6,645'	

Checked By: _____	Approved By: _____	Date: _____
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