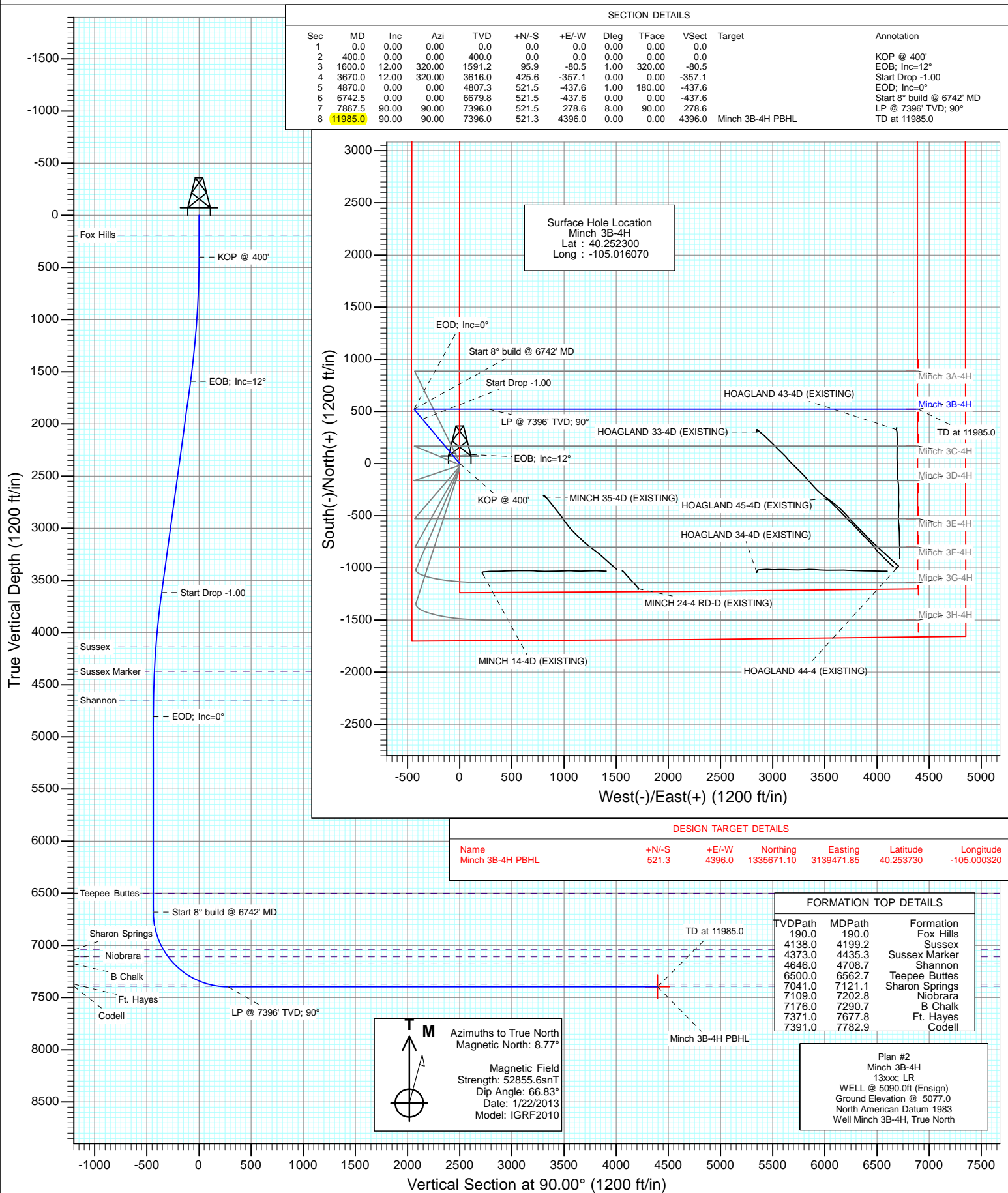




Project: DJ Wattenberg  
Site: S4-T3N-R68W (Minch)  
Well: Minch 3B-4H  
Wellbore: Hz  
Design: Plan #2



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site:</b>	S4-T3N-R68W (Minch)	<b>North Reference:</b>	True
<b>Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #2		

<b>Project</b>	DJ Wattenberg		
<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 Northern Zone		

Site		S4-T3N-R68W (Minch)			
Site Position:		Northing:	1,334,165.55 ft	Latitude:	40.249600
From:	Lat/Long	Easting:	3,139,290.53 ft	Longitude:	-105.001000
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.32 °

Well	Minch 3B-4H					
Well Position	+N/-S	0.0 ft	Northing:	1,335,125.78 ft	Latitude:	40.252300
	+E/-W	0.0 ft	Easting:	3,135,078.75 ft	Longitude:	-105.016070
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,077.0 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 (nT)</b>
	IGRF2010	1/22/2013	8.77	66.83	52,856

<b>Design</b>	Plan #2				
<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	90.00	

<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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.0	12.00	320.00	1,591.2	95.9	-80.5	1.00	1.00	0.00	320.00	
3,670.0	12.00	320.00	3,616.0	425.6	-357.1	0.00	0.00	0.00	0.00	
4,870.0	0.00	0.00	4,807.3	521.5	-437.6	1.00	-1.00	0.00	180.00	
6,742.5	0.00	0.00	6,679.8	521.5	-437.6	0.00	0.00	0.00	0.00	
7,867.5	90.00	90.00	7,396.0	521.5	278.6	8.00	8.00	0.00	90.00	
11,985.0	90.00	90.00	7,396.0	521.3	4,396.0	0.00	0.00	0.00	0.00	Minch 3B-4H PBHL

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site:</b>	S4-T3N-R68W (Minch)	<b>North Reference:</b>	True
<b>Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	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	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
190.0	0.00	0.00	190.0	0.0	0.0	0.0	0.00	0.00	Fox Hills
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	320.00	500.0	0.7	-0.6	-0.6	1.00	1.00	
600.0	2.00	320.00	600.0	2.7	-2.2	-2.2	1.00	1.00	
700.0	3.00	320.00	699.9	6.0	-5.0	-5.0	1.00	1.00	
800.0	4.00	320.00	799.7	10.7	-9.0	-9.0	1.00	1.00	
900.0	5.00	320.00	899.4	16.7	-14.0	-14.0	1.00	1.00	
1,000.0	6.00	320.00	998.9	24.0	-20.2	-20.2	1.00	1.00	
1,100.0	7.00	320.00	1,098.3	32.7	-27.5	-27.5	1.00	1.00	
1,200.0	8.00	320.00	1,197.4	42.7	-35.8	-35.8	1.00	1.00	
1,300.0	9.00	320.00	1,296.3	54.0	-45.3	-45.3	1.00	1.00	
1,400.0	10.00	320.00	1,394.9	66.7	-56.0	-56.0	1.00	1.00	
1,500.0	11.00	320.00	1,493.3	80.6	-67.7	-67.7	1.00	1.00	
1,600.0	12.00	320.00	1,591.2	95.9	-80.5	-80.5	1.00	1.00	EOB; Inc=12°
1,700.0	12.00	320.00	1,689.1	111.8	-93.8	-93.8	0.00	0.00	
1,800.0	12.00	320.00	1,786.9	127.8	-107.2	-107.2	0.00	0.00	
1,900.0	12.00	320.00	1,884.7	143.7	-120.6	-120.6	0.00	0.00	
2,000.0	12.00	320.00	1,982.5	159.6	-133.9	-133.9	0.00	0.00	
2,100.0	12.00	320.00	2,080.3	175.5	-147.3	-147.3	0.00	0.00	
2,200.0	12.00	320.00	2,178.1	191.5	-160.7	-160.7	0.00	0.00	
2,300.0	12.00	320.00	2,275.9	207.4	-174.0	-174.0	0.00	0.00	
2,400.0	12.00	320.00	2,373.8	223.3	-187.4	-187.4	0.00	0.00	
2,500.0	12.00	320.00	2,471.6	239.3	-200.8	-200.8	0.00	0.00	
2,600.0	12.00	320.00	2,569.4	255.2	-214.1	-214.1	0.00	0.00	
2,700.0	12.00	320.00	2,667.2	271.1	-227.5	-227.5	0.00	0.00	
2,800.0	12.00	320.00	2,765.0	287.0	-240.9	-240.9	0.00	0.00	
2,900.0	12.00	320.00	2,862.8	303.0	-254.2	-254.2	0.00	0.00	
3,000.0	12.00	320.00	2,960.7	318.9	-267.6	-267.6	0.00	0.00	
3,100.0	12.00	320.00	3,058.5	334.8	-280.9	-280.9	0.00	0.00	
3,200.0	12.00	320.00	3,156.3	350.7	-294.3	-294.3	0.00	0.00	
3,300.0	12.00	320.00	3,254.1	366.7	-307.7	-307.7	0.00	0.00	
3,400.0	12.00	320.00	3,351.9	382.6	-321.0	-321.0	0.00	0.00	
3,500.0	12.00	320.00	3,449.7	398.5	-334.4	-334.4	0.00	0.00	
3,600.0	12.00	320.00	3,547.5	414.5	-347.8	-347.8	0.00	0.00	
3,670.0	12.00	320.00	3,616.0	425.6	-357.1	-357.1	0.00	0.00	Start Drop -1.00
3,700.0	11.70	320.00	3,645.4	430.3	-361.1	-361.1	1.00	-1.00	
3,800.0	10.70	320.00	3,743.5	445.2	-373.6	-373.6	1.00	-1.00	
3,900.0	9.70	320.00	3,841.9	458.8	-384.9	-384.9	1.00	-1.00	
4,000.0	8.70	320.00	3,940.6	471.0	-395.2	-395.2	1.00	-1.00	
4,100.0	7.70	320.00	4,039.6	481.9	-404.4	-404.4	1.00	-1.00	
4,199.2	6.71	320.00	4,138.0	491.5	-412.4	-412.4	1.00	-1.00	Sussex
4,200.0	6.70	320.00	4,138.8	491.5	-412.4	-412.4	1.00	-1.00	
4,300.0	5.70	320.00	4,238.2	499.8	-419.4	-419.4	1.00	-1.00	
4,400.0	4.70	320.00	4,337.8	506.8	-425.2	-425.2	1.00	-1.00	
4,435.3	4.35	320.00	4,373.0	508.9	-427.0	-427.0	1.00	-1.00	Sussex Marker
4,500.0	3.70	320.00	4,437.5	512.4	-429.9	-429.9	1.00	-1.00	
4,600.0	2.70	320.00	4,537.4	516.6	-433.5	-433.5	1.00	-1.00	
4,700.0	1.70	320.00	4,637.3	519.6	-436.0	-436.0	1.00	-1.00	

