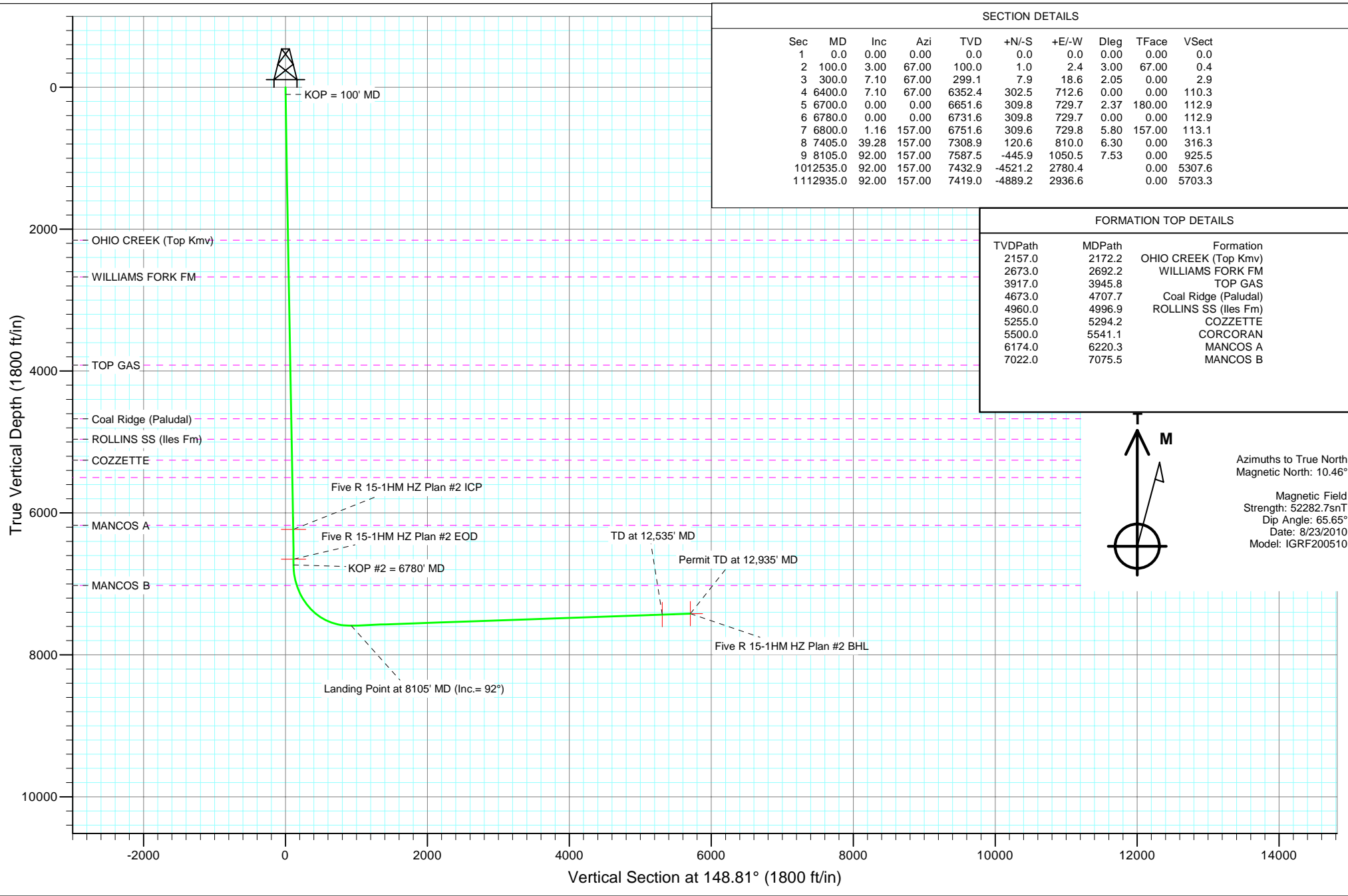


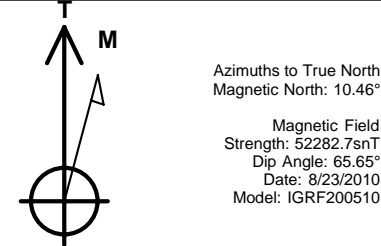


Project: Orchard
 Site: NENW Sec10-T8S-R96W (C100U)
 Well: Five R 15-1HM
 Wellbore: HZ
 Design: Plan #2



