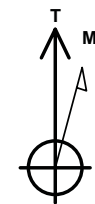
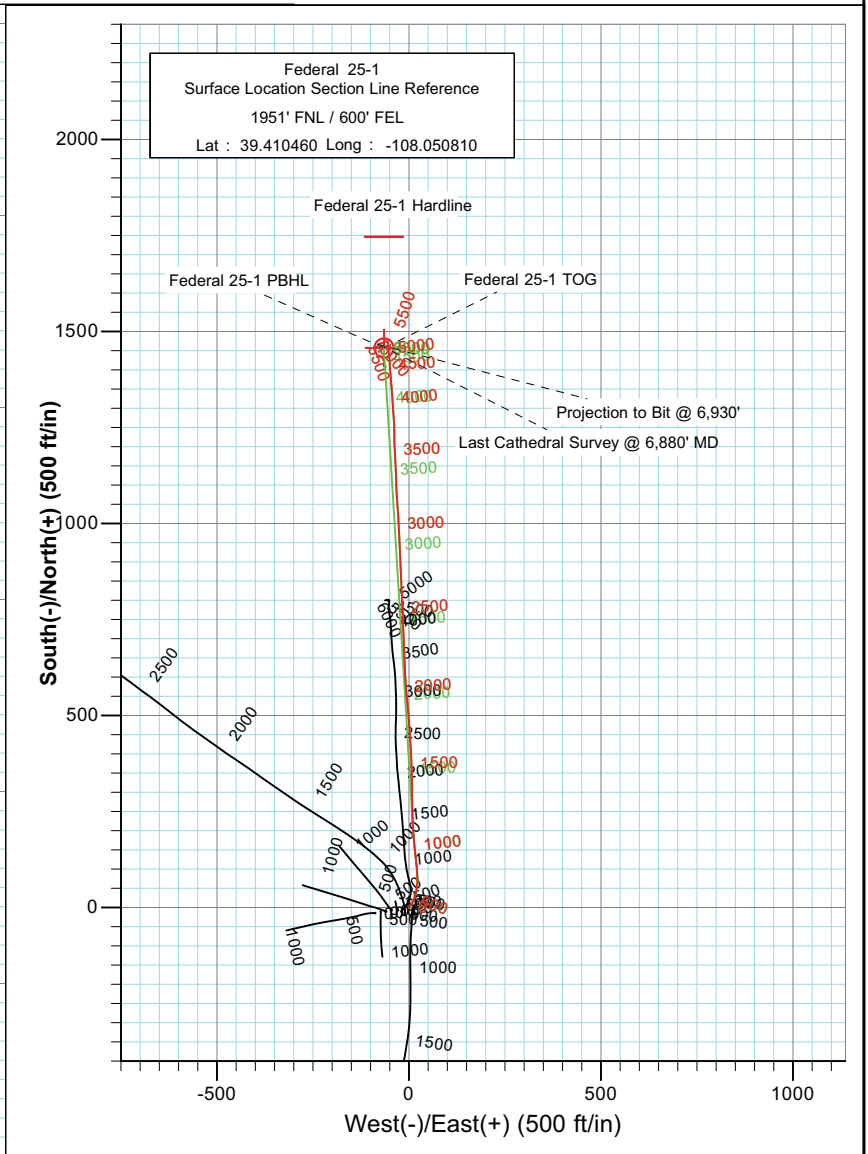