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site:</b>	S4-T3N-R68W (Minch)	<b>North Reference:</b>	True
<b>Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	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
4,708.7	1.61	320.00	4,646.0	519.8	-436.1	-436.1	1.00	-1.00	Shannon
4,800.0	0.70	320.00	4,737.3	521.2	-437.3	-437.3	1.00	-1.00	
4,870.0	0.00	0.00	4,807.3	521.5	-437.6	-437.6	1.00	-1.00	EOD; Inc=0°
4,900.0	0.00	0.00	4,837.3	521.5	-437.6	-437.6	0.00	0.00	
5,000.0	0.00	0.00	4,937.3	521.5	-437.6	-437.6	0.00	0.00	
5,100.0	0.00	0.00	5,037.3	521.5	-437.6	-437.6	0.00	0.00	
5,200.0	0.00	0.00	5,137.3	521.5	-437.6	-437.6	0.00	0.00	
5,300.0	0.00	0.00	5,237.3	521.5	-437.6	-437.6	0.00	0.00	
5,400.0	0.00	0.00	5,337.3	521.5	-437.6	-437.6	0.00	0.00	
5,500.0	0.00	0.00	5,437.3	521.5	-437.6	-437.6	0.00	0.00	
5,600.0	0.00	0.00	5,537.3	521.5	-437.6	-437.6	0.00	0.00	
5,700.0	0.00	0.00	5,637.3	521.5	-437.6	-437.6	0.00	0.00	
5,800.0	0.00	0.00	5,737.3	521.5	-437.6	-437.6	0.00	0.00	
5,900.0	0.00	0.00	5,837.3	521.5	-437.6	-437.6	0.00	0.00	
6,000.0	0.00	0.00	5,937.3	521.5	-437.6	-437.6	0.00	0.00	
6,100.0	0.00	0.00	6,037.3	521.5	-437.6	-437.6	0.00	0.00	
6,200.0	0.00	0.00	6,137.3	521.5	-437.6	-437.6	0.00	0.00	
6,300.0	0.00	0.00	6,237.3	521.5	-437.6	-437.6	0.00	0.00	
6,400.0	0.00	0.00	6,337.3	521.5	-437.6	-437.6	0.00	0.00	
6,500.0	0.00	0.00	6,437.3	521.5	-437.6	-437.6	0.00	0.00	
6,562.7	0.00	0.00	6,500.0	521.5	-437.6	-437.6	0.00	0.00	Teepee Buttes
6,600.0	0.00	0.00	6,537.3	521.5	-437.6	-437.6	0.00	0.00	
6,700.0	0.00	0.00	6,637.3	521.5	-437.6	-437.6	0.00	0.00	
6,742.5	0.00	0.00	6,679.8	521.5	-437.6	-437.6	0.00	0.00	Start 8° build @ 6742' MD
6,800.0	4.60	90.00	6,737.2	521.5	-435.3	-435.3	8.00	8.00	
6,900.0	12.60	90.00	6,836.0	521.5	-420.4	-420.4	8.00	8.00	
7,000.0	20.60	90.00	6,931.7	521.5	-391.8	-391.8	8.00	8.00	
7,100.0	28.60	90.00	7,022.6	521.5	-350.2	-350.2	8.00	8.00	
7,121.1	30.29	90.00	7,041.0	521.5	-339.9	-339.9	8.00	8.00	Sharon Springs
7,200.0	36.60	90.00	7,106.8	521.5	-296.4	-296.4	8.00	8.00	
7,202.8	36.82	90.00	7,109.0	521.5	-294.8	-294.8	8.00	8.00	Niobrara
7,290.7	43.85	90.00	7,176.0	521.5	-237.9	-237.9	8.00	8.00	B Chalk
7,300.0	44.60	90.00	7,182.7	521.5	-231.4	-231.4	8.00	8.00	
7,400.0	52.60	90.00	7,248.7	521.5	-156.4	-156.4	8.00	8.00	
7,500.0	60.60	90.00	7,303.7	521.5	-73.0	-73.0	8.00	8.00	
7,600.0	68.60	90.00	7,346.6	521.5	17.2	17.2	8.00	8.00	
7,677.8	74.82	90.00	7,371.0	521.5	91.0	91.0	8.00	8.00	Ft. Hayes
7,700.0	76.60	90.00	7,376.5	521.5	112.6	112.6	8.00	8.00	
7,782.9	83.23	90.00	7,391.0	521.5	194.1	194.1	8.00	8.00	Codell
7,800.0	84.60	90.00	7,392.8	521.5	211.2	211.2	8.00	8.00	
7,867.5	90.00	90.00	7,396.0	521.5	278.6	278.6	8.00	8.00	LP @ 7396' TVD; 90°
7,900.0	90.00	90.00	7,396.0	521.5	311.1	311.1	0.00	0.00	
8,000.0	90.00	90.00	7,396.0	521.5	411.1	411.1	0.00	0.00	
8,100.0	90.00	90.00	7,396.0	521.5	511.1	511.1	0.00	0.00	
8,200.0	90.00	90.00	7,396.0	521.5	611.1	611.1	0.00	0.00	
8,300.0	90.00	90.00	7,396.0	521.5	711.1	711.1	0.00	0.00	
8,400.0	90.00	90.00	7,396.0	521.5	811.1	811.1	0.00	0.00	
8,500.0	90.00	90.00	7,396.0	521.5	911.1	911.1	0.00	0.00	
8,600.0	90.00	90.00	7,396.0	521.5	1,011.1	1,011.1	0.00	0.00	
8,700.0	90.00	90.00	7,396.0	521.5	1,111.1	1,111.1	0.00	0.00	
8,800.0	90.00	90.00	7,396.0	521.5	1,211.1	1,211.1	0.00	0.00	
8,900.0	90.00	90.00	7,396.0	521.4	1,311.1	1,311.1	0.00	0.00	

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site:</b>	S4-T3N-R68W (Minch)	<b>North Reference:</b>	True
<b>Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	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
9,000.0	90.00	90.00	7,396.0	521.4	1,411.1	1,411.1	0.00	0.00	
9,100.0	90.00	90.00	7,396.0	521.4	1,511.1	1,511.1	0.00	0.00	
9,200.0	90.00	90.00	7,396.0	521.4	1,611.1	1,611.1	0.00	0.00	
9,300.0	90.00	90.00	7,396.0	521.4	1,711.1	1,711.1	0.00	0.00	
9,400.0	90.00	90.00	7,396.0	521.4	1,811.1	1,811.1	0.00	0.00	
9,500.0	90.00	90.00	7,396.0	521.4	1,911.1	1,911.1	0.00	0.00	
9,600.0	90.00	90.00	7,396.0	521.4	2,011.1	2,011.1	0.00	0.00	
9,700.0	90.00	90.00	7,396.0	521.4	2,111.1	2,111.1	0.00	0.00	
9,800.0	90.00	90.00	7,396.0	521.4	2,211.1	2,211.1	0.00	0.00	
9,900.0	90.00	90.00	7,396.0	521.4	2,311.1	2,311.1	0.00	0.00	
10,000.0	90.00	90.00	7,396.0	521.4	2,411.1	2,411.1	0.00	0.00	
10,100.0	90.00	90.00	7,396.0	521.4	2,511.1	2,511.1	0.00	0.00	
10,200.0	90.00	90.00	7,396.0	521.4	2,611.1	2,611.1	0.00	0.00	
10,300.0	90.00	90.00	7,396.0	521.4	2,711.1	2,711.1	0.00	0.00	
10,400.0	90.00	90.00	7,396.0	521.4	2,811.1	2,811.1	0.00	0.00	
10,500.0	90.00	90.00	7,396.0	521.4	2,911.1	2,911.1	0.00	0.00	
10,600.0	90.00	90.00	7,396.0	521.4	3,011.1	3,011.1	0.00	0.00	
10,700.0	90.00	90.00	7,396.0	521.4	3,111.1	3,111.1	0.00	0.00	
10,800.0	90.00	90.00	7,396.0	521.4	3,211.1	3,211.1	0.00	0.00	
10,900.0	90.00	90.00	7,396.0	521.4	3,311.1	3,311.1	0.00	0.00	
11,000.0	90.00	90.00	7,396.0	521.4	3,411.1	3,411.1	0.00	0.00	
11,100.0	90.00	90.00	7,396.0	521.4	3,511.1	3,511.1	0.00	0.00	
11,200.0	90.00	90.00	7,396.0	521.4	3,611.1	3,611.1	0.00	0.00	
11,300.0	90.00	90.00	7,396.0	521.4	3,711.1	3,711.1	0.00	0.00	
11,400.0	90.00	90.00	7,396.0	521.4	3,811.1	3,811.1	0.00	0.00	
11,500.0	90.00	90.00	7,396.0	521.4	3,911.1	3,911.1	0.00	0.00	
11,600.0	90.00	90.00	7,396.0	521.3	4,011.1	4,011.1	0.00	0.00	
11,700.0	90.00	90.00	7,396.0	521.3	4,111.1	4,111.1	0.00	0.00	
11,800.0	90.00	90.00	7,396.0	521.3	4,211.1	4,211.1	0.00	0.00	
11,900.0	90.00	90.00	7,396.0	521.3	4,311.1	4,311.1	0.00	0.00	
11,985.0	90.00	90.00	7,396.0	521.3	4,396.0	4,396.0	0.00	0.00	TD at 11985.0 - Minch 3B-4H PBHL

### 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
Minch 3B-4H PBHL - plan hits target center - Point	0.00	0.00	7,396.0	521.3	4,396.0	1,335,671.10	3,139,471.85	40.253730	-105.000320

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site:</b>	S4-T3N-R68W (Minch)	<b>North Reference:</b>	True
<b>Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
190.0	190.0	Fox Hills				
4,199.2	4,138.0	Sussex				
4,435.3	4,373.0	Sussex Marker				
4,708.7	4,646.0	Shannon				
6,562.7	6,500.0	Teepee Buttes				
7,121.1	7,041.0	Sharon Springs				
7,202.8	7,109.0	Niobrara				
7,290.7	7,176.0	B Chalk				
7,677.8	7,371.0	Ft. Hayes				
7,782.9	7,391.0	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP @ 400'	
1,600.0	1,591.2	95.9	-80.5	EOB; Inc=12°	
3,670.0	3,616.0	425.6	-357.1	Start Drop -1.00	
4,870.0	4,807.3	521.5	-437.6	EOD; Inc=0°	
6,742.5	6,679.8	521.5	-437.6	Start 8° build @ 6742' MD	
7,867.5	7,396.0	521.5	278.6	LP @ 7396' TVD; 90°	
11,985.0	7,396.0	521.3	4,396.0	TD at 11985.0	

