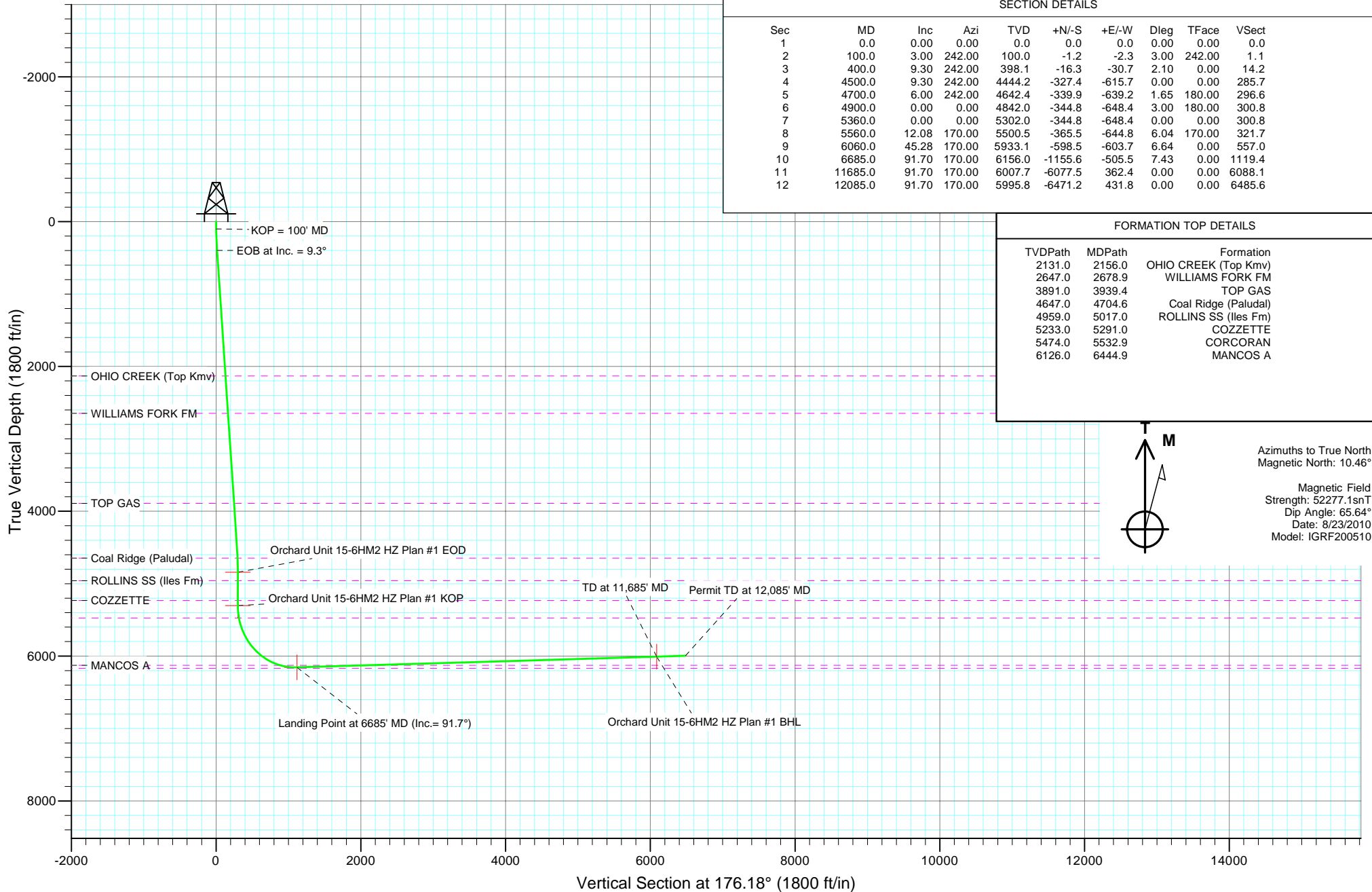




Project: Orchard
 Site: NENW Sec10-T8S-R96W (C10OU)
 Well: Orchard Unit 15-6HM2
 Wellbore: HZ
 Design: Plan #1



