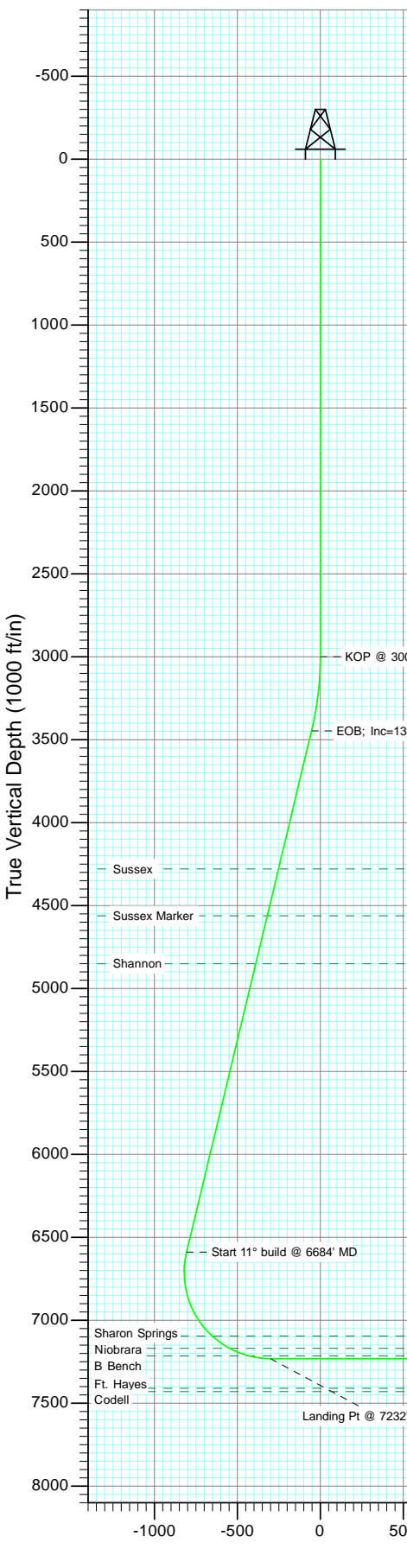
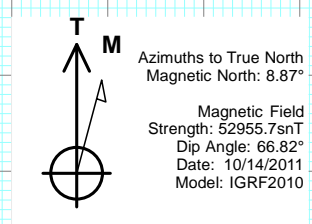
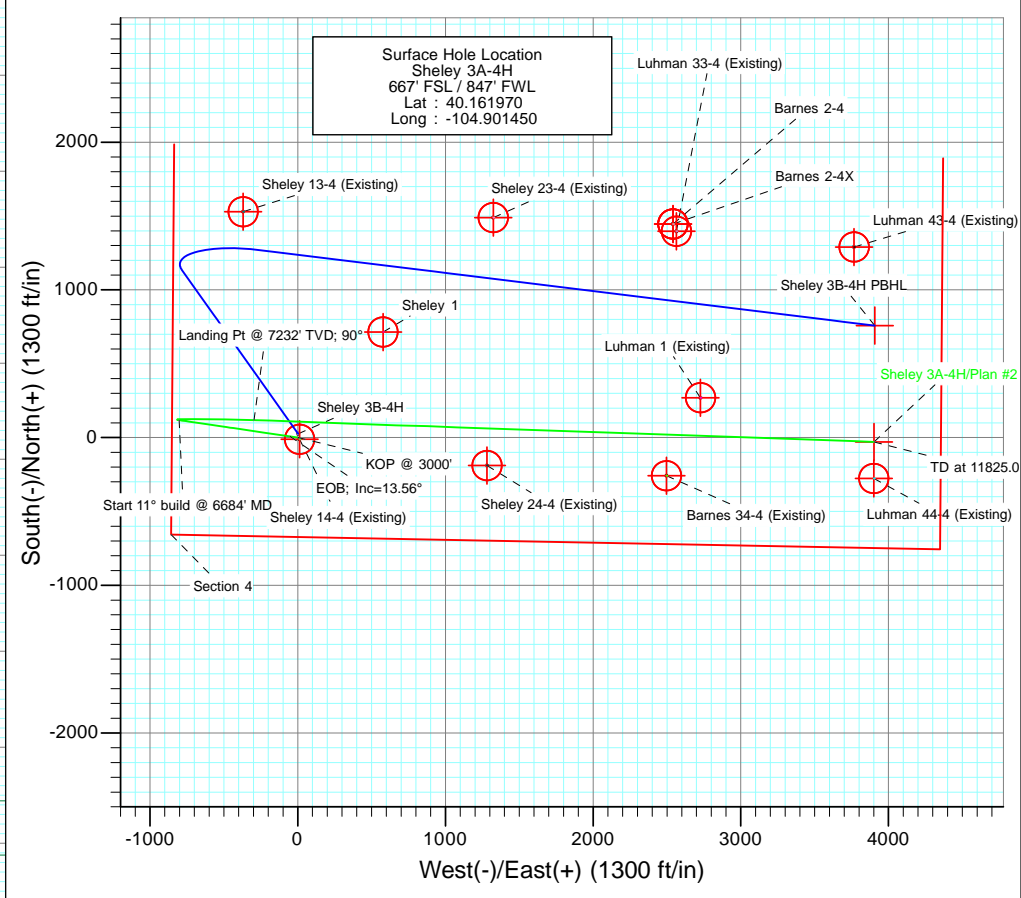




Project: DJ Wattenberg  
 Site: SWSW S4-T2N-R67W (Sheley)  
 Well: Sheley 3A-4H  
 Wellbore: HZ  
 Design: Plan #2



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSEct	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3452.1	13.56	278.38	3447.9	7.8	-52.7	3.00	278.38	-52.9	
4	6684.3	13.56	278.38	6590.0	118.2	-802.6	0.00	0.00	-806.2	
5	7625.0	90.00	92.00	7232.0	117.8	-295.8	11.00	173.44	-299.7	
6	11825.0	90.00	92.00	7232.0	-28.8	3901.7	0.00	0.00	3900.3	Sheley 3A-4H PBHL



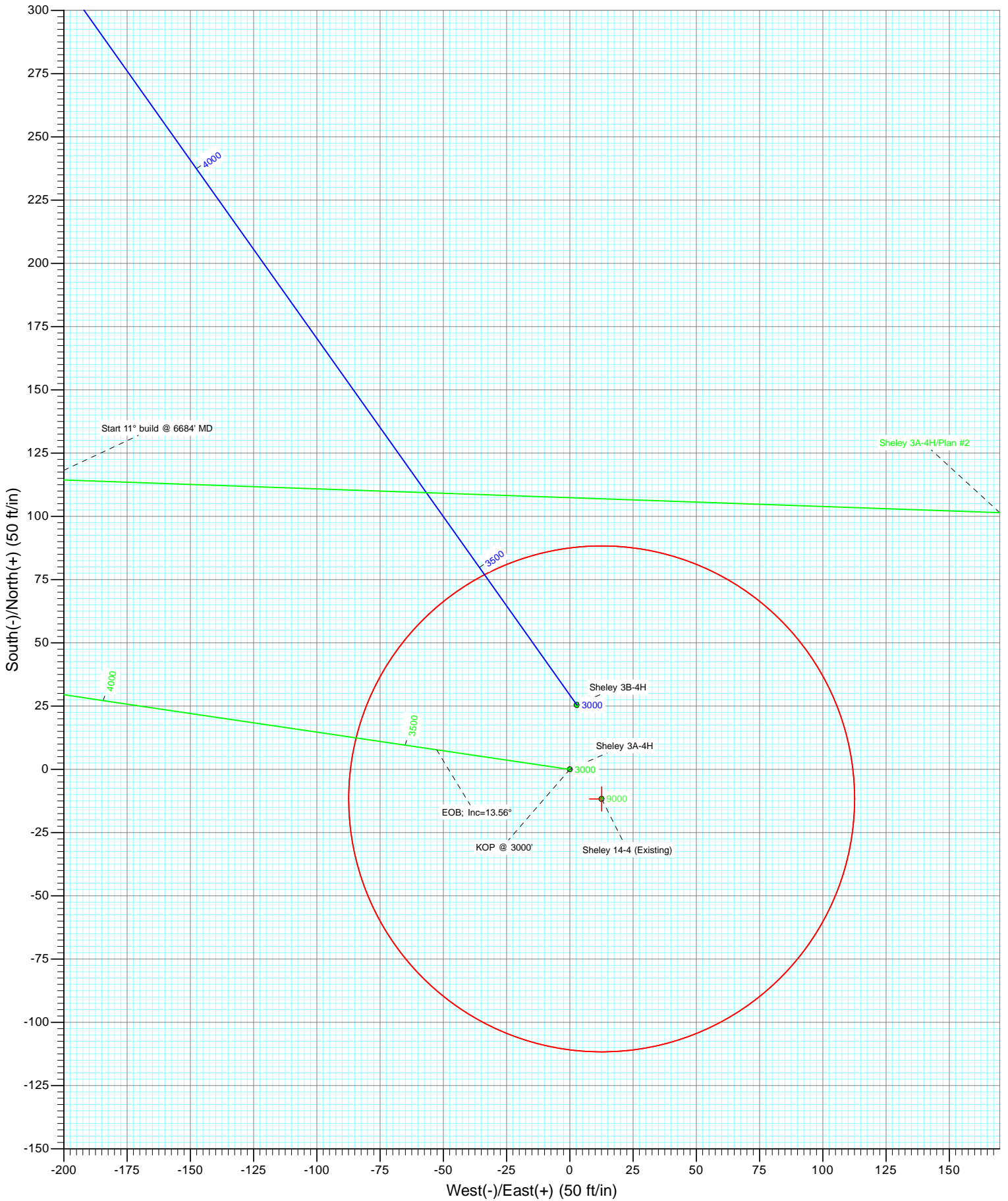
FORMATION TOP DETAILS			
TVDPPath	MDPath	Formation	
4279.0	4307.1	Sussex	
4562.0	4598.2	Sussex Marker	
4851.0	4895.5	Shannon	
7095.0	7238.3	Sharon Springs	
7169.0	7366.1	Niobrara	
7215.0	7491.5	B Bench	

