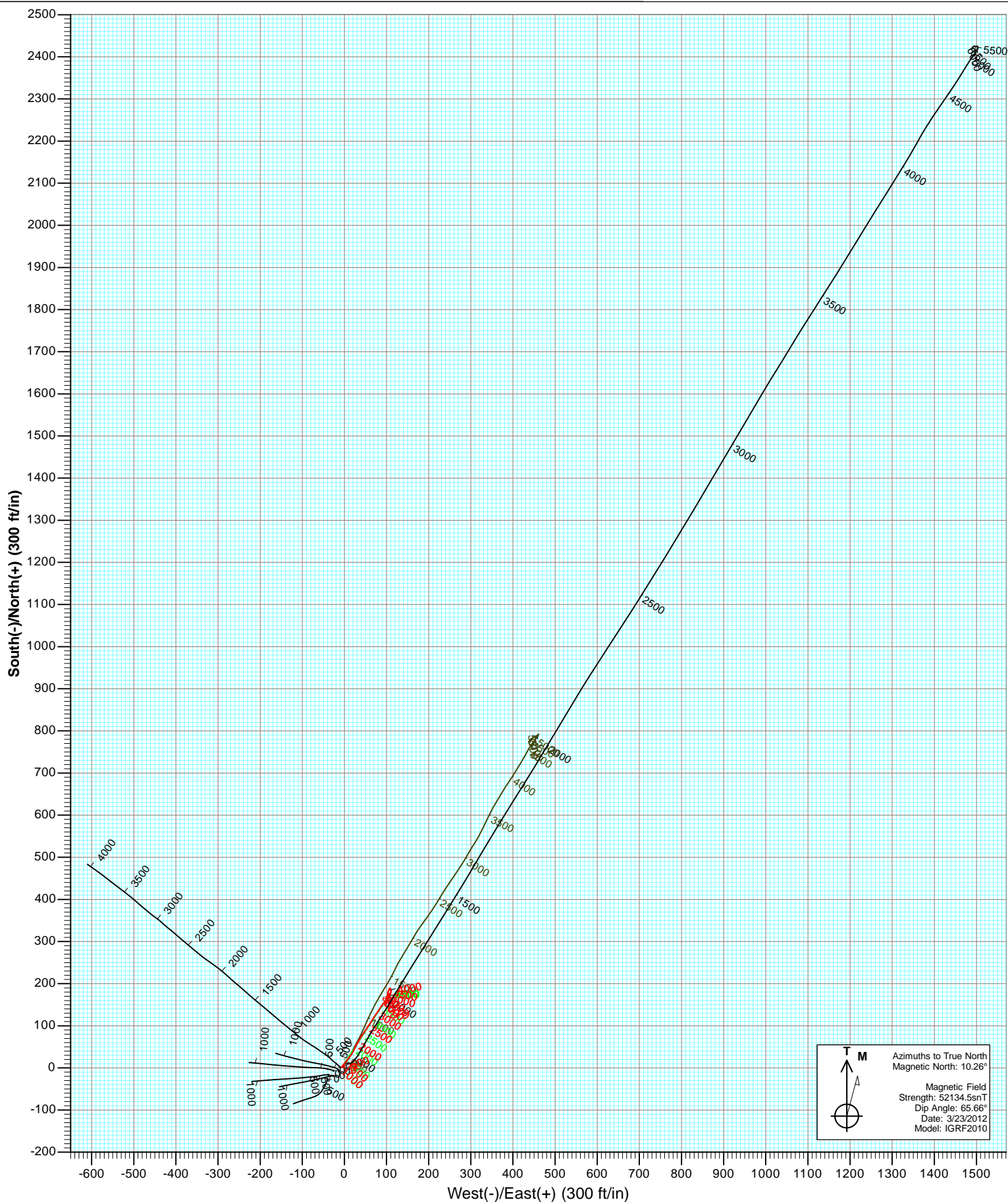