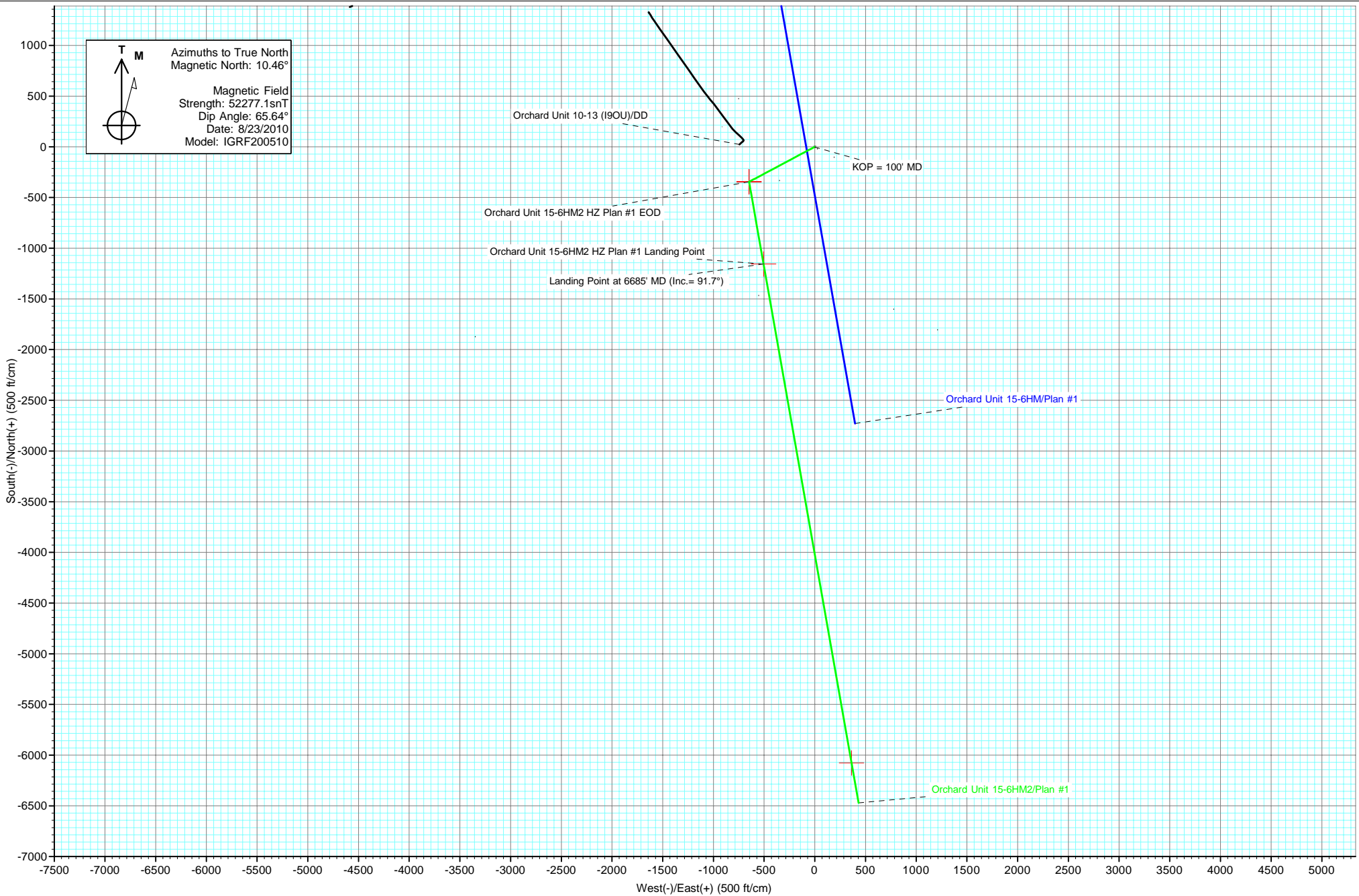
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	100.0	3.00	242.00	100.0	-1.2	-2.3	3.00	242.00	1.1	
3	400.0	9.30	242.00	398.1	-16.3	-30.7	2.10	0.00	14.2	
4	4500.0	9.30	242.00	4444.2	-327.4	-615.7	0.00	0.00	285.7	
5	4700.0	6.00	242.00	4642.4	-339.9	-639.2	1.65	180.00	296.6	
6	4900.0	0.00	0.00	4842.0	-344.8	-648.4	3.00	180.00	300.8	
7	5360.0	0.00	0.00	5302.0	-344.8	-648.4	0.00	0.00	300.8	
8	5560.0	12.08	170.00	5500.5	-365.5	-644.8	6.04	170.00	321.7	
9	6060.0	45.28	170.00	5933.1	-598.5	-603.7	6.64	0.00	557.0	
10	6685.0	91.70	170.00	6156.0	-1155.6	-505.5	7.43	0.00	1119.4	
11	11685.0	91.70	170.00	6007.7	-6077.5	362.4	0.00	0.00	6088.1	
12	12085.0	91.70	170.00	5995.8	-6471.2	431.8	0.00	0.00	6485.6	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2131.0	2156.0	OHIO CREEK (Top Kmv)
2647.0	2678.9	WILLIAMS FORK FM
3891.0	3939.4	TOP GAS
4647.0	4704.6	Coal Ridge (Paludal)
4959.0	5017.0	ROLLINS SS (Iles Fm)
5233.0	5291.0	COZZETTE
5474.0	5532.9	CORCORAN
6126.0	6444.9	MANCOS A