# **EnCana Oil & Gas (USA) Inc**

**DJ Wattenberg**

**S4-T3N-R68W (Minch)**

**Minch 3B-4H**

**Hz**

**Plan #2**

## **Anticollision Report**

**28 January, 2013**

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #2		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	Systematic Ellipse
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 500.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	1/28/2013		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,985.0	Plan #2 (Hz)	MWD	Geolink MWD

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S4-T3N-R68W (Minch)						
HOAGLAND 33-4D (EXISTING) - Existing - Existing	10,436.3	7,662.0	206.7	100.0	1.937	CC, ES, SF
HOAGLAND 34-4D (EXISTING) - Existing - Existing						Out of range
HOAGLAND 43-4D (EXISTING) - Existing - Existing	11,775.8	7,519.0	190.2	71.1	1.597	CC, ES, SF
HOAGLAND 44-4 (EXISTING) - Existing - Existing						Out of range
HOAGLAND 45-4D (EXISTING) - Existing - Existing						Out of range
MINCH 14-4D (EXISTING) - Existing - Existing						Out of range
MINCH 24-4 RD-D (EXISTING) - Existing - Existing						Out of range
MINCH 35-4D (EXISTING) - Existing - Existing						Out of range
Minch 3A-4H - Hz - Plan #1	200.0	200.0	10.9	10.3	16.742	CC, ES
Minch 3A-4H - Hz - Plan #1	11,985.0	11,815.9	421.5	223.5	2.129	SF
Minch 3C-4H - Hz - Plan #1	400.0	400.0	10.9	9.6	8.090	CC, ES
Minch 3C-4H - Hz - Plan #1	11,985.0	11,744.5	412.1	216.0	2.101	SF
Minch 3D-4H - Hz - Plan #2	200.0	200.0	18.4	17.8	28.230	CC, ES
Minch 3D-4H - Hz - Plan #2	500.0	499.3	23.5	21.7	13.718	SF
Minch 3E-4H - Hz - Plan #1	400.0	400.0	29.3	27.9	21.672	CC, ES
Minch 3E-4H - Hz - Plan #1	800.0	799.7	40.3	37.6	14.642	SF
Minch 3F-4H - Hz - Plan #2	400.0	400.0	40.2	38.8	29.735	CC, ES
Minch 3F-4H - Hz - Plan #2	700.0	699.2	46.9	44.5	19.525	SF
Minch 3G-4H - Hz - Plan #1	400.0	400.0	47.4	46.1	35.117	CC, ES
Minch 3G-4H - Hz - Plan #1	700.0	697.1	60.5	58.1	25.220	SF
Minch 3H-4H - Hz - Plan #2	200.0	200.0	58.4	57.7	89.395	CC, ES
Minch 3H-4H - Hz - Plan #2	700.0	693.4	84.9	82.5	35.422	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S4-T3N-R68W (Minch) - HOAGLAND 33-4D (EXISTING) - Existing - Existing													<b>Offset Site Error:</b> 0.0 ft
Survey Program: 1516-MWD													<b>Offset Well Error:</b> 0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,000.0	7,396.0	7,660.5	7,320.8	65.8	40.6	86.88	315.0	2,847.4	482.8	386.7	96.05	5.026	
10,100.0	7,396.0	7,660.8	7,321.1	68.2	40.6	86.98	315.0	2,847.4	394.7	296.3	98.48	4.008	
10,200.0	7,396.0	7,661.2	7,321.5	70.6	40.6	87.07	315.0	2,847.4	313.9	213.0	100.92	3.111	
10,300.0	7,396.0	7,661.5	7,321.8	73.0	40.6	87.17	315.0	2,847.4	247.6	144.2	103.36	2.395	
10,400.0	7,396.0	7,661.9	7,322.2	75.5	40.6	87.27	315.0	2,847.4	209.8	104.0	105.80	1.983	
10,436.3	7,396.0	7,662.0	7,322.3	76.3	40.6	87.31	315.0	2,847.4	206.7	100.0	106.68	1.937	CC, ES, SF
10,500.0	7,396.0	7,662.2	7,322.5	77.9	40.6	87.37	314.9	2,847.4	216.3	108.0	108.24	1.998	
10,600.0	7,396.0	7,662.6	7,322.9	80.3	40.6	87.47	314.9	2,847.4	263.6	152.9	110.69	2.382	
10,700.0	7,396.0	7,663.0	7,323.3	82.8	40.6	87.57	314.9	2,847.4	335.0	221.9	113.14	2.961	
10,800.0	7,396.0	7,663.3	7,323.6	85.2	40.6	87.68	314.9	2,847.4	418.3	302.7	115.59	3.619	

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S4-T3N-R68W (Minch) - HOAGLAND 43-4D (EXISTING) - Existing - Existing												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 1641-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,400.0	7,396.0	7,519.1	7,328.5	99.8	23.9	88.94	331.1	4,186.9	421.2	311.3	109.93	3.832	
11,500.0	7,396.0	7,519.1	7,328.4	102.3	23.9	88.92	331.1	4,186.9	335.1	222.7	112.38	2.982	
11,600.0	7,396.0	7,519.0	7,328.4	104.7	23.9	88.91	331.1	4,186.9	259.1	144.2	114.83	2.256	
11,700.0	7,396.0	7,519.0	7,328.3	107.2	23.9	88.90	331.1	4,186.9	204.8	87.5	117.29	1.746	
11,775.8	7,396.0	7,519.0	7,328.3	109.0	23.9	88.89	331.1	4,186.9	190.2	71.1	119.15	1.597 CC, ES, SF	
11,800.0	7,396.0	7,519.0	7,328.3	109.6	23.9	88.89	331.1	4,186.9	191.8	72.0	119.74	1.602	
11,900.0	7,396.0	7,518.9	7,328.3	112.1	23.9	88.87	331.1	4,186.9	227.2	105.0	122.20	1.859	
11,985.0	7,396.0	7,518.9	7,328.2	114.2	23.9	88.86	331.1	4,186.9	282.7	158.4	124.28	2.275	

