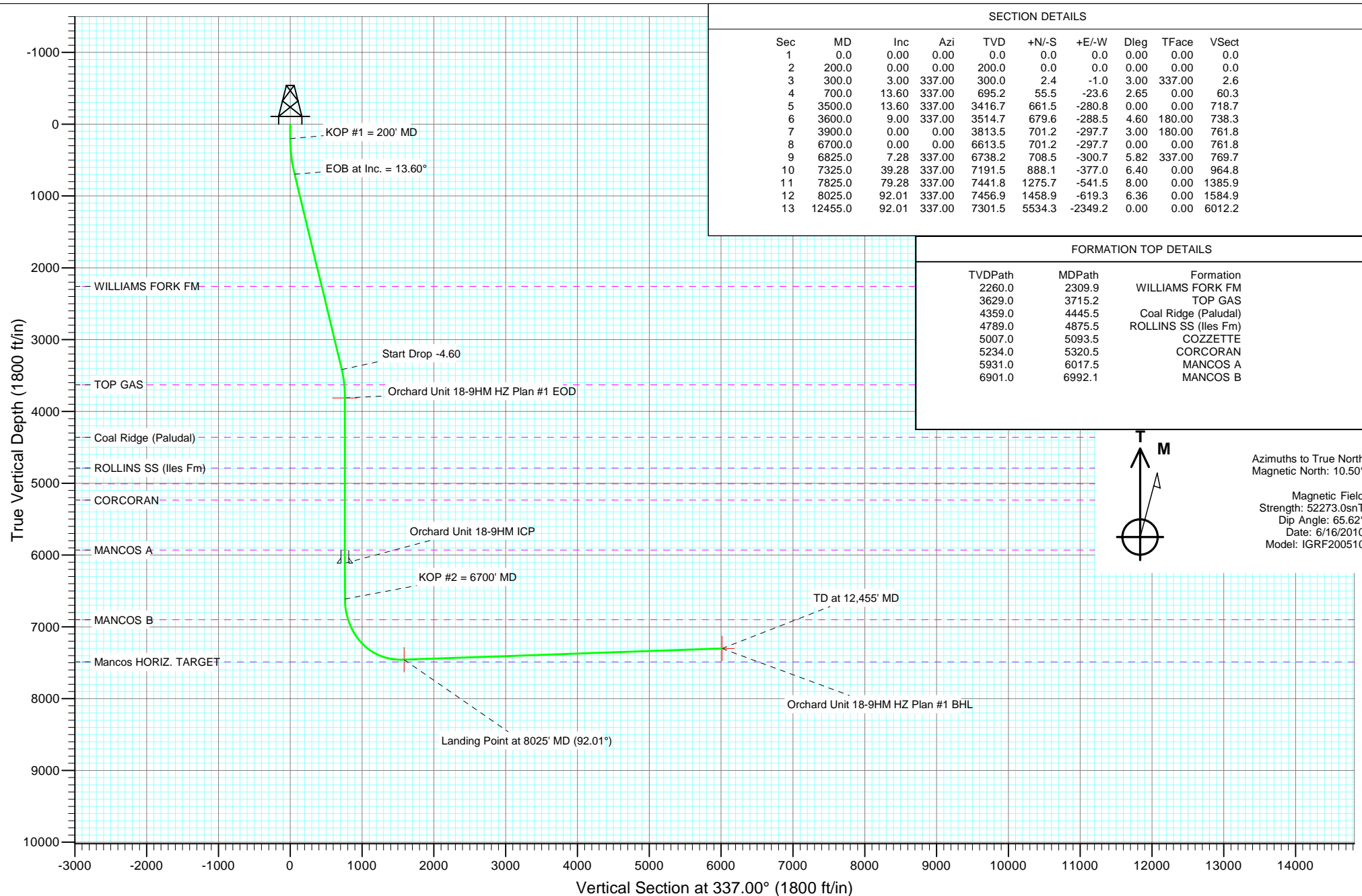


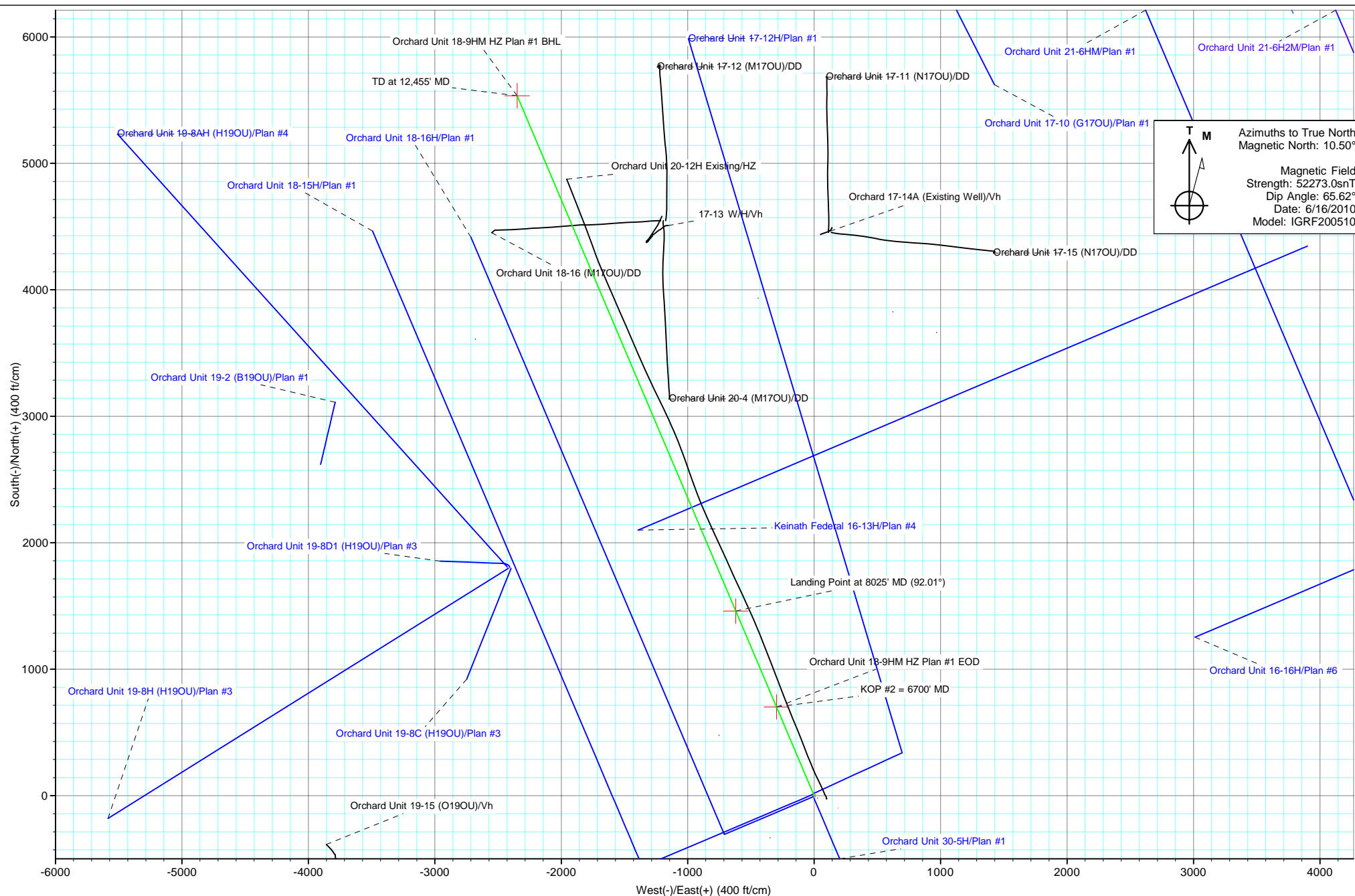


Project: Orchard  
Site: NESW Sec20-8S-96W (K20OU Pad)  
Well: Orchard Unit 18-9HM  
Wellbore: HZ  
Design: Plan #1