Azimuths to True North
 Magnetic North: 10.46°
 Magnetic Field
 Strength: 52277.1snT
 Dip Angle: 65.64°
 Date: 8/23/2010
 Model: IGRF200510



Project: Orchard
Site: NENW Sec10-T8S-R96W (C10OU)
Well: Orchard Unit 15-6HM2
Wellbore: HZ
Plan: Plan #1



Cathedral Energy Services

Planning Report

Database: EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference: Well Orchard Unit 15-6HM2
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: Orchard Unit 15-6HM2	Survey Calculation Method: Minimum Curvature
Wellbore: HZ	
Design: Plan #1	

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 Orchard Unit 15-6HM2					
Well Position	+N/-S 0.0 ft	Northing: 1,566,044.91 ft	Latitude: 39.358669		
	+E/-W 0.0 ft	Easting: 2,265,086.34 ft	Longitude: -108.099525		
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 (nT)
	IGRF200510	8/23/2010	10.46	65.64	52,277

Design Plan #1				
Audit Notes:				
Version:	Phase: PLAN	Tie On Depth: 0.0		
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	176.18

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	242.00	100.0	-1.2	-2.3	3.00	3.00	0.00	242.00	
400.0	9.30	242.00	398.1	-16.3	-30.7	2.10	2.10	0.00	0.00	
4,500.0	9.30	242.00	4,444.2	-327.4	-615.7	0.00	0.00	0.00	0.00	
4,700.0	6.00	242.00	4,642.4	-339.9	-639.2	1.65	-1.65	0.00	180.00	
4,900.0	0.00	0.00	4,842.0	-344.8	-648.4	3.00	-3.00	0.00	180.00	
5,360.0	0.00	0.00	5,302.0	-344.8	-648.4	0.00	0.00	0.00	0.00	
5,560.0	12.08	170.00	5,500.5	-365.5	-644.8	6.04	6.04	0.00	170.00	
6,060.0	45.28	170.00	5,933.1	-598.5	-603.7	6.64	6.64	0.00	0.00	
6,685.0	91.70	170.00	6,156.0	-1,155.6	-505.5	7.43	7.43	0.00	0.00	
11,685.0	91.70	170.00	6,007.7	-6,077.5	362.4	0.00	0.00	0.00	0.00	
12,085.0	91.70	170.00	5,995.8	-6,471.2	431.8	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Orchard Unit 15-6HM2
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:	Orchard Unit 15-6HM2	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