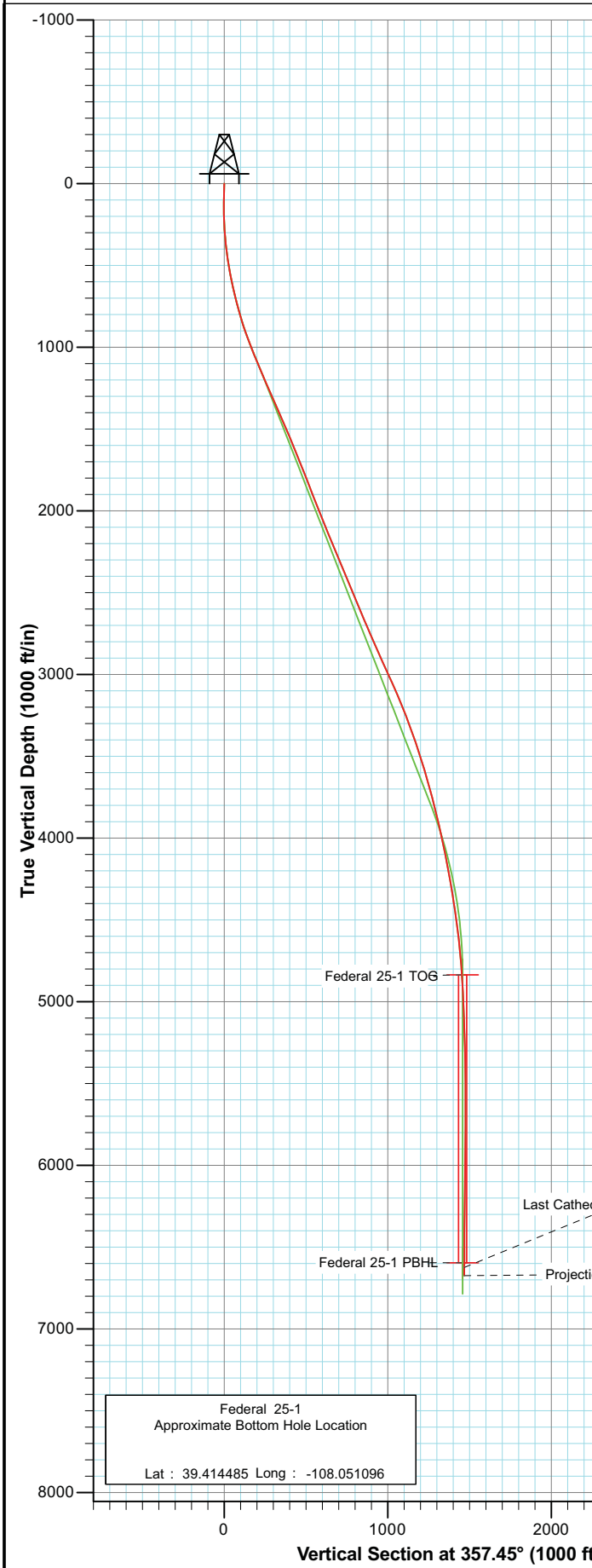