Type	Target	Target No	Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From TVD
Sheley 3A-4H PBHL				92.00	Slot		0.0	0.0	0.0
				TVD			+N/-S	+E/-W	Latitude
				7232.0			-28.8	3901.7	40.161890
									Longitude
									-104.887490

Plan #2  
 Sheley 3A-4H  
 15x0x; LR  
 KBE @ 4925.0ft (Original Well Elev)  
 GL @ 4912.0  
 North American Datum 1983  
 Well Sheley 3A-4H, True North



Project: DJ Wattenberg  
Site: SWSW S4-T2N-R67W (Sheley)  
Well: Sheley 3A-4H  
Wellbore: HZ  
Design: Plan #2



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Sheley 3A-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>North Reference:</b>	True
<b>Well:</b>	Sheley 3A-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		

<b>Site</b> SWSW S4-T2N-R67W (Sheley)					
<b>Site Position:</b>		<b>Northing:</b>	1,302,419.89 ft	<b>Latitude:</b>	40.161980
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,167,329.04 ft	<b>Longitude:</b>	-104.901320
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.39 °

<b>Well</b> Sheley 3A-4H						
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,302,416.00 ft	<b>Latitude:</b>	40.161970
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,167,292.74 ft	<b>Longitude:</b>	-104.901450
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,912.0 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>
	IGRF2010	10/14/2011	(°)	(°)	(nT)
			8.87	66.82	52,956

<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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	92.00

<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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,452.1	13.56	278.38	3,447.9	7.8	-52.7	3.00	3.00	0.00	278.38	
6,684.3	13.56	278.38	6,590.0	118.2	-802.6	0.00	0.00	0.00	0.00	
7,625.0	90.00	92.00	7,232.0	117.8	-295.8	11.00	8.13	18.46	173.44	
11,825.0	90.00	92.00	7,232.0	-28.8	3,901.7	0.00	0.00	0.00	0.00	Sheley 3A-4H PBHL

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Sheley 3A-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>North Reference:</b>	True
<b>Well:</b>	Sheley 3A-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	
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	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 3000'
3,100.0	3.00	278.38	3,100.0	0.4	-2.6	-2.6	3.00	3.00	
3,200.0	6.00	278.38	3,199.6	1.5	-10.4	-10.4	3.00	3.00	
3,300.0	9.00	278.38	3,298.8	3.4	-23.3	-23.4	3.00	3.00	
3,400.0	12.00	278.38	3,397.1	6.1	-41.3	-41.5	3.00	3.00	
3,452.1	13.56	278.38	3,447.9	7.8	-52.7	-52.9	3.00	3.00	EOB; Inc=13.56°
3,500.0	13.56	278.38	3,494.5	9.4	-63.8	-64.1	0.00	0.00	
3,600.0	13.56	278.38	3,591.7	12.8	-87.0	-87.4	0.00	0.00	
3,700.0	13.56	278.38	3,688.9	16.2	-110.2	-110.7	0.00	0.00	
3,800.0	13.56	278.38	3,786.1	19.7	-133.4	-134.0	0.00	0.00	
3,900.0	13.56	278.38	3,883.3	23.1	-156.6	-157.3	0.00	0.00	
4,000.0	13.56	278.38	3,980.5	26.5	-179.8	-180.6	0.00	0.00	
4,100.0	13.56	278.38	4,077.7	29.9	-203.0	-203.9	0.00	0.00	
4,200.0	13.56	278.38	4,174.9	33.3	-226.2	-227.2	0.00	0.00	
4,300.0	13.56	278.38	4,272.1	36.7	-249.4	-250.5	0.00	0.00	
4,307.1	13.56	278.38	4,279.0	37.0	-251.0	-252.2	0.00	0.00	Sussex
4,400.0	13.56	278.38	4,369.4	40.2	-272.6	-273.8	0.00	0.00	
4,500.0	13.56	278.38	4,466.6	43.6	-295.8	-297.2	0.00	0.00	
4,598.2	13.56	278.38	4,562.0	46.9	-318.6	-320.0	0.00	0.00	Sussex Marker
4,600.0	13.56	278.38	4,563.8	47.0	-319.0	-320.5	0.00	0.00	
4,700.0	13.56	278.38	4,661.0	50.4	-342.2	-343.8	0.00	0.00	
4,800.0	13.56	278.38	4,758.2	53.8	-365.4	-367.1	0.00	0.00	