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	242.00	100.0	-1.2	-2.3	1.1	3.00	3.00	KOP = 100' MD
200.0	5.10	242.00	199.7	-4.5	-8.5	4.0	2.10	2.10	
300.0	7.20	242.00	299.1	-9.6	-18.0	8.4	2.10	2.10	
400.0	9.30	242.00	398.1	-16.3	-30.7	14.2	2.10	2.10	EOB at Inc. = 9.3°
500.0	9.30	242.00	496.8	-23.9	-44.9	20.9	0.00	0.00	
600.0	9.30	242.00	595.4	-31.5	-59.2	27.5	0.00	0.00	
700.0	9.30	242.00	694.1	-39.1	-73.5	34.1	0.00	0.00	
800.0	9.30	242.00	792.8	-46.7	-87.7	40.7	0.00	0.00	
900.0	9.30	242.00	891.5	-54.2	-102.0	47.3	0.00	0.00	
1,000.0	9.30	242.00	990.2	-61.8	-116.3	54.0	0.00	0.00	
1,100.0	9.30	242.00	1,088.9	-69.4	-130.6	60.6	0.00	0.00	
1,200.0	9.30	242.00	1,187.6	-77.0	-144.8	67.2	0.00	0.00	
1,300.0	9.30	242.00	1,286.2	-84.6	-159.1	73.8	0.00	0.00	
1,400.0	9.30	242.00	1,384.9	-92.2	-173.4	80.4	0.00	0.00	
1,500.0	9.30	242.00	1,483.6	-99.8	-187.6	87.1	0.00	0.00	
1,600.0	9.30	242.00	1,582.3	-107.4	-201.9	93.7	0.00	0.00	
1,700.0	9.30	242.00	1,681.0	-114.9	-216.2	100.3	0.00	0.00	
1,800.0	9.30	242.00	1,779.7	-122.5	-230.4	106.9	0.00	0.00	
1,900.0	9.30	242.00	1,878.4	-130.1	-244.7	113.5	0.00	0.00	
2,000.0	9.30	242.00	1,977.0	-137.7	-259.0	120.2	0.00	0.00	
2,100.0	9.30	242.00	2,075.7	-145.3	-273.2	126.8	0.00	0.00	
2,156.0	9.30	242.00	2,131.0	-149.5	-281.2	130.5	0.00	0.00	OHIO CREEK (Top Kmv)
2,200.0	9.30	242.00	2,174.4	-152.9	-287.5	133.4	0.00	0.00	
2,300.0	9.30	242.00	2,273.1	-160.5	-301.8	140.0	0.00	0.00	
2,400.0	9.30	242.00	2,371.8	-168.0	-316.0	146.6	0.00	0.00	
2,500.0	9.30	242.00	2,470.5	-175.6	-330.3	153.3	0.00	0.00	
2,600.0	9.30	242.00	2,569.2	-183.2	-344.6	159.9	0.00	0.00	
2,678.9	9.30	242.00	2,647.0	-189.2	-355.8	165.1	0.00	0.00	WILLIAMS FORK FM
2,700.0	9.30	242.00	2,667.8	-190.8	-358.9	166.5	0.00	0.00	
2,800.0	9.30	242.00	2,766.5	-198.4	-373.1	173.1	0.00	0.00	
2,900.0	9.30	242.00	2,865.2	-206.0	-387.4	179.7	0.00	0.00	
3,000.0	9.30	242.00	2,963.9	-213.6	-401.7	186.4	0.00	0.00	
3,100.0	9.30	242.00	3,062.6	-221.2	-415.9	193.0	0.00	0.00	
3,200.0	9.30	242.00	3,161.3	-228.7	-430.2	199.6	0.00	0.00	
3,300.0	9.30	242.00	3,260.0	-236.3	-444.5	206.2	0.00	0.00	
3,400.0	9.30	242.00	3,358.6	-243.9	-458.7	212.8	0.00	0.00	
3,500.0	9.30	242.00	3,457.3	-251.5	-473.0	219.5	0.00	0.00	
3,600.0	9.30	242.00	3,556.0	-259.1	-487.3	226.1	0.00	0.00	
3,700.0	9.30	242.00	3,654.7	-266.7	-501.5	232.7	0.00	0.00	
3,800.0	9.30	242.00	3,753.4	-274.3	-515.8	239.3	0.00	0.00	
3,900.0	9.30	242.00	3,852.1	-281.8	-530.1	245.9	0.00	0.00	
3,939.4	9.30	242.00	3,891.0	-284.8	-535.7	248.5	0.00	0.00	TOP GAS
4,000.0	9.30	242.00	3,950.8	-289.4	-544.3	252.6	0.00	0.00	
4,100.0	9.30	242.00	4,049.4	-297.0	-558.6	259.2	0.00	0.00	
4,200.0	9.30	242.00	4,148.1	-304.6	-572.9	265.8	0.00	0.00	
4,300.0	9.30	242.00	4,246.8	-312.2	-587.2	272.4	0.00	0.00	
4,400.0	9.30	242.00	4,345.5	-319.8	-601.4	279.0	0.00	0.00	
4,500.0	9.30	242.00	4,444.2	-327.4	-615.7	285.7	0.00	0.00	Start Drop -1.65
4,600.0	7.65	242.00	4,543.1	-334.3	-628.7	291.7	1.65	-1.65	
4,700.0	6.00	242.00	4,642.4	-339.9	-639.2	296.6	1.65	-1.65	
4,704.6	5.86	242.00	4,647.0	-340.1	-639.6	296.8	3.00	-3.00	Coal Ridge (Paludal)

