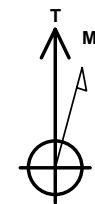
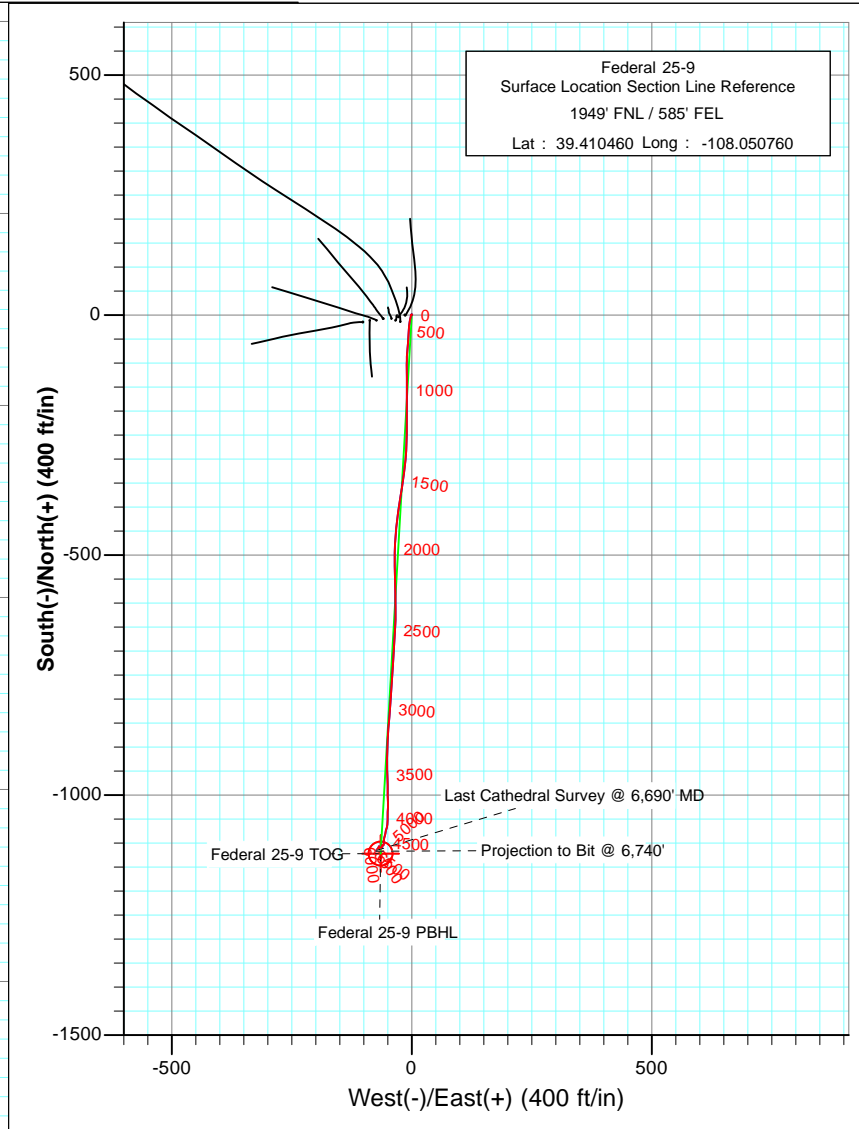