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Sheley 3A-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>North Reference:</b>	True
<b>Well:</b>	Sheley 3A-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
4,895.5	13.56	278.38	4,851.0	57.1	-387.6	-389.3	0.00	0.00	Shannon
4,900.0	13.56	278.38	4,855.4	57.2	-388.6	-390.4	0.00	0.00	
5,000.0	13.56	278.38	4,952.6	60.7	-411.8	-413.7	0.00	0.00	
5,100.0	13.56	278.38	5,049.8	64.1	-435.0	-437.0	0.00	0.00	
5,200.0	13.56	278.38	5,147.0	67.5	-458.2	-460.3	0.00	0.00	
5,300.0	13.56	278.38	5,244.3	70.9	-481.4	-483.6	0.00	0.00	
5,400.0	13.56	278.38	5,341.5	74.3	-504.6	-506.9	0.00	0.00	
5,500.0	13.56	278.38	5,438.7	77.8	-527.8	-530.2	0.00	0.00	
5,600.0	13.56	278.38	5,535.9	81.2	-551.0	-553.5	0.00	0.00	
5,700.0	13.56	278.38	5,633.1	84.6	-574.2	-576.8	0.00	0.00	
5,800.0	13.56	278.38	5,730.3	88.0	-597.4	-600.1	0.00	0.00	
5,900.0	13.56	278.38	5,827.5	91.4	-620.6	-623.4	0.00	0.00	
6,000.0	13.56	278.38	5,924.7	94.8	-643.8	-646.7	0.00	0.00	
6,100.0	13.56	278.38	6,021.9	98.3	-667.0	-670.1	0.00	0.00	
6,200.0	13.56	278.38	6,119.2	101.7	-690.2	-693.4	0.00	0.00	
6,300.0	13.56	278.38	6,216.4	105.1	-713.4	-716.7	0.00	0.00	
6,400.0	13.56	278.38	6,313.6	108.5	-736.6	-740.0	0.00	0.00	
6,500.0	13.56	278.38	6,410.8	111.9	-759.8	-763.3	0.00	0.00	
6,600.0	13.56	278.38	6,508.0	115.3	-783.0	-786.6	0.00	0.00	
6,684.3	13.56	278.38	6,590.0	118.2	-802.6	-806.2	0.00	0.00	Start 11° build @ 6684' MD
6,700.0	11.85	279.34	6,605.3	118.8	-806.0	-809.7	11.00	-10.92	
6,800.0	1.71	335.91	6,704.5	121.8	-816.8	-820.5	11.00	-10.14	
6,900.0	10.36	83.57	6,804.0	124.2	-808.4	-812.3	11.00	8.65	
7,000.0	21.30	88.06	6,900.0	125.8	-781.2	-785.2	11.00	10.94	
7,100.0	32.28	89.57	6,989.1	126.6	-736.3	-740.2	11.00	10.98	
7,200.0	43.27	90.37	7,068.1	126.6	-675.1	-679.1	11.00	10.99	
7,238.3	47.49	90.59	7,095.0	126.4	-647.8	-651.8	11.00	10.99	Sharon Springs
7,300.0	54.26	90.89	7,133.9	125.7	-600.0	-604.0	11.00	10.99	
7,366.1	61.53	91.17	7,169.0	124.7	-544.0	-548.1	11.00	10.99	Niobrara
7,400.0	65.26	91.29	7,184.2	124.1	-513.8	-517.8	11.00	11.00	
7,491.5	75.32	91.60	7,215.0	121.9	-427.7	-431.7	11.00	11.00	B Bench
7,500.0	76.25	91.62	7,217.1	121.7	-419.5	-423.5	11.00	11.00	
7,600.0	87.25	91.93	7,231.4	118.6	-320.8	-324.7	11.00	11.00	
7,625.0	90.00	92.00	7,232.0	117.8	-295.8	-299.7	11.00	11.00	Landing Pt @ 7232' TVD; 90°
7,700.0	90.00	92.00	7,232.0	115.1	-220.8	-224.7	0.00	0.00	
7,800.0	90.00	92.00	7,232.0	111.6	-120.9	-124.7	0.00	0.00	
7,900.0	90.00	92.00	7,232.0	108.2	-21.0	-24.7	0.00	0.00	
8,000.0	90.00	92.00	7,232.0	104.7	79.0	75.3	0.00	0.00	
8,100.0	90.00	92.00	7,232.0	101.2	178.9	175.3	0.00	0.00	
8,200.0	90.00	92.00	7,232.0	97.7	278.9	275.3	0.00	0.00	
8,300.0	90.00	92.00	7,232.0	94.2	378.8	375.3	0.00	0.00	
8,400.0	90.00	92.00	7,232.0	90.7	478.7	475.3	0.00	0.00	
8,500.0	90.00	92.00	7,232.0	87.2	578.7	575.3	0.00	0.00	
8,600.0	90.00	92.00	7,232.0	83.7	678.6	675.3	0.00	0.00	
8,700.0	90.00	92.00	7,232.0	80.2	778.6	775.3	0.00	0.00	
8,800.0	90.00	92.00	7,232.0	76.7	878.5	875.3	0.00	0.00	
8,900.0	90.00	92.00	7,232.0	73.3	978.4	975.3	0.00	0.00	
9,000.0	90.00	92.00	7,232.0	69.8	1,078.4	1,075.3	0.00	0.00	
9,100.0	90.00	92.00	7,232.0	66.3	1,178.3	1,175.3	0.00	0.00	
9,200.0	90.00	92.00	7,232.0	62.8	1,278.3	1,275.3	0.00	0.00	
9,300.0	90.00	92.00	7,232.0	59.3	1,378.2	1,375.3	0.00	0.00	
9,400.0	90.00	92.00	7,232.0	55.8	1,478.1	1,475.3	0.00	0.00	

Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Sheley 3A-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>North Reference:</b>	True
<b>Well:</b>	Sheley 3A-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
9,500.0	90.00	92.00	7,232.0	52.3	1,578.1	1,575.3	0.00	0.00	
9,600.0	90.00	92.00	7,232.0	48.8	1,678.0	1,675.3	0.00	0.00	
9,700.0	90.00	92.00	7,232.0	45.3	1,777.9	1,775.3	0.00	0.00	
9,800.0	90.00	92.00	7,232.0	41.8	1,877.9	1,875.3	0.00	0.00	
9,900.0	90.00	92.00	7,232.0	38.4	1,977.8	1,975.3	0.00	0.00	
10,000.0	90.00	92.00	7,232.0	34.9	2,077.8	2,075.3	0.00	0.00	
10,100.0	90.00	92.00	7,232.0	31.4	2,177.7	2,175.3	0.00	0.00	
10,200.0	90.00	92.00	7,232.0	27.9	2,277.6	2,275.3	0.00	0.00	
10,300.0	90.00	92.00	7,232.0	24.4	2,377.6	2,375.3	0.00	0.00	
10,400.0	90.00	92.00	7,232.0	20.9	2,477.5	2,475.3	0.00	0.00	
10,500.0	90.00	92.00	7,232.0	17.4	2,577.5	2,575.3	0.00	0.00	
10,600.0	90.00	92.00	7,232.0	13.9	2,677.4	2,675.3	0.00	0.00	
10,700.0	90.00	92.00	7,232.0	10.4	2,777.3	2,775.3	0.00	0.00	
10,800.0	90.00	92.00	7,232.0	6.9	2,877.3	2,875.3	0.00	0.00	
10,900.0	90.00	92.00	7,232.0	3.5	2,977.2	2,975.3	0.00	0.00	
11,000.0	90.00	92.00	7,232.0	0.0	3,077.2	3,075.3	0.00	0.00	
11,100.0	90.00	92.00	7,232.0	-3.5	3,177.1	3,175.3	0.00	0.00	
11,200.0	90.00	92.00	7,232.0	-7.0	3,277.0	3,275.3	0.00	0.00	
11,300.0	90.00	92.00	7,232.0	-10.5	3,377.0	3,375.3	0.00	0.00	
11,400.0	90.00	92.00	7,232.0	-14.0	3,476.9	3,475.3	0.00	0.00	
11,500.0	90.00	92.00	7,232.0	-17.5	3,576.9	3,575.3	0.00	0.00	
11,600.0	90.00	92.00	7,232.0	-21.0	3,676.8	3,675.3	0.00	0.00	
11,700.0	90.00	92.00	7,232.0	-24.5	3,776.7	3,775.3	0.00	0.00	
11,800.0	90.00	92.00	7,232.0	-28.0	3,876.7	3,875.3	0.00	0.00	
11,825.0	90.00	92.00	7,232.0	-28.8	3,901.7	3,900.3	0.00	0.00	TD at 11825.0 - Sheley 3A-4H PBHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Sheley 3A-4H PBHL - hit/miss target - Shape - Point	0.00	0.00	7,232.0	-28.8	3,901.7	1,302,413.51	3,171,194.51	40.161890	-104.887490

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,307.1	4,279.0	Sussex				
4,598.2	4,562.0	Sussex Marker				
4,895.5	4,851.0	Shannon				
7,238.3	7,095.0	Sharon Springs				
7,366.1	7,169.0	Niobrara				
7,491.5	7,215.0	B Bench				

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Sheley 3A-4H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>North Reference:</b>	True
<b>Well:</b>	Sheley 3A-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #2		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,000.0	3,000.0	0.0	0.0	KOP @ 3000'
3,452.1	3,447.9	7.8	-52.7	EOB; Inc=13.56°
6,684.3	6,590.0	118.2	-802.6	Start 11° build @ 6684' MD
7,625.0	7,232.0	117.8	-295.8	Landing Pt @ 7232' TVD; 90°
11,825.0	7,232.0	-28.8	3,901.7	TD at 11825.0

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

**DJ Wattenberg**

**SWSW S4-T2N-R67W (Sheley)**

**Sheley 3A-4H**

**HZ**

**Plan #2**

## **Anticollision Report**

**27 October, 2011**



## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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 1,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	10/27/2011		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,825.0	Plan #2 (HZ)	MWD	Geolink MWD

