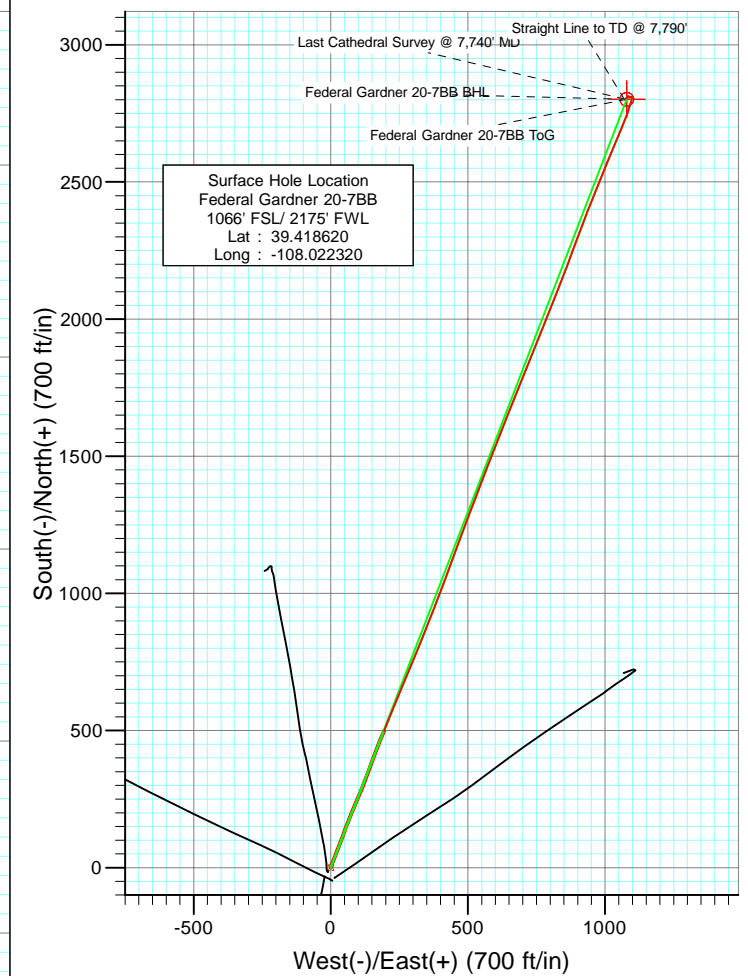
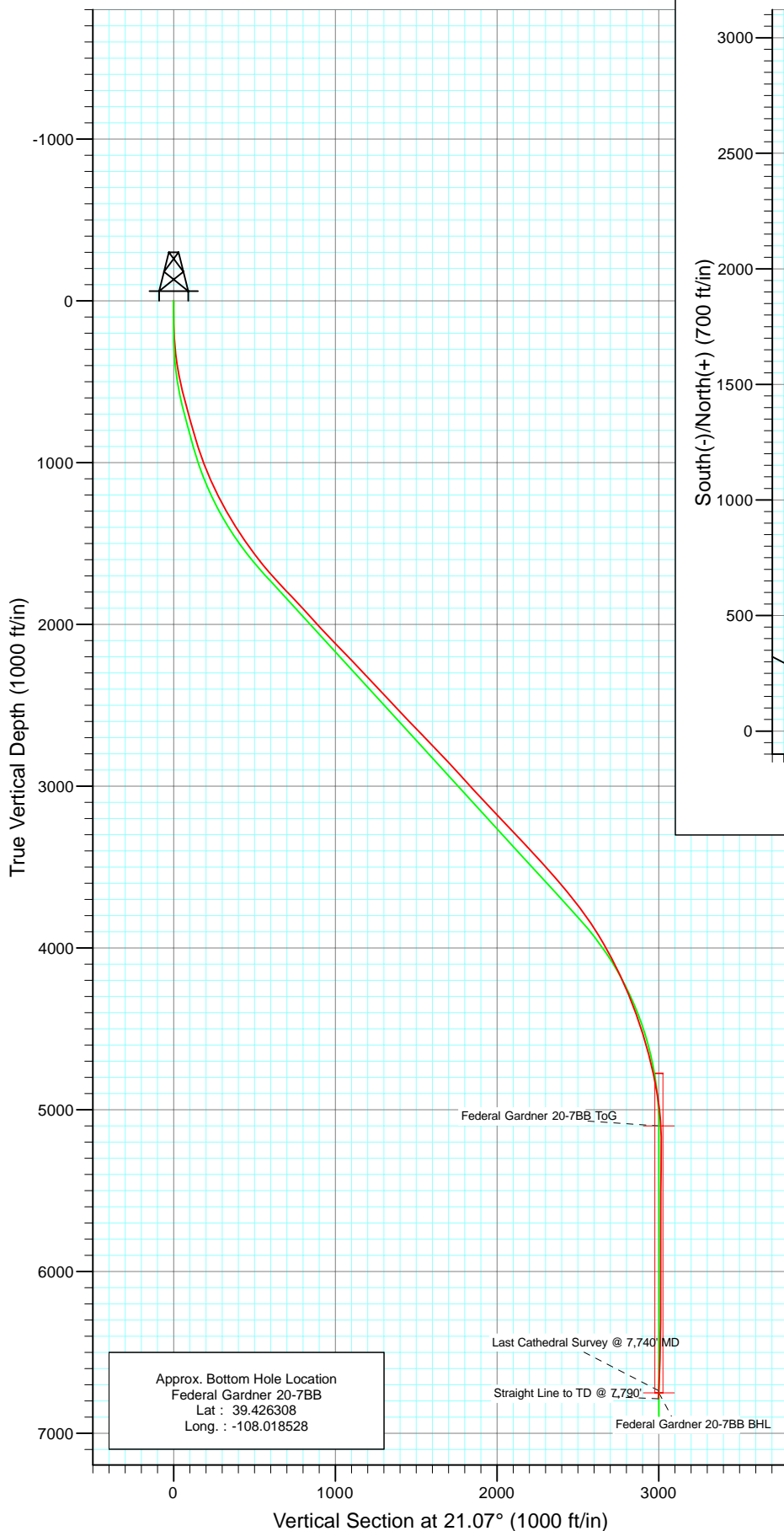