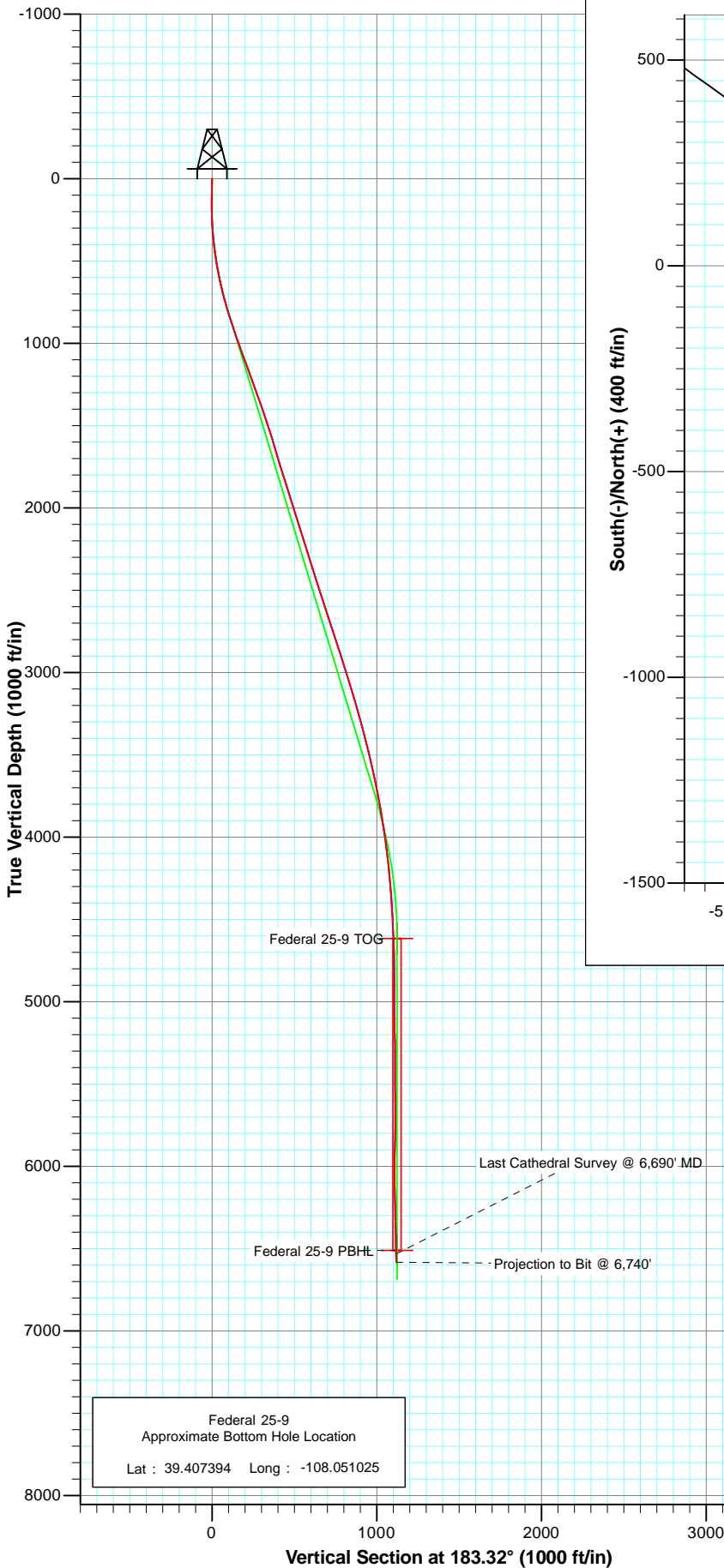