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
SWSW S4-T2N-R67W (Sheley)						
Barnes 2-4 - Existing - Existing						Out of range
Barnes 2-4X - Existing - Existing						Out of range
Barnes 34-4 (Existing) - Existing - Existing	10,428.6	7,233.0	278.6	194.5	3.315	CC, ES, SF
Luhman 1 (Existing) - Existing - Existing	10,640.8	7,228.0	257.7	168.5	2.890	CC, ES, SF
Luhman 33-4 (Existing) - Existing - Existing						Out of range
Luhman 43-4 (Existing) - Existing - Existing						Out of range
Luhman 44-4 (Existing) - Existing - Existing	11,825.0	7,237.0	248.1	130.0	2.101	CC, ES, SF
Sheley 1 - Existing - Existing	8,476.6	7,206.0	627.1	588.3	16.181	CC
Sheley 1 - Existing - Existing	8,500.0	7,206.0	627.5	588.3	15.997	ES
Sheley 1 - Existing - Existing	8,700.0	7,206.0	665.7	622.2	15.316	SF
Sheley 13-4 (Existing) - Existing - Existing						Out of range
Sheley 14-4 (Existing) - Existing - Existing	3,000.0	2,985.0	17.2	6.7	1.645	CC, ES, SF
Sheley 23-4 (Existing) - Existing - Existing						Out of range
Sheley 24-4 (Existing) - Existing - Existing	9,212.0	7,225.0	251.9	196.9	4.576	CC, ES, SF
Sheley 3B-4H - HZ - Plan #2	3,000.0	3,000.0	25.7	15.2	2.460	CC, ES, 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 Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													Offset Site Error:	0.0 ft		
Survey Program: 0-MWD													SWSW S4-T2N-R67W (Sheley) - Barnes 34-4 (Existing) - Existing - Existing		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				
9,500.0	7,232.0	7,233.0	7,233.0	49.2	12.6	90.00	-258.5	2,496.4	969.5	907.7	61.81	15.687				
9,600.0	7,232.0	7,233.0	7,233.0	51.6	12.6	90.00	-258.5	2,496.4	874.2	810.0	64.17	13.624				
9,700.0	7,232.0	7,233.0	7,233.0	53.9	12.6	90.00	-258.5	2,496.4	780.1	713.5	66.54	11.723				
9,800.0	7,232.0	7,233.0	7,233.0	56.3	12.6	90.00	-258.5	2,496.4	687.6	618.7	68.93	9.976				
9,900.0	7,232.0	7,233.0	7,233.0	58.7	12.6	90.00	-258.5	2,496.4	597.6	526.2	71.32	8.379				
10,000.0	7,232.0	7,233.0	7,233.0	61.1	12.6	90.00	-258.5	2,496.4	511.2	437.5	73.71	6.935				
10,100.0	7,232.0	7,233.0	7,233.0	63.5	12.6	90.00	-258.5	2,496.4	430.8	354.7	76.12	5.660				
10,200.0	7,232.0	7,233.0	7,233.0	65.9	12.6	90.00	-258.5	2,496.4	360.4	281.9	78.53	4.590				
10,300.0	7,232.0	7,233.0	7,233.0	68.3	12.6	90.00	-258.5	2,496.4	306.9	225.9	80.94	3.791				
10,400.0	7,232.0	7,233.0	7,233.0	70.7	12.6	90.00	-258.5	2,496.4	280.1	196.7	83.36	3.360				
10,428.6	7,232.0	7,233.0	7,233.0	71.4	12.6	90.00	-258.5	2,496.4	278.6	194.5	84.05	3.315 CC, ES, SF				
10,500.0	7,232.0	7,233.0	7,233.0	73.2	12.6	90.00	-258.5	2,496.4	287.6	201.8	85.78	3.353				
10,600.0	7,232.0	7,233.0	7,233.0	75.6	12.6	90.00	-258.5	2,496.4	327.1	238.9	88.20	3.708				
10,700.0	7,232.0	7,233.0	7,233.0	78.0	12.6	90.00	-258.5	2,496.4	388.9	298.3	90.63	4.291				
10,800.0	7,232.0	7,233.0	7,233.0	80.4	12.6	90.00	-258.5	2,496.4	464.2	371.2	93.06	4.989				
10,900.0	7,232.0	7,233.0	7,233.0	82.9	12.6	90.00	-258.5	2,496.4	547.5	452.0	95.49	5.734				
11,000.0	7,232.0	7,233.0	7,233.0	85.3	12.6	90.00	-258.5	2,496.4	635.7	537.7	97.93	6.491				
11,100.0	7,232.0	7,233.0	7,233.0	87.8	12.6	90.00	-258.5	2,496.4	726.9	626.5	100.36	7.242				
11,200.0	7,232.0	7,233.0	7,233.0	90.2	12.6	90.00	-258.5	2,496.4	820.1	717.3	102.80	7.978				
11,300.0	7,232.0	7,233.0	7,233.0	92.6	12.6	90.00	-258.5	2,496.4	914.8	809.6	105.24	8.692				

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 Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													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)					
9,700.0	7,232.0	7,228.0	7,228.0	53.9	12.6	-90.00	270.1	2,727.2	975.5	909.0	66.54	14.662			
9,800.0	7,232.0	7,228.0	7,228.0	56.3	12.6	-90.00	270.1	2,727.2	879.5	810.5	68.92	12.761			
9,900.0	7,232.0	7,228.0	7,228.0	58.7	12.6	-90.00	270.1	2,727.2	784.4	713.1	71.31	11.000			
10,000.0	7,232.0	7,228.0	7,228.0	61.1	12.6	-90.00	270.1	2,727.2	690.7	617.0	73.71	9.372			
10,100.0	7,232.0	7,228.0	7,228.0	63.5	12.6	-90.00	270.1	2,727.2	599.1	523.0	76.11	7.872			
10,200.0	7,232.0	7,228.0	7,228.0	65.9	12.6	-90.00	270.1	2,727.2	510.7	432.1	78.52	6.504			
10,300.0	7,232.0	7,228.0	7,228.0	68.3	12.6	-90.00	270.1	2,727.2	427.3	346.4	80.93	5.280			
10,400.0	7,232.0	7,228.0	7,228.0	70.7	12.6	-90.00	270.1	2,727.2	352.8	269.4	83.35	4.232			
10,500.0	7,232.0	7,228.0	7,228.0	73.2	12.6	-90.00	270.1	2,727.2	293.7	207.9	85.77	3.424			
10,600.0	7,232.0	7,228.0	7,228.0	75.6	12.6	-90.00	270.1	2,727.2	260.9	172.8	88.19	2.959			
10,640.8	7,232.0	7,228.0	7,228.0	76.6	12.6	-90.00	270.1	2,727.2	257.7	168.5	89.18	2.890	CC, ES, SF		
10,700.0	7,232.0	7,228.0	7,228.0	78.0	12.6	-90.00	270.1	2,727.2	264.4	173.8	90.62	2.918			
10,800.0	7,232.0	7,228.0	7,228.0	80.4	12.6	-90.00	270.1	2,727.2	302.9	209.9	93.05	3.255			
10,900.0	7,232.0	7,228.0	7,228.0	82.9	12.6	-90.00	270.1	2,727.2	365.5	270.0	95.48	3.828			
11,000.0	7,232.0	7,228.0	7,228.0	85.3	12.6	-90.00	270.1	2,727.2	442.1	344.1	97.92	4.515			
11,100.0	7,232.0	7,228.0	7,228.0	87.8	12.6	-90.00	270.1	2,727.2	526.5	426.2	100.35	5.247			
11,200.0	7,232.0	7,228.0	7,228.0	90.2	12.6	-90.00	270.1	2,727.2	615.7	512.9	102.79	5.990			
11,300.0	7,232.0	7,228.0	7,228.0	92.6	12.6	-90.00	270.1	2,727.2	707.7	602.5	105.23	6.725			
11,400.0	7,232.0	7,228.0	7,228.0	95.1	12.6	-90.00	270.1	2,727.2	801.7	694.0	107.68	7.445			
11,500.0	7,232.0	7,228.0	7,228.0	97.5	12.6	-90.00	270.1	2,727.2	897.0	786.9	110.12	8.145			
11,600.0	7,232.0	7,228.0	7,228.0	100.0	12.6	-90.00	270.1	2,727.2	993.2	880.6	112.57	8.823			