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3A-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	0.00	10.9	0.0	10.9					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	10.9	0.0	10.9	10.6	0.30	35.986		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	10.9	0.0	10.9	10.3	0.65	16.742 CC, ES		
300.0	300.0	299.8	299.8	0.5	0.5	-1.88	11.7	-0.4	11.7	10.7	1.00	11.690		
400.0	400.0	399.6	399.5	0.7	0.7	-6.26	14.0	-1.5	14.1	12.8	1.35	10.434		
500.0	500.0	499.3	499.1	0.9	0.9	30.44	17.9	-3.5	17.5	15.8	1.70	10.308		
600.0	600.0	598.9	598.5	1.0	1.1	29.26	23.4	-6.1	21.1	19.1	2.05	10.292		
700.0	699.9	698.4	697.8	1.2	1.3	29.32	30.4	-9.6	24.8	22.4	2.40	10.333		
800.0	799.7	797.9	796.8	1.4	1.5	30.12	38.9	-13.8	28.7	26.0	2.76	10.400		
900.0	899.4	897.3	895.6	1.6	1.8	31.39	48.9	-18.8	32.8	29.7	3.13	10.477		
1,000.0	998.9	996.6	994.1	1.8	2.0	32.95	60.5	-24.5	37.0	33.5	3.51	10.550		
1,100.0	1,098.3	1,095.9	1,092.2	2.1	2.3	34.70	73.6	-31.0	41.5	37.6	3.91	10.612		
1,200.0	1,197.4	1,195.1	1,190.1	2.3	2.6	36.55	88.2	-38.2	46.1	41.8	4.33	10.651		
1,300.0	1,296.3	1,294.2	1,287.5	2.6	3.0	38.45	104.3	-46.1	51.0	46.2	4.79	10.664		
1,400.0	1,394.9	1,393.2	1,384.6	2.9	3.4	40.36	121.9	-54.8	56.2	50.9	5.28	10.645		
1,500.0	1,493.3	1,492.1	1,481.2	3.3	3.8	42.26	141.0	-64.3	61.6	55.8	5.82	10.593		
1,600.0	1,591.2	1,591.0	1,577.3	3.6	4.2	44.12	161.5	-74.4	67.4	61.0	6.41	10.511		
1,700.0	1,689.1	1,689.7	1,673.0	4.0	4.6	45.49	183.6	-85.3	74.0	67.0	7.02	10.535		
1,800.0	1,786.9	1,789.3	1,769.2	4.4	5.1	46.25	206.7	-96.7	81.5	73.9	7.64	10.673		
1,900.0	1,884.7	1,889.0	1,865.5	4.8	5.6	46.88	229.8	-108.2	89.1	80.8	8.26	10.780		
2,000.0	1,982.5	1,988.7	1,961.8	5.2	6.0	47.41	252.9	-119.6	96.7	87.8	8.90	10.863		
2,100.0	2,080.3	2,088.4	2,058.1	5.6	6.5	47.87	276.1	-131.0	104.2	94.7	9.54	10.927		
2,200.0	2,178.1	2,188.1	2,154.4	6.0	7.0	48.26	299.2	-142.5	111.8	101.6	10.18	10.979		
2,300.0	2,275.9	2,287.8	2,250.7	6.3	7.5	48.60	322.3	-153.9	119.4	108.6	10.83	11.020		
2,400.0	2,373.8	2,387.5	2,347.0	6.7	7.9	48.90	345.5	-165.3	127.0	115.5	11.49	11.052		
2,500.0	2,471.6	2,487.3	2,443.4	7.1	8.4	49.17	368.6	-176.8	134.6	122.4	12.15	11.079		
2,600.0	2,569.4	2,587.0	2,539.7	7.5	8.9	49.41	391.8	-188.2	142.1	129.3	12.80	11.101		
2,700.0	2,667.2	2,686.7	2,636.0	7.9	9.4	49.62	414.9	-199.6	149.7	136.3	13.47	11.119		
2,800.0	2,765.0	2,786.4	2,732.3	8.3	9.9	49.82	438.0	-211.1	157.3	143.2	14.13	11.134		
2,900.0	2,862.8	2,886.1	2,828.6	8.7	10.3	49.99	461.2	-222.5	164.9	150.1	14.80	11.146		
3,000.0	2,960.7	2,985.8	2,924.9	9.1	10.8	50.15	484.3	-234.0	172.5	157.1	15.46	11.157		
3,100.0	3,058.5	3,085.5	3,021.2	9.5	11.3	50.30	507.4	-245.4	180.1	164.0	16.13	11.165		
3,200.0	3,156.3	3,185.2	3,117.5	9.9	11.8	50.44	530.6	-256.8	187.7	170.9	16.80	11.172		
3,300.0	3,254.1	3,284.9	3,213.9	10.3	12.3	50.56	553.7	-268.3	195.3	177.9	17.47	11.178		
3,400.0	3,351.9	3,384.6	3,310.2	10.7	12.7	50.68	576.8	-279.7	202.9	184.8	18.15	11.183		
3,500.0	3,449.7	3,484.4	3,406.5	11.1	13.2	50.78	600.0	-291.1	210.5	191.7	18.82	11.188		
3,600.0	3,547.5	3,584.1	3,502.8	11.5	13.7	50.88	623.1	-302.6	218.1	198.6	19.49	11.191		
3,700.0	3,645.4	3,683.8	3,599.1	11.9	14.2	50.98	646.2	-314.0	225.8	205.6	20.16	11.198		
3,800.0	3,743.5	3,783.4	3,695.3	12.3	14.7	50.87	669.4	-325.4	234.3	213.5	20.76	11.283		
3,900.0	3,841.9	3,882.9	3,791.5	12.7	15.2	50.45	692.4	-336.8	243.9	222.6	21.27	11.464		
4,000.0	3,940.6	3,983.1	3,888.3	13.0	15.6	49.79	715.7	-348.3	254.5	232.9	21.69	11.735		
4,100.0	4,039.6	4,086.3	3,988.2	13.3	16.1	49.03	738.4	-359.5	265.4	243.3	22.05	12.035		
4,200.0	4,138.8	4,189.6	4,088.8	13.5	16.5	48.27	759.6	-370.0	276.0	253.6	22.37	12.336		
4,300.0	4,238.2	4,293.2	4,190.1	13.8	17.0	47.51	779.2	-379.7	286.3	263.6	22.65	12.640		
4,400.0	4,337.8	4,397.0	4,292.0	14.0	17.3	46.74	797.2	-388.6	296.3	273.4	22.89	12.947		
4,500.0	4,437.5	4,501.1	4,394.4	14.2	17.7	45.98	813.6	-396.7	306.1	283.0	23.09	13.259		
4,600.0	4,537.4	4,605.3	4,497.3	14.3	18.0	45.20	828.3	-404.0	315.6	292.4	23.25	13.575		
4,700.0	4,637.3	4,709.8	4,600.8	14.5	18.3	44.42	841.4	-410.4	324.9	301.5	23.38	13.895		
4,800.0	4,737.3	4,814.5	4,704.7	14.6	18.6	43.62	852.8	-416.1	333.9	310.4	23.48	14.220		
4,900.0	4,837.3	4,919.4	4,809.0	14.7	18.8	2.81	862.5	-420.9	342.6	313.4	29.18	11.741		
5,000.0	4,937.3	5,024.6	4,913.9	14.8	19.0	2.09	870.5	-424.8	350.0	320.4	29.66	11.803		
5,100.0	5,037.3	5,130.1	5,019.1	14.9	19.2	1.55	876.8	-428.0	355.9	325.8	30.07	11.835		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3A-4H - Hz - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)					
5,200.0	5,137.3	5,235.9	5,124.8	15.0	19.3	1.17	881.4	-430.2	360.2	329.8	30.43	11.838	
5,300.0	5,237.3	5,341.8	5,230.6	15.1	19.5	0.94	884.3	-431.6	362.9	332.1	30.73	11.809	
5,400.0	5,337.3	5,447.7	5,336.6	15.2	19.6	0.86	885.3	-432.2	363.9	332.9	30.98	11.747	
5,500.0	5,437.3	5,548.4	5,437.3	15.3	19.7	0.86	885.4	-432.2	363.9	332.7	31.20	11.664	
5,600.0	5,537.3	5,648.4	5,537.3	15.4	19.7	0.86	885.4	-432.2	363.9	332.5	31.42	11.582	
5,700.0	5,637.3	5,748.4	5,637.3	15.5	19.8	0.86	885.4	-432.2	363.9	332.2	31.64	11.500	
5,800.0	5,737.3	5,848.4	5,737.3	15.7	19.9	0.86	885.4	-432.2	363.9	332.0	31.87	11.418	
5,900.0	5,837.3	5,948.4	5,837.3	15.8	20.0	0.86	885.4	-432.2	363.9	331.8	32.10	11.337	
6,000.0	5,937.3	6,048.4	5,937.3	15.9	20.1	0.86	885.4	-432.2	363.9	331.6	32.33	11.256	
6,100.0	6,037.3	6,148.4	6,037.3	16.0	20.2	0.86	885.4	-432.2	363.9	331.3	32.56	11.176	
6,200.0	6,137.3	6,248.4	6,137.3	16.1	20.3	0.86	885.4	-432.2	363.9	331.1	32.79	11.096	
6,300.0	6,237.3	6,348.4	6,237.3	16.2	20.4	0.86	885.4	-432.2	363.9	330.9	33.03	11.017	
6,400.0	6,337.3	6,448.4	6,337.3	16.4	20.5	0.86	885.4	-432.2	363.9	330.6	33.27	10.938	
6,500.0	6,437.3	6,548.4	6,437.3	16.5	20.6	0.86	885.4	-432.2	363.9	330.4	33.51	10.860	
6,523.5	6,460.8	6,571.9	6,460.8	16.5	20.6	0.86	885.4	-432.2	363.9	330.3	33.56	10.841	
6,600.0	6,537.3	6,647.7	6,536.4	16.6	20.6	1.37	885.4	-428.9	363.9	330.3	33.65	10.816	
6,700.0	6,637.3	6,744.1	6,631.5	16.7	20.6	3.84	885.4	-413.2	364.7	331.3	33.42	10.913	
6,800.0	6,737.2	6,835.6	6,719.0	16.8	20.5	-82.19	885.4	-386.7	367.5	338.1	29.44	12.485	
6,900.0	6,836.0	6,923.9	6,799.6	16.8	20.4	-78.21	885.4	-350.7	372.2	342.3	29.97	12.422	
7,000.0	6,931.7	7,009.8	6,873.1	16.7	20.3	-74.55	885.4	-306.4	378.3	348.3	30.05	12.590	
7,100.0	7,022.6	7,093.7	6,939.3	16.5	20.1	-71.26	885.4	-255.0	385.2	355.5	29.68	12.977	
7,200.0	7,106.8	7,175.8	6,997.9	16.3	20.0	-68.37	885.4	-197.5	392.5	363.5	28.96	13.550	
7,300.0	7,182.7	7,256.5	7,048.7	16.1	20.0	-65.90	885.4	-134.8	399.6	371.5	28.05	14.246	
7,400.0	7,248.7	7,336.1	7,091.6	16.0	20.0	-63.85	885.4	-67.8	406.1	379.0	27.18	14.943	
7,500.0	7,303.7	7,414.8	7,126.4	16.0	20.1	-62.23	885.4	2.7	411.8	385.1	26.70	15.421	
7,600.0	7,346.6	7,492.8	7,153.1	16.2	20.3	-61.02	885.4	76.0	416.3	389.4	26.86	15.500	
7,700.0	7,376.5	7,570.4	7,171.6	16.7	20.7	-60.21	885.4	151.2	419.4	391.5	27.92	15.024	
7,800.0	7,392.8	7,650.0	7,182.0	17.7	21.2	-59.81	885.4	230.1	421.0	391.1	29.94	14.061	
7,900.0	7,396.0	7,731.0	7,184.0	19.1	22.0	-59.78	885.4	311.0	421.2	388.5	32.65	12.898	
8,000.0	7,396.0	7,831.0	7,184.0	20.8	23.2	-59.78	885.4	411.0	421.2	385.5	35.62	11.825	
8,100.0	7,396.0	7,931.0	7,184.0	22.6	24.6	-59.78	885.4	511.0	421.2	382.3	38.83	10.848	
8,200.0	7,396.0	8,031.0	7,184.0	24.5	26.3	-59.78	885.4	611.0	421.2	379.0	42.23	9.975	
