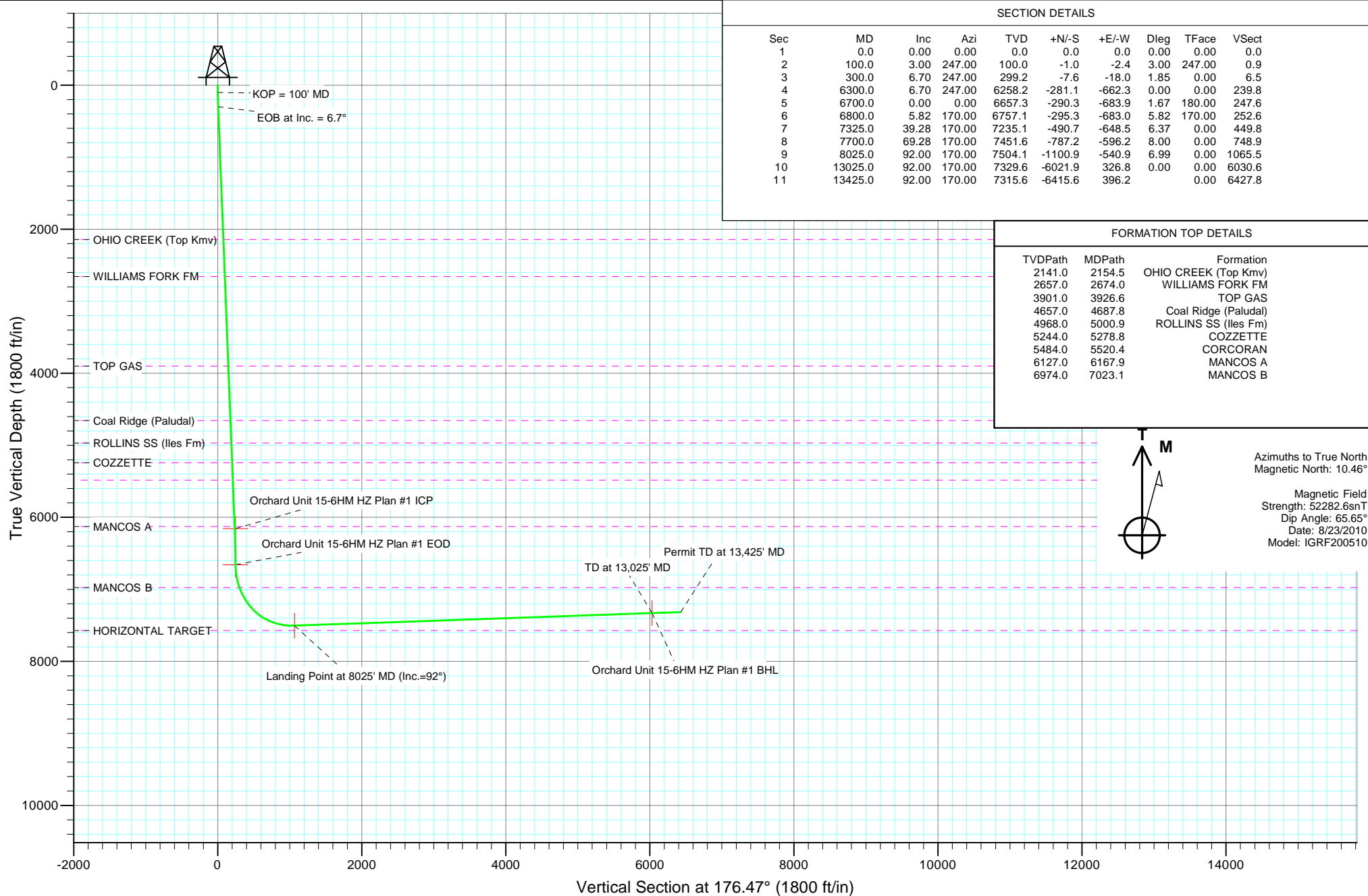




Project: Orchard
 Site: NENW Sec10-T8S-R96W (C10OU)
 Well: Orchard Unit 15-6HM
 Wellbore: HZ
 Design: Plan #1



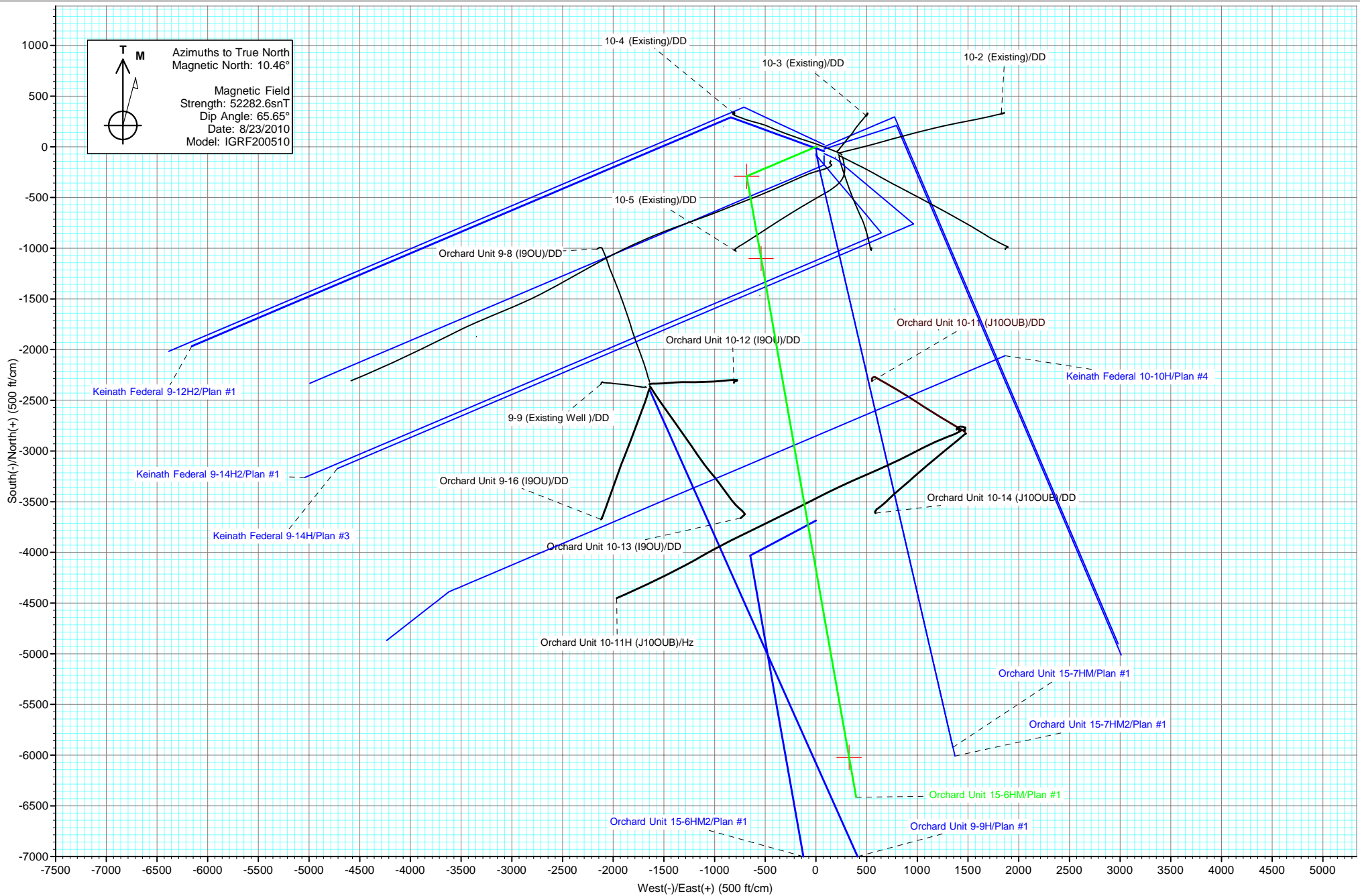
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	100.0	3.00	247.00	100.0	-1.0	-2.4	3.00	247.00	0.9	
3	300.0	6.70	247.00	299.2	-7.6	-18.0	1.85	0.00	6.5	
4	6300.0	6.70	247.00	6258.2	-281.1	-662.3	0.00	0.00	239.8	
5	6700.0	0.00	0.00	6657.3	-290.3	-683.9	1.67	180.00	247.6	
6	6800.0	5.82	170.00	6757.1	-295.3	-683.0	5.82	170.00	252.6	
7	7325.0	39.28	170.00	7235.1	-490.7	-648.5	6.37	0.00	449.8	
8	7700.0	69.28	170.00	7451.6	-787.2	-596.2	8.00	0.00	748.9	
9	8025.0	92.00	170.00	7504.1	-1100.9	-540.9	6.99	0.00	1065.5	
10	13025.0	92.00	170.00	7329.6	-6021.9	326.8	0.00	0.00	6030.6	
11	13425.0	92.00	170.00	7315.6	-6415.6	396.2		0.00	6427.8	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2141.0	2154.5	OHIO CREEK (Top Kmv)
2657.0	2674.0	WILLIAMS FORK FM
3901.0	3926.6	TOP GAS
4657.0	4687.8	Coal Ridge (Paludal)
4968.0	5000.9	ROLLINS SS (Iles Fm)
5244.0	5278.8	COZZETTE
5484.0	5520.4	CORCORAN
6127.0	6167.9	MANCOS A
6974.0	7023.1	MANCOS B

Azimuths to True North
 Magnetic North: 10.46°
 Magnetic Field
 Strength: 52282.6snT
 Dip Angle: 65.65°
 Date: 8/23/2010
 Model: IGRF200510



Project: Orchard
Site: NENW Sec10-T8S-R96W (C10OU)
Well: Orchard Unit 15-6HM
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 15-6HM
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 15-6HM	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 15-6HM					
Well Position	+N/-S	0.0 ft	Northing:	1,569,729.75 ft	Latitude: 39.368790
	+E/-W	0.0 ft	Easting:	2,265,191.81 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
	IGRF200510	8/23/2010	(°) 10.46	(°) 65.65	(nT) 52,283

Design Plan #1				
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	176.47

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	
100.0	3.00	247.00	100.0	-1.0	-2.4	3.00	3.00	0.00	247.00	