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 Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													Offset Site Error:	0.0 ft		
Survey Program: 0-MWD													SWSW S4-T2N-R67W (Sheley) - Luhman 44-4 (Existing) - Existing - Existing		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	Warning			
10,900.0	7,232.0	7,237.0	7,237.0	82.9	12.6	90.00	-276.9	3,900.0	964.5	869.0	95.50	10.099				
11,000.0	7,232.0	7,237.0	7,237.0	85.3	12.6	90.00	-276.9	3,900.0	868.2	770.3	97.93	8.865				
11,100.0	7,232.0	7,237.0	7,237.0	87.8	12.6	90.00	-276.9	3,900.0	772.9	672.5	100.37	7.701				
11,200.0	7,232.0	7,237.0	7,237.0	90.2	12.6	90.00	-276.9	3,900.0	678.9	576.1	102.81	6.604				
11,300.0	7,232.0	7,237.0	7,237.0	92.6	12.6	90.00	-276.9	3,900.0	587.0	481.7	105.25	5.577				
11,400.0	7,232.0	7,237.0	7,237.0	95.1	12.6	90.00	-276.9	3,900.0	498.2	390.5	107.69	4.626				
11,500.0	7,232.0	7,237.0	7,237.0	97.5	12.6	90.00	-276.9	3,900.0	414.4	304.3	110.14	3.763				
11,600.0	7,232.0	7,237.0	7,237.0	100.0	12.6	90.00	-276.9	3,900.0	339.6	227.0	112.58	3.017				
11,700.0	7,232.0	7,237.0	7,237.0	102.4	12.6	90.00	-276.9	3,900.0	281.0	165.9	115.03	2.442				
11,800.0	7,232.0	7,237.0	7,237.0	104.9	12.6	90.00	-276.9	3,900.0	250.1	132.6	117.48	2.129				
11,825.0	7,232.0	7,237.0	7,237.0	105.5	12.6	90.00	-276.9	3,900.0	248.1	130.0	118.09	2.101	CC, ES, SF			

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													Offset Site Error:	0.0 ft
SWSW S4-T2N-R67W (Sheley) - Sheley 1 - Existing - Existing													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
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	
0.0	0.0	0.0	0.0	0.0	0.0	38.92	714.7	577.1	919.0					
100.0	100.0	74.0	74.0	0.2	0.1	38.92	714.7	577.1	918.6	918.4	0.28	3,268.611		
200.0	200.0	174.0	174.0	0.3	0.3	38.92	714.7	577.1	918.6	918.0	0.63	1,458.016		
300.0	300.0	274.0	274.0	0.5	0.5	38.92	714.7	577.1	918.6	917.7	0.98	938.224		
400.0	400.0	374.0	374.0	0.7	0.7	38.92	714.7	577.1	918.6	917.3	1.33	691.648		
500.0	500.0	474.0	474.0	0.8	0.8	38.92	714.7	577.1	918.6	917.0	1.68	547.704		
600.0	600.0	574.0	574.0	1.0	1.0	38.92	714.7	577.1	918.6	916.6	2.03	453.354		
700.0	700.0	674.0	674.0	1.2	1.2	38.92	714.7	577.1	918.6	916.3	2.38	386.733		
800.0	800.0	774.0	774.0	1.4	1.4	38.92	714.7	577.1	918.6	915.9	2.72	337.184		
900.0	900.0	874.0	874.0	1.5	1.5	38.92	714.7	577.1	918.6	915.6	3.07	298.889		
1,000.0	1,000.0	974.0	974.0	1.7	1.7	38.92	714.7	577.1	918.6	915.2	3.42	268.406		
1,100.0	1,100.0	1,074.0	1,074.0	1.9	1.9	38.92	714.7	577.1	918.6	914.9	3.77	243.565		
1,200.0	1,200.0	1,174.0	1,174.0	2.1	2.0	38.92	714.7	577.1	918.6	914.5	4.12	222.933		
1,300.0	1,300.0	1,274.0	1,274.0	2.2	2.2	38.92	714.7	577.1	918.6	914.2	4.47	205.523		
1,400.0	1,400.0	1,374.0	1,374.0	2.4	2.4	38.92	714.7	577.1	918.6	913.8	4.82	190.635		
1,500.0	1,500.0	1,474.0	1,474.0	2.6	2.6	38.92	714.7	577.1	918.6	913.5	5.17	177.759		
1,600.0	1,600.0	1,574.0	1,574.0	2.8	2.7	38.92	714.7	577.1	918.6	913.1	5.52	166.512		
1,700.0	1,700.0	1,674.0	1,674.0	2.9	2.9	38.92	714.7	577.1	918.6	912.8	5.87	156.603		
1,800.0	1,800.0	1,774.0	1,774.0	3.1	3.1	38.92	714.7	577.1	918.6	912.4	6.22	147.808		
1,900.0	1,900.0	1,874.0	1,874.0	3.3	3.3	38.92	714.7	577.1	918.6	912.1	6.56	139.948		
2,000.0	2,000.0	1,974.0	1,974.0	3.5	3.4	38.92	714.7	577.1	918.6	911.7	6.91	132.882		
2,100.0	2,100.0	2,074.0	2,074.0	3.6	3.6	38.92	714.7	577.1	918.6	911.4	7.26	126.495		
2,200.0	2,200.0	2,174.0	2,174.0	3.8	3.8	38.92	714.7	577.1	918.6	911.0	7.61	120.693		
2,300.0	2,300.0	2,274.0	2,274.0	4.0	4.0	38.92	714.7	577.1	918.6	910.7	7.96	115.401		
2,400.0	2,400.0	2,374.0	2,374.0	4.2	4.1	38.92	714.7	577.1	918.6	910.3	8.31	110.553		
2,500.0	2,500.0	2,474.0	2,474.0	4.3	4.3	38.92	714.7	577.1	918.6	910.0	8.66	106.096		
2,600.0	2,600.0	2,574.0	2,574.0	4.5	4.5	38.92	714.7	577.1	918.6	909.6	9.01	101.985		
2,700.0	2,700.0	2,674.0	2,674.0	4.7	4.7	38.92	714.7	577.1	918.6	909.3	9.36	98.180		
2,800.0	2,800.0	2,774.0	2,774.0	4.9	4.8	38.92	714.7	577.1	918.6	908.9	9.71	94.649		
2,900.0	2,900.0	2,874.0	2,874.0	5.0	5.0	38.92	714.7	577.1	918.6	908.6	10.05	91.363		
3,000.0	3,000.0	2,974.0	2,974.0	5.2	5.2	38.92	714.7	577.1	918.6	908.2	10.40	88.298		
3,100.0	3,100.0	3,074.0	3,074.0	5.4	5.4	120.65	714.7	577.1	920.0	909.2	10.75	85.572		
3,200.0	3,199.6	3,173.6	3,173.6	5.6	5.5	120.96	714.7	577.1	924.0	912.9	11.10	83.275		
3,300.0	3,298.8	3,272.8	3,272.8	5.8	5.7	121.47	714.7	577.1	930.8	919.4	11.44	81.340		
3,400.0	3,397.1	3,371.1	3,371.1	6.0	5.9	122.16	714.7	577.1	940.5	928.7	11.80	79.705		
3,500.0	3,494.5	3,468.5	3,468.5	6.2	6.1	123.14	714.7	577.1	953.0	940.9	12.18	78.245		
3,600.0	3,591.7	3,565.7	3,565.7	6.5	6.2	124.28	714.7	577.1	966.3	953.7	12.58	76.783		
3,700.0	3,688.9	3,662.9	3,662.9	6.8	6.4	125.39	714.7	577.1	980.0	967.0	13.00	75.384		
3,800.0	3,786.1	3,760.1	3,760.1	7.1	6.6	126.47	714.7	577.1	994.0	980.6	13.42	74.055		
7,700.0	7,232.0	7,206.0	7,206.0	15.0	12.6	-90.00	714.7	577.1	998.1	970.6	27.56	36.216		
7,800.0	7,232.0	7,206.0	7,206.0	15.6	12.6	-90.00	714.7	577.1	922.5	894.3	28.15	32.775		
7,900.0	7,232.0	7,206.0	7,206.0	16.5	12.6	-90.00	714.7	577.1	851.8	822.8	29.08	29.288		
8,000.0	7,232.0	7,206.0	7,206.0	17.8	12.6	-90.00	714.7	577.1	787.6	757.3	30.32	25.975		
8,100.0	7,232.0	7,206.0	7,206.0	19.2	12.6	-90.00	714.7	577.1	731.4	699.6	31.80	23.003		
8,200.0	7,232.0	7,206.0	7,206.0	20.9	12.6	-90.00	714.7	577.1	685.3	651.9	33.46	20.480		
8,300.0	7,232.0	7,206.0	7,206.0	22.7	12.6	-90.00	714.7	577.1	651.5	616.2	35.28	18.466		
8,400.0	7,232.0	7,206.0	7,206.0	24.7	12.6	-90.00	714.7	577.1	631.7	594.5	37.21	16.978		
8,476.6	7,232.0	7,206.0	7,206.0	26.2	12.6	-90.00	714.7	577.1	627.1	588.3	38.75	16.181	CC	
8,500.0	7,232.0	7,206.0	7,206.0	26.7	12.6	-90.00	714.7	577.1	627.5	588.3	39.23	15.997	ES	
8,600.0	7,232.0	7,206.0	7,206.0	28.8	12.6	-90.00	714.7	577.1	639.1	597.8	41.32	15.468		
8,700.0	7,232.0	7,206.0	7,206.0	30.9	12.6	-90.00	714.7	577.1	665.7	622.2	43.46	15.316	SF	
8,800.0	7,232.0	7,206.0	7,206.0	33.1	12.6	-90.00	714.7	577.1	705.6	659.9	45.66	15.454		