Project: S. Piceance (Parachute)
 Site: SENE Sec25-T7S-R96W (PH-25)
 Well: Federal 25-9
 Wellbore: DD
 Plan: FINAL



Azimuths to True North
 Magnetic North: 10.44°

Magnetic Field
 Strength: 52257.1snT
 Dip Angle: 65.67°
 Date: 11/4/2010
 Model: IGRF2010

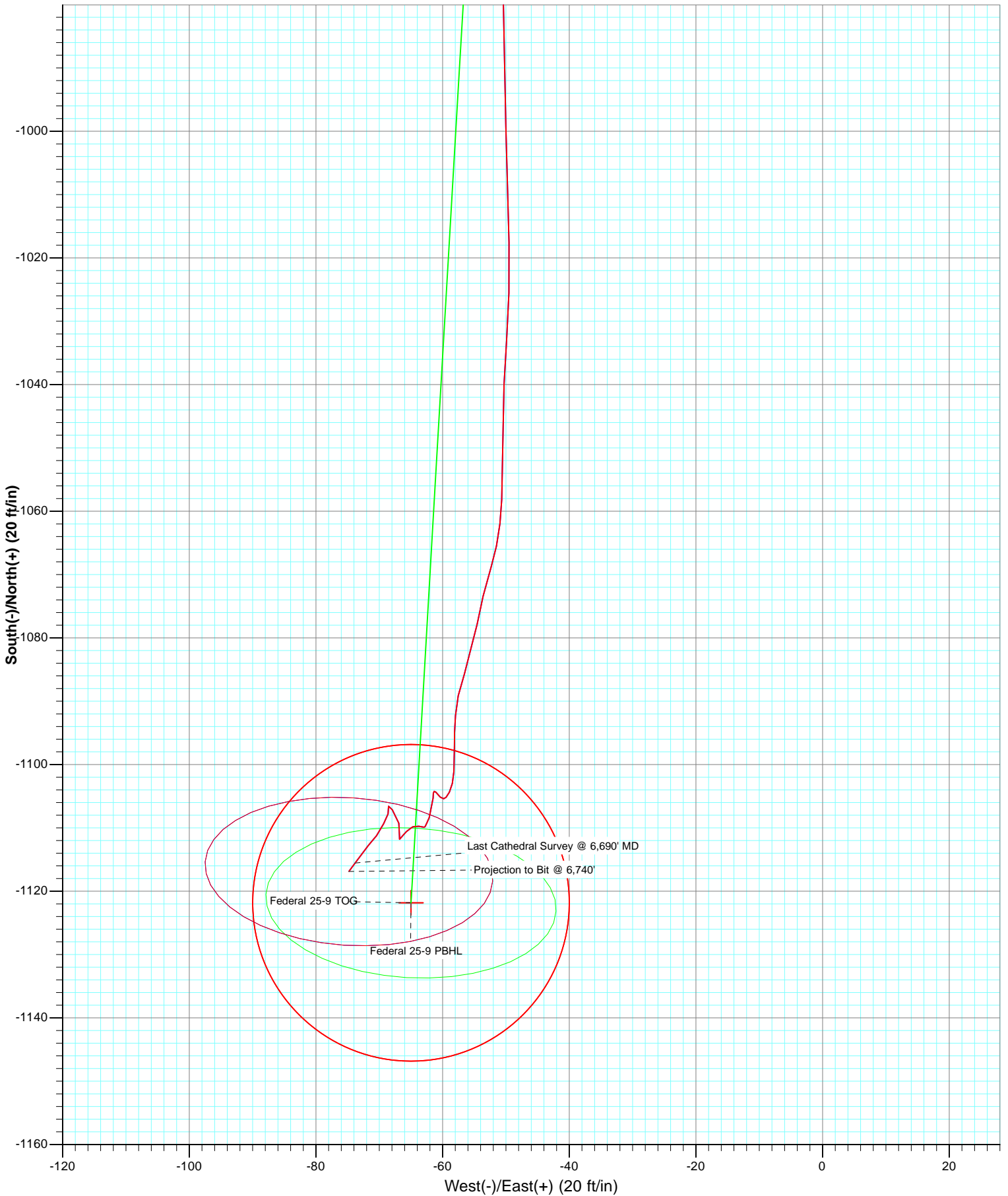
DD Federal 25-9 105436 (SH-TD); KR					
WELL @ 6086.0ft (Original Well Elev) North American Datum 1983 Well Federal 25-9, True North					
Target	Azimuth	Origin Type	N/S	E/W	
Federal 25-9 PBHL	183.32	Slot	0.0	0.0	
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Federal 25-9 TOG	4616.0	-1121.8	-65.0	39.407380	-108.050990
Federal 25-9 PBHL	6511.0	-1121.8	-65.0	39.407380	-108.050990