300.0	6.70	247.00	299.2	-7.6	-18.0	1.85	1.85	0.00	0.00	
6,300.0	6.70	247.00	6,258.2	-281.1	-662.3	0.00	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,657.3	-290.3	-683.9	1.67	-1.67	0.00	180.00	
6,800.0	5.82	170.00	6,757.1	-295.3	-683.0	5.82	5.82	0.00	170.00	
7,325.0	39.28	170.00	7,235.1	-490.7	-648.5	6.37	6.37	0.00	0.00	
7,700.0	69.28	170.00	7,451.6	-787.2	-596.2	8.00	8.00	0.00	0.00	
8,025.0	92.00	170.00	7,504.1	-1,100.9	-540.9	6.99	6.99	0.00	0.00	
13,025.0	92.00	170.00	7,329.6	-6,021.9	326.8	0.00	0.00	0.00	0.00	
13,425.0	92.00	170.00	7,315.6	-6,415.6	396.2		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 15-6HM
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 15-6HM	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	247.00	100.0	-1.0	-2.4	0.9	3.00	3.00	KOP = 100' MD
200.0	4.85	247.00	199.7	-3.7	-8.7	3.2	1.85	1.85	
300.0	6.70	247.00	299.2	-7.6	-18.0	6.5	1.85	1.85	EOB at Inc. = 6.7°
400.0	6.70	247.00	398.5	-12.2	-28.7	10.4	0.00	0.00	
500.0	6.70	247.00	497.8	-16.7	-39.5	14.3	0.00	0.00	
600.0	6.70	247.00	597.2	-21.3	-50.2	18.2	0.00	0.00	
700.0	6.70	247.00	696.5	-25.9	-60.9	22.1	0.00	0.00	
800.0	6.70	247.00	795.8	-30.4	-71.7	25.9	0.00	0.00	
900.0	6.70	247.00	895.1	-35.0	-82.4	29.8	0.00	0.00	
1,000.0	6.70	247.00	994.4	-39.5	-93.1	33.7	0.00	0.00	
1,100.0	6.70	247.00	1,093.7	-44.1	-103.9	37.6	0.00	0.00	
1,200.0	6.70	247.00	1,193.1	-48.7	-114.6	41.5	0.00	0.00	
1,300.0	6.70	247.00	1,292.4	-53.2	-125.4	45.4	0.00	0.00	
1,400.0	6.70	247.00	1,391.7	-57.8	-136.1	49.3	0.00	0.00	
1,500.0	6.70	247.00	1,491.0	-62.3	-146.8	53.2	0.00	0.00	
1,600.0	6.70	247.00	1,590.3	-66.9	-157.6	57.1	0.00	0.00	
1,700.0	6.70	247.00	1,689.6	-71.5	-168.3	60.9	0.00	0.00	
1,800.0	6.70	247.00	1,789.0	-76.0	-179.1	64.8	0.00	0.00	
1,900.0	6.70	247.00	1,888.3	-80.6	-189.8	68.7	0.00	0.00	
2,000.0	6.70	247.00	1,987.6	-85.1	-200.5	72.6	0.00	0.00	
2,100.0	6.70	247.00	2,086.9	-89.7	-211.3	76.5	0.00	0.00	
2,154.5	6.70	247.00	2,141.0	-92.2	-217.1	78.6	0.00	0.00	OHIO CREEK (Top Kmv)