Project: Orchard  
Site: NESW Sec20-8S-96W (K20OU Pad)  
Well: Orchard Unit 18-9HM  
Wellbore: HZ  
Plan: Plan #1



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Orchard Unit 18-9HM
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Project:</b>	Orchard	<b>MD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Site:</b>	NESW Sec20-8S-96W (K20OU Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Orchard Unit 18-9HM	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #1		

<b>Project</b>	Orchard		
<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		

Site		NESW Sec20-8S-96W (K20OU Pad)			
Site Position:		Northing:	1,556,589.03 ft	Latitude:	39.331906
From:	Lat/Long	Easting:	2,254,817.34 ft	Longitude:	-108.134858
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.66 °

Well	Orchard Unit 18-9HM					
Well Position	+N/-S	0.0 ft	Northing:	1,556,656.32 ft	Latitude:	39.332083
	+E/-W	0.0 ft	Easting:	2,254,724.86 ft	Longitude:	-108.135192
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,929.0 ft

<b>Wellbore</b>	HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF200510	6/16/2010	10.50	65.62	52,273

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<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	337.00

<b>Plan Sections</b>										
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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	3.00	337.00	300.0	2.4	-1.0	3.00	3.00	0.00	337.00	
700.0	13.60	337.00	695.2	55.5	-23.6	2.65	2.65	0.00	0.00	
3,500.0	13.60	337.00	3,416.7	661.5	-280.8	0.00	0.00	0.00	0.00	
3,600.0	9.00	337.00	3,514.7	679.6	-288.5	4.60	-4.60	0.00	180.00	
3,900.0	0.00	0.00	3,813.5	701.2	-297.7	3.00	-3.00	0.00	180.00	
6,700.0	0.00	0.00	6,613.5	701.2	-297.7	0.00	0.00	0.00	0.00	
6,825.0	7.28	337.00	6,738.2	708.5	-300.7	5.82	5.82	0.00	337.00	
7,325.0	39.28	337.00	7,191.5	888.1	-377.0	6.40	6.40	0.00	0.00	
7,825.0	79.28	337.00	7,441.8	1,275.7	-541.5	8.00	8.00	0.00	0.00	
8,025.0	92.01	337.00	7,456.9	1,458.9	-619.3	6.36	6.36	0.00	0.00	
12,455.0	92.01	337.00	7,301.5	5,534.3	-2,349.2	0.00	0.00	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Orchard Unit 18-9HM
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Project:</b>	Orchard	<b>MD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Site:</b>	NESW Sec20-8S-96W (K20OU Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Orchard Unit 18-9HM	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	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	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP #1 = 200' MD
300.0	3.00	337.00	300.0	2.4	-1.0	2.6	3.00	3.00	
400.0	5.65	337.00	399.7	9.4	-4.0	10.2	2.65	2.65	
500.0	8.30	337.00	498.9	20.5	-8.7	22.3	2.65	2.65	
600.0	10.95	337.00	597.5	35.9	-15.2	39.0	2.65	2.65	
700.0	13.60	337.00	695.2	55.5	-23.6	60.3	2.65	2.65	EOB at Inc. = 13.60°
800.0	13.60	337.00	792.4	77.1	-32.7	83.8	0.00	0.00	
900.0	13.60	337.00	889.6	98.8	-41.9	107.3	0.00	0.00	