Federal 25-9
 Approximate Bottom Hole Location
 Lat : 39.407394 Long : -108.051025

Vertical Section at 183.32° (1000 ft/in)



Project: S. Piceance (Parachute)
Site: SENE Sec25-T7S-R96W (PH-25)
Well: Federal 25-9
Wellbore: DD
Plan: FINAL



Cathedral Energy

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Federal 25-9
Project: S. Piceance (Parachute)	TVD Reference: WELL @ 6086.0ft (Original Well Elev)
Site: SENE Sec25-T7S-R96W (PH-25)	MD Reference: WELL @ 6086.0ft (Original Well Elev)
Well: Federal 25-9	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 25-9				
Well Position	+N/-S 0.0 ft	Northing: 1,584,510.47 ft	Latitude: 39.410460	
	+E/-W 0.0 ft	Easting: 2,279,398.77 ft	Longitude: -108.050760	
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)
	IGRF2010	11/4/2010	10.44	65.67	52,257

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	183.32

Survey Program		Date 11/15/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
82.0	6,740.0	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	0.80	359.50	82.0	0.6	0.0	-0.6	0.98	0.98	
113.0	1.10	3.10	113.0	1.1	0.0	-1.1	0.99	0.97	
143.0	0.80	344.60	143.0	1.6	0.0	-1.6	1.42	-1.00	
173.0	0.40	288.30	173.0	1.8	-0.2	-1.8	2.22	-1.33	
203.0	0.90	218.80	203.0	1.7	-0.4	-1.6	2.82	1.67	
233.0	2.00	205.00	233.0	1.0	-0.8	-1.0	3.82	3.67	
263.0	2.90	205.90	262.9	-0.2	-1.4	0.2	3.00	3.00	
293.0	4.00	191.20	292.9	-1.9	-1.9	2.0	4.68	3.67	
323.0	5.10	193.10	322.8	-4.2	-2.4	4.3	3.70	3.67	
354.0	6.00	191.10	353.7	-7.1	-3.0	7.3	2.97	2.90	
384.0	6.50	189.50	383.5	-10.3	-3.6	10.5	1.76	1.67	
475.0	8.40	188.00	473.7	-22.0	-5.4	22.3	2.10	2.09	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 25-9
Project:	S. Piceance (Parachute)	TVD Reference:	WELL @ 6086.0ft (Original Well Elev)
Site:	SENE Sec25-T7S-R96W (PH-25)	MD Reference:	WELL @ 6086.0ft (Original Well Elev)
Well:	Federal 25-9	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	10.50	182.00	563.5	-36.9	-6.6	37.2	2.55	2.31	
656.0	12.70	184.40	651.6	-54.9	-7.6	55.3	2.50	2.44	
748.0	15.60	184.80	740.8	-77.3	-9.4	77.8	3.15	3.15	
839.0	17.50	179.80	828.1	-103.2	-10.4	103.7	2.61	2.09	
929.0	18.10	179.40	913.7	-130.7	-10.2	131.1	0.68	0.67	
1,020.0	19.40	180.20	999.9	-160.0	-10.1	160.3	1.46	1.43	
1,114.0	20.10	180.40	1,088.4	-191.7	-10.3	192.0	0.75	0.74	
1,242.0	21.30	180.30	1,208.1	-237.0	-10.6	237.2	0.94	0.94	
1,335.0	19.80	181.50	1,295.2	-269.6	-11.1	269.8	1.68	-1.61	
1,428.0	18.80	185.40	1,383.0	-300.3	-12.9	300.5	1.75	-1.08	
1,521.0	18.10	187.20	1,471.2	-329.6	-16.1	329.9	0.97	-0.75	