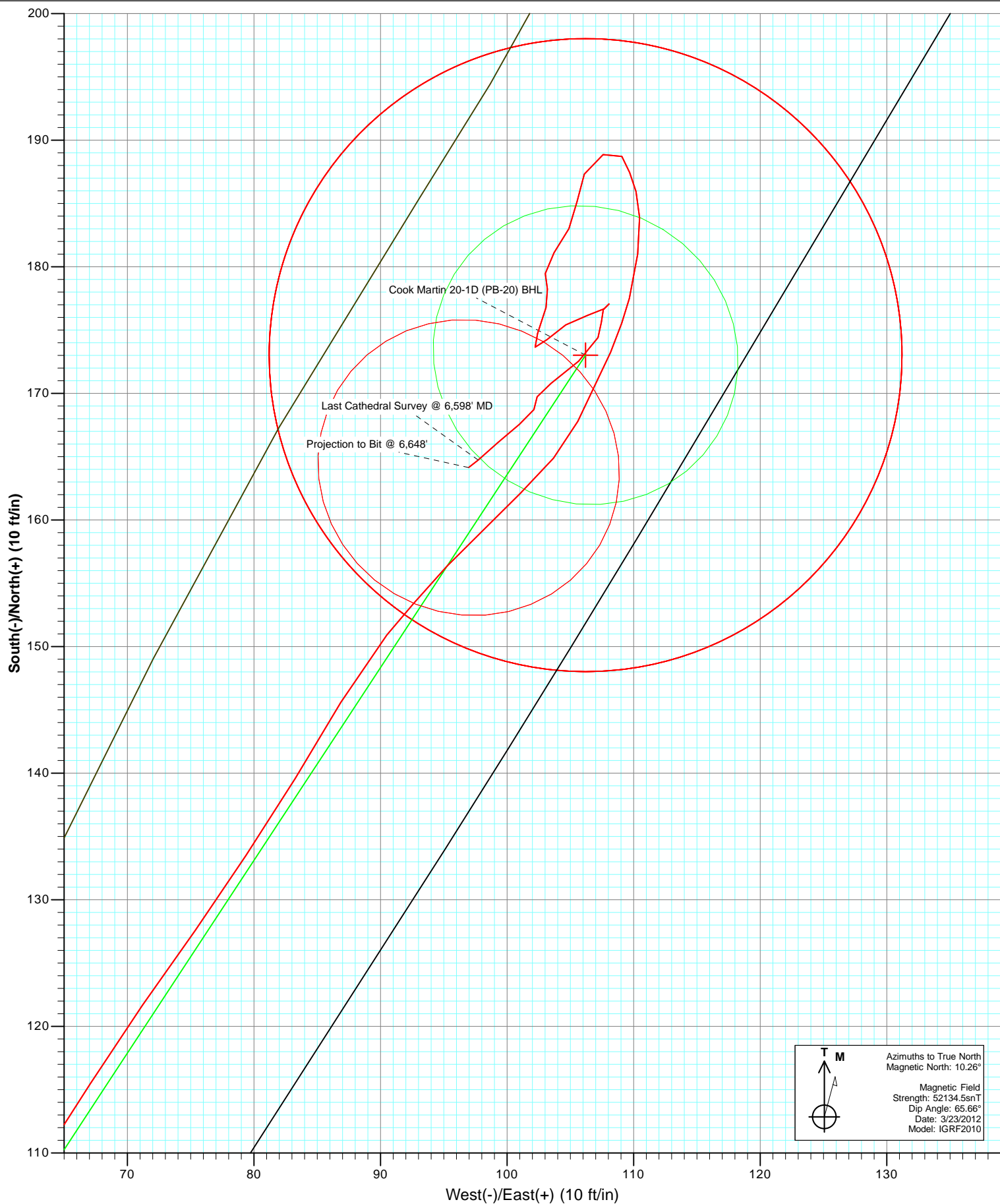