2,200.0	6.70	247.00	2,186.2	-94.2	-222.0	80.4	0.00	0.00	
2,300.0	6.70	247.00	2,285.5	-98.8	-232.8	84.3	0.00	0.00	
2,400.0	6.70	247.00	2,384.9	-103.4	-243.5	88.2	0.00	0.00	
2,500.0	6.70	247.00	2,484.2	-107.9	-254.2	92.0	0.00	0.00	
2,600.0	6.70	247.00	2,583.5	-112.5	-265.0	95.9	0.00	0.00	
2,674.0	6.70	247.00	2,657.0	-115.9	-272.9	98.8	0.00	0.00	WILLIAMS FORK FM
2,700.0	6.70	247.00	2,682.8	-117.0	-275.7	99.8	0.00	0.00	
2,800.0	6.70	247.00	2,782.1	-121.6	-286.5	103.7	0.00	0.00	
2,900.0	6.70	247.00	2,881.4	-126.2	-297.2	107.6	0.00	0.00	
3,000.0	6.70	247.00	2,980.8	-130.7	-307.9	111.5	0.00	0.00	
3,100.0	6.70	247.00	3,080.1	-135.3	-318.7	115.4	0.00	0.00	
3,200.0	6.70	247.00	3,179.4	-139.8	-329.4	119.3	0.00	0.00	
3,300.0	6.70	247.00	3,278.7	-144.4	-340.2	123.1	0.00	0.00	
3,400.0	6.70	247.00	3,378.0	-148.9	-350.9	127.0	0.00	0.00	
3,500.0	6.70	247.00	3,477.3	-153.5	-361.6	130.9	0.00	0.00	
3,600.0	6.70	247.00	3,576.7	-158.1	-372.4	134.8	0.00	0.00	
3,700.0	6.70	247.00	3,676.0	-162.6	-383.1	138.7	0.00	0.00	
3,800.0	6.70	247.00	3,775.3	-167.2	-393.9	142.6	0.00	0.00	
3,900.0	6.70	247.00	3,874.6	-171.7	-404.6	146.5	0.00	0.00	
3,926.6	6.70	247.00	3,901.0	-173.0	-407.5	147.5	0.00	0.00	TOP GAS
4,000.0	6.70	247.00	3,973.9	-176.3	-415.3	150.4	0.00	0.00	
4,100.0	6.70	247.00	4,073.3	-180.9	-426.1	154.3	0.00	0.00	
4,200.0	6.70	247.00	4,172.6	-185.4	-436.8	158.1	0.00	0.00	
4,300.0	6.70	247.00	4,271.9	-190.0	-447.6	162.0	0.00	0.00	
4,400.0	6.70	247.00	4,371.2	-194.5	-458.3	165.9	0.00	0.00	
4,500.0	6.70	247.00	4,470.5	-199.1	-469.0	169.8	0.00	0.00	
4,600.0	6.70	247.00	4,569.8	-203.7	-479.8	173.7	0.00	0.00	
4,687.8	6.70	247.00	4,657.0	-207.7	-489.2	177.1	0.00	0.00	Coal Ridge (Paludal)
4,700.0	6.70	247.00	4,669.2	-208.2	-490.5	177.6	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Orchard Unit 15-6HM
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 15-6HM	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	6.70	247.00	4,768.5	-212.8	-501.3	181.5	0.00	0.00	