Project: S. Piceance (Parachute)
 Site: SENE Sec25-T7S-R96W (PH-25)
 Well: Federal 25-1
 Wellbore: DD
 Plan: FINAL



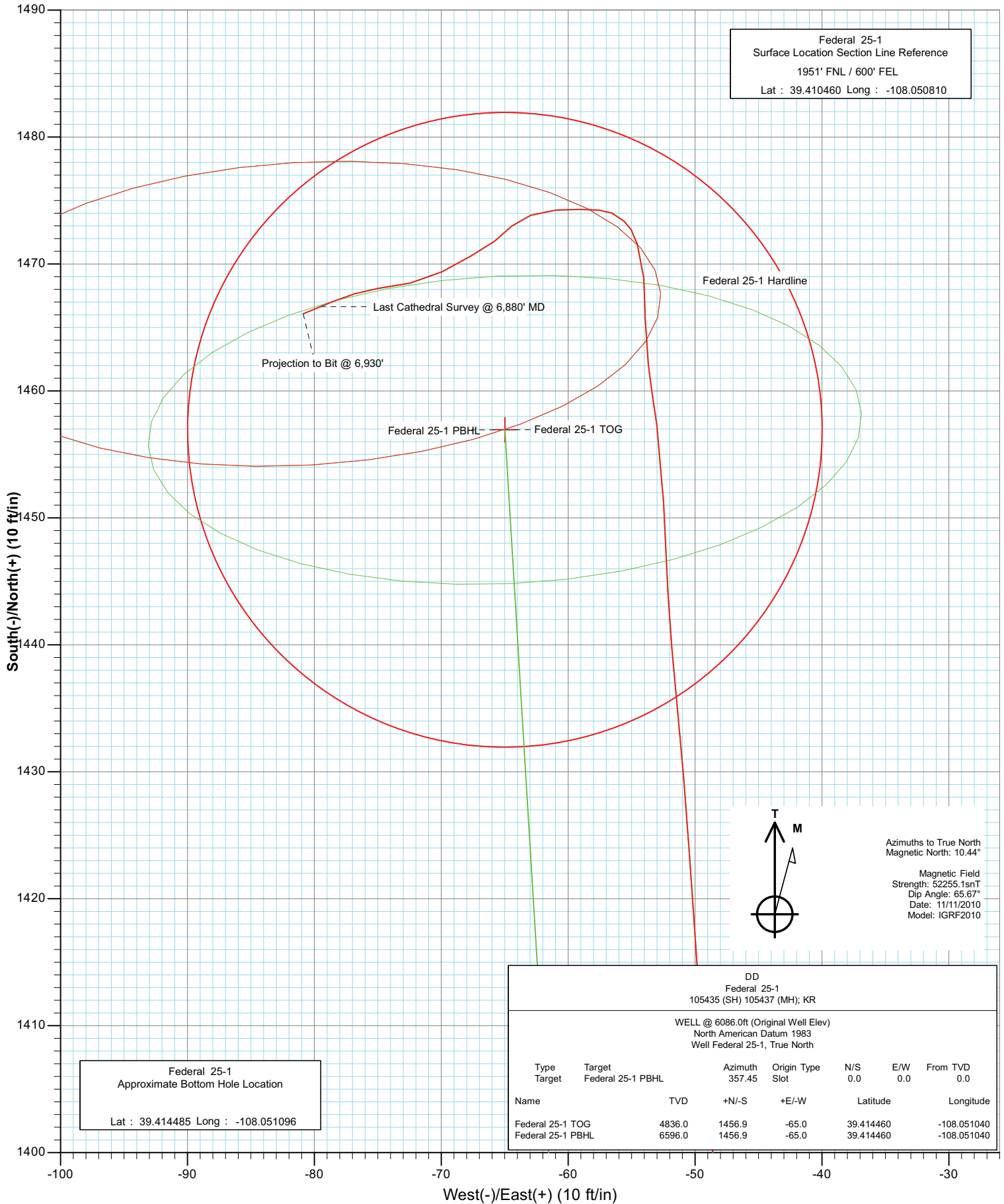
Azimuths to True North
 Magnetic North: 10.44°

Magnetic Field
 Strength: 52255.1snT
 Dip Angle: 65.67°
 Date: 11/11/2010
 Model: IGRF2010

DD Federal 25-1 105435 (SH) 105437 (MH); KR						
WELL @ 6086.0ft (Original Well Elev) North American Datum 1983 Well Federal 25-1, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
Target	Federal 25-1 PBHL	357.45	Slot		0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	From TVD
Federal 25-1 TOG	4836.0	1456.9	-65.0	39.414460	-108.051040	0.0
Federal 25-1 PBHL	6596.0	1456.9	-65.0	39.414460	-108.051040	0.0

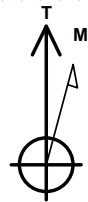


Project: S. Piceance (Parachute)
 Site: SENE Sec25-T7S-R96W (PH-25)
 Well: Federal 25-1
 Wellbore: DD
 Plan: FINAL



Federal 25-1
 Surface Location Section Line Reference
 1951' FNL / 600' FEL
 Lat : 39.410460 Long : -108.050810

Federal 25-1
 Approximate Bottom Hole Location
 Lat : 39.414485 Long : -108.051096



Azimuths to True North
 Magnetic North: 10.44°
 Magnetic Field
 Strength: 52255.1snT
 Dip Angle: 65.67°
 Date: 11/11/2010
 Model: IGRF2010