8,300.0	7,396.0	8,131.0	7,184.0	26.5	28.1	-59.78	885.4	711.0	421.2	375.4	45.77	9.202	
8,400.0	7,396.0	8,231.0	7,184.0	28.6	30.1	-59.78	885.4	811.0	421.2	371.8	49.44	8.520	
8,500.0	7,396.0	8,331.0	7,184.0	30.8	32.1	-59.78	885.4	911.0	421.2	368.0	53.19	7.918	
8,600.0	7,396.0	8,431.0	7,184.0	33.0	34.2	-59.78	885.4	1,011.0	421.2	364.2	57.03	7.386	
8,700.0	7,396.0	8,531.0	7,184.0	35.2	36.3	-59.78	885.4	1,111.0	421.2	360.3	60.92	6.915	
8,800.0	7,396.0	8,631.0	7,184.0	37.5	38.5	-59.78	885.4	1,211.0	421.2	356.4	64.86	6.495	
8,900.0	7,396.0	8,731.0	7,184.0	39.7	40.7	-59.78	885.5	1,311.0	421.2	352.4	68.84	6.119	
9,000.0	7,396.0	8,831.0	7,184.0	42.1	43.0	-59.78	885.5	1,411.0	421.2	348.4	72.85	5.782	
9,100.0	7,396.0	8,931.0	7,184.0	44.4	45.3	-59.78	885.5	1,511.0	421.3	344.4	76.90	5.478	
9,200.0	7,396.0	9,031.0	7,184.0	46.7	47.6	-59.78	885.5	1,611.0	421.3	340.3	80.97	5.203	
9,300.0	7,396.0	9,131.0	7,184.0	49.1	49.9	-59.79	885.5	1,711.0	421.3	336.2	85.06	4.953	
9,400.0	7,396.0	9,231.0	7,184.0	51.4	52.2	-59.79	885.5	1,811.0	421.3	332.1	89.16	4.725	
9,500.0	7,396.0	9,331.0	7,184.0	53.8	54.5	-59.79	885.5	1,911.0	421.3	328.0	93.29	4.516	
9,600.0	7,396.0	9,431.0	7,184.0	56.2	56.9	-59.79	885.5	2,011.0	421.3	323.9	97.42	4.324	
9,700.0	7,396.0	9,531.0	7,184.0	58.6	59.3	-59.79	885.5	2,111.0	421.3	319.7	101.57	4.148	
9,800.0	7,396.0	9,631.0	7,184.0	61.0	61.6	-59.79	885.5	2,211.0	421.3	315.6	105.73	3.985	
9,900.0	7,396.0	9,731.0	7,184.0	63.4	64.0	-59.79	885.5	2,311.0	421.3	311.4	109.90	3.834	
10,000.0	7,396.0	9,831.0	7,184.0	65.8	66.4	-59.79	885.5	2,411.0	421.3	307.2	114.08	3.693	
10,100.0	7,396.0	9,931.0	7,184.0	68.2	68.8	-59.79	885.5	2,511.0	421.3	303.1	118.26	3.563	
10,200.0	7,396.0	10,031.0	7,184.0	70.6	71.2	-59.79	885.5	2,611.0	421.3	298.9	122.46	3.441	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3A-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,300.0	7,396.0	10,131.0	7,184.0	73.0	73.6	-59.79	885.5	2,711.0	421.4	294.7	126.65	3.327		
10,400.0	7,396.0	10,231.0	7,184.0	75.5	76.0	-59.79	885.5	2,811.0	421.4	290.5	130.86	3.220		
10,500.0	7,396.0	10,331.0	7,184.0	77.9	78.4	-59.79	885.5	2,911.0	421.4	286.3	135.07	3.120		
10,600.0	7,396.0	10,431.0	7,184.0	80.3	80.8	-59.79	885.5	3,011.0	421.4	282.1	139.28	3.025		
10,700.0	7,396.0	10,531.0	7,184.0	82.8	83.2	-59.79	885.5	3,111.0	421.4	277.9	143.50	2.937		
10,800.0	7,396.0	10,631.0	7,184.0	85.2	85.7	-59.79	885.6	3,211.0	421.4	273.7	147.72	2.853		
10,900.0	7,396.0	10,731.0	7,184.0	87.6	88.1	-59.80	885.6	3,311.0	421.4	269.5	151.94	2.773		
11,000.0	7,396.0	10,831.0	7,184.0	90.1	90.5	-59.80	885.6	3,411.0	421.4	265.2	156.17	2.698		
11,100.0	7,396.0	10,931.0	7,184.0	92.5	92.9	-59.80	885.6	3,511.0	421.4	261.0	160.40	2.627		
11,200.0	7,396.0	11,031.0	7,184.0	94.9	95.4	-59.80	885.6	3,611.0	421.4	256.8	164.63	2.560		
11,300.0	7,396.0	11,131.0	7,184.0	97.4	97.8	-59.80	885.6	3,711.0	421.4	252.6	168.87	2.496		
11,400.0	7,396.0	11,231.0	7,184.0	99.8	100.2	-59.80	885.6	3,811.0	421.4	248.3	173.11	2.435		
11,500.0	7,396.0	11,331.0	7,184.0	102.3	102.7	-59.80	885.6	3,911.0	421.4	244.1	177.35	2.376		
11,600.0	7,396.0	11,431.0	7,184.0	104.7	105.1	-59.80	885.6	4,011.0	421.5	239.9	181.59	2.321		
11,700.0	7,396.0	11,531.0	7,184.0	107.2	107.6	-59.80	885.6	4,111.0	421.5	235.6	185.83	2.268		
11,800.0	7,396.0	11,631.0	7,184.0	109.6	110.0	-59.80	885.6	4,211.0	421.5	231.4	190.08	2.217		
11,900.0	7,396.0	11,731.0	7,184.0	112.1	112.5	-59.80	885.6	4,311.0	421.5	227.2	194.33	2.169		
11,985.0	7,396.0	11,815.9	7,184.0	114.2	114.5	-59.80	885.6	4,395.9	421.5	223.5	197.94	2.129 SF		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3C-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program:		0-MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-10.9	0.0	10.9					
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-10.9	0.0	10.9	10.6	0.30	35.986		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-10.9	0.0	10.9	10.3	0.65	16.742		
300.0	300.0	300.0	300.0	0.5	0.5	-180.00	-10.9	0.0	10.9	9.9	1.00	10.909		
400.0	400.0	400.0	400.0	0.7	0.7	-180.00	-10.9	0.0	10.9	9.6	1.35	8.090 CC, ES		
500.0	500.0	500.0	500.0	0.9	0.8	-142.76	-10.9	0.0	11.6	9.9	1.70	6.830		
600.0	600.0	600.0	600.0	1.0	1.0	-149.35	-10.9	0.0	13.8	11.7	2.05	6.727		
700.0	699.9	700.0	700.0	1.2	1.2	-154.30	-10.6	-0.8	17.1	14.7	2.40	7.145		
800.0	799.7	800.2	800.1	1.4	1.4	-155.77	-9.6	-3.2	21.1	18.3	2.75	7.664		
900.0	899.4	900.3	900.2	1.6	1.6	-155.27	-7.9	-7.3	25.6	22.5	3.11	8.217		
1,000.0	998.9	1,000.5	1,000.2	1.8	1.8	-153.68	-5.6	-12.9	30.6	27.1	3.48	8.780		
1,100.0	1,098.3	1,100.7	1,100.0	2.1	2.0	-151.54	-2.6	-20.2	36.1	32.3	3.87	9.341		
1,200.0	1,197.4	1,200.8	1,199.7	2.3	2.2	-149.14	1.0	-29.1	42.3	38.0	4.28	9.886		
1,300.0	1,296.3	1,301.0	1,299.2	2.6	2.4	-146.67	5.3	-39.6	49.1	44.4	4.72	10.403		
1,400.0	1,394.9	1,401.1	1,398.5	2.9	2.7	-144.23	10.3	-51.7	56.7	51.5	5.21	10.881		
1,500.0	1,493.3	1,501.2	1,497.5	3.3	2.9	-141.90	15.9	-65.4	64.9	59.2	5.74	11.311		
1,600.0	1,591.2	1,601.2	1,596.1	3.6	3.2	-139.70	22.2	-80.7	73.9	67.6	6.32	11.690		
1,700.0	1,689.1	1,700.8	1,694.2	4.0	3.6	-137.88	28.7	-96.7	83.3	76.4	6.93	12.019		
1,800.0	1,786.9	1,800.3	1,792.2	4.4	3.9	-136.44	35.3	-112.7	92.8	85.2	7.56	12.277		
1,900.0	1,884.7	1,899.8	1,890.2	4.8	4.2	-135.26	41.9	-128.7	102.3	94.1	8.20	12.483		
2,000.0	1,982.5	1,999.3	1,988.2	5.2	4.5	-134.28	48.4	-144.7	111.9	103.0	8.84	12.650		
2,100.0	2,080.3	2,098.9	2,086.2	5.6	4.9	-133.46	55.0	-160.7	121.5	112.0	9.50	12.787		
2,200.0	2,178.1	2,198.4	2,184.2	6.0	5.2	-132.76	61.5	-176.7	131.1	120.9	10.16	12.901		
2,300.0	2,275.9	2,297.9	2,282.2	6.3	5.5	-132.15	68.1	-192.7	140.7	129.9	10.83	12.997		
2,400.0	2,373.8	2,397.4	2,380.2	6.7	5.9	-131.62	74.6	-208.7	150.3	138.8	11.49	13.078		
2,500.0	2,471.6	2,497.0	2,478.3	7.1	6.2	-131.16	81.2	-224.6	160.0	147.8	12.17	13.148		
2,600.0	2,569.4	2,596.5	2,576.3	7.5	6.5	-130.75	87.8	-240.6	169.6	156.8	12.84	13.208		
2,700.0	2,667.2	2,696.0	2,674.3	7.9	6.9	-130.38	94.3	-256.6	179.3	165.8	13.52	13.261		
2,800.0	2,765.0	2,795.5	2,772.3	8.3	7.2	-130.05	100.9	-272.6	189.0	174.8	14.20	13.307		
2,900.0	2,862.8	2,895.1	2,870.3	8.7	7.6	-129.75	107.4	-288.6	198.7	183.8	14.88	13.347		
3,000.0	2,960.7	2,994.6	2,968.3	9.1	7.9	-129.48	114.0	-304.6	208.4	192.8	15.57	13.384		
3,100.0	3,058.5	3,094.1	3,066.3	9.5	8.3	-129.24	120.6	-320.6	218.0	201.8	16.25	13.416		
3,200.0	3,156.3	3,193.6	3,164.4	9.9	8.6	-129.01	127.1	-336.6	227.7	210.8	16.94	13.445		
3,300.0	3,254.1	3,293.2	3,262.4	10.3	8.9	-128.80	133.7	-352.6	237.4	219.8	17.63	13.471		
3,400.0	3,351.9	3,392.0	3,359.8	10.7	9.3	-128.75	140.0	-367.9	247.2	229.0	18.28	13.525		
3,500.0	3,449.7	3,490.6	3,457.2	11.1	9.6	-129.07	145.6	-381.7	257.4	238.5	18.88	13.637		
3,600.0	3,547.5	3,589.0	3,554.8	11.5	9.9	-129.71	150.6	-393.9	267.9	248.5	19.41	13.804		
3,700.0	3,645.4	3,687.3	3,652.4	11.9	10.1	-130.66	155.0	-404.5	278.8	259.0	19.88	14.023		
3,800.0	3,743.5	3,785.4	3,750.0	12.3	10.3	-131.73	158.7	-413.6	289.4	269.1	20.30	14.255		
3,900.0	3,841.9	3,883.5	3,847.8	12.7	10.5	-132.78	161.8	-421.1	299.2	278.6	20.66	14.481		
4,000.0	3,940.6	3,981.5	3,945.6	13.0	10.7	-133.84	164.2	-427.1	308.5	287.5	20.98	14.702		
4,100.0	4,039.6	4,079.4	4,043.4	13.3	10.9	-134.90	166.0	-431.5	317.1	295.8	21.25	14.919		
4,200.0	4,138.8	4,177.3	4,141.2	13.5	11.0	-135.97	167.2	-434.4	325.1	303.6	21.48	15.134		