1,000.0	13.60	337.00	986.8	120.4	-51.1	130.8	0.00	0.00	
1,100.0	13.60	337.00	1,084.0	142.1	-60.3	154.3	0.00	0.00	
1,200.0	13.60	337.00	1,181.2	163.7	-69.5	177.8	0.00	0.00	
1,300.0	13.60	337.00	1,278.4	185.4	-78.7	201.4	0.00	0.00	
1,400.0	13.60	337.00	1,375.6	207.0	-87.9	224.9	0.00	0.00	
1,500.0	13.60	337.00	1,472.8	228.6	-97.1	248.4	0.00	0.00	
1,600.0	13.60	337.00	1,570.0	250.3	-106.2	271.9	0.00	0.00	
1,700.0	13.60	337.00	1,667.2	271.9	-115.4	295.4	0.00	0.00	
1,800.0	13.60	337.00	1,764.4	293.6	-124.6	318.9	0.00	0.00	
1,900.0	13.60	337.00	1,861.6	315.2	-133.8	342.4	0.00	0.00	
2,000.0	13.60	337.00	1,958.7	336.9	-143.0	366.0	0.00	0.00	
2,100.0	13.60	337.00	2,055.9	358.5	-152.2	389.5	0.00	0.00	
2,200.0	13.60	337.00	2,153.1	380.2	-161.4	413.0	0.00	0.00	
2,300.0	13.60	337.00	2,250.3	401.8	-170.6	436.5	0.00	0.00	
2,309.9	13.60	337.00	2,260.0	404.0	-171.5	438.8	0.00	0.00	WILLIAMS FORK FM
2,400.0	13.60	337.00	2,347.5	423.4	-179.7	460.0	0.00	0.00	
2,500.0	13.60	337.00	2,444.7	445.1	-188.9	483.5	0.00	0.00	
2,600.0	13.60	337.00	2,541.9	466.7	-198.1	507.0	0.00	0.00	
2,700.0	13.60	337.00	2,639.1	488.4	-207.3	530.6	0.00	0.00	
2,800.0	13.60	337.00	2,736.3	510.0	-216.5	554.1	0.00	0.00	
2,900.0	13.60	337.00	2,833.5	531.7	-225.7	577.6	0.00	0.00	
3,000.0	13.60	337.00	2,930.7	553.3	-234.9	601.1	0.00	0.00	
3,100.0	13.60	337.00	3,027.9	575.0	-244.1	624.6	0.00	0.00	
3,200.0	13.60	337.00	3,125.1	596.6	-253.2	648.1	0.00	0.00	
3,300.0	13.60	337.00	3,222.3	618.3	-262.4	671.6	0.00	0.00	
3,400.0	13.60	337.00	3,319.5	639.9	-271.6	695.2	0.00	0.00	
3,500.0	13.60	337.00	3,416.7	661.5	-280.8	718.7	0.00	0.00	Start Drop -4.60
3,600.0	9.00	337.00	3,514.7	679.6	-288.5	738.3	4.60	-4.60	
3,700.0	6.00	337.00	3,613.9	691.6	-293.6	751.3	3.00	-3.00	
3,715.2	5.54	337.00	3,629.0	693.0	-294.2	752.8	3.00	-3.00	TOP GAS
3,800.0	3.00	337.00	3,713.5	698.8	-296.6	759.2	3.00	-3.00	
3,900.0	0.00	0.00	3,813.5	701.2	-297.7	761.8	3.00	-3.00	EOD at Inc. = 0° - Orchard Unit 18-9HM HZ Pla
4,000.0	0.00	0.00	3,913.5	701.2	-297.7	761.8	0.00	0.00	
4,100.0	0.00	0.00	4,013.5	701.2	-297.7	761.8	0.00	0.00	
4,200.0	0.00	0.00	4,113.5	701.2	-297.7	761.8	0.00	0.00	
4,300.0	0.00	0.00	4,213.5	701.2	-297.7	761.8	0.00	0.00	
4,400.0	0.00	0.00	4,313.5	701.2	-297.7	761.8	0.00	0.00	
4,445.5	0.00	0.00	4,359.0	701.2	-297.7	761.8	0.00	0.00	Coal Ridge (Paludal)
4,500.0	0.00	0.00	4,413.5	701.2	-297.7	761.8	0.00	0.00	
4,600.0	0.00	0.00	4,513.5	701.2	-297.7	761.8	0.00	0.00	
4,700.0	0.00	0.00	4,613.5	701.2	-297.7	761.8	0.00	0.00	
4,800.0	0.00	0.00	4,713.5	701.2	-297.7	761.8	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Orchard Unit 18-9HM
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Project:</b>	Orchard	<b>MD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Site:</b>	NESW Sec20-8S-96W (K20OU Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Orchard Unit 18-9HM	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	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