DD Federal 25-1 105435 (SH) 105437 (MH); KR								
WELL @ 6086.0ft (Original Well Elev) North American Datum 1983 Well Federal 25-1, True North								
Type Target	Target Federal 25-1 PBHL	Azimuth 357.45	Origin Type Slot	N/S 0.0	E/W 0.0	From TVD 0.0		
Name		TVD	+N/-S	+E/-W	Latitude	Longitude		
Federal 25-1 TOG		4836.0	1456.9	-65.0	39.414460	-108.051040		
Federal 25-1 PBHL		6596.0	1456.9	-65.0	39.414460	-108.051040		

Cathedral Energy

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Federal 25-1
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 25-1	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: 0.000in		Grid Convergence:	-1.61 °

Well Federal 25-1				
Well Position	+N/-S	0.0 ft	Northing:	1,584,510.87 ft
	+E/-W	0.0 ft	Easting:	2,279,384.64 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Latitude:	39.410460
			Longitude:	-108.050810
			Ground Level:	6,064.0 ft

Wellbore DD					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/11/2010	10.44	65.67	52,255

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	357.45

Survey Program		Date 12/1/2010
From (ft)	To (ft)	Survey (Wellbore)
82.0	6,930.0	Survey #1 (DD)
		Tool Name
		MWD
		Description
		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	1.00	159.60	82.0	-0.7	0.2	-0.7	1.22	1.22	
113.0	0.90	145.30	113.0	-1.1	0.5	-1.1	0.83	-0.32	
143.0	0.50	92.50	143.0	-1.3	0.7	-1.4	2.39	-1.33	
173.0	0.80	32.00	173.0	-1.2	1.0	-1.2	2.35	1.00	
203.0	1.70	30.60	203.0	-0.6	1.3	-0.6	3.00	3.00	
233.0	2.90	29.80	233.0	0.5	1.9	0.4	4.00	4.00	
263.0	3.70	27.50	262.9	2.0	2.8	1.8	2.70	2.67	
293.0	4.40	25.60	292.8	3.9	3.7	3.7	2.38	2.33	
323.0	5.30	27.30	322.7	6.1	4.8	5.9	3.04	3.00	
354.0	6.20	33.70	353.6	8.8	6.4	8.5	3.56	2.90	
384.0	7.20	28.50	383.4	11.8	8.2	11.4	3.90	3.33	
414.0	8.00	23.70	413.1	15.4	9.9	14.9	3.40	2.67	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 25-1
Project:	S. Piceance (Parachute)	TD Reference:	WELL @ 6086.0ft (Original Well Elev)
Site:	SENE Sec25-T7S-R96W (PH-25)	MVD Reference:	WELL @ 6086.0ft (Original Well Elev)
Well:	Federal 25-1	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
444.0	8.90	25.00	442.8	19.4	11.8	18.8	3.07	3.00	
475.0	9.80	20.50	473.4	24.0	13.7	23.4	3.74	2.90	
505.0	10.60	17.50	502.9	29.0	15.4	28.3	3.20	2.67	
535.0	11.10	16.80	532.4	34.4	17.1	33.6	1.72	1.67	
566.0	11.40	13.00	562.8	40.3	18.6	39.4	2.58	0.97	
596.0	12.10	10.00	592.1	46.3	19.9	45.3	3.10	2.33	
626.0	12.50	9.00	621.4	52.6	20.9	51.6	1.51	1.33	
656.0	13.00	6.10	650.7	59.1	21.8	58.1	2.71	1.67	
748.0	14.60	356.50	740.1	81.0	22.2	79.9	3.03	1.74	
839.0	16.90	354.00	827.6	105.6	20.1	104.6	2.63	2.53	