4,300.0	4,238.2	4,275.0	4,238.9	13.8	11.1	-137.05	167.8	-435.7	332.4	310.8	21.66	15.349		
4,400.0	4,337.8	4,373.9	4,337.8	14.0	11.3	-138.12	167.8	-435.8	339.1	317.3	21.82	15.541		
4,500.0	4,437.5	4,473.6	4,437.5	14.2	11.4	-138.96	167.8	-435.8	344.6	322.6	22.00	15.667		
4,600.0	4,537.4	4,573.5	4,537.4	14.3	11.5	-139.59	167.8	-435.8	348.8	326.7	22.19	15.721		
4,700.0	4,637.3	4,673.4	4,637.3	14.5	11.6	-140.02	167.8	-435.8	351.8	329.4	22.40	15.705		
4,800.0	4,737.3	4,773.4	4,737.3	14.6	11.7	-140.25	167.8	-435.8	353.4	330.8	22.62	15.619		
4,900.0	4,837.3	4,873.4	4,837.3	14.7	11.9	-139.71	167.8	-435.8	353.7	332.1	21.59	16.382		
5,000.0	4,937.3	4,973.4	4,937.3	14.8	12.0	-139.71	167.8	-435.8	353.7	331.8	21.87	16.170		
5,100.0	5,037.3	5,073.4	5,037.3	14.9	12.1	-139.71	167.8	-435.8	353.7	331.6	22.16	15.962		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3C-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.0	5,137.3	5,173.4	5,137.3	15.0	12.2	179.71	167.8	-435.8	353.7	331.3	22.45	15.759		
5,300.0	5,237.3	5,273.4	5,237.3	15.1	12.4	179.71	167.8	-435.8	353.7	331.0	22.73	15.559		
5,400.0	5,337.3	5,373.4	5,337.3	15.2	12.5	179.71	167.8	-435.8	353.7	330.7	23.02	15.363		
5,500.0	5,437.3	5,473.4	5,437.3	15.3	12.6	179.71	167.8	-435.8	353.7	330.4	23.31	15.172		
5,600.0	5,537.3	5,573.4	5,537.3	15.4	12.8	179.71	167.8	-435.8	353.7	330.1	23.61	14.984		
5,700.0	5,637.3	5,673.4	5,637.3	15.5	12.9	179.71	167.8	-435.8	353.7	329.8	23.90	14.800		
5,800.0	5,737.3	5,773.4	5,737.3	15.7	13.0	179.71	167.8	-435.8	353.7	329.5	24.19	14.619		
5,900.0	5,837.3	5,873.4	5,837.3	15.8	13.2	179.71	167.8	-435.8	353.7	329.2	24.49	14.442		
6,000.0	5,937.3	5,973.4	5,937.3	15.9	13.3	179.71	167.8	-435.8	353.7	328.9	24.79	14.269		
6,100.0	6,037.3	6,073.4	6,037.3	16.0	13.4	179.71	167.8	-435.8	353.7	328.6	25.09	14.099		
6,200.0	6,137.3	6,173.4	6,137.3	16.1	13.6	179.71	167.8	-435.8	353.7	328.3	25.39	13.933		
6,300.0	6,237.3	6,273.4	6,237.3	16.2	13.7	179.71	167.8	-435.8	353.7	328.0	25.69	13.770		
6,400.0	6,337.3	6,373.4	6,337.3	16.4	13.9	179.71	167.8	-435.8	353.7	327.7	25.99	13.610		
6,500.0	6,437.3	6,473.4	6,437.3	16.5	14.0	179.71	167.8	-435.8	353.7	327.4	26.29	13.453		
6,531.6	6,468.9	6,505.0	6,468.9	16.5	14.0	179.71	167.8	-435.8	353.7	327.3	26.39	13.404		
6,600.0	6,537.3	6,573.0	6,536.8	16.6	14.1	179.17	167.8	-432.5	353.7	327.1	26.66	13.268		
6,700.0	6,637.3	6,669.9	6,632.3	16.7	14.0	176.61	167.8	-416.6	354.4	327.1	27.26	13.001		
6,800.0	6,737.2	6,761.8	6,720.1	16.8	13.9	82.49	167.8	-389.9	357.0	330.3	26.74	13.349		
6,900.0	6,836.0	6,850.0	6,800.6	16.8	13.7	78.39	167.8	-353.8	361.7	335.5	26.12	13.845		
7,000.0	6,931.7	6,936.6	6,874.6	16.7	13.5	74.57	167.8	-309.0	367.7	342.2	25.51	14.414		
7,100.0	7,022.6	7,020.7	6,940.9	16.5	13.3	71.16	167.8	-257.3	374.7	349.7	25.01	14.984		
7,200.0	7,106.8	7,100.0	6,997.4	16.3	13.2	68.23	167.8	-201.7	382.1	357.5	24.67	15.488		
7,300.0	7,182.7	7,183.9	7,050.1	16.1	13.1	65.58	167.8	-136.5	389.4	364.9	24.57	15.849		
7,400.0	7,248.7	7,263.7	7,092.9	16.0	13.1	63.44	167.8	-69.2	396.2	371.5	24.76	16.003		
7,500.0	7,303.7	7,342.5	7,127.5	16.0	13.6	61.73	167.8	1.5	402.1	376.9	25.26	15.921		
7,600.0	7,346.6	7,420.5	7,153.9	16.2	14.3	60.45	167.8	74.9	406.9	380.7	26.16	15.555		
7,700.0	7,376.5	7,500.0	7,172.4	16.7	15.2	59.58	167.8	152.2	410.2	382.8	27.46	14.937		
7,800.0	7,392.8	7,575.4	7,182.0	17.7	16.3	59.14	167.8	226.9	412.0	382.9	29.14	14.139		
7,900.0	7,396.0	7,659.6	7,184.0	19.1	17.6	59.06	167.8	311.1	412.3	380.9	31.40	13.132		
8,000.0	7,396.0	7,759.6	7,184.0	20.8	19.4	59.06	167.8	411.1	412.3	377.9	34.41	11.981		
8,100.0	7,396.0	7,859.6	7,184.0	22.6	21.3	59.06	167.8	511.1	412.3	374.7	37.66	10.948		
8,200.0	7,396.0	7,959.6	7,184.0	24.5	23.3	59.06	167.8	611.1	412.3	371.2	41.09	10.034		
8,300.0	7,396.0	8,059.6	7,184.0	26.5	25.4	59.06	167.8	711.1	412.3	367.6	44.66	9.232		
8,400.0	7,396.0	8,159.6	7,184.0	28.6	27.6	59.06	167.8	811.1	412.3	364.0	48.34	8.529		
8,500.0	7,396.0	8,259.6	7,184.0	30.8	29.8	59.06	167.9	911.1	412.3	360.2	52.11	7.912		
8,600.0	7,396.0	8,359.6	7,184.0	33.0	32.0	59.06	167.9	1,011.1	412.3	356.3	55.95	7.369		
8,700.0	7,396.0	8,459.6	7,184.0	35.2	34.3	59.05	167.9	1,111.1	412.3	352.4	59.84	6.890		
8,800.0	7,396.0	8,559.6	7,184.0	37.5	36.6	59.05	167.9	1,211.1	412.3	348.5	63.78	6.464		
8,900.0	7,396.0	8,659.6	7,184.0	39.7	38.9	59.05	167.9	1,311.1	412.3	344.5	67.75	6.085		
9,000.0	7,396.0	8,759.6	7,184.0	42.1	41.3	59.05	167.9	1,411.1	412.3	340.5	71.76	5.745		
9,100.0	7,396.0	8,859.6	7,184.0	44.4	43.6	59.05	167.9	1,511.1	412.3	336.5	75.79	5.439		
9,200.0	7,396.0	8,959.6	7,184.0	46.7	46.0	59.05	167.9	1,611.1	412.2	332.4	79.85	5.163		
9,300.0	7,396.0	9,059.6	7,184.0	49.1	48.4	59.05	167.9	1,711.1	412.2	328.3	83.92	4.912		
9,400.0	7,396.0	9,159.6	7,184.0	51.4	50.8	59.05	167.9	1,811.1	412.2	324.2	88.01	4.684		
9,500.0	7,396.0	9,259.6	7,184.0	53.8	53.1	59.05	167.9	1,911.1	412.2	320.1	92.12	4.475		
9,600.0	7,396.0	9,359.6	7,184.0	56.2	55.5	59.05	167.9	2,011.1	412.2	316.0	96.24	4.283		
9,700.0	7,396.0	9,459.6	7,184.0	58.6	58.0	59.05	167.9	2,111.1	412.2	311.9	100.37	4.107		
9,800.0	7,396.0	9,559.6	7,184.0	61.0	60.4	59.05	167.9	2,211.1	412.2	307.7	104.50	3.944		
9,900.0	7,396.0	9,659.6	7,184.0	63.4	62.8	59.05	167.9	2,311.1	412.2	303.6	108.65	3.794		
10,000.0	7,396.0	9,759.6	7,184.0	65.8	65.2	59.05	167.9	2,411.1	412.2	299.4	112.80	3.654		
10,100.0	7,396.0	9,859.6	7,184.0	68.2	67.6	59.05	167.9	2,511.1	412.2	295.2	116.97	3.524		
10,200.0	7,396.0	9,959.6	7,184.0	70.6	70.1	59.05	167.9	2,611.1	412.2	291.1	121.13	3.403		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3C-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,300.0	7,396.0	10,059.6	7,184.0	73.0	72.5	59.05	167.9	2,711.1	412.2	286.9	125.30	3.289		
10,400.0	7,396.0	10,159.6	7,184.0	75.5	74.9	59.05	167.9	2,811.1	412.2	282.7	129.48	3.183		
10,500.0	7,396.0	10,259.6	7,184.0	77.9	77.4	59.05	167.9	2,911.1	412.2	278.5	133.66	3.084		
10,600.0	7,396.0	10,359.6	7,184.0	80.3	79.8	59.05	167.9	3,011.1	412.2	274.3	137.85	2.990		
10,700.0	7,396.0	10,459.6	7,184.0	82.8	82.3	59.04	167.9	3,111.1	412.2	270.1	142.04	2.902		
10,800.0	7,396.0	10,559.6	7,184.0	85.2	84.7	59.04	167.9	3,211.1	412.1	265.9	146.23	2.818		
10,900.0	7,396.0	10,659.6	7,184.0	87.6	87.1	59.04	167.9	3,311.1	412.1	261.7	150.43	2.740		
11,000.0	7,396.0	10,759.6	7,184.0	90.1	89.6	59.04	167.9	3,411.1	412.1	257.5	154.63	2.665		
11,100.0	7,396.0	10,859.6	7,184.0	92.5	92.0	59.04	167.9	3,511.1	412.1	253.3	158.83	2.595		
11,200.0	7,396.0	10,959.6	7,184.0	94.9	94.5	59.04	167.9	3,611.1	412.1	249.1	163.03	2.528		
11,300.0	7,396.0	11,059.6	7,184.0	97.4	96.9	59.04	168.0	3,711.1	412.1	244.9	167.24	2.464		
11,400.0	7,396.0	11,159.6	7,184.0	99.8	99.4	59.04	168.0	3,811.1	412.1	240.7	171.44	2.404		
11,500.0	7,396.0	11,259.6	7,184.0	102.3	101.8	59.04	168.0	3,911.1	412.1	236.5	175.65	2.346		
11,600.0	7,396.0	11,359.6	7,184.0	104.7	104.3	59.04	168.0	4,011.1	412.1	232.2	179.86	2.291		
11,700.0	7,396.0	11,459.6	7,184.0	107.2	106.8	59.04	168.0	4,111.1	412.1	228.0	184.08	2.239		
11,800.0	7,396.0	11,559.6	7,184.0	109.6	109.2	59.04	168.0	4,211.1	412.1	223.8	188.29	2.189		
11,900.0	7,396.0	11,659.6	7,184.0	112.1	111.7	59.04	168.0	4,311.1	412.1	219.6	192.51	2.141		
11,985.0	7,396.0	11,744.5	7,184.0	114.2	113.8	59.04	168.0	4,396.0	412.1	216.0	196.09	2.101 SF		



# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3D-4H - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-171.29	-18.2	-2.8	18.4					
100.0	100.0	100.0	100.0	0.2	0.2	-171.29	-18.2	-2.8	18.4	18.1	0.30	60.677		
200.0	200.0	200.0	200.0	0.3	0.3	-171.29	-18.2	-2.8	18.4	17.8	0.65	28.230 CC, ES		
300.0	300.0	299.8	299.8	0.5	0.5	-168.93	-18.5	-3.6	18.8	17.8	1.00	18.810		
400.0	400.0	399.6	399.6	0.7	0.7	-162.51	-19.3	-6.1	20.3	18.9	1.35	15.000		
500.0	500.0	499.3	499.2	0.9	0.9	-115.67	-20.7	-10.2	23.5	21.7	1.71	13.718 SF		
600.0	600.0	598.8	598.5	1.0	1.1	-111.44	-22.6	-15.9	28.8	26.7	2.07	13.908		
700.0	699.9	698.1	697.5	1.2	1.3	-109.36	-25.1	-23.3	36.1	33.7	2.44	14.794		
800.0	799.7	797.2	796.1	1.4	1.5	-108.65	-28.1	-32.3	45.4	42.5	2.83	16.029		
900.0	899.4	895.9	894.2	1.6	1.8	-108.69	-31.6	-42.8	56.5	53.2	3.24	17.432		
1,000.0	998.9	994.2	991.7	1.8	2.0	-109.11	-35.7	-54.9	69.4	65.8	3.67	18.897		
1,100.0	1,098.3	1,092.1	1,088.5	2.1	2.3	-109.70	-40.2	-68.5	84.3	80.1	4.14	20.359		
1,200.0	1,197.4	1,189.5	1,184.6	2.3	2.6	-110.35	-45.3	-83.6	100.9	96.3	4.63	21.776		
1,300.0	1,296.3	1,287.7	1,281.3	2.6	3.0	-111.22	-50.7	-99.8	119.0	113.8	5.16	23.049		
1,400.0	1,394.9	1,385.9	1,378.0	2.9	3.3	-112.49	-56.1	-116.0	137.7	132.0	5.72	24.079		
1,500.0	1,493.3	1,483.9	1,474.5	3.3	3.6	-114.00	-61.5	-132.1	157.2	150.9	6.30	24.934		
1,600.0	1,591.2	1,581.7	1,570.8	3.6	4.0	-115.65	-66.9	-148.2	177.5	170.6	6.91	25.669		
1,700.0	1,689.1	1,679.3	1,667.0	4.0	4.3	-117.34	-72.2	-164.3	198.3	190.8	7.54	26.314		
1,800.0	1,786.9	1,777.0	1,763.2	4.4	4.6	-118.71	-77.6	-180.4	219.3	211.2	8.16	26.867		
1,900.0	1,884.7	1,874.6	1,859.3	4.8	5.0	-119.83	-83.0	-196.4	240.4	231.6	8.79	27.347		
2,000.0	1,982.5	1,972.3	1,955.5	5.2	5.3	-120.78	-88.4	-212.5	261.6	252.1	9.42	27.766		
2,100.0	2,080.3	2,069.9	2,051.7	5.6	5.6	-121.59	-93.8	-228.6	282.8	272.7	10.05	28.135		
2,200.0	2,178.1	2,167.6	2,147.8	6.0	6.0	-122.28	-99.1	-244.7	304.0	293.4	10.68	28.463		
2,300.0	2,275.9	2,265.2	2,244.0	6.3	6.3	-122.88	-104.5	-260.8	325.3	314.0	11.31	28.755		
2,400.0	2,373.8	2,362.9	2,340.2	6.7	6.7	-123.41	-109.9	-276.8	346.7	334.7	11.95	29.017		
2,500.0	2,471.6	2,460.6	2,436.3	7.1	7.0	-123.87	-115.3	-292.9	368.0	355.4	12.58	29.254		
2,600.0	2,569.4	2,558.2	2,532.5	7.5	7.3	-124.29	-120.7	-309.0	389.4	376.2	13.21	29.468		
2,700.0	2,667.2	2,655.9	2,628.7	7.9	7.7	-124.66	-126.1	-325.1	410.8	396.9	13.85	29.664		
2,800.0	2,765.0	2,753.5	2,724.8	8.3	8.0	-125.00	-131.4	-341.2	432.2	417.7	14.48	29.842		
2,900.0	2,862.8	2,852.1	2,821.9	8.7	8.4	-125.31	-136.8	-357.4	453.6	438.5	15.12	30.005		
3,000.0	2,960.7	2,954.2	2,922.7	9.1	8.7	-125.73	-142.1	-373.0	474.4	458.6	15.74	30.138		
3,100.0	3,058.5	3,056.6	3,024.1	9.5	9.0	-126.31	-146.7	-386.9	494.3	477.9	16.34	30.248		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3E-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-174.53	-29.1	-2.8	29.3					
100.0	100.0	100.0	100.0	0.2	0.2	-174.53	-29.1	-2.8	29.3	29.0	0.30	96.403		
200.0	200.0	200.0	200.0	0.3	0.3	-174.53	-29.1	-2.8	29.3	28.6	0.65	44.851		
300.0	300.0	300.0	300.0	0.5	0.5	-174.53	-29.1	-2.8	29.3	28.3	1.00	29.223		
400.0	400.0	400.0	400.0	0.7	0.7	-174.53	-29.1	-2.8	29.3	27.9	1.35	21.672 CC, ES		
500.0	500.0	500.0	500.0	0.9	0.8	-135.72	-29.1	-2.8	29.9	28.2	1.70	17.584		
600.0	600.0	600.0	600.0	1.0	1.0	-139.00	-29.1	-2.8	31.8	29.8	2.05	15.520		
700.0	699.9	699.9	699.9	1.2	1.2	-143.63	-29.1	-2.8	35.2	32.8	2.40	14.670		
800.0	799.7	799.7	799.7	1.4	1.4	-148.76	-29.1	-2.8	40.3	37.6	2.75	14.642 SF		
900.0	899.4	898.9	898.9	1.6	1.5	-152.81	-29.8	-3.3	47.7	44.6	3.10	15.369		
1,000.0	998.9	997.8	997.8	1.8	1.7	-155.03	-31.7	-5.0	57.8	54.4	3.46	16.726		
1,100.0	1,098.3	1,096.4	1,096.3	2.1	1.9	-155.96	-35.0	-7.8	70.5	66.7	3.81	18.485		
1,200.0	1,197.4	1,194.5	1,194.2	2.3	2.1	-156.08	-39.4	-11.6	85.7	81.5	4.18	20.507		
1,300.0	1,296.3	1,292.1	1,291.4	2.6	2.3	-155.74	-45.2	-16.6	103.4	98.8	4.56	22.697		
1,400.0	1,394.9	1,388.9	1,387.9	2.9	2.5	-155.16	-52.1	-22.5	123.6	118.6	4.95	24.987		
1,500.0	1,493.3	1,485.1	1,483.4	3.3	2.7	-154.45	-60.2	-29.5	146.2	140.9	5.35	27.323		
1,600.0	1,591.2	1,580.3	1,577.9	3.6	2.9	-153.70	-69.4	-37.4	171.3	165.5	5.78	29.662		
1,700.0	1,689.1	1,676.4	1,673.1	4.0	3.2	-153.07	-79.5	-46.1	197.8	191.6	6.22	31.799		
1,800.0	1,786.9	1,772.8	1,768.5	4.4	3.4	-152.58	-89.6	-54.8	224.4	217.7	6.68	33.615		
1,900.0	1,884.7	1,869.2	1,864.0	4.8	3.7	-152.19	-99.8	-63.6	250.9	243.8	7.13	35.173		
2,000.0	1,982.5	1,965.6	1,959.4	5.2	3.9	-151.88	-110.0	-72.3	277.5	269.9	7.60	36.520		
2,100.0	2,080.3	2,062.0	2,054.9	5.6	4.2	-151.62	-120.2	-81.1	304.1	296.0	8.07	37.694		
2,200.0	2,178.1	2,158.4	2,150.3	6.0	4.5	-151.40	-130.3	-89.8	330.7	322.1	8.54	38.725		
2,300.0	2,275.9	2,254.8	2,245.8	6.3	4.8	-151.22	-140.5	-98.6	357.3	348.3	9.01	39.636		
2,400.0	2,373.8	2,351.2	2,341.3	6.7	5.0	-151.06	-150.7	-107.3	383.9	374.4	9.49	40.447		
2,500.0	2,471.6	2,447.6	2,436.7	7.1	5.3	-150.92	-160.8	-116.1	410.4	400.5	9.97	41.171		
2,600.0	2,569.4	2,544.0	2,532.2	7.5	5.6	-150.80	-171.0	-124.8	437.0	426.6	10.45	41.822		
2,700.0	2,667.2	2,640.3	2,627.6	7.9	5.9	-150.69	-181.2	-133.6	463.6	452.7	10.93	42.410		
2,800.0	2,765.0	2,736.7	2,723.1	8.3	6.1	-150.60	-191.4	-142.3	490.2	478.8	11.42	42.944		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3F-4H - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-176.02	-40.1	-2.8	40.2					
100.0	100.0	100.0	100.0	0.2	0.2	-176.02	-40.1	-2.8	40.2	39.9	0.30	132.270		
200.0	200.0	200.0	200.0	0.3	0.3	-176.02	-40.1	-2.8	40.2	39.5	0.65	61.537		
300.0	300.0	300.0	300.0	0.5	0.5	-176.02	-40.1	-2.8	40.2	39.2	1.00	40.096		
400.0	400.0	400.0	400.0	0.7	0.7	-176.02	-40.1	-2.8	40.2	38.8	1.35	29.735 CC, ES		
500.0	500.0	500.0	500.0	0.9	0.8	-136.86	-40.1	-2.8	40.8	39.1	1.70	23.999		
600.0	600.0	600.0	600.0	1.0	1.0	-139.25	-40.1	-2.8	42.7	40.7	2.05	20.850		
700.0	699.9	699.2	699.2	1.2	1.2	-142.18	-40.8	-3.2	46.9	44.5	2.40	19.525 SF		