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 Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													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			
8,900.0	7,232.0	7,206.0	7,206.0	35.3	12.6	-90.00	714.7	577.1	756.7	708.8	47.89	15.801			
9,000.0	7,232.0	7,206.0	7,206.0	37.6	12.6	-90.00	714.7	577.1	816.8	766.7	50.15	16.289			
9,100.0	7,232.0	7,206.0	7,206.0	39.9	12.6	-90.00	714.7	577.1	884.3	831.8	52.43	16.864			
9,200.0	7,232.0	7,206.0	7,206.0	42.2	12.6	-90.00	714.7	577.1	957.4	902.7	54.74	17.490			

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference													Warning		
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			
0.0	0.0	0.0	0.0	0.0	0.0	132.84	-11.7	12.6	22.8						
100.0	100.0	85.0	85.0	0.2	0.1	132.84	-11.7	12.6	17.2	16.9	0.30	57.128			
200.0	200.0	185.0	185.0	0.3	0.3	132.84	-11.7	12.6	17.2	16.5	0.65	26.416			
300.0	300.0	285.0	285.0	0.5	0.5	132.84	-11.7	12.6	17.2	16.2	1.00	17.180			
400.0	400.0	385.0	385.0	0.7	0.7	132.84	-11.7	12.6	17.2	15.8	1.35	12.729			
500.0	500.0	485.0	485.0	0.8	0.8	132.84	-11.7	12.6	17.2	15.5	1.70	10.110			
600.0	600.0	585.0	585.0	1.0	1.0	132.84	-11.7	12.6	17.2	15.1	2.05	8.385			
700.0	700.0	685.0	685.0	1.2	1.2	132.84	-11.7	12.6	17.2	14.8	2.39	7.162			
800.0	800.0	785.0	785.0	1.4	1.4	132.84	-11.7	12.6	17.2	14.4	2.74	6.251			
900.0	900.0	885.0	885.0	1.5	1.5	132.84	-11.7	12.6	17.2	14.1	3.09	5.546			
1,000.0	1,000.0	985.0	985.0	1.7	1.7	132.84	-11.7	12.6	17.2	13.7	3.44	4.983			
1,100.0	1,100.0	1,085.0	1,085.0	1.9	1.9	132.84	-11.7	12.6	17.2	13.4	3.79	4.524			
1,200.0	1,200.0	1,185.0	1,185.0	2.1	2.1	132.84	-11.7	12.6	17.2	13.0	4.14	4.143			
1,300.0	1,300.0	1,285.0	1,285.0	2.2	2.2	132.84	-11.7	12.6	17.2	12.7	4.49	3.821			
1,400.0	1,400.0	1,385.0	1,385.0	2.4	2.4	132.84	-11.7	12.6	17.2	12.3	4.84	3.545			
1,500.0	1,500.0	1,485.0	1,485.0	2.6	2.6	132.84	-11.7	12.6	17.2	12.0	5.19	3.307			
1,600.0	1,600.0	1,585.0	1,585.0	2.8	2.8	132.84	-11.7	12.6	17.2	11.6	5.54	3.098			
1,700.0	1,700.0	1,685.0	1,685.0	2.9	2.9	132.84	-11.7	12.6	17.2	11.3	5.89	2.914			
1,800.0	1,800.0	1,785.0	1,785.0	3.1	3.1	132.84	-11.7	12.6	17.2	10.9	6.23	2.751			
1,900.0	1,900.0	1,885.0	1,885.0	3.3	3.3	132.84	-11.7	12.6	17.2	10.6	6.58	2.605			
2,000.0	2,000.0	1,985.0	1,985.0	3.5	3.5	132.84	-11.7	12.6	17.2	10.2	6.93	2.474			
2,100.0	2,100.0	2,085.0	2,085.0	3.6	3.6	132.84	-11.7	12.6	17.2	9.9	7.28	2.355			
2,200.0	2,200.0	2,185.0	2,185.0	3.8	3.8	132.84	-11.7	12.6	17.2	9.5	7.63	2.248			
2,300.0	2,300.0	2,285.0	2,285.0	4.0	4.0	132.84	-11.7	12.6	17.2	9.2	7.98	2.149			
2,400.0	2,400.0	2,385.0	2,385.0	4.2	4.2	132.84	-11.7	12.6	17.2	8.8	8.33	2.059			
2,500.0	2,500.0	2,485.0	2,485.0	4.3	4.3	132.84	-11.7	12.6	17.2	8.5	8.68	1.976			
2,600.0	2,600.0	2,585.0	2,585.0	4.5	4.5	132.84	-11.7	12.6	17.2	8.1	9.03	1.900			
2,700.0	2,700.0	2,685.0	2,685.0	4.7	4.7	132.84	-11.7	12.6	17.2	7.8	9.38	1.829			
2,800.0	2,800.0	2,785.0	2,785.0	4.9	4.9	132.84	-11.7	12.6	17.2	7.4	9.72	1.764			
2,900.0	2,900.0	2,885.0	2,885.0	5.0	5.0	132.84	-11.7	12.6	17.2	7.1	10.07	1.703			
3,000.0	3,000.0	2,985.0	2,985.0	5.2	5.2	132.84	-11.7	12.6	17.2	6.7	10.42	1.645 CC, ES, SF			
3,100.0	3,100.0	3,085.0	3,085.0	5.4	5.4	-149.90	-11.7	12.6	19.4	8.6	10.76	1.799			
3,200.0	3,199.6	3,184.6	3,184.6	5.6	5.6	-158.37	-11.7	12.6	26.4	15.4	11.09	2.386			
3,300.0	3,298.8	3,283.8	3,283.8	5.8	5.7	-165.38	-11.7	12.6	38.9	27.5	11.38	3.416			
3,400.0	3,397.1	3,382.1	3,382.1	6.0	5.9	-169.93	-11.7	12.6	56.7	45.1	11.66	4.865			
3,500.0	3,494.5	3,479.5	3,479.5	6.2	6.1	-172.77	-11.7	12.6	79.2	67.3	11.95	6.628			
3,600.0	3,591.7	3,576.7	3,576.7	6.5	6.2	-174.42	-11.7	12.6	102.5	90.3	12.30	8.339			
3,700.0	3,688.9	3,673.9	3,673.9	6.8	6.4	-175.45	-11.7	12.6	125.9	113.3	12.64	9.962			
3,800.0	3,786.1	3,771.1	3,771.1	7.1	6.6	-176.17	-11.7	12.6	149.3	136.3	12.98	11.500			
3,900.0	3,883.3	3,868.3	3,868.3	7.4	6.8	-176.69	-11.7	12.6	172.7	159.4	13.33	12.960			
4,000.0	3,980.5	3,965.5	3,965.5	7.8	6.9	-177.08	-11.7	12.6	196.1	182.5	13.67	14.347			
4,100.0	4,077.7	4,062.7	4,062.7	8.1	7.1	-177.39	-11.7	12.6	219.6	205.5	14.01	15.667			
4,200.0	4,174.9	4,159.9	4,159.9	8.5	7.3	-177.65	-11.7	12.6	243.0	228.6	14.36	16.925			
4,300.0	4,272.1	4,257.1	4,257.1	8.8	7.4	-177.85	-11.7	12.6	266.4	251.7	14.70	18.123			
4,400.0	4,369.4	4,354.4	4,354.4	9.2	7.6	-178.03	-11.7	12.6	289.9	274.8	15.04	19.268			
4,500.0	4,466.6	4,451.6	4,451.6	9.6	7.8	-178.17	-11.7	12.6	313.3	297.9	15.39	20.361			
4,600.0	4,563.8	4,548.8	4,548.8	10.0	7.9	-178.30	-11.7	12.6	336.7	321.0	15.73	21.407			
4,700.0	4,661.0	4,646.0	4,646.0	10.4	8.1	-178.41	-11.7	12.6	360.2	344.1	16.07	22.408			
4,800.0	4,758.2	4,743.2	4,743.2	10.8	8.3	-178.51	-11.7	12.6	383.6	367.2	16.42	23.368			
4,900.0	4,855.4	4,840.4	4,840.4	11.2	8.4	-178.59	-11.7	12.6	407.1	390.3	16.76	24.288			
5,000.0	4,952.6	4,937.6	4,937.6	11.6	8.6	-178.67	-11.7	12.6	430.5	413.4	17.10	25.172			
5,100.0	5,049.8	5,034.8	5,034.8	12.0	8.8	-178.74	-11.7	12.6	454.0	436.5	17.45	26.021			