1,615.0	17.50	189.30	1,560.7	-358.0	-20.2	358.6	0.93	-0.64	
1,708.0	16.70	188.80	1,649.6	-385.0	-24.5	385.8	0.87	-0.86	
1,802.0	17.00	188.60	1,739.5	-411.9	-28.7	412.9	0.33	0.32	
1,895.0	17.30	184.60	1,828.4	-439.2	-31.8	440.3	1.31	0.32	
1,988.0	17.30	185.30	1,917.2	-466.7	-34.2	467.9	0.22	0.00	
2,081.0	18.00	179.40	2,005.8	-494.8	-35.3	496.1	2.06	0.75	
2,175.0	17.40	180.90	2,095.4	-523.4	-35.4	524.6	0.80	-0.64	
2,268.0	18.20	177.40	2,183.9	-551.8	-34.9	552.9	1.44	0.86	
2,361.0	17.60	179.60	2,272.4	-580.4	-34.2	581.4	0.97	-0.65	
2,455.0	16.90	178.80	2,362.2	-608.3	-33.8	609.2	0.79	-0.74	
2,548.0	17.00	181.90	2,451.2	-635.4	-34.0	636.3	0.98	0.11	
2,641.0	18.60	183.10	2,539.7	-663.8	-35.2	664.7	1.76	1.72	
2,735.0	18.40	183.30	2,628.9	-693.6	-36.9	694.5	0.22	-0.21	
2,828.0	18.50	184.40	2,717.1	-722.9	-38.9	724.0	0.39	0.11	
2,921.0	17.80	184.60	2,805.4	-751.8	-41.1	752.9	0.76	-0.75	
3,015.0	17.80	182.20	2,894.9	-780.5	-42.8	781.7	0.78	0.00	
3,108.0	17.50	184.70	2,983.6	-808.6	-44.5	809.8	0.88	-0.32	
3,202.0	16.50	184.40	3,073.5	-836.0	-46.7	837.3	1.07	-1.06	
3,295.0	16.40	185.20	3,162.7	-862.3	-48.9	863.6	0.27	-0.11	
3,388.0	15.70	180.30	3,252.0	-887.9	-50.2	889.3	1.64	-0.75	
3,481.0	15.20	183.00	3,341.7	-912.7	-50.9	914.1	0.94	-0.54	
3,575.0	14.00	179.80	3,432.6	-936.4	-51.5	937.8	1.54	-1.28	
3,668.0	13.70	177.30	3,522.9	-958.6	-50.9	959.9	0.72	-0.32	
3,762.0	12.10	179.90	3,614.6	-979.6	-50.4	980.9	1.81	-1.70	
3,855.0	12.30	178.00	3,705.5	-999.2	-50.0	1,000.4	0.48	0.22	
3,949.0	10.20	178.90	3,797.7	-1,017.6	-49.5	1,018.7	2.24	-2.23	
4,042.0	9.00	184.20	3,889.3	-1,033.0	-49.9	1,034.2	1.60	-1.29	
4,135.0	7.30	180.20	3,981.4	-1,046.2	-50.4	1,047.4	1.93	-1.83	
4,229.0	7.30	182.00	4,074.6	-1,058.1	-50.7	1,059.3	0.24	0.00	
4,322.0	6.10	197.10	4,167.0	-1,068.8	-52.3	1,070.0	2.28	-1.29	
4,416.0	5.30	190.10	4,260.6	-1,077.8	-54.6	1,079.2	1.13	-0.85	
4,509.0	4.70	199.00	4,353.2	-1,085.7	-56.6	1,087.1	1.05	-0.65	
4,602.0	3.70	183.60	4,446.0	-1,092.3	-58.0	1,093.8	1.61	-1.08	
4,695.0	2.20	178.50	4,538.8	-1,097.0	-58.1	1,098.6	1.64	-1.61	
4,789.0	2.70	183.70	4,632.7	-1,101.0	-58.2	1,102.6	0.58	0.53	
4,883.0	1.50	207.80	4,726.7	-1,104.3	-58.9	1,105.9	1.56	-1.28	
4,976.0	0.40	274.20	4,819.7	-1,105.4	-59.8	1,107.0	1.49	-1.18	
5,069.0	0.40	318.60	4,912.7	-1,105.1	-60.4	1,106.8	0.33	0.00	
5,162.0	0.90	317.60	5,005.7	-1,104.3	-61.1	1,106.0	0.54	0.54	
5,256.0	1.80	176.70	5,099.6	-1,105.3	-61.5	1,107.0	2.73	0.96	
5,349.0	2.20	203.10	5,192.6	-1,108.4	-62.1	1,110.1	1.07	0.43	
5,442.0	0.20	316.80	5,285.6	-1,109.9	-62.9	1,111.7	2.46	-2.15	