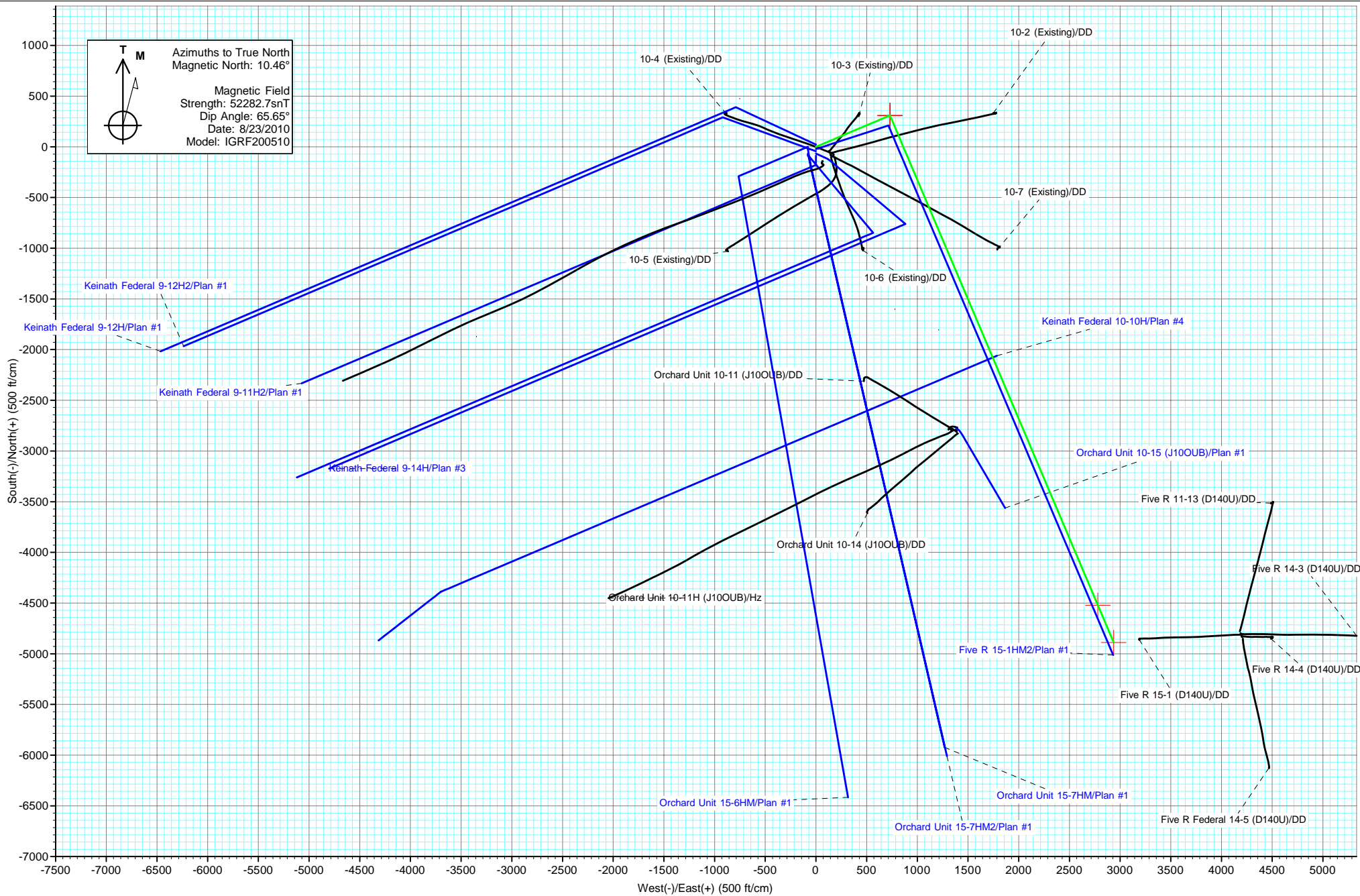
SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	100.0	3.00	67.00	100.0	1.0	2.4	3.00	67.00	0.4
3	300.0	7.10	67.00	299.1	7.9	18.6	2.05	0.00	2.9
4	6400.0	7.10	67.00	6352.4	302.5	712.6	0.00	0.00	110.3
5	6700.0	0.00	0.00	6651.6	309.8	729.7	2.37	180.00	112.9
6	6780.0	0.00	0.00	6731.6	309.8	729.7	0.00	0.00	112.9
7	6800.0	1.16	157.00	6751.6	309.6	729.8	5.80	157.00	113.1
8	7405.0	39.28	157.00	7308.9	120.6	810.0	6.30	0.00	316.3
9	8105.0	92.00	157.00	7587.5	-445.9	1050.5	7.53	0.00	925.5
10	12535.0	92.00	157.00	7432.9	-4521.2	2780.4		0.00	5307.6
11	12935.0	92.00	157.00	7419.0	-4889.2	2936.6		0.00	5703.3