4,875.5	0.00	0.00	4,789.0	701.2	-297.7	761.8	0.00	0.00	ROLLINS SS (Iles Fm)
4,900.0	0.00	0.00	4,813.5	701.2	-297.7	761.8	0.00	0.00	
5,000.0	0.00	0.00	4,913.5	701.2	-297.7	761.8	0.00	0.00	
5,093.5	0.00	0.00	5,007.0	701.2	-297.7	761.8	0.00	0.00	COZZETTE
5,100.0	0.00	0.00	5,013.5	701.2	-297.7	761.8	0.00	0.00	
5,200.0	0.00	0.00	5,113.5	701.2	-297.7	761.8	0.00	0.00	
5,300.0	0.00	0.00	5,213.5	701.2	-297.7	761.8	0.00	0.00	
5,320.5	0.00	0.00	5,234.0	701.2	-297.7	761.8	0.00	0.00	CORCORAN
5,400.0	0.00	0.00	5,313.5	701.2	-297.7	761.8	0.00	0.00	
5,500.0	0.00	0.00	5,413.5	701.2	-297.7	761.8	0.00	0.00	
5,600.0	0.00	0.00	5,513.5	701.2	-297.7	761.8	0.00	0.00	
5,700.0	0.00	0.00	5,613.5	701.2	-297.7	761.8	0.00	0.00	
5,800.0	0.00	0.00	5,713.5	701.2	-297.7	761.8	0.00	0.00	
5,900.0	0.00	0.00	5,813.5	701.2	-297.7	761.8	0.00	0.00	
6,000.0	0.00	0.00	5,913.5	701.2	-297.7	761.8	0.00	0.00	
6,017.5	0.00	0.00	5,931.0	701.2	-297.7	761.8	0.00	0.00	MANCOS A
6,100.0	0.00	0.00	6,013.5	701.2	-297.7	761.8	0.00	0.00	
6,200.0	0.00	0.00	6,113.5	701.2	-297.7	761.8	0.00	0.00	Orchard Unit 18-9HM ICP
6,300.0	0.00	0.00	6,213.5	701.2	-297.7	761.8	0.00	0.00	
6,400.0	0.00	0.00	6,313.5	701.2	-297.7	761.8	0.00	0.00	
6,500.0	0.00	0.00	6,413.5	701.2	-297.7	761.8	0.00	0.00	
6,600.0	0.00	0.00	6,513.5	701.2	-297.7	761.8	0.00	0.00	
6,700.0	0.00	0.00	6,613.5	701.2	-297.7	761.8	0.00	0.00	KOP #2 = 6700' MD
6,800.0	5.82	337.00	6,713.3	705.9	-299.6	766.9	5.82	5.82	
6,825.0	7.28	337.00	6,738.2	708.5	-300.7	769.7	5.82	5.82	
6,900.0	12.08	337.00	6,812.1	720.1	-305.7	782.3	6.40	6.40	
6,992.1	17.98	337.00	6,901.0	742.1	-315.0	806.2	6.40	6.40	MANCOS B
7,000.0	18.48	337.00	6,908.5	744.4	-316.0	808.7	6.40	6.40	
7,100.0	24.88	337.00	7,001.4	778.4	-330.4	845.6	6.40	6.40	
7,200.0	31.28	337.00	7,089.5	821.7	-348.8	892.6	6.40	6.40	
7,300.0	37.68	337.00	7,171.9	873.8	-370.9	949.2	6.40	6.40	
7,325.0	39.28	337.00	7,191.5	888.1	-377.0	964.8	6.40	6.40	
7,400.0	45.28	337.00	7,247.0	934.5	-396.7	1,015.2	8.00	8.00	
7,500.0	53.28	337.00	7,312.2	1,004.2	-426.3	1,090.9	8.00	8.00	
7,600.0	61.28	337.00	7,366.2	1,081.6	-459.1	1,175.0	8.00	8.00	
7,700.0	69.28	337.00	7,407.9	1,165.1	-494.6	1,265.8	8.00	8.00	
7,800.0	77.28	337.00	7,436.7	1,253.2	-532.0	1,361.4	8.00	8.00	
7,825.0	79.28	337.00	7,441.8	1,275.7	-541.5	1,385.9	8.00	8.00	
7,900.0	84.05	337.00	7,452.6	1,344.0	-570.5	1,460.1	6.36	6.36	
8,000.0	90.42	337.00	7,457.5	1,435.9	-609.5	1,559.9	6.36	6.36	
8,025.0	92.01	337.00	7,456.9	1,458.9	-619.3	1,584.9	6.36	6.36	Landing Point at 8025' MD (92.01°) - Orchard U
8,100.0	92.01	337.00	7,454.3	1,527.9	-648.6	1,659.9	0.00	0.00	
8,200.0	92.01	337.00	7,450.8	1,619.9	-687.6	1,759.8	0.00	0.00	
8,300.0	92.01	337.00	7,447.3	1,711.9	-726.7	1,859.8	0.00	0.00	
8,400.0	92.01	337.00	7,443.8	1,803.9	-765.7	1,959.7	0.00	0.00	
8,500.0	92.01	337.00	7,440.3	1,895.9	-804.8	2,059.6	0.00	0.00	
8,600.0	92.01	337.00	7,436.8	1,987.9	-843.8	2,159.6	0.00	0.00	
8,700.0	92.01	337.00	7,433.3	2,079.9	-882.9	2,259.5	0.00	0.00	