Cook Martin 20-1D (PB-20)
 Approximate Bottom Hole Location
 Lat : 39.428106 Long : -108.019253





Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Cook Martin 20-1D (PB-20)
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 5665.0ft (Nabors M13)
Site:	PB-20 Pad	MD Reference:	KBE @ 5665.0ft (Nabors M13)
Well:	Cook Martin 20-1D (PB-20)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 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	PB-20 Pad			
Site Position:		Northing:	1,590,537.58 ft	Latitude: 39.427690
From:	Lat/Long	Easting:	2,288,393.21 ft	Longitude: -108.019530
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: -1.59 °

Well	Cook Martin 20-1D (PB-20)			
Well Position	+N/-S	0.0 ft	Northing:	1,590,525.35 ft
	+E/-W	0.0 ft	Easting:	2,288,374.22 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level: 5,643.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/23/2012	10.26	65.66	52,134

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	31.54

Survey Program	Date	4/3/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
113.0	6,648.0	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	
113.0	0.50	339.70	113.0	0.5	-0.2	0.3	0.44	0.44	
204.0	0.60	5.30	204.0	1.3	-0.3	1.0	0.29	0.11	
297.0	0.80	358.50	297.0	2.4	-0.2	2.0	0.23	0.22	
389.0	0.60	6.70	389.0	3.6	-0.2	2.9	0.24	-0.22	
482.0	0.90	338.20	482.0	4.7	-0.4	3.8	0.51	0.32	
573.0	1.00	352.20	573.0	6.2	-0.8	4.9	0.28	0.11	
665.0	0.90	312.30	664.9	7.5	-1.4	5.6	0.71	-0.11	
758.0	0.70	223.20	757.9	7.5	-2.4	5.2	1.22	-0.22	
850.0	1.20	205.00	849.9	6.3	-3.1	3.7	0.63	0.54	
941.0	1.40	198.20	940.9	4.3	-3.9	1.7	0.28	0.22	
980.0	1.30	220.50	979.9	3.5	-4.3	0.8	1.36	-0.26	
1,070.0	1.40	222.50	1,069.9	2.0	-5.7	-1.3	0.12	0.11	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Cook Martin 20-1D (PB-20)
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 5665.0ft (Nabors M13)
Site:	PB-20 Pad	MD Reference:	KBE @ 5665.0ft (Nabors M13)
Well:	Cook Martin 20-1D (PB-20)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	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
1,166.0	0.40	348.00	1,165.9	1.4	-6.6	-2.2	1.73	-1.04	
1,262.0	2.10	35.20	1,261.8	3.2	-5.7	-0.2	1.93	1.77	
1,357.0	4.20	38.60	1,356.7	7.3	-2.5	4.9	2.22	2.21	
1,452.0	5.70	38.30	1,451.3	13.7	2.6	13.1	1.58	1.58	
1,548.0	5.50	39.40	1,546.9	21.0	8.5	22.4	0.24	-0.21	
1,643.0	5.80	36.90	1,641.4	28.4	14.3	31.7	0.41	0.32	
1,738.0	6.20	26.60	1,735.9	36.8	19.4	41.6	1.21	0.42	
1,834.0	5.70	26.80	1,831.4	45.7	23.9	51.5	0.52	-0.52	
1,929.0	6.00	27.10	1,925.9	54.3	28.3	61.1	0.32	0.32	
2,025.0	6.50	31.30	2,021.3	63.5	33.4	71.6	0.71	0.52	
2,121.0	6.30	31.10	2,116.7	72.6	38.9	82.3	0.21	-0.21	
2,216.0	5.80	32.90	2,211.2	81.1	44.2	92.3	0.56	-0.53	
2,311.0	5.40	35.00	2,305.7	88.8	49.4	101.5	0.47	-0.42	
2,407.0	5.00	35.00	2,401.3	95.9	54.4	110.2	0.42	-0.42	
2,502.0	4.50	31.90	2,496.0	102.5	58.8	118.1	0.59	-0.53	
2,597.0	4.70	33.30	2,590.7	108.9	62.9	125.7	0.24	0.21	
2,693.0	4.60	32.00	2,686.4	115.4	67.1	133.5	0.15	-0.10	
2,788.0	4.40	35.30	2,781.1	121.7	71.2	140.9	0.34	-0.21	
2,883.0	4.40	35.10	2,875.8	127.6	75.4	148.2	0.02	0.00	
2,978.0	4.20	33.10	2,970.5	133.5	79.4	155.3	0.26	-0.21	
3,074.0	4.40	32.00	3,066.3	139.6	83.3	162.5	0.23	0.21	
3,169.0	4.10	29.90	3,161.0	145.6	86.9	169.5	0.36	-0.32	