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2157.0	2172.2	OHIO CREEK (Top Kmv)
2673.0	2692.2	WILLIAMS FORK FM
3917.0	3945.8	TOP GAS
4673.0	4707.7	Coal Ridge (Paludal)
4960.0	4996.9	ROLLINS SS (Iles Fm)
5255.0	5294.2	COZZETTE
5500.0	5541.1	CORCORAN
6174.0	6220.3	MANCOS A
7022.0	7075.5	MANCOS B





Project: Orchard
Site: NENW Sec10-T8S-R96W (C10OU)
Well: Five R 15-1HM
Wellbore: HZ
Plan: Plan #2



Cathedral Energy Services

Planning Report

Database: EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference: Well Five R 15-1HM
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: KBE @ 5590.0ft (Original Well Elev)
Project: Orchard	MD Reference: KBE @ 5590.0ft (Original Well Elev)
Site: NENW Sec10-T8S-R96W (C10OU)	North Reference: True
Well: Five R 15-1HM	Survey Calculation Method: Minimum Curvature
Wellbore: HZ	
Design: Plan #2	

Project Orchard		
Map System: US State Plane 1983	System Datum: Mean Sea Level	
Geo Datum: North American Datum 1983		
Map Zone: Colorado Central Zone		

Site NENW Sec10-T8S-R96W (C10OU)					
Site Position:		Northing:	1,569,581.56 ft	Latitude:	39.368394
From:	Lat/Long	Easting:	2,265,333.69 ft	Longitude:	-108.099008
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.64 °

Well Five R 15-1HM					
Well Position	+N/-S	0.0 ft	Northing:	1,569,727.46 ft	Latitude: 39.368790
	+E/-W	0.0 ft	Easting:	2,265,271.78 ft	Longitude: -108.099242
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 5,568.0 ft

Wellbore HZ					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	8/23/2010	(°) 10.46	(°) 65.65	(nT) 52,283