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 Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													Offset Site Error:	0.0 ft		
Survey Program: 0-MWD													Offset Well Error:		0.0 ft	
Reference: SWSW S4-T2N-R67W (Sheley) - Sheley 14-4 (Existing) - Existing - Existing																
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			
5,200.0	5,147.0	5,132.0	5,132.0	12.4	9.0	-178.80	-11.7	12.6	477.4	459.6	17.79	26.837				
5,300.0	5,244.3	5,229.3	5,229.3	12.8	9.1	-178.86	-11.7	12.6	500.9	482.7	18.13	27.622				
5,400.0	5,341.5	5,326.5	5,326.5	13.2	9.3	-178.91	-11.7	12.6	524.3	505.8	18.48	28.379				
5,500.0	5,438.7	5,423.7	5,423.7	13.7	9.5	-178.96	-11.7	12.6	547.7	528.9	18.82	29.107				
5,600.0	5,535.9	5,520.9	5,520.9	14.1	9.6	-179.00	-11.7	12.6	571.2	552.0	19.16	29.810				
5,700.0	5,633.1	5,618.1	5,618.1	14.5	9.8	-179.04	-11.7	12.6	594.6	575.1	19.50	30.488				
5,800.0	5,730.3	5,715.3	5,715.3	14.9	10.0	-179.07	-11.7	12.6	618.1	598.2	19.85	31.143				
5,900.0	5,827.5	5,812.5	5,812.5	15.4	10.1	-179.11	-11.7	12.6	641.5	621.3	20.19	31.776				
6,000.0	5,924.7	5,909.7	5,909.7	15.8	10.3	-179.14	-11.7	12.6	665.0	644.5	20.53	32.387				
6,100.0	6,021.9	6,006.9	6,006.9	16.2	10.5	-179.17	-11.7	12.6	688.4	667.6	20.88	32.979				
6,200.0	6,119.2	6,104.2	6,104.2	16.7	10.7	-179.20	-11.7	12.6	711.9	690.7	21.22	33.551				
6,300.0	6,216.4	6,201.4	6,201.4	17.1	10.8	-179.22	-11.7	12.6	735.3	713.8	21.56	34.105				
6,400.0	6,313.6	6,298.6	6,298.6	17.5	11.0	-179.25	-11.7	12.6	758.8	736.9	21.90	34.642				
6,500.0	6,410.8	6,395.8	6,395.8	18.0	11.2	-179.27	-11.7	12.6	782.2	760.0	22.25	35.162				
6,600.0	6,508.0	6,493.0	6,493.0	18.4	11.3	-179.29	-11.7	12.6	805.7	783.1	22.59	35.667				
6,700.0	6,605.3	6,590.3	6,590.3	18.8	11.5	-179.31	-11.7	12.6	828.9	805.9	23.00	36.032				
6,800.0	6,704.5	6,689.5	6,689.5	19.0	11.7	-179.32	-11.7	12.6	840.0	816.5	23.50	35.748				
6,900.0	6,804.0	6,789.0	6,789.0	19.0	11.8	-179.32	-11.7	12.6	832.2	808.7	23.43	35.512				
7,000.0	6,900.0	6,885.0	6,885.0	18.6	12.0	-179.32	-11.7	12.6	805.6	782.8	22.84	35.277				
7,100.0	6,989.1	6,974.1	6,974.1	18.1	12.2	-179.32	-11.7	12.6	761.5	739.7	21.81	34.915				
7,200.0	7,068.1	7,053.1	7,053.1	17.3	12.3	-179.32	-11.7	12.6	701.4	680.9	20.57	34.105				
7,300.0	7,133.9	7,118.9	7,118.9	16.5	12.4	-179.32	-11.7	12.6	627.8	608.2	19.57	32.084				
7,400.0	7,184.2	7,169.2	7,169.2	15.7	12.5	-179.32	-11.7	12.6	543.6	523.7	19.85	27.390				
7,500.0	7,217.1	7,202.1	7,202.1	15.1	12.6	-179.32	-11.7	12.6	452.2	429.0	23.17	19.518				
7,600.0	7,231.4	7,216.4	7,216.4	14.8	12.6	-179.32	-11.7	12.6	357.9	330.7	27.20	13.158				
7,700.0	7,232.0	7,217.0	7,217.0	15.0	12.6	-179.32	-11.7	12.6	265.6	238.0	27.58	9.631				
7,800.0	7,232.0	7,217.0	7,217.0	15.6	12.6	-179.32	-11.7	12.6	181.7	153.5	28.16	6.452				
7,900.0	7,232.0	7,217.0	7,217.0	16.5	12.6	-179.32	-11.7	12.6	124.4	95.3	29.10	4.275				
7,937.7	7,232.0	7,217.0	7,217.0	17.0	12.6	-179.32	-11.7	12.6	118.6	89.0	29.57	4.010				
8,000.0	7,232.0	7,217.0	7,217.0	17.8	12.6	-179.32	-11.7	12.6	133.9	103.6	30.34	4.415				
8,100.0	7,232.0	7,217.0	7,217.0	19.2	12.6	-179.32	-11.7	12.6	201.0	169.2	31.82	6.317				
8,200.0	7,232.0	7,217.0	7,217.0	20.9	12.6	-179.32	-11.7	12.6	287.9	254.4	33.48	8.597				
8,300.0	7,232.0	7,217.0	7,217.0	22.7	12.6	-179.32	-11.7	12.6	381.2	345.9	35.30	10.800				
8,400.0	7,232.0	7,217.0	7,217.0	24.7	12.6	-179.32	-11.7	12.6	477.3	440.0	37.23	12.821				
8,500.0	7,232.0	7,217.0	7,217.0	26.7	12.6	-179.32	-11.7	12.6	574.7	535.4	39.25	14.643				
8,600.0	7,232.0	7,217.0	7,217.0	28.8	12.6	-179.32	-11.7	12.6	672.8	631.5	41.34	16.277				
8,700.0	7,232.0	7,217.0	7,217.0	30.9	12.6	-179.32	-11.7	12.6	771.5	728.0	43.48	17.742				
8,800.0	7,232.0	7,217.0	7,217.0	33.1	12.6	-179.32	-11.7	12.6	870.4	824.7	45.68	19.056				
8,900.0	7,232.0	7,217.0	7,217.0	35.3	12.6	-179.32	-11.7	12.6	969.6	921.7	47.91	20.239				