3,264.0	3.70	39.30	3,255.8	150.9	90.5	176.0	0.79	-0.42	
3,360.0	4.90	42.60	3,351.5	156.3	95.2	183.1	1.28	1.25	
3,456.0	4.90	47.70	3,447.2	162.1	101.1	191.0	0.45	0.00	
3,550.0	4.10	27.80	3,540.9	167.8	105.6	198.2	1.85	-0.85	
3,645.0	3.20	22.30	3,635.7	173.2	108.2	204.2	1.02	-0.95	
3,741.0	2.20	14.60	3,731.6	177.5	109.7	208.7	1.11	-1.04	
3,836.0	2.10	6.70	3,826.5	181.0	110.3	212.0	0.33	-0.11	
3,931.0	1.40	357.30	3,921.5	183.9	110.5	214.5	0.79	-0.74	
4,027.0	1.10	345.70	4,017.5	186.0	110.2	216.1	0.41	-0.31	
4,122.0	0.80	336.30	4,112.4	187.4	109.7	217.1	0.35	-0.32	
4,218.0	0.90	331.90	4,208.4	188.7	109.1	217.9	0.12	0.10	
4,313.0	1.50	245.20	4,303.4	188.9	107.6	217.2	1.79	0.63	
4,408.0	1.30	199.80	4,398.4	187.3	106.1	215.2	1.15	-0.21	
4,504.0	1.40	189.80	4,494.4	185.1	105.5	213.0	0.27	0.10	
4,599.0	1.30	203.80	4,589.3	183.0	104.9	210.9	0.36	-0.11	
4,695.0	1.40	219.50	4,685.3	181.1	103.7	208.6	0.40	0.10	
4,790.0	0.90	176.30	4,780.3	179.5	103.0	206.9	1.02	-0.53	
4,886.0	0.60	166.40	4,876.3	178.2	103.2	205.9	0.34	-0.31	
4,981.0	1.20	193.00	4,971.3	176.8	103.1	204.6	0.75	0.63	
5,076.0	1.40	202.40	5,066.2	174.7	102.4	202.5	0.31	0.21	
5,171.0	0.30	92.90	5,161.2	173.7	102.2	201.5	1.61	-1.16	
5,267.0	1.10	48.50	5,257.2	174.3	103.2	202.5	0.95	0.83	
5,361.0	1.20	54.60	5,351.2	175.4	104.6	204.2	0.17	0.11	
5,456.0	1.10	79.40	5,446.2	176.2	106.4	205.8	0.53	-0.11	
5,550.0	0.70	51.20	5,540.2	176.7	107.7	206.9	0.62	-0.43	
5,645.0	0.10	280.00	5,635.2	177.1	108.1	207.4	0.81	-0.63	
5,741.0	0.70	218.70	5,731.2	176.6	107.6	206.8	0.69	0.62	
5,836.0	0.70	158.40	5,826.2	175.6	107.5	205.9	0.74	0.00	
5,931.0	1.00	214.70	5,921.2	174.4	107.2	204.7	0.89	0.32	
6,027.0	1.90	222.20	6,017.1	172.5	105.7	202.3	0.96	0.94	
6,122.0	1.50	242.60	6,112.1	170.8	103.5	199.7	0.76	-0.42	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Cook Martin 20-1D (PB-20)
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 5665.0ft (Nabors M13)
Site:	PB-20 Pad	MD Reference:	KBE @ 5665.0ft (Nabors M13)
Well:	Cook Martin 20-1D (PB-20)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	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
6,217.0	0.60	179.80	6,207.1	169.7	102.4	198.2	1.41	-0.95	
6,312.0	0.70	207.30	6,302.1	168.7	102.1	197.2	0.34	0.11	
6,407.0	1.30	233.80	6,397.1	167.6	101.0	195.6	0.78	0.63	
6,502.0	1.40	225.90	6,492.0	166.1	99.3	193.5	0.22	0.11	
6,598.0	1.10	231.60	6,588.0	164.7	97.7	191.5	0.34	-0.31	Last Cathedral Survey @ 6,598' MD
6,648.0	1.10	231.60	6,638.0	164.1	97.0	190.6	0.00	0.00	Projection to Bit @ 6,648'

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
Cook Martin 20-1D (PB- - survey misses target center by 14.9ft at 6598.0ft MD (6588.0 TVD, 164.7 N, 97.7 E) - Circle (radius 25.0)	0.00	0.00	6,597.0	173.0	106.2	1,590,695.37	2,288,485.19	39.428130	-108.019220
Cook Martin 20-1D (PB- - survey misses target center by 13.2ft at 4009.3ft MD (3999.7 TVD, 185.6 N, 110.3 E) - Circle (radius 25.0)	0.00	0.00	4,000.0	173.0	106.2	1,590,695.37	2,288,485.19	39.428130	-108.019220

Survey Annotations

	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S (ft)	+E/-W (ft)	
	6,598.0	6,588.0	164.7	97.7	Last Cathedral Survey @ 6,598' MD Projection to Bit @ 6,648'
	6,648.0	6,638.0	164.1	97.0	

Checked By: _____ Approved By: _____ Date: _____