Design Plan #2				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	148.81

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
100.0	3.00	67.00	100.0	1.0	2.4	3.00	3.00	0.00	67.00	
300.0	7.10	67.00	299.1	7.9	18.6	2.05	2.05	0.00	0.00	
6,400.0	7.10	67.00	6,352.4	302.5	712.6	0.00	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,651.6	309.8	729.7	2.37	-2.37	0.00	180.00	
6,780.0	0.00	0.00	6,731.6	309.8	729.7	0.00	0.00	0.00	0.00	
6,800.0	1.16	157.00	6,751.6	309.6	729.8	5.80	5.80	0.00	157.00	
7,405.0	39.28	157.00	7,308.9	120.6	810.0	6.30	6.30	0.00	0.00	
8,105.0	92.00	157.00	7,587.5	-445.9	1,050.5	7.53	7.53	0.00	0.00	
12,535.0	92.00	157.00	7,432.9	-4,521.2	2,780.4		0.00	0.00	0.00	
12,935.0	92.00	157.00	7,419.0	-4,889.2	2,936.6		0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Five R 15-1HM
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5590.0ft (Original Well Elev)
Project:	Orchard	MD Reference:	KBE @ 5590.0ft (Original Well Elev)
Site:	NENW Sec10-T8S-R96W (C100U)	North Reference:	True
Well:	Five R 15-1HM	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	3.00	67.00	100.0	1.0	2.4	0.4	3.00	3.00	KOP = 100' MD
200.0	5.05	67.00	199.7	3.8	8.9	1.4	2.05	2.05	
300.0	7.10	67.00	299.1	7.9	18.6	2.9	2.05	2.05	EOB at Inc. = 7.10°
400.0	7.10	67.00	398.4	12.7	30.0	4.6	0.00	0.00	
500.0	7.10	67.00	497.6	17.6	41.4	6.4	0.00	0.00	
600.0	7.10	67.00	596.8	22.4	52.7	8.2	0.00	0.00	
700.0	7.10	67.00	696.1	27.2	64.1	9.9	0.00	0.00	
800.0	7.10	67.00	795.3	32.0	75.5	11.7	0.00	0.00	
900.0	7.10	67.00	894.5	36.9	86.9	13.4	0.00	0.00	
1,000.0	7.10	67.00	993.8	41.7	98.3	15.2	0.00	0.00	
1,100.0	7.10	67.00	1,093.0	46.5	109.6	17.0	0.00	0.00	
1,200.0	7.10	67.00	1,192.2	51.4	121.0	18.7	0.00	0.00	
1,300.0	7.10	67.00	1,291.5	56.2	132.4	20.5	0.00	0.00	
1,400.0	7.10	67.00	1,390.7	61.0	143.8	22.3	0.00	0.00	
1,500.0	7.10	67.00	1,489.9	65.9	155.1	24.0	0.00	0.00	
1,600.0	7.10	67.00	1,589.2	70.7	166.5	25.8	0.00	0.00	
1,700.0	7.10	67.00	1,688.4	75.5	177.9	27.5	0.00	0.00	
1,800.0	7.10	67.00	1,787.6	80.3	189.3	29.3	0.00	0.00	
1,900.0	7.10	67.00	1,886.9	85.2	200.7	31.1	0.00	0.00	
2,000.0	7.10	67.00	1,986.1	90.0	212.0	32.8	0.00	0.00	
2,100.0	7.10	67.00	2,085.3	94.8	223.4	34.6	0.00	0.00	
2,172.2	7.10	67.00	2,157.0	98.3	231.6	35.8	0.00	0.00	OHIO CREEK (Top Kmv)
2,200.0	7.10	67.00	2,184.6	99.7	234.8	36.3	0.00	0.00	
2,300.0	7.10	67.00	2,283.8	104.5	246.2	38.1	0.00	0.00	
2,400.0	7.10	67.00	2,383.0	109.3	257.5	39.9	0.00	0.00	
2,500.0	7.10	67.00	2,482.3	114.1	268.9	41.6	0.00	0.00	
2,600.0	7.10	67.00	2,581.5	119.0	280.3	43.4	0.00	0.00	
2,692.2	7.10	67.00	2,673.0	123.4	290.8	45.0	0.00	0.00	WILLIAMS FORK FM
2,700.0	7.10	67.00	2,680.7	123.8	291.7	45.1	0.00	0.00	
2,800.0	7.10	67.00	2,780.0	128.6	303.1	46.9	0.00	0.00	
2,900.0	7.10	67.00	2,879.2	133.5	314.4	48.7	0.00	0.00	
3,000.0	7.10	67.00	2,978.4	138.3	325.8	50.4	0.00	0.00	
3,100.0	7.10	67.00	3,077.7	143.1	337.2	52.2	0.00	0.00	
3,200.0	7.10	67.00	3,176.9	148.0	348.6	53.9	0.00	0.00	
3,300.0	7.10	67.00	3,276.1	152.8	359.9	55.7	0.00	0.00	
3,400.0	7.10	67.00	3,375.4	157.6	371.3	57.5	0.00	0.00	
3,500.0	7.10	67.00	3,474.6	162.4	382.7	59.2	0.00	0.00	
3,600.0	7.10	67.00	3,573.8	167.3	394.1	61.0	0.00	0.00	
3,700.0	7.10	67.00	3,673.1	172.1	405.4	62.8	0.00	0.00	
3,800.0	7.10	67.00	3,772.3	176.9	416.8	64.5	0.00	0.00	
3,900.0	7.10	67.00	3,871.5	181.8	428.2	66.3	0.00	0.00	
3,945.8	7.10	67.00	3,917.0	184.0	433.4	67.1	0.00	0.00	TOP GAS
4,000.0	7.10	67.00	3,970.8	186.6	439.6	68.0	0.00	0.00	
4,100.0	7.10	67.00	4,070.0	191.4	451.0	69.8	0.00	0.00	
4,200.0	7.10	67.00	4,169.2	196.3	462.3	71.6	0.00	0.00	
4,300.0	7.10	67.00	4,268.5	201.1	473.7	73.3	0.00	0.00	
4,400.0	7.10	67.00	4,367.7	205.9	485.1	75.1	0.00	0.00	
4,500.0	7.10	67.00	4,466.9	210.7	496.5	76.8	0.00	0.00	
4,600.0	7.10	67.00	4,566.2	215.6	507.8	78.6	0.00	0.00	
4,700.0	7.10	67.00	4,665.4	220.4	519.2	80.4	0.00	0.00	
4,707.7	7.10	67.00	4,673.0	220.8	520.1	80.5	0.00	0.00	Coal Ridge (Paludal)