4,900.0	6.70	247.00	4,867.8	-217.3	-512.0	185.4	0.00	0.00	
5,000.0	6.70	247.00	4,967.1	-221.9	-522.7	189.2	0.00	0.00	
5,000.9	6.70	247.00	4,968.0	-221.9	-522.8	189.3	0.00	0.00	ROLLINS SS (Iles Fm)
5,100.0	6.70	247.00	5,066.4	-226.4	-533.5	193.1	0.00	0.00	
5,200.0	6.70	247.00	5,165.7	-231.0	-544.2	197.0	0.00	0.00	
5,278.8	6.70	247.00	5,244.0	-234.6	-552.7	200.1	0.00	0.00	COZZETTE
5,300.0	6.70	247.00	5,265.1	-235.6	-555.0	200.9	0.00	0.00	
5,400.0	6.70	247.00	5,364.4	-240.1	-565.7	204.8	0.00	0.00	
5,500.0	6.70	247.00	5,463.7	-244.7	-576.4	208.7	0.00	0.00	
5,520.4	6.70	247.00	5,484.0	-245.6	-578.6	209.5	0.00	0.00	CORCORAN
5,600.0	6.70	247.00	5,563.0	-249.2	-587.2	212.6	0.00	0.00	
5,700.0	6.70	247.00	5,662.3	-253.8	-597.9	216.5	0.00	0.00	
5,800.0	6.70	247.00	5,761.6	-258.4	-608.6	220.3	0.00	0.00	
5,900.0	6.70	247.00	5,861.0	-262.9	-619.4	224.2	0.00	0.00	
6,000.0	6.70	247.00	5,960.3	-267.5	-630.1	228.1	0.00	0.00	
6,100.0	6.70	247.00	6,059.6	-272.0	-640.9	232.0	0.00	0.00	
6,167.9	6.70	247.00	6,127.0	-275.1	-648.2	234.7	0.00	0.00	MANCOS A
6,200.0	6.70	247.00	6,158.9	-276.6	-651.6	235.9	0.00	0.00	
6,202.5	6.70	247.00	6,161.4	-276.7	-651.9	236.0	0.00	0.00	Orchard Unit 15-6HM HZ Plan #1 ICP
6,300.0	6.70	247.00	6,258.2	-281.1	-662.3	239.8	0.00	0.00	Start Drop -1.67
6,400.0	5.02	247.00	6,357.7	-285.1	-671.7	243.2	1.67	-1.67	
6,500.0	3.35	247.00	6,457.4	-288.0	-678.5	245.6	1.67	-1.67	
6,600.0	1.67	247.00	6,557.3	-289.7	-682.5	247.1	1.67	-1.67	
6,700.0	0.00	0.00	6,657.3	-290.3	-683.9	247.6	1.67	-1.67	EOD at Inc. = 0° - Orchard Unit 15-6HM HZ Pla
6,800.0	5.82	170.00	6,757.1	-295.3	-683.0	252.6	5.82	5.82	KOP #2 = 6800' MD
6,900.0	12.19	170.00	6,855.9	-310.7	-680.3	268.2	6.37	6.37	
7,000.0	18.57	170.00	6,952.2	-336.8	-675.7	294.5	6.37	6.37	
7,023.1	20.04	170.00	6,974.0	-344.3	-674.3	302.1	6.37	6.37	MANCOS B
7,100.0	24.94	170.00	7,045.1	-373.3	-669.2	331.3	6.37	6.37	
7,200.0	31.31	170.00	7,133.2	-419.7	-661.0	378.1	6.37	6.37	
7,300.0	37.69	170.00	7,215.6	-475.4	-651.2	434.4	6.37	6.37	