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Orchard Unit 15-6HM2
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:	Orchard Unit 15-6HM2	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

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	3.00	242.00	4,742.1	-343.6	-646.1	299.8	3.00	-3.00	
4,900.0	0.00	0.00	4,842.0	-344.8	-648.4	300.8	3.00	-3.00	EOD at Inc. = 0° - Orchard Unit 15-6HM2 HZ PI
5,000.0	0.00	0.00	4,942.0	-344.8	-648.4	300.8	0.00	0.00	
5,017.0	0.00	0.00	4,959.0	-344.8	-648.4	300.8	0.00	0.00	ROLLINS SS (Iles Fm)
5,100.0	0.00	0.00	5,042.0	-344.8	-648.4	300.8	0.00	0.00	
5,200.0	0.00	0.00	5,142.0	-344.8	-648.4	300.8	0.00	0.00	
5,291.0	0.00	0.00	5,233.0	-344.8	-648.4	300.8	0.00	0.00	COZZETTE
5,300.0	0.00	0.00	5,242.0	-344.8	-648.4	300.8	0.00	0.00	
5,360.0	0.00	0.00	5,302.0	-344.8	-648.4	300.8	0.00	0.00	KOP #2 = 5360' MD - Orchard Unit 15-6HM2 HZ
5,400.0	2.42	170.00	5,342.0	-345.6	-648.3	301.7	6.04	6.04	
5,500.0	8.46	170.00	5,441.5	-354.9	-646.6	311.1	6.04	6.04	
5,532.9	10.45	170.00	5,474.0	-360.3	-645.7	316.5	6.04	6.04	CORCORAN
5,560.0	12.08	170.00	5,500.5	-365.5	-644.8	321.7	6.04	6.04	
5,600.0	14.74	170.00	5,539.4	-374.6	-643.2	330.9	6.64	6.64	
5,700.0	21.38	170.00	5,634.5	-405.1	-637.8	361.7	6.64	6.64	
5,800.0	28.02	170.00	5,725.3	-446.2	-630.5	403.3	6.64	6.64	
5,900.0	34.66	170.00	5,810.6	-497.4	-621.5	454.9	6.64	6.64	
6,000.0	41.30	170.00	5,889.4	-558.0	-610.8	516.1	6.64	6.64	
6,060.0	45.28	170.00	5,933.1	-598.5	-603.7	557.0	6.64	6.64	
6,100.0	48.25	170.00	5,960.5	-627.2	-598.6	585.9	7.43	7.43	
6,200.0	55.68	170.00	6,022.0	-704.7	-585.0	664.2	7.43	7.43	
6,300.0	63.11	170.00	6,072.9	-789.4	-570.0	749.7	7.43	7.43	
6,400.0	70.53	170.00	6,112.3	-879.9	-554.1	841.0	7.43	7.43	
6,444.9	73.87	170.00	6,126.0	-922.0	-546.7	883.5	7.43	7.43	MANCOS A
6,500.0	77.96	170.00	6,139.4	-974.6	-537.4	936.6	7.43	7.43	
6,600.0	85.39	170.00	6,153.9	-1,072.0	-520.2	1,034.9	7.43	7.43	
6,685.0	91.70	170.00	6,156.0	-1,155.6	-505.5	1,119.4	7.43	7.43	Landing Point at 6685' MD (Inc. = 91.7°) - Orcha
6,700.0	91.70	170.00	6,155.6	-1,170.4	-502.9	1,134.3	0.00	0.00	
6,800.0	91.70	170.00	6,152.6	-1,268.8	-485.5	1,233.7	0.00	0.00	
6,900.0	91.70	170.00	6,149.7	-1,367.2	-468.2	1,333.0	0.00	0.00	
7,000.0	91.70	170.00	6,146.7	-1,465.7	-450.8	1,432.4	0.00	0.00	
7,100.0	91.70	170.00	6,143.7	-1,564.1	-433.4	1,531.8	0.00	0.00	
7,200.0	91.70	170.00	6,140.8	-1,662.5	-416.1	1,631.2	0.00	0.00	
7,300.0	91.70	170.00	6,137.8	-1,761.0	-398.7	1,730.5	0.00	0.00	
7,400.0	91.70	170.00	6,134.8	-1,859.4	-381.4	1,829.9	0.00	0.00	
7,500.0	91.70	170.00	6,131.9	-1,957.9	-364.0	1,929.3	0.00	0.00	
7,600.0	91.70	170.00	6,128.9	-2,056.3	-346.7	2,028.6	0.00	0.00	
7,700.0	91.70	170.00	6,125.9	-2,154.7	-329.3	2,128.0	0.00	0.00	
7,800.0	91.70	170.00	6,123.0	-2,253.2	-311.9	2,227.4	0.00	0.00	
7,900.0	91.70	170.00	6,120.0	-2,351.6	-294.6	2,326.8	0.00	0.00	
8,000.0	91.70	170.00	6,117.0	-2,450.0	-277.2	2,426.1	0.00	0.00	
8,100.0	91.70	170.00	6,114.1	-2,548.5	-259.9	2,525.5	0.00	0.00	
8,200.0	91.70	170.00	6,111.1	-2,646.9	-242.5	2,624.9	0.00	0.00	
8,300.0	91.70	170.00	6,108.1	-2,745.4	-225.1	2,724.3	0.00	0.00	
8,400.0	91.70	170.00	6,105.2	-2,843.8	-207.8	2,823.6	0.00	0.00	
8,500.0	91.70	170.00	6,102.2	-2,942.2	-190.4	2,923.0	0.00	0.00	
8,600.0	91.70	170.00	6,099.2	-3,040.7	-173.1	3,022.4	0.00	0.00	
8,700.0	91.70	170.00	6,096.3	-3,139.1	-155.7	3,121.8	0.00	0.00	
8,800.0	91.70	170.00	6,093.3	-3,237.5	-138.4	3,221.1	0.00	0.00	
8,900.0	91.70	170.00	6,090.3	-3,336.0	-121.0	3,320.5	0.00	0.00	
9,000.0	91.70	170.00	6,087.4	-3,434.4	-103.6	3,419.9	0.00	0.00	
9,100.0	91.70	170.00	6,084.4	-3,532.9	-86.3	3,519.3	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Orchard Unit 15-6HM2
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:	Orchard Unit 15-6HM2	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