Cathedral Energy Services

Planning Report

Database: EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference: Well Five R 15-1HM
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: KBE @ 5590.0ft (Original Well Elev)
Project: Orchard	MD Reference: KBE @ 5590.0ft (Original Well Elev)
Site: NENW Sec10-T8S-R96W (C10OU)	North Reference: True
Well: Five R 15-1HM	Survey Calculation Method: Minimum Curvature
Wellbore: HZ	
Design: Plan #2	

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	7.10	67.00	4,764.6	225.2	530.6	82.1	0.00	0.00	
4,900.0	7.10	67.00	4,863.9	230.1	542.0	83.9	0.00	0.00	
4,996.9	7.10	67.00	4,960.0	234.7	553.0	85.6	0.00	0.00	ROLLINS SS (Iles Fm)
5,000.0	7.10	67.00	4,963.1	234.9	553.4	85.6	0.00	0.00	
5,100.0	7.10	67.00	5,062.3	239.7	564.7	87.4	0.00	0.00	
5,200.0	7.10	67.00	5,161.6	244.5	576.1	89.2	0.00	0.00	
5,294.2	7.10	67.00	5,255.0	249.1	586.8	90.8	0.00	0.00	COZZETTE
5,300.0	7.10	67.00	5,260.8	249.4	587.5	90.9	0.00	0.00	
5,400.0	7.10	67.00	5,360.0	254.2	598.9	92.7	0.00	0.00	
5,500.0	7.10	67.00	5,459.3	259.0	610.2	94.4	0.00	0.00	
5,541.1	7.10	67.00	5,500.0	261.0	614.9	95.2	0.00	0.00	CORCORAN
5,600.0	7.10	67.00	5,558.5	263.9	621.6	96.2	0.00	0.00	
5,700.0	7.10	67.00	5,657.7	268.7	633.0	98.0	0.00	0.00	
5,800.0	7.10	67.00	5,757.0	273.5	644.4	99.7	0.00	0.00	
5,900.0	7.10	67.00	5,856.2	278.4	655.8	101.5	0.00	0.00	
6,000.0	7.10	67.00	5,955.4	283.2	667.1	103.3	0.00	0.00	
6,100.0	7.10	67.00	6,054.7	288.0	678.5	105.0	0.00	0.00	
6,200.0	7.10	67.00	6,153.9	292.8	689.9	106.8	0.00	0.00	
6,220.3	7.10	67.00	6,174.0	293.8	692.2	107.1	0.00	0.00	MANCOS A
6,281.9	7.10	67.00	6,235.1	296.8	699.2	108.2	0.00	0.00	Five R 15-1HM HZ Plan #2 ICP
6,300.0	7.10	67.00	6,253.1	297.7	701.3	108.5	0.00	0.00	
6,400.0	7.10	67.00	6,352.4	302.5	712.6	110.3	0.00	0.00	Start Drop -2.37
6,500.0	4.73	67.00	6,451.8	306.5	722.1	111.8	2.37	-2.37	
6,600.0	2.37	67.00	6,551.6	308.9	727.8	112.6	2.37	-2.37	
6,700.0	0.00	0.00	6,651.6	309.8	729.7	112.9	2.37	-2.37	EOD at Inc. = 0° - Five R 15-1HM HZ Plan #2 E
6,780.0	0.00	0.00	6,731.6	309.8	729.7	112.9	0.00	0.00	KOP #2 = 6780' MD
6,800.0	1.16	157.00	6,751.6	309.6	729.8	113.1	5.80	5.80	Start Build 6.30
6,900.0	7.46	157.00	6,851.3	302.7	732.7	120.6	6.30	6.30	
7,000.0	13.76	157.00	6,949.5	285.7	739.9	138.8	6.30	6.30	