7,325.0	39.28	170.00	7,235.1	-490.7	-648.5	449.8	6.37	6.37	
7,400.0	45.28	170.00	7,290.6	-540.4	-639.7	499.9	8.00	8.00	
7,500.0	53.28	170.00	7,355.8	-615.0	-626.6	575.2	8.00	8.00	
7,600.0	61.28	170.00	7,409.8	-697.8	-612.0	658.7	8.00	8.00	
7,700.0	69.28	170.00	7,451.6	-787.2	-596.2	748.9	8.00	8.00	
7,800.0	76.27	170.00	7,481.2	-881.2	-579.7	843.8	6.99	6.99	
7,900.0	83.26	170.00	7,498.9	-978.0	-562.6	941.5	6.99	6.99	
8,000.0	90.25	170.00	7,504.6	-1,076.3	-545.3	1,040.6	6.99	6.99	
8,025.0	92.00	170.00	7,504.1	-1,100.9	-540.9	1,065.5	6.99	6.99	Landing Point at 8025' MD - Orchard Unit 15-6H
8,100.0	92.00	170.00	7,501.5	-1,174.7	-527.9	1,139.9	0.00	0.00	
8,200.0	92.00	170.00	7,498.0	-1,273.1	-510.5	1,239.2	0.00	0.00	
8,300.0	92.00	170.00	7,494.5	-1,371.6	-493.2	1,338.5	0.00	0.00	
8,400.0	92.00	170.00	7,491.0	-1,470.0	-475.8	1,437.8	0.00	0.00	
8,500.0	92.00	170.00	7,487.5	-1,568.4	-458.5	1,537.2	0.00	0.00	
8,600.0	92.00	170.00	7,484.0	-1,666.8	-441.1	1,636.5	0.00	0.00	
8,700.0	92.00	170.00	7,480.5	-1,765.2	-423.8	1,735.8	0.00	0.00	
8,800.0	92.00	170.00	7,477.1	-1,863.7	-406.4	1,835.1	0.00	0.00	
8,900.0	92.00	170.00	7,473.6	-1,962.1	-389.1	1,934.4	0.00	0.00	
9,000.0	92.00	170.00	7,470.1	-2,060.5	-371.7	2,033.7	0.00	0.00	
9,100.0	92.00	170.00	7,466.6	-2,158.9	-354.4	2,133.0	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Orchard Unit 15-6HM
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 15-6HM	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	92.00	170.00	7,463.1	-2,257.3	-337.0	2,232.3	0.00	0.00	
9,300.0	92.00	170.00	7,459.6	-2,355.8	-319.7	2,331.6	0.00	0.00	
9,400.0	92.00	170.00	7,456.1	-2,454.2	-302.3	2,430.9	0.00	0.00	
9,500.0	92.00	170.00	7,452.6	-2,552.6	-284.9	2,530.2	0.00	0.00	
9,600.0	92.00	170.00	7,449.1	-2,651.0	-267.6	2,629.5	0.00	0.00	
9,700.0	92.00	170.00	7,445.6	-2,749.4	-250.2	2,728.8	0.00	0.00	
9,800.0	92.00	170.00	7,442.2	-2,847.9	-232.9	2,828.1	0.00	0.00	
9,900.0	92.00	170.00	7,438.7	-2,946.3	-215.5	2,927.4	0.00	0.00	