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
9,200.0	91.70	170.00	6,081.4	-3,631.3	-68.9	3,618.6	0.00	0.00	
9,300.0	91.70	170.00	6,078.5	-3,729.7	-51.6	3,718.0	0.00	0.00	
9,400.0	91.70	170.00	6,075.5	-3,828.2	-34.2	3,817.4	0.00	0.00	
9,500.0	91.70	170.00	6,072.5	-3,926.6	-16.9	3,916.8	0.00	0.00	
9,600.0	91.70	170.00	6,069.6	-4,025.0	0.5	4,016.1	0.00	0.00	
9,700.0	91.70	170.00	6,066.6	-4,123.5	17.9	4,115.5	0.00	0.00	
9,800.0	91.70	170.00	6,063.6	-4,221.9	35.2	4,214.9	0.00	0.00	
9,900.0	91.70	170.00	6,060.7	-4,320.4	52.6	4,314.3	0.00	0.00	
10,000.0	91.70	170.00	6,057.7	-4,418.8	69.9	4,413.6	0.00	0.00	
10,100.0	91.70	170.00	6,054.7	-4,517.2	87.3	4,513.0	0.00	0.00	
10,200.0	91.70	170.00	6,051.8	-4,615.7	104.6	4,612.4	0.00	0.00	
10,300.0	91.70	170.00	6,048.8	-4,714.1	122.0	4,711.8	0.00	0.00	
10,400.0	91.70	170.00	6,045.8	-4,812.5	139.4	4,811.1	0.00	0.00	
10,500.0	91.70	170.00	6,042.9	-4,911.0	156.7	4,910.5	0.00	0.00	
10,600.0	91.70	170.00	6,039.9	-5,009.4	174.1	5,009.9	0.00	0.00	
10,700.0	91.70	170.00	6,036.9	-5,107.9	191.4	5,109.3	0.00	0.00	
10,800.0	91.70	170.00	6,034.0	-5,206.3	208.8	5,208.6	0.00	0.00	
10,900.0	91.70	170.00	6,031.0	-5,304.7	226.1	5,308.0	0.00	0.00	
11,000.0	91.70	170.00	6,028.0	-5,403.2	243.5	5,407.4	0.00	0.00	
11,100.0	91.70	170.00	6,025.1	-5,501.6	260.9	5,506.8	0.00	0.00	
11,200.0	91.70	170.00	6,022.1	-5,600.0	278.2	5,606.1	0.00	0.00	
11,300.0	91.70	170.00	6,019.1	-5,698.5	295.6	5,705.5	0.00	0.00	
11,400.0	91.70	170.00	6,016.2	-5,796.9	312.9	5,804.9	0.00	0.00	
11,500.0	91.70	170.00	6,013.2	-5,895.4	330.3	5,904.3	0.00	0.00	
11,600.0	91.70	170.00	6,010.2	-5,993.8	347.6	6,003.6	0.00	0.00	
11,685.0	91.70	170.00	6,007.7	-6,077.5	362.4	6,088.1	0.00	0.00	TD at 11,685' MD - Orchard Unit 15-6HM2 HZ F
11,700.0	91.70	170.00	6,007.3	-6,092.2	365.0	6,103.0	0.00	0.00	
11,800.0	91.70	170.00	6,004.3	-6,190.7	382.4	6,202.4	0.00	0.00	
11,900.0	91.70	170.00	6,001.3	-6,289.1	399.7	6,301.8	0.00	0.00	
12,000.0	91.70	170.00	5,998.4	-6,387.5	417.1	6,401.1	0.00	0.00	
12,085.0	91.70	170.00	5,995.8	-6,471.2	431.8	6,485.6	0.00	0.00	Permit TD at 12,085' MD