Project: S. Piceance (Parachute)  
 Site: SESW Sec20-T7S-R95W (PN-20-7-95)  
 Well: Federal Gardner 20-7BB  
 Wellbore: Final  
 Design: DD



Azimuths to True North  
 Magnetic North: 10.43°

Magnetic Field  
 Strength: 52316.6snT  
 Dip Angle: 65.70°  
 Date: 8/29/2010  
 Model: IGRF200510

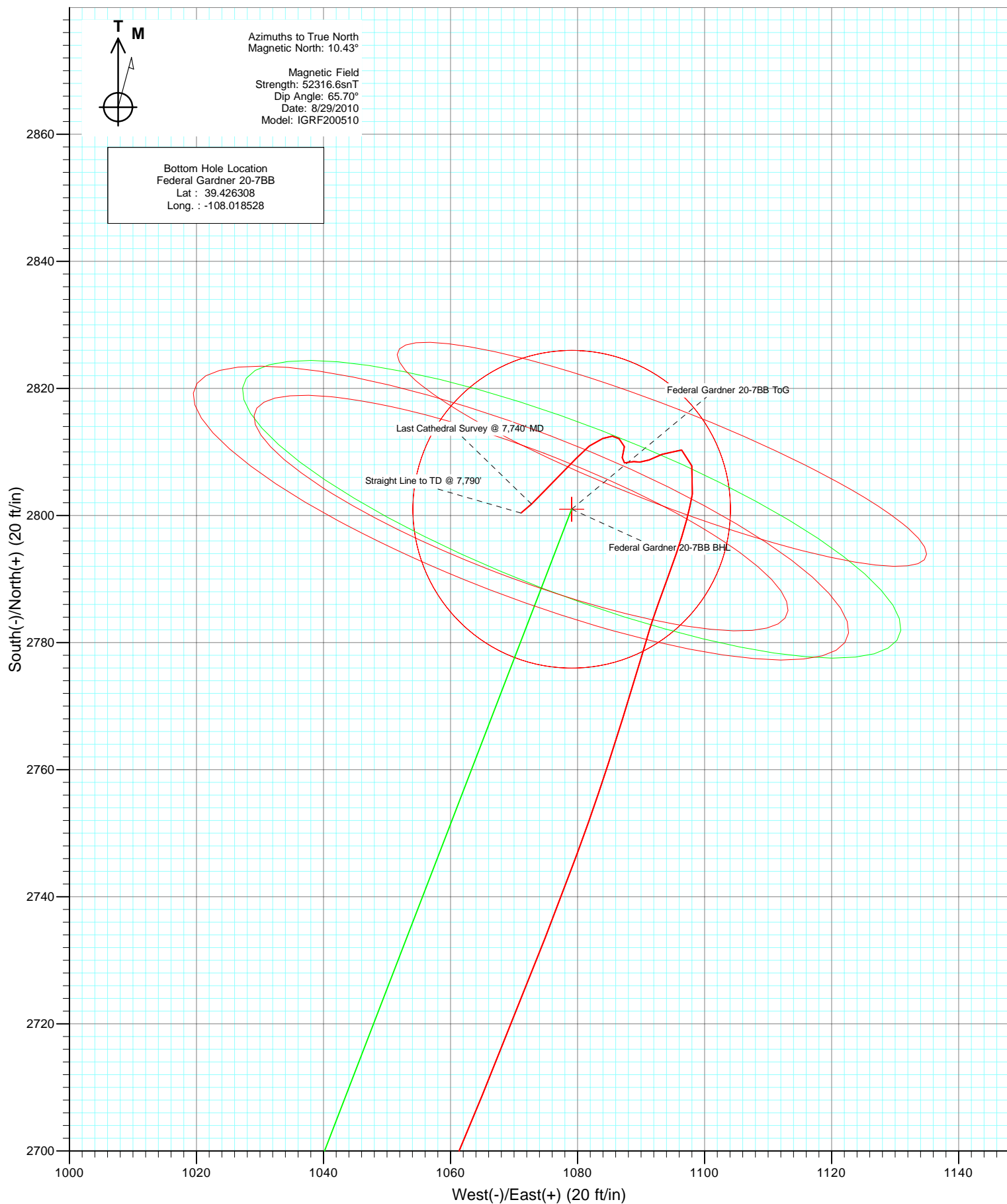
DESIGN DETAILS: DD

Job #105343 (SH) 105366 (MH): KR  
 KBE 2 @ 5804.0ft (Nabors M11)

Target	Azimuth	Origin	N/S	E/W	From TVD
Federal Gardner 20-7BB BHL	07	Slot	0.0	0.0	0.0



Project: S. Piceance (Parachute)  
Site: SESW Sec20-T7S-R95W (PN-20-7-95)  
Well: Federal Gardner 20-7BB  
Wellbore: Final  
Design: DD



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Federal Gardner 20-7BB
<b>Project:</b>	S. Piceance (Parachute)	<b>TVD Reference:</b>	KBE 2 @ 5804.0ft (Nabors M11)
<b>Site:</b>	SESW Sec20-T7S-R95W (PN-20-7-95)	<b>MD Reference:</b>	KBE 2 @ 5804.0ft (Nabors M11)
<b>Well:</b>	Federal Gardner 20-7BB	<b>North Reference:</b>	True
<b>Wellbore:</b>	Final	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB

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

<b>Site</b>	SESW Sec20-T7S-R95W (PN-20-7-95)			
<b>Site Position:</b>		<b>Northing:</b>	1,587,275.03 ft	<b>Latitude:</b> 39.418670
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,287,525.50 ft	<b>Longitude:</b> -108.022280
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.59 °

<b>Well</b>	Federal Gardner 20-7BB			
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,587,257.12 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,287,513.70 ft
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b> 5,782.0 ft

<b>Wellbore</b>	Final				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	8/29/2010	10.43	65.70	52,317

<b>Design</b>	DD			
<b>Audit Notes:</b>				
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b> 0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	21.07