10,000.0	92.00	170.00	7,435.2	-3,044.7	-198.2	3,026.7	0.00	0.00	
10,100.0	92.00	170.00	7,431.7	-3,143.1	-180.8	3,126.0	0.00	0.00	
10,200.0	92.00	170.00	7,428.2	-3,241.5	-163.5	3,225.3	0.00	0.00	
10,300.0	92.00	170.00	7,424.7	-3,340.0	-146.1	3,324.6	0.00	0.00	
10,400.0	92.00	170.00	7,421.2	-3,438.4	-128.8	3,423.9	0.00	0.00	
10,500.0	92.00	170.00	7,417.7	-3,536.8	-111.4	3,523.2	0.00	0.00	
10,600.0	92.00	170.00	7,414.2	-3,635.2	-94.0	3,622.5	0.00	0.00	
10,700.0	92.00	170.00	7,410.7	-3,733.7	-76.7	3,721.8	0.00	0.00	
10,800.0	92.00	170.00	7,407.3	-3,832.1	-59.3	3,821.1	0.00	0.00	
10,900.0	92.00	170.00	7,403.8	-3,930.5	-42.0	3,920.4	0.00	0.00	
11,000.0	92.00	170.00	7,400.3	-4,028.9	-24.6	4,019.7	0.00	0.00	
11,100.0	92.00	170.00	7,396.8	-4,127.3	-7.3	4,119.0	0.00	0.00	
11,200.0	92.00	170.00	7,393.3	-4,225.8	10.1	4,218.3	0.00	0.00	
11,300.0	92.00	170.00	7,389.8	-4,324.2	27.4	4,317.6	0.00	0.00	
11,400.0	92.00	170.00	7,386.3	-4,422.6	44.8	4,416.9	0.00	0.00	
11,500.0	92.00	170.00	7,382.8	-4,521.0	62.1	4,516.3	0.00	0.00	
11,600.0	92.00	170.00	7,379.3	-4,619.4	79.5	4,615.6	0.00	0.00	
11,700.0	92.00	170.00	7,375.8	-4,717.9	96.9	4,714.9	0.00	0.00	
11,800.0	92.00	170.00	7,372.4	-4,816.3	114.2	4,814.2	0.00	0.00	
11,900.0	92.00	170.00	7,368.9	-4,914.7	131.6	4,913.5	0.00	0.00	
12,000.0	92.00	170.00	7,365.4	-5,013.1	148.9	5,012.8	0.00	0.00	
12,100.0	92.00	170.00	7,361.9	-5,111.5	166.3	5,112.1	0.00	0.00	
12,200.0	92.00	170.00	7,358.4	-5,210.0	183.6	5,211.4	0.00	0.00	
12,300.0	92.00	170.00	7,354.9	-5,308.4	201.0	5,310.7	0.00	0.00	
12,400.0	92.00	170.00	7,351.4	-5,406.8	218.3	5,410.0	0.00	0.00	
12,500.0	92.00	170.00	7,347.9	-5,505.2	235.7	5,509.3	0.00	0.00	
12,600.0	92.00	170.00	7,344.4	-5,603.6	253.0	5,608.6	0.00	0.00	
12,700.0	92.00	170.00	7,340.9	-5,702.1	270.4	5,707.9	0.00	0.00	
12,800.0	92.00	170.00	7,337.5	-5,800.5	287.7	5,807.2	0.00	0.00	
12,900.0	92.00	170.00	7,334.0	-5,898.9	305.1	5,906.5	0.00	0.00	
13,000.0	92.00	170.00	7,330.5	-5,997.3	322.5	6,005.8	0.00	0.00	