800.0	799.7	798.2	798.1	1.4	1.4	-144.66	-43.1	-4.5	54.0	51.2	2.75	19.598		
900.0	899.4	896.8	896.7	1.6	1.6	-146.50	-46.8	-6.5	64.0	60.9	3.11	20.571		
1,000.0	998.9	995.0	994.7	1.8	1.7	-147.73	-52.0	-9.4	76.9	73.4	3.47	22.141		
1,100.0	1,098.3	1,092.6	1,092.0	2.1	1.9	-148.49	-58.5	-13.1	92.6	88.8	3.84	24.107		
1,200.0	1,197.4	1,189.5	1,188.5	2.3	2.1	-148.91	-66.5	-17.6	111.1	106.9	4.22	26.336		
1,300.0	1,296.3	1,285.6	1,284.0	2.6	2.4	-149.11	-75.8	-22.8	132.4	127.8	4.61	28.731		
1,400.0	1,394.9	1,380.8	1,378.4	2.9	2.6	-149.16	-86.4	-28.7	156.4	151.4	5.01	31.221		
1,500.0	1,493.3	1,475.0	1,471.6	3.3	2.9	-149.11	-98.3	-35.3	183.1	177.7	5.42	33.754		
1,600.0	1,591.2	1,568.1	1,563.5	3.6	3.1	-148.99	-111.3	-42.6	212.5	206.6	5.85	36.292		
1,700.0	1,689.1	1,662.3	1,656.3	4.0	3.4	-148.95	-125.5	-50.5	243.5	237.2	6.30	38.628		
1,800.0	1,786.9	1,757.3	1,749.9	4.4	3.7	-148.90	-139.9	-58.6	274.6	267.8	6.76	40.614		
1,900.0	1,884.7	1,852.4	1,843.5	4.8	4.0	-148.86	-154.3	-66.6	305.6	298.4	7.22	42.320		
2,000.0	1,982.5	1,947.4	1,937.1	5.2	4.3	-148.83	-168.7	-74.7	336.7	329.0	7.69	43.797		
2,100.0	2,080.3	2,042.5	2,030.7	5.6	4.7	-148.80	-183.1	-82.7	367.8	359.6	8.16	45.087		
2,200.0	2,178.1	2,137.5	2,124.3	6.0	5.0	-148.78	-197.5	-90.8	398.9	390.3	8.63	46.222		
2,300.0	2,275.9	2,232.6	2,217.9	6.3	5.3	-148.76	-211.9	-98.8	430.0	420.9	9.10	47.226		
2,400.0	2,373.8	2,327.6	2,311.5	6.7	5.6	-148.74	-226.3	-106.9	461.0	451.5	9.58	48.121		
2,500.0	2,471.6	2,422.6	2,405.1	7.1	5.9	-148.73	-240.8	-114.9	492.1	482.1	10.06	48.923		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3G-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-176.63	-47.4	-2.8	47.4					
100.0	100.0	100.0	100.0	0.2	0.2	-176.63	-47.4	-2.8	47.4	47.1	0.30	156.211		
200.0	200.0	200.0	200.0	0.3	0.3	-176.63	-47.4	-2.8	47.4	46.8	0.65	72.676		
300.0	300.0	300.0	300.0	0.5	0.5	-176.63	-47.4	-2.8	47.4	46.4	1.00	47.353		
400.0	400.0	400.0	400.0	0.7	0.7	-176.63	-47.4	-2.8	47.4	46.1	1.35	35.117 CC, ES		
500.0	500.0	499.2	499.2	0.9	0.8	-136.97	-48.1	-3.1	48.9	47.2	1.70	28.778		
600.0	600.0	598.3	598.2	1.0	1.0	-137.89	-50.5	-4.1	53.2	51.2	2.05	25.999		
700.0	699.9	697.1	697.0	1.2	1.2	-139.12	-54.4	-5.8	60.5	58.1	2.40	25.220 SF		
800.0	799.7	795.5	795.2	1.4	1.4	-140.40	-59.9	-8.2	70.7	68.0	2.76	25.667		
900.0	899.4	893.4	892.8	1.6	1.6	-141.58	-66.9	-11.2	83.9	80.7	3.12	26.905		
1,000.0	998.9	990.7	989.7	1.8	1.8	-142.59	-75.3	-14.8	99.9	96.4	3.49	28.666		
1,100.0	1,098.3	1,087.3	1,085.6	2.1	2.0	-143.41	-85.2	-19.1	118.9	115.0	3.86	30.774		
1,200.0	1,197.4	1,182.9	1,180.5	2.3	2.3	-144.06	-96.4	-23.9	140.6	136.4	4.25	33.106		
1,300.0	1,296.3	1,277.6	1,274.2	2.6	2.6	-144.57	-109.0	-29.3	165.3	160.6	4.65	35.578		
1,400.0	1,394.9	1,371.2	1,366.6	2.9	2.9	-144.96	-122.8	-35.3	192.7	187.6	5.05	38.125		
1,500.0	1,493.3	1,463.6	1,457.5	3.3	3.2	-145.25	-137.8	-41.8	222.8	217.3	5.47	40.708		
1,600.0	1,591.2	1,557.5	1,549.8	3.6	3.5	-145.54	-153.9	-48.7	255.2	249.3	5.91	43.197		
1,700.0	1,689.1	1,651.9	1,642.4	4.0	3.8	-146.01	-170.2	-55.7	288.4	282.0	6.36	45.355		
1,800.0	1,786.9	1,746.2	1,735.1	4.4	4.1	-146.39	-186.5	-62.8	321.6	314.8	6.81	47.199		
1,900.0	1,884.7	1,840.5	1,827.7	4.8	4.5	-146.69	-202.7	-69.8	354.7	347.5	7.27	48.789		
2,000.0	1,982.5	1,934.8	1,920.3	5.2	4.8	-146.95	-219.0	-76.8	387.9	380.2	7.73	50.172		
2,100.0	2,080.3	2,029.1	2,013.0	5.6	5.1	-147.16	-235.3	-83.8	421.1	412.9	8.20	51.384		
2,200.0	2,178.1	2,123.5	2,105.6	6.0	5.5	-147.34	-251.6	-90.8	454.3	445.7	8.66	52.454		
2,300.0	2,275.9	2,217.8	2,198.3	6.3	5.8	-147.50	-267.8	-97.8	487.5	478.4	9.13	53.405		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3H-4H - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-177.26	-58.3	-2.8	58.4					
100.0	100.0	100.0	100.0	0.2	0.2	-177.26	-58.3	-2.8	58.4	58.0	0.30	192.147		
200.0	200.0	200.0	200.0	0.3	0.3	-177.26	-58.3	-2.8	58.4	57.7	0.65	89.395 CC, ES		
300.0	300.0	299.0	299.0	0.5	0.5	-177.04	-59.1	-3.1	59.2	58.2	1.00	59.171		
400.0	400.0	398.0	397.9	0.7	0.7	-176.42	-61.5	-3.8	61.7	60.3	1.35	45.750		
500.0	500.0	496.8	496.7	0.9	0.9	-135.98	-65.6	-5.2	66.5	64.8	1.70	39.224		
600.0	600.0	595.3	595.0	1.0	1.1	-136.20	-71.2	-7.0	74.2	72.2	2.04	36.310		
700.0	699.9	693.4	692.8	1.2	1.3	-136.87	-78.5	-9.4	84.9	82.5	2.40	35.422 SF		
800.0	799.7	791.0	789.9	1.4	1.5	-137.77	-87.2	-12.2	98.5	95.7	2.75	35.765		
900.0	899.4	887.9	886.2	1.6	1.7	-138.74	-97.5	-15.5	115.0	111.9	3.12	36.900		
1,000.0	998.9	983.9	981.5	1.8	2.0	-139.69	-109.2	-19.3	134.4	130.9	3.49	38.556		
1,100.0	1,098.3	1,079.1	1,075.6	2.1	2.3	-140.56	-122.3	-23.6	156.7	152.8	3.86	40.559		
1,200.0	1,197.4	1,173.2	1,168.5	2.3	2.6	-141.33	-136.7	-28.3	181.9	177.6	4.25	42.789		
1,300.0	1,296.3	1,266.2	1,260.0	2.6	2.9	-142.00	-152.4	-33.4	209.9	205.2	4.65	45.163		
1,400.0	1,394.9	1,357.9	1,350.1	2.9	3.2	-142.57	-169.2	-38.8	240.7	235.6	5.05	47.619		
1,500.0	1,493.3	1,448.3	1,438.5	3.3	3.6	-143.05	-187.1	-44.7	274.3	268.8	5.47	50.113		
1,600.0	1,591.2	1,538.9	1,526.7	3.6	4.0	-143.47	-206.3	-50.9	310.4	304.5	5.90	52.582		
1,700.0	1,689.1	1,631.7	1,617.1	4.0	4.3	-144.06	-226.2	-57.4	347.5	341.2	6.35	54.695		
1,800.0	1,786.9	1,724.5	1,707.5	4.4	4.7	-144.55	-246.1	-63.9	384.7	377.9	6.81	56.497		
1,900.0	1,884.7	1,817.3	1,797.9	4.8	5.1	-144.95	-266.1	-70.4	421.9	414.6	7.27	58.049		
2,000.0	1,982.5	1,910.1	1,888.3	5.2	5.5	-145.28	-286.0	-76.8	459.0	451.3	7.73	59.398		
2,100.0	2,080.3	2,002.9	1,978.7	5.6	5.9	-145.56	-305.9	-83.3	496.2	488.0	8.19	60.580		

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Minch 3B-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Reference Site:</b>	S4-T3N-R68W (Minch)	<b>MD Reference:</b>	WELL @ 5090.0ft (Ensign)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Minch 3B-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5090.0ft (Ensign)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Minch 3B-4H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.31°