<b>Survey Program</b>	<b>Date</b>	9/13/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
80.0	1,731.0	Survey #1 (Final)	MWD	Geolink MWD	
1,826.0	7,790.0	Survey #2 (Final)	MWD	Geolink MWD	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>
1,731.0	38.80	21.70	1,611.6	498.8	194.4	535.4	0.00	0.00	
1,826.0	41.50	21.80	1,684.2	555.7	217.1	596.6	2.84	2.84	
1,922.0	42.90	23.30	1,755.4	615.3	241.9	661.1	1.80	1.46	
2,018.0	44.00	22.80	1,825.1	676.0	267.7	727.1	1.20	1.15	
2,114.0	42.30	22.00	1,895.1	736.7	292.8	792.7	1.86	-1.77	
2,209.0	42.30	22.10	1,965.4	796.0	316.8	856.6	0.07	0.00	
2,305.0	43.40	22.10	2,035.7	856.5	341.3	921.9	1.15	1.15	
2,401.0	43.50	20.60	2,105.4	917.9	365.4	987.9	1.08	0.10	
2,496.0	43.90	21.70	2,174.1	979.2	389.0	1,053.6	0.90	0.42	
2,592.0	43.80	20.90	2,243.3	1,041.1	413.2	1,120.1	0.59	-0.10	
2,688.0	43.30	19.80	2,312.9	1,103.1	436.2	1,186.2	0.95	-0.52	
2,782.0	43.20	19.90	2,381.4	1,163.7	458.1	1,250.6	0.13	-0.11	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Federal Gardner 20-7BB
<b>Project:</b>	S. Piceance (Parachute)	<b>TVD Reference:</b>	KBE 2 @ 5804.0ft (Nabors M11)
<b>Site:</b>	SESW Sec20-T7S-R95W (PN-20-7-95)	<b>MD Reference:</b>	KBE 2 @ 5804.0ft (Nabors M11)
<b>Well:</b>	Federal Gardner 20-7BB	<b>North Reference:</b>	True
<b>Wellbore:</b>	Final	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
2,877.0	43.20	20.40	2,450.6	1,224.8	480.5	1,315.6	0.36	0.00	
2,973.0	43.50	21.20	2,520.5	1,286.4	503.9	1,381.5	0.65	0.31	
3,069.0	43.50	21.10	2,590.1	1,348.0	527.7	1,447.6	0.07	0.00	
3,165.0	44.00	21.20	2,659.4	1,409.9	551.7	1,514.0	0.53	0.52	
3,260.0	44.20	21.10	2,727.7	1,471.6	575.5	1,580.1	0.22	0.21	
3,356.0	43.50	21.30	2,796.9	1,533.6	599.6	1,646.6	0.74	-0.73	
3,452.0	42.40	20.60	2,867.2	1,594.7	623.0	1,712.0	1.25	-1.15	
3,548.0	43.50	22.00	2,937.4	1,655.6	646.7	1,777.4	1.52	1.15	
3,643.0	42.20	21.70	3,007.1	1,715.6	670.8	1,842.0	1.39	-1.37	
3,739.0	42.80	22.10	3,077.8	1,775.7	695.0	1,906.9	0.69	0.62	
3,835.0	43.10	21.80	3,148.1	1,836.4	719.4	1,972.3	0.38	0.31	
3,930.0	43.00	21.60	3,217.5	1,896.7	743.4	2,037.1	0.18	-0.11	
4,026.0	43.40	22.00	3,287.5	1,957.7	767.8	2,102.8	0.50	0.42	
4,121.0	43.50	22.70	3,356.5	2,018.1	792.6	2,168.1	0.52	0.11	
4,217.0	43.70	22.00	3,426.0	2,079.3	817.8	2,234.3	0.54	0.21	
4,312.0	42.20	20.70	3,495.5	2,139.6	841.4	2,299.0	1.83	-1.58	