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
Orchard Unit 15-6HM2 † - plan hits target center - Point	0.00	0.00	5,302.0	-344.8	-648.4	1,565,718.83	2,264,428.30	39.357722	-108.101818
Orchard Unit 15-6HM2 † - plan hits target center - Point	0.00	0.00	6,156.0	-1,155.6	-505.5	1,564,904.26	2,264,548.01	39.355496	-108.101313
Orchard Unit 15-6HM2 † - plan hits target center - Point	0.00	0.00	6,007.7	-6,077.5	362.4	1,559,959.57	2,265,274.70	39.341983	-108.098244
Orchard Unit 15-6HM2 † - plan hits target center - Point	0.00	0.00	4,842.0	-344.8	-648.4	1,565,718.83	2,264,428.30	39.357722	-108.101818

Cathedral Energy Services

Planning Report

Database: EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference: Well Orchard Unit 15-6HM2
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: Orchard Unit 15-6HM2	Survey Calculation Method: Minimum Curvature
Wellbore: HZ	
Design: Plan #1	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,156.0	2,131.0	OHIO CREEK (Top Kmv)				
2,678.9	2,647.0	WILLIAMS FORK FM				
3,939.4	3,891.0	TOP GAS				
4,704.6	4,647.0	Coal Ridge (Paludal)				
5,017.0	4,959.0	ROLLINS SS (Iles Fm)				
5,291.0	5,233.0	COZZETTE				
5,532.9	5,474.0	CORCORAN				
6,444.9	6,126.0	MANCOS A				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
100.0	100.0	-1.2	-2.3	KOP = 100' MD	
400.0	398.1	-16.3	-30.7	EOB at Inc. = 9.3°	
4,500.0	4,444.2	-327.4	-615.7	Start Drop -1.65	
4,900.0	4,842.0	-339.9	-639.2	EOD at Inc. = 0°	
5,360.0	5,302.0	-344.8	-648.4	KOP #2 = 5360' MD	
6,685.0	6,156.0	-344.8	-648.4	Landing Point at 6685' MD (Inc.= 91.7°)	
11,685.0	6,007.7	-365.5	-644.8	TD at 11,685' MD	
12,085.0	5,995.8	-598.5	-603.7	Permit TD at 12,085' MD	