8,800.0	92.01	337.00	7,429.7	2,171.9	-921.9	2,359.5	0.00	0.00	
8,900.0	92.01	337.00	7,426.2	2,263.9	-961.0	2,459.4	0.00	0.00	
9,000.0	92.01	337.00	7,422.7	2,355.9	-1,000.0	2,559.3	0.00	0.00	
9,100.0	92.01	337.00	7,419.2	2,447.9	-1,039.1	2,659.3	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Orchard Unit 18-9HM
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Project:</b>	Orchard	<b>MD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Site:</b>	NESW Sec20-8S-96W (K20OU Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Orchard Unit 18-9HM	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	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	92.01	337.00	7,415.7	2,539.9	-1,078.1	2,759.2	0.00	0.00	
9,300.0	92.01	337.00	7,412.2	2,631.9	-1,117.2	2,859.2	0.00	0.00	
9,400.0	92.01	337.00	7,408.7	2,723.9	-1,156.2	2,959.1	0.00	0.00	
9,500.0	92.01	337.00	7,405.2	2,815.9	-1,195.3	3,059.0	0.00	0.00	
9,600.0	92.01	337.00	7,401.7	2,907.8	-1,234.3	3,159.0	0.00	0.00	
9,700.0	92.01	337.00	7,398.2	2,999.8	-1,273.4	3,258.9	0.00	0.00	
9,800.0	92.01	337.00	7,394.7	3,091.8	-1,312.4	3,358.8	0.00	0.00	
9,900.0	92.01	337.00	7,391.2	3,183.8	-1,351.5	3,458.8	0.00	0.00	
10,000.0	92.01	337.00	7,387.7	3,275.8	-1,390.5	3,558.7	0.00	0.00	
10,100.0	92.01	337.00	7,384.1	3,367.8	-1,429.6	3,658.7	0.00	0.00	
10,200.0	92.01	337.00	7,380.6	3,459.8	-1,468.6	3,758.6	0.00	0.00	
10,300.0	92.01	337.00	7,377.1	3,551.8	-1,507.7	3,858.5	0.00	0.00	
10,400.0	92.01	337.00	7,373.6	3,643.8	-1,546.7	3,958.5	0.00	0.00	
10,500.0	92.01	337.00	7,370.1	3,735.8	-1,585.7	4,058.4	0.00	0.00	
10,600.0	92.01	337.00	7,366.6	3,827.8	-1,624.8	4,158.4	0.00	0.00	
10,700.0	92.01	337.00	7,363.1	3,919.8	-1,663.8	4,258.3	0.00	0.00	
10,800.0	92.01	337.00	7,359.6	4,011.8	-1,702.9	4,358.2	0.00	0.00	
10,900.0	92.01	337.00	7,356.1	4,103.8	-1,741.9	4,458.2	0.00	0.00	
11,000.0	92.01	337.00	7,352.6	4,195.8	-1,781.0	4,558.1	0.00	0.00	
11,100.0	92.01	337.00	7,349.1	4,287.8	-1,820.0	4,658.0	0.00	0.00	
11,200.0	92.01	337.00	7,345.6	4,379.7	-1,859.1	4,758.0	0.00	0.00	
11,300.0	92.01	337.00	7,342.1	4,471.7	-1,898.1	4,857.9	0.00	0.00	
11,400.0	92.01	337.00	7,338.6	4,563.7	-1,937.2	4,957.9	0.00	0.00	
11,500.0	92.01	337.00	7,335.0	4,655.7	-1,976.2	5,057.8	0.00	0.00	
11,600.0	92.01	337.00	7,331.5	4,747.7	-2,015.3	5,157.7	0.00	0.00	
11,700.0	92.01	337.00	7,328.0	4,839.7	-2,054.3	5,257.7	0.00	0.00	
11,800.0	92.01	337.00	7,324.5	4,931.7	-2,093.4	5,357.6	0.00	0.00	
11,900.0	92.01	337.00	7,321.0	5,023.7	-2,132.4	5,457.6	0.00	0.00	
12,000.0	92.01	337.00	7,317.5	5,115.7	-2,171.5	5,557.5	0.00	0.00	
12,100.0	92.01	337.00	7,314.0	5,207.7	-2,210.5	5,657.4	0.00	0.00	
12,200.0	92.01	337.00	7,310.5	5,299.7	-2,249.6	5,757.4	0.00	0.00	
12,300.0	92.01	337.00	7,307.0	5,391.7	-2,288.6	5,857.3	0.00	0.00	
12,400.0	92.01	337.00	7,303.5	5,483.7	-2,327.7	5,957.2	0.00	0.00	
12,455.0	92.01	337.00	7,301.5	5,534.3	-2,349.2	6,012.2	0.00	0.00	TD at 12,455' MD - Orchard Unit 18-9HM HZ PI