4,408.0	40.60	20.90	3,567.6	2,199.0	863.9	2,362.5	1.67	-1.67	
4,504.0	39.10	20.50	3,641.3	2,256.5	885.7	2,424.0	1.59	-1.56	
4,599.0	38.00	20.00	3,715.5	2,312.0	906.2	2,483.2	1.20	-1.16	
4,695.0	36.50	19.70	3,792.0	2,366.7	925.9	2,541.3	1.57	-1.56	
4,788.0	32.80	21.80	3,868.5	2,416.1	944.6	2,594.2	4.18	-3.98	
4,884.0	30.80	22.50	3,950.0	2,463.0	963.7	2,644.8	2.12	-2.08	
4,980.0	28.80	22.90	4,033.3	2,507.0	982.1	2,692.4	2.09	-2.08	
5,075.0	26.40	22.10	4,117.5	2,547.7	998.9	2,736.4	2.56	-2.53	
5,171.0	24.40	22.00	4,204.2	2,585.8	1,014.4	2,777.6	2.08	-2.08	
5,267.0	22.60	22.20	4,292.3	2,621.3	1,028.8	2,815.9	1.88	-1.87	
5,363.0	19.70	21.90	4,381.8	2,653.4	1,041.8	2,850.5	3.02	-3.02	
5,458.0	18.30	23.50	4,471.6	2,681.9	1,053.7	2,881.4	1.57	-1.47	
5,554.0	17.00	22.10	4,563.1	2,708.7	1,065.0	2,910.5	1.42	-1.35	
5,650.0	15.20	21.40	4,655.3	2,733.5	1,074.9	2,937.1	1.89	-1.87	
5,745.0	13.40	19.00	4,747.4	2,755.5	1,083.0	2,960.6	1.99	-1.89	
5,841.0	10.30	15.90	4,841.3	2,774.3	1,089.0	2,980.3	3.30	-3.23	
5,937.0	8.50	20.60	4,936.0	2,789.1	1,093.8	2,995.9	2.04	-1.87	
6,000.0	6.90	16.80	4,998.5	2,797.1	1,096.5	3,004.3	2.66	-2.54	
6,064.0	4.70	8.90	5,062.1	2,803.4	1,098.1	3,010.7	3.65	-3.44	
6,128.0	3.40	345.30	5,126.0	2,807.8	1,098.0	3,014.8	3.26	-2.03	
6,224.0	1.10	252.20	5,221.9	2,810.3	1,096.4	3,016.6	3.78	-2.40	
6,321.0	0.70	266.50	5,318.9	2,810.0	1,094.9	3,015.7	0.47	-0.41	
6,417.0	1.30	253.60	5,414.9	2,809.6	1,093.3	3,014.8	0.66	0.62	
6,512.0	1.40	240.10	5,509.9	2,808.8	1,091.2	3,013.3	0.35	0.11	
6,608.0	0.60	298.10	5,605.9	2,808.4	1,089.8	3,012.4	1.25	-0.83	
6,704.0	0.60	252.20	5,701.8	2,808.5	1,088.9	3,012.2	0.49	0.00	
6,799.0	1.20	266.90	5,796.8	2,808.3	1,087.4	3,011.5	0.67	0.63	
6,895.0	1.30	36.00	5,892.8	2,809.1	1,087.0	3,012.1	2.35	0.10	
6,990.0	1.10	341.60	5,987.8	2,810.8	1,087.4	3,013.8	1.17	-0.21	
7,086.0	0.80	303.40	6,083.8	2,812.1	1,086.5	3,014.7	0.71	-0.31	
7,182.0	0.60	273.90	6,179.8	2,812.5	1,085.5	3,014.7	0.42	-0.21	
7,277.0	1.30	247.70	6,274.8	2,812.1	1,084.0	3,013.8	0.85	0.74	
7,373.0	1.60	235.90	6,370.7	2,811.0	1,081.9	3,012.0	0.44	0.31	
7,468.0	1.80	218.30	6,465.7	2,809.0	1,079.8	3,009.4	0.59	0.21	
7,562.0	2.10	229.40	6,559.7	2,806.8	1,077.6	3,006.5	0.51	0.32	
7,658.0	2.20	218.90	6,655.6	2,804.2	1,075.1	3,003.2	0.42	0.10	
7,740.0	2.50	229.80	6,737.5	2,801.8	1,072.8	3,000.1	0.65	0.37	Last Cathedral Survey @ 7,740' MD