Cathedral Energy

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Federal 25-9
Project: S. Piceance (Parachute)	TVD Reference: WELL @ 6086.0ft (Original Well Elev)
Site: SENE Sec25-T7S-R96W (PH-25)	MD Reference: WELL @ 6086.0ft (Original Well Elev)
Well: Federal 25-9	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
5,536.0	0.90	273.80	5,379.6	-1,109.7	-63.8	1,111.6	0.81	0.74	
5,629.0	0.30	239.10	5,472.6	-1,109.8	-64.7	1,111.7	0.73	-0.65	
5,722.0	1.30	231.10	5,565.5	-1,110.6	-65.7	1,112.5	1.08	1.08	
5,816.0	0.70	204.60	5,659.5	-1,111.8	-66.8	1,113.8	0.79	-0.64	
5,909.0	1.40	11.30	5,752.5	-1,111.2	-66.8	1,113.2	2.24	0.75	
6,002.0	1.10	339.20	5,845.5	-1,109.2	-66.9	1,111.3	0.81	-0.32	
6,096.0	1.80	330.20	5,939.5	-1,107.1	-68.0	1,109.2	0.78	0.74	
6,189.0	0.90	167.20	6,032.5	-1,106.6	-68.5	1,108.7	2.87	-0.97	
6,282.0	0.70	206.50	6,125.5	-1,107.8	-68.6	1,109.9	0.61	-0.22	
6,375.0	1.40	202.40	6,218.4	-1,109.3	-69.3	1,111.5	0.76	0.75	
6,469.0	1.30	220.80	6,312.4	-1,111.2	-70.4	1,113.4	0.47	-0.11	
6,562.0	1.20	218.80	6,405.4	-1,112.8	-71.7	1,115.1	0.12	-0.11	
6,690.0	1.90	215.80	6,533.3	-1,115.5	-73.8	1,117.9	0.55	0.55	Last Cathedral Survey @ 6,690' MD
6,740.0	1.90	215.80	6,583.3	-1,116.9	-74.8	1,119.3	0.00	0.00	Projection to Bit @ 6,740'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Federal 25-9 TOG - hit/miss target - Shape	0.00	0.00	4,616.0	-1,121.8	-65.0	1,583,390.92	2,279,302.31	39.407380	-108.050990
- survey misses target center by 22.6ft at 4773.2ft MD (4616.9 TVD, -1100.3 N, -58.2 E)									
- Point									
Federal 25-9 PBHL - survey misses target center by 10.9ft at 6667.7ft MD (6511.0 TVD, -1115.0 N, -73.4 E)	0.00	0.00	6,511.0	-1,121.8	-65.0	1,583,390.92	2,279,302.31	39.407380	-108.050990
- Circle (radius 25.0)									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,690.0	6,533.3	-1,115.5	-73.8	Last Cathedral Survey @ 6,690' MD
6,740.0	6,583.3	-1,116.9	-74.8	Projection to Bit @ 6,740'

Checked By: _____	Approved By: _____	Date: _____
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