### 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 18-9HM HZ - plan hits target center - Point	0.00	0.00	7,456.9	1,458.9	-619.3	1,558,132.60	2,254,148.15	39.336089	-108.137381
Orchard Unit 18-9HM HZ - plan hits target center - Point	0.00	0.00	7,301.5	5,534.3	-2,349.2	1,562,256.39	2,252,537.20	39.347278	-108.143499
Orchard Unit 18-9HM HZ - plan hits target center - Point	0.00	0.00	3,813.5	701.2	-297.7	1,557,365.87	2,254,447.68	39.334009	-108.136244

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Orchard Unit 18-9HM
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Project:</b>	Orchard	<b>MD Reference:</b>	WELL @ 5951.0ft (Original Well Elev)
<b>Site:</b>	NESW Sec20-8S-96W (K200U Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Orchard Unit 18-9HM	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #1		

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
6,200.0	6,113.5	Orchard Unit 18-9HM ICP		

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,309.9	2,260.0	WILLIAMS FORK FM			
3,715.2	3,629.0	TOP GAS			
4,445.5	4,359.0	Coal Ridge (Paludal)			
4,875.5	4,789.0	ROLLINS SS (Iles Fm)			
5,093.5	5,007.0	COZZETTE			
5,320.5	5,234.0	CORCORAN			
6,017.5	5,931.0	MANCOS A			
6,992.1	6,901.0	MANCOS B			

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP #1 = 200' MD
700.0	695.2	55.5	-23.6	EOB at Inc. = 13.60°
3,500.0	3,416.7	661.5	-280.8	Start Drop -4.60
3,900.0	3,813.5	701.2	-297.7	EOD at Inc. = 0°
6,700.0	6,613.5	701.2	-297.7	KOP #2 = 6700' MD
8,025.0	7,456.9	1,458.9	-619.3	Landing Point at 8025' MD (92.01°)
12,455.0	7,301.5	5,534.3	-2,349.2	TD at 12,455' MD