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Federal Gardner 20-7BB
<b>Project:</b>	S. Piceance (Parachute)	<b>TVD Reference:</b>	KBE 2 @ 5804.0ft (Nabors M11)
<b>Site:</b>	SESW Sec20-T7S-R95W (PN-20-7-95)	<b>MD Reference:</b>	KBE 2 @ 5804.0ft (Nabors M11)
<b>Well:</b>	Federal Gardner 20-7BB	<b>North Reference:</b>	True
<b>Wellbore:</b>	Final	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
7,790.0	2.50	229.80	6,787.5	2,800.4	1,071.1	2,998.2	0.00	0.00	<b>Straight Line to TD @ 7,790'</b>

### 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
Federal Gardner 20-7BE - survey misses target center by 14.0ft at 7740.0ft MD (6737.5 TVD, 2801.8 N, 1072.8 E) - Circle (radius 25.0)	0.00	0.00	6,750.0	2,801.0	1,079.1	1,590,027.08	2,288,670.11	39.426310	-108.018500
Federal Gardner 20-7BE - survey misses target center by 19.9ft at 6101.6ft MD (5099.7 TVD, 2806.2 N, 1098.2 E) - Point	0.00	0.00	5,100.0	2,801.0	1,079.1	1,590,027.08	2,288,670.11	39.426310	-108.018500

### Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
7,740.0	6,737.5	2,801.8	1,072.8	Last Cathedral Survey @ 7,740' MD
7,790.0	6,787.5	2,800.4	1,071.1	Straight Line to TD @ 7,790'

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_