929.0	19.80	353.70	913.0	133.8	17.0	132.9	3.22	3.22	
1,020.0	21.30	354.10	998.3	165.5	13.7	164.8	1.66	1.65	
1,114.0	22.50	356.70	1,085.5	200.5	10.9	199.8	1.64	1.28	
1,242.0	23.50	358.80	1,203.3	250.4	8.9	249.8	1.01	0.78	
1,335.0	23.70	359.30	1,288.5	287.7	8.3	287.0	0.30	0.22	
1,429.0	23.80	358.90	1,374.6	325.5	7.7	324.9	0.20	0.11	
1,522.0	23.80	358.80	1,459.6	363.0	7.0	362.4	0.04	0.00	
1,615.0	22.70	357.10	1,545.1	399.7	5.7	399.1	1.39	-1.18	
1,709.0	22.20	356.60	1,632.0	435.6	3.7	435.0	0.57	-0.53	
1,802.0	21.60	355.10	1,718.3	470.2	1.2	469.6	0.88	-0.65	
1,895.0	21.90	355.60	1,804.6	504.5	-1.6	504.1	0.38	0.32	
1,988.0	21.00	354.20	1,891.2	538.4	-4.6	538.1	1.11	-0.97	
2,082.0	21.00	355.70	1,979.0	571.9	-7.6	571.7	0.57	0.00	
2,175.0	22.20	357.70	2,065.4	606.1	-9.5	605.9	1.51	1.29	
2,268.0	23.10	357.30	2,151.2	641.9	-11.1	641.8	0.98	0.97	
2,362.0	22.20	357.60	2,238.0	678.1	-12.7	678.0	0.97	-0.96	
2,455.0	22.30	356.70	2,324.1	713.2	-14.5	713.2	0.38	0.11	
2,549.0	22.50	358.70	2,411.0	749.0	-15.9	749.0	0.84	0.21	
2,642.0	23.20	357.50	2,496.7	785.1	-17.1	785.1	0.90	0.75	
2,735.0	22.90	357.50	2,582.3	821.5	-18.7	821.5	0.32	-0.32	
2,829.0	22.30	357.00	2,669.0	857.6	-20.4	857.6	0.67	-0.64	
2,922.0	23.80	357.80	2,754.6	893.9	-22.1	894.0	1.65	1.61	
3,015.0	23.90	357.60	2,839.7	931.5	-23.6	931.6	0.14	0.11	
3,108.0	24.30	357.30	2,924.6	969.4	-25.3	969.6	0.45	0.43	
3,202.0	24.40	356.80	3,010.2	1,008.2	-27.3	1,008.4	0.24	0.11	
3,295.0	23.40	355.70	3,095.2	1,045.8	-29.7	1,046.0	1.18	-1.08	
3,388.0	22.40	357.00	3,180.9	1,081.9	-32.0	1,082.2	1.20	-1.08	
3,482.0	21.70	358.80	3,268.0	1,117.1	-33.3	1,117.5	1.03	-0.74	
3,575.0	19.60	356.20	3,355.0	1,149.9	-34.7	1,150.3	2.46	-2.26	
3,669.0	18.10	357.30	3,444.0	1,180.2	-36.5	1,180.7	1.64	-1.60	
3,762.0	16.40	358.60	3,532.8	1,207.8	-37.5	1,208.2	1.87	-1.83	
3,856.0	17.00	358.70	3,622.8	1,234.8	-38.1	1,235.2	0.64	0.64	
3,949.0	15.50	357.30	3,712.1	1,260.8	-39.0	1,261.3	1.67	-1.61	
4,042.0	13.70	356.40	3,802.1	1,284.2	-40.3	1,284.7	1.95	-1.94	
4,136.0	13.50	356.30	3,893.5	1,306.2	-41.7	1,306.8	0.21	-0.21	
4,229.0	12.80	354.60	3,984.1	1,327.3	-43.4	1,327.9	0.86	-0.75	
4,322.0	11.50	356.00	4,075.0	1,346.8	-45.0	1,347.5	1.43	-1.40	
4,416.0	10.20	355.70	4,167.3	1,364.5	-46.2	1,365.2	1.38	-1.38	
4,509.0	10.20	358.00	4,258.8	1,380.9	-47.2	1,381.6	0.44	0.00	
4,603.0	9.30	353.70	4,351.5	1,396.8	-48.3	1,397.5	1.23	-0.96	
4,696.0	8.00	356.00	4,443.4	1,410.7	-49.6	1,411.5	1.45	-1.40	
4,789.0	7.90	356.00	4,535.5	1,423.5	-50.4	1,424.4	0.11	-0.11	
4,883.0	6.20	354.40	4,628.8	1,435.0	-51.4	1,435.9	1.82	-1.81	