7,075.5	18.52	157.00	7,022.0	266.4	748.1	159.6	6.30	6.30	MANCOS B
7,100.0	20.06	157.00	7,045.1	258.9	751.3	167.6	6.30	6.30	
7,200.0	26.36	157.00	7,137.0	222.7	766.7	206.6	6.30	6.30	
7,300.0	32.66	157.00	7,224.0	177.4	785.9	255.3	6.30	6.30	
7,400.0	38.96	157.00	7,305.0	123.5	808.8	313.2	6.30	6.30	
7,405.0	39.28	157.00	7,308.9	120.6	810.0	316.3	6.30	6.30	
7,500.0	46.43	157.00	7,378.5	61.2	835.2	380.2	7.53	7.53	
7,600.0	53.97	157.00	7,442.5	-9.5	865.2	456.2	7.53	7.53	
7,700.0	61.50	157.00	7,495.8	-87.3	898.3	539.9	7.53	7.53	
7,800.0	69.03	157.00	7,537.6	-170.8	933.7	629.7	7.53	7.53	
7,900.0	76.56	157.00	7,567.2	-258.7	971.0	724.2	7.53	7.53	
8,000.0	84.09	157.00	7,584.0	-349.4	1,009.5	821.7	7.53	7.53	
8,100.0	91.62	157.00	7,587.7	-441.3	1,048.5	920.5	7.53	7.53	
8,105.0	92.00	157.00	7,587.5	-445.9	1,050.5	925.5	7.53	7.53	Landing Point at 8105' MD (Inc. = 92°)
8,200.0	92.00	157.00	7,584.2	-533.3	1,087.6	1,019.4	0.00	0.00	
8,300.0	92.00	157.00	7,580.7	-625.3	1,126.6	1,118.4	0.00	0.00	
8,400.0	92.00	157.00	7,577.2	-717.3	1,165.7	1,217.3	0.00	0.00	
8,500.0	92.00	157.00	7,573.8	-809.3	1,204.7	1,316.2	0.00	0.00	
8,600.0	92.00	157.00	7,570.3	-901.3	1,243.8	1,415.1	0.00	0.00	
8,700.0	92.00	157.00	7,566.8	-993.2	1,282.8	1,514.0	0.00	0.00	
8,800.0	92.00	157.00	7,563.3	-1,085.2	1,321.9	1,613.0	0.00	0.00	
8,900.0	92.00	157.00	7,559.8	-1,177.2	1,360.9	1,711.9	0.00	0.00	
9,000.0	92.00	157.00	7,556.3	-1,269.2	1,400.0	1,810.8	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Five R 15-1HM
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5590.0ft (Original Well Elev)
Project:	Orchard	MD Reference:	KBE @ 5590.0ft (Original Well Elev)
Site:	NENW Sec10-T8S-R96W (C10OU)	North Reference:	True
Well:	Five R 15-1HM	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,100.0	92.00	157.00	7,552.8	-1,361.2	1,439.0	1,909.7	0.00	0.00	
9,200.0	92.00	157.00	7,549.3	-1,453.2	1,478.1	2,008.6	0.00	0.00	
9,300.0	92.00	157.00	7,545.8	-1,545.2	1,517.1	2,107.6	0.00	0.00	
9,400.0	92.00	157.00	7,542.3	-1,637.2	1,556.2	2,206.5	0.00	0.00	
9,500.0	92.00	157.00	7,538.9	-1,729.2	1,595.2	2,305.4	0.00	0.00	
9,600.0	92.00	157.00	7,535.4	-1,821.2	1,634.3	2,404.3	0.00	0.00	
9,700.0	92.00	157.00	7,531.9	-1,913.2	1,673.3	2,503.2	0.00	0.00	
9,800.0	92.00	157.00	7,528.4	-2,005.2	1,712.4	2,602.1	0.00	0.00	