13,025.0	92.00	170.00	7,329.6	-6,021.9	326.8	6,030.6	0.00	0.00	TD at 13,025' MD - Orchard Unit 15-6HM HZ PI
13,100.0	92.00	170.00	7,327.0	-6,095.8	339.8	6,105.1	0.00	0.00	
13,200.0	92.00	170.00	7,323.5	-6,194.2	357.2	6,204.4	0.00	0.00	
13,300.0	92.00	170.00	7,320.0	-6,292.6	374.5	6,303.7	0.00	0.00	
13,400.0	92.00	170.00	7,316.5	-6,391.0	391.9	6,403.0	0.00	0.00	
13,425.0	92.00	170.00	7,315.6	-6,415.6	396.2	6,427.8	0.00	0.00	Permit TD at 13,425' MD

Cathedral Energy Services

Planning Report

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

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									
Orchard Unit 15-6HM H _z - plan hits target center - Point	0.00	0.00	7,329.6	-6,021.9	326.8	1,563,700.93	2,265,346.18	39.352256	-108.098369
Orchard Unit 15-6HM H _z - plan hits target center - Point	0.00	0.00	6,657.3	-290.3	-683.9	1,569,459.15	2,264,499.93	39.367993	-108.101944
Orchard Unit 15-6HM H _z - plan misses target center by 35.0ft at 6202.5ft MD (6161.4 TVD, -276.7 N, -651.9 E) - Point	0.00	0.00	6,157.3	-290.3	-683.9	1,569,459.15	2,264,499.93	39.367993	-108.101944
Orchard Unit 15-6HM H _z - plan hits target center - Point	0.00	0.00	7,504.1	-1,100.9	-540.9	1,568,644.78	2,264,619.61	39.365767	-108.101438

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
2,154.5	2,141.0	OHIO CREEK (Top Kmv)				
2,674.0	2,657.0	WILLIAMS FORK FM				
3,926.6	3,901.0	TOP GAS				
4,687.8	4,657.0	Coal Ridge (Paludal)				
5,000.9	4,968.0	ROLLINS SS (Iles Fm)				
5,278.8	5,244.0	COZZETTE				
5,520.4	5,484.0	CORCORAN				
6,167.9	6,127.0	MANCOS A				
7,023.1	6,974.0	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	299.2	-7.6	-18.0	EOB at Inc. = 6.7°	
6,300.0	6,258.2	-281.1	-662.3	Start Drop -1.67	
6,700.0	6,657.3	-290.3	-683.9	EOD at Inc. = 0°	
6,800.0	6,757.1	-295.3	-683.0	KOP #2 = 6800' MD	
8,025.0	7,504.1	-490.7	-648.5	Landing Point at 8025' MD	
13,025.0	7,329.6	-787.2	-596.2	TD at 13,025' MD	
13,425.0	7,315.6	-1,100.9	-540.9	Permit TD at 13,425' MD	