Cathedral Energy

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Federal 25-1
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 25-1	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
4,976.0	4.90	356.50	4,721.4	1,444.0	-52.1	1,444.9	1.41	-1.40	
5,069.0	4.00	358.20	4,814.1	1,451.2	-52.5	1,452.1	0.98	-0.97	
5,163.0	3.50	351.20	4,907.9	1,457.3	-53.0	1,458.2	0.72	-0.53	
5,256.0	2.40	353.30	5,000.7	1,462.1	-53.7	1,463.0	1.19	-1.18	
5,349.0	2.20	359.20	5,093.7	1,465.8	-53.9	1,466.7	0.33	-0.22	
5,443.0	1.60	356.40	5,187.6	1,468.9	-54.0	1,469.8	0.65	-0.64	
5,536.0	1.80	342.30	5,280.6	1,471.6	-54.6	1,472.5	0.50	0.22	
5,629.0	0.90	304.30	5,373.6	1,473.4	-55.6	1,474.4	1.32	-0.97	
5,723.0	0.50	301.50	5,467.5	1,474.0	-56.6	1,475.1	0.43	-0.43	
5,816.0	0.80	272.20	5,560.5	1,474.2	-57.6	1,475.4	0.47	0.32	
5,909.0	1.10	271.80	5,653.5	1,474.3	-59.1	1,475.5	0.32	0.32	
6,003.0	1.20	265.20	5,747.5	1,474.2	-61.0	1,475.5	0.18	0.11	
6,096.0	1.30	251.70	5,840.5	1,473.8	-63.0	1,475.2	0.33	0.11	
6,189.0	0.90	223.40	5,933.5	1,473.0	-64.5	1,474.4	0.71	-0.43	
6,282.0	1.30	232.20	6,026.5	1,471.8	-65.8	1,473.3	0.47	0.43	
6,376.0	1.50	243.00	6,120.4	1,470.6	-67.7	1,472.1	0.35	0.21	
6,469.0	1.60	240.10	6,213.4	1,469.4	-69.9	1,471.0	0.14	0.11	
6,563.0	1.70	260.10	6,307.4	1,468.5	-72.5	1,470.3	0.62	0.11	
6,656.0	1.40	261.50	6,400.3	1,468.1	-74.9	1,470.0	0.33	-0.32	
6,749.0	1.00	251.40	6,493.3	1,467.7	-76.8	1,469.6	0.48	-0.43	
6,843.0	1.30	248.80	6,587.3	1,467.0	-78.6	1,469.1	0.32	0.32	
6,880.0	1.70	247.40	6,624.3	1,466.6	-79.5	1,468.7	1.09	1.08	Last Cathedral Survey @ 6,880' MD
6,930.0	1.70	247.40	6,674.2	1,466.1	-80.9	1,468.2	0.00	0.00	Projection to Bit @ 6,930'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Federal 25-1 PBHL	0.00	0.00	6,596.0	1,456.9	-65.0	1,585,969.06	2,279,360.59	39.414460	-108.051040
- survey misses target center by 17.0ft at 6851.5ft MD (6595.8 TVD, 1466.9 N, -78.8 E)									
- Circle (radius 25.0)									
Federal 25-1 Hardline	0.00	0.00	-6,596.0	1,456.9	-65.0	1,585,969.06	2,279,360.59	39.414460	-108.051040
- survey misses target center by 6755.3ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			-6,596.0	290.0	50.0	1,586,257.54	2,279,418.71		
Point 2			-6,596.0	290.0	-50.0	1,586,260.35	2,279,318.75		
Federal 25-1 TOG	0.00	0.00	4,836.0	1,456.9	-65.0	1,585,969.06	2,279,360.59	39.414460	-108.051040
- survey misses target center by 13.1ft at 5091.3ft MD (4836.3 TVD, 1452.7 N, -52.5 E)									
- Point									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
6,880.0	6,624.3	1,466.6	-79.5	Last Cathedral Survey @ 6,880' MD
6,930.0	6,674.2	1,466.1	-80.9	Projection to Bit @ 6,930'

Checked By: _____ Approved By: _____ Date: _____