9,900.0	92.00	157.00	7,524.9	-2,097.2	1,751.4	2,701.1	0.00	0.00	
10,000.0	92.00	157.00	7,521.4	-2,189.2	1,790.5	2,800.0	0.00	0.00	
10,100.0	92.00	157.00	7,517.9	-2,281.2	1,829.5	2,898.9	0.00	0.00	
10,200.0	92.00	157.00	7,514.4	-2,373.2	1,868.6	2,997.8	0.00	0.00	
10,300.0	92.00	157.00	7,510.9	-2,465.2	1,907.6	3,096.7	0.00	0.00	
10,400.0	92.00	157.00	7,507.4	-2,557.2	1,946.7	3,195.7	0.00	0.00	
10,500.0	92.00	157.00	7,504.0	-2,649.1	1,985.7	3,294.6	0.00	0.00	
10,600.0	92.00	157.00	7,500.5	-2,741.1	2,024.8	3,393.5	0.00	0.00	
10,700.0	92.00	157.00	7,497.0	-2,833.1	2,063.8	3,492.4	0.00	0.00	
10,800.0	92.00	157.00	7,493.5	-2,925.1	2,102.9	3,591.3	0.00	0.00	
10,900.0	92.00	157.00	7,490.0	-3,017.1	2,141.9	3,690.3	0.00	0.00	
11,000.0	92.00	157.00	7,486.5	-3,109.1	2,181.0	3,789.2	0.00	0.00	
11,100.0	92.00	157.00	7,483.0	-3,201.1	2,220.0	3,888.1	0.00	0.00	
11,200.0	92.00	157.00	7,479.5	-3,293.1	2,259.1	3,987.0	0.00	0.00	
11,300.0	92.00	157.00	7,476.0	-3,385.1	2,298.1	4,085.9	0.00	0.00	
11,400.0	92.00	157.00	7,472.5	-3,477.1	2,337.2	4,184.9	0.00	0.00	
11,500.0	92.00	157.00	7,469.1	-3,569.1	2,376.2	4,283.8	0.00	0.00	
11,600.0	92.00	157.00	7,465.6	-3,661.1	2,415.3	4,382.7	0.00	0.00	
11,700.0	92.00	157.00	7,462.1	-3,753.1	2,454.3	4,481.6	0.00	0.00	
11,800.0	92.00	157.00	7,458.6	-3,845.1	2,493.4	4,580.5	0.00	0.00	
11,900.0	92.00	157.00	7,455.1	-3,937.1	2,532.4	4,679.5	0.00	0.00	
12,000.0	92.00	157.00	7,451.6	-4,029.1	2,571.5	4,778.4	0.00	0.00	
12,100.0	92.00	157.00	7,448.1	-4,121.1	2,610.5	4,877.3	0.00	0.00	
12,200.0	92.00	157.00	7,444.6	-4,213.1	2,649.5	4,976.2	0.00	0.00	
12,300.0	92.00	157.00	7,441.1	-4,305.0	2,688.6	5,075.1	0.00	0.00	
12,400.0	92.00	157.00	7,437.7	-4,397.0	2,727.6	5,174.1	0.00	0.00	
12,500.0	92.00	157.00	7,434.2	-4,489.0	2,766.7	5,273.0	0.00	0.00	
12,535.0	92.00	157.00	7,432.9	-4,521.2	2,780.4	5,307.6	0.00	0.00	TD at 12,535' MD - Five R 15-1HM HZ Plan #2
12,600.0	92.00	157.00	7,430.7	-4,581.0	2,805.7	5,371.9	0.00	0.00	
12,700.0	92.00	157.00	7,427.2	-4,673.0	2,844.8	5,470.8	0.00	0.00	
12,800.0	92.00	157.00	7,423.7	-4,765.0	2,883.8	5,569.7	0.00	0.00	
12,900.0	92.00	157.00	7,420.2	-4,857.0	2,922.9	5,668.7	0.00	0.00	
12,935.0	92.00	157.00	7,419.0	-4,889.2	2,936.6	5,703.3	0.00	0.00	Permit TD at 12,935' MD - Five R 15-1HM HZ F

Cathedral Energy Services

Planning Report

Database: EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference: Well Five R 15-1HM
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: KBE @ 5590.0ft (Original Well Elev)
Project: Orchard	MD Reference: KBE @ 5590.0ft (Original Well Elev)
Site: NENW Sec10-T8S-R96W (C10OU)	North Reference: True
Well: Five R 15-1HM	Survey Calculation Method: Minimum Curvature
Wellbore: HZ	
Design: Plan #2	

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Five R 15-1HM HZ Plan - plan misses target center by 33.4ft at 6281.9ft MD (6235.1 TVD, 296.8 N, 699.2 E) - Point	0.00	0.00	6,231.0	309.8	729.7	1,570,016.21	2,266,010.08	39.369640	-108.096661
Five R 15-1HM HZ Plan - plan hits target center - Point	0.00	0.00	6,651.6	309.8	729.7	1,570,016.21	2,266,010.08	39.369640	-108.096661
Five R 15-1HM HZ Plan - plan hits target center - Point	0.00	0.00	7,432.9	-4,521.2	2,780.4	1,565,128.53	2,267,921.67	39.356376	-108.089409
Five R 15-1HM HZ Plan - plan hits target center - Point	0.00	0.00	7,419.0	-4,889.2	2,936.6	1,564,756.24	2,268,067.27	39.355366	-108.088857

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
2,172.2	2,157.0	OHIO CREEK (Top Kmv)				
2,692.2	2,673.0	WILLIAMS FORK FM				
3,945.8	3,917.0	TOP GAS				
4,707.7	4,673.0	Coal Ridge (Paludal)				
4,996.9	4,960.0	ROLLINS SS (Iles Fm)				
5,294.2	5,255.0	COZZETTE				
5,541.1	5,500.0	CORCORAN				
6,220.3	6,174.0	MANCOS A				
7,075.5	7,022.0	MANCOS B				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)		
100.0	100.0	1.0	2.4	KOP = 100' MD	
300.0	299.1	7.9	18.6	EOB at Inc. = 7.10°	
6,400.0	6,352.4	302.5	712.6	Start Drop -2.37	
6,700.0	6,651.6	309.8	729.7	EOD at Inc. = 0°	
6,780.0	6,731.6	309.8	729.7	KOP #2 = 6780' MD	
6,800.0	6,751.6	309.6	729.8	Start Build 6.30	
8,105.0	7,587.5	120.6	810.0	Landing Point at 8105' MD (Inc.= 92°)	
12,535.0	7,432.9	-445.9	1,050.5	TD at 12,535' MD	
12,935.0	7,419.0	-4,521.2	2,780.4	Permit TD at 12,935' MD	