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 Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													Offset Site Error:	0.0 ft		
Survey Program: 0-MWD													SWSW S4-T2N-R67W (Sheley) - Sheley 24-4 (Existing) - Existing - Existing		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				
8,300.0	7,232.0	7,225.0	7,225.0	22.7	12.6	90.00	-189.4	1,281.5	946.2	910.9	35.31	26.795				
8,400.0	7,232.0	7,225.0	7,225.0	24.7	12.6	90.00	-189.4	1,281.5	850.2	813.0	37.24	22.830				
8,500.0	7,232.0	7,225.0	7,225.0	26.7	12.6	90.00	-189.4	1,281.5	755.3	716.0	39.26	19.238				
8,600.0	7,232.0	7,225.0	7,225.0	28.8	12.6	90.00	-189.4	1,281.5	661.8	620.5	41.35	16.005				
8,700.0	7,232.0	7,225.0	7,225.0	30.9	12.6	90.00	-189.4	1,281.5	570.6	527.1	43.50	13.119				
8,800.0	7,232.0	7,225.0	7,225.0	33.1	12.6	90.00	-189.4	1,281.5	482.9	437.2	45.69	10.570				
8,900.0	7,232.0	7,225.0	7,225.0	35.3	12.6	90.00	-189.4	1,281.5	401.0	353.1	47.92	8.368				
9,000.0	7,232.0	7,225.0	7,225.0	37.6	12.6	90.00	-189.4	1,281.5	329.3	279.1	50.18	6.561				
9,100.0	7,232.0	7,225.0	7,225.0	39.9	12.6	90.00	-189.4	1,281.5	275.7	223.2	52.47	5.255				
9,200.0	7,232.0	7,225.0	7,225.0	42.2	12.6	90.00	-189.4	1,281.5	252.2	197.4	54.77	4.604				
9,212.0	7,232.0	7,225.0	7,225.0	42.5	12.6	90.00	-189.4	1,281.5	251.9	196.9	55.05	4.576	CC, ES, SF			
9,300.0	7,232.0	7,225.0	7,225.0	44.5	12.6	90.00	-189.4	1,281.5	266.8	209.7	57.10	4.673				
9,400.0	7,232.0	7,225.0	7,225.0	46.9	12.6	90.00	-189.4	1,281.5	314.3	254.9	59.44	5.288				
9,500.0	7,232.0	7,225.0	7,225.0	49.2	12.6	90.00	-189.4	1,281.5	382.6	320.8	61.79	6.192				
9,600.0	7,232.0	7,225.0	7,225.0	51.6	12.6	90.00	-189.4	1,281.5	462.6	398.4	64.16	7.211				
9,700.0	7,232.0	7,225.0	7,225.0	53.9	12.6	90.00	-189.4	1,281.5	549.2	482.6	66.53	8.255				
9,800.0	7,232.0	7,225.0	7,225.0	56.3	12.6	90.00	-189.4	1,281.5	639.7	570.8	68.91	9.282				
9,900.0	7,232.0	7,225.0	7,225.0	58.7	12.6	90.00	-189.4	1,281.5	732.7	661.4	71.30	10.275				
10,000.0	7,232.0	7,225.0	7,225.0	61.1	12.6	90.00	-189.4	1,281.5	827.3	753.6	73.70	11.225				
10,100.0	7,232.0	7,225.0	7,225.0	63.5	12.6	90.00	-189.4	1,281.5	923.0	846.9	76.10	12.129				

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 Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		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		
0.0	0.0	0.0	0.0	0.0	0.0	6.25	25.5	2.8	25.7	25.3	0.30	84.470			
100.0	100.0	100.0	100.0	0.2	0.2	6.25	25.5	2.8	25.7	25.0	0.65	39.299			
200.0	200.0	200.0	200.0	0.3	0.3	6.25	25.5	2.8	25.7	24.7	1.00	25.606			
300.0	300.0	300.0	300.0	0.5	0.5	6.25	25.5	2.8	25.7	24.3	1.35	18.989			
400.0	400.0	400.0	400.0	0.7	0.7	6.25	25.5	2.8	25.7	24.0	1.70	15.090			
500.0	500.0	500.0	500.0	0.8	0.8	6.25	25.5	2.8	25.7	23.6	2.05	12.519			
600.0	600.0	600.0	600.0	1.0	1.0	6.25	25.5	2.8	25.7	23.3	2.40	10.697			
700.0	700.0	700.0	700.0	1.2	1.2	6.25	25.5	2.8	25.7	22.9	2.75	9.338			
800.0	800.0	800.0	800.0	1.4	1.4	6.25	25.5	2.8	25.7	22.6	3.10	8.285			
900.0	900.0	900.0	900.0	1.5	1.5	6.25	25.5	2.8	25.7	22.2	3.45	7.446			
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	6.25	25.5	2.8	25.7	21.9	3.79	6.761			
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	6.25	25.5	2.8	25.7	21.5	4.14	6.191			
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	6.25	25.5	2.8	25.7	21.2	4.49	5.710			
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	6.25	25.5	2.8	25.7	20.8	4.84	5.298			
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	6.25	25.5	2.8	25.7	20.5	5.19	4.942			
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	6.25	25.5	2.8	25.7	20.1	5.54	4.631			
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	6.25	25.5	2.8	25.7	19.8	5.89	4.356			
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	6.25	25.5	2.8	25.7	19.4	6.24	4.112			
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	6.25	25.5	2.8	25.7	19.1	6.59	3.894			
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	6.25	25.5	2.8	25.7	18.7	6.94	3.698			
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	6.25	25.5	2.8	25.7	18.4	7.29	3.521			
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	6.25	25.5	2.8	25.7	18.0	7.63	3.360			
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	6.25	25.5	2.8	25.7	17.7	7.98	3.213			
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	6.25	25.5	2.8	25.7	17.3	8.33	3.079			
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	6.25	25.5	2.8	25.7	17.0	8.68	2.955			
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	6.25	25.5	2.8	25.7	16.6	9.03	2.841			
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	6.25	25.5	2.8	25.7	16.3	9.38	2.735			
2,700.0	2,700.0	2,700.0	2,700.0	4.7	4.7	6.25	25.5	2.8	25.7	15.9	9.73	2.637			
2,800.0	2,800.0	2,800.0	2,800.0	4.9	4.9	6.25	25.5	2.8	25.7	15.6	10.08	2.546			
2,900.0	2,900.0	2,900.0	2,900.0	5.0	5.0	6.25	25.5	2.8	25.7	15.2	10.43	2.460	CC, ES, SF		
3,000.0	3,000.0	3,000.0	3,000.0	5.2	5.2	6.25	25.5	2.8	25.7	16.7	10.77	2.553			
3,100.0	3,100.0	3,099.0	3,098.9	5.4	5.4	89.67	27.6	1.3	27.5	22.1	11.13	2.982			
3,200.0	3,199.6	3,197.7	3,197.3	5.6	5.6	93.80	33.8	-3.1	33.2	31.4	11.51	3.728			
3,300.0	3,298.8	3,295.9	3,294.7	5.8	5.8	98.14	44.2	-10.4	42.9	44.8	11.92	4.755			
3,400.0	3,397.1	3,393.4	3,390.7	6.0	6.0	101.60	58.4	-20.6	56.7	61.9	12.38	6.003			
3,500.0	3,494.5	3,490.1	3,484.7	6.2	6.2	103.85	76.5	-33.4	74.3	81.8	12.90	7.345			
3,600.0	3,591.7	3,585.8	3,576.6	6.5	6.5	103.22	98.2	-48.8	94.7	104.4	13.47	8.749			
3,700.0	3,688.9	3,680.1	3,665.8	6.8	6.8	100.82	123.2	-66.5	117.8	129.8	14.07	10.227			
3,800.0	3,786.1	3,772.9	3,751.9	7.1	7.2	97.68	151.3	-86.5	143.9	156.9	14.70	11.670			
3,900.0	3,883.3	3,868.6	3,840.1	7.4	7.7	94.85	181.9	-108.2	171.6	184.2	15.36	12.996			
4,000.0	3,980.5	3,964.4	3,928.2	7.8	8.2	92.81	212.5	-129.9	199.6	211.7	16.03	14.209			
4,100.0	4,077.7	4,060.2	4,016.3	8.1	8.7	91.27	243.1	-151.6	227.8	239.3	16.72	15.315			
4,200.0	4,174.9	4,156.0	4,104.5	8.5	9.2	90.07	273.7	-173.3	256.1	267.0	17.42	16.324			
4,300.0	4,272.1	4,251.8	4,192.6	8.8	9.8	89.10	304.4	-195.0	284.4	294.7	18.14	17.246			
4,400.0	4,369.4	4,347.6	4,280.7	9.2	10.4	88.31	335.0	-216.8	312.9	322.5	18.87	18.088			
4,500.0	4,466.6	4,443.4	4,368.9	9.6	11.0	87.66	365.6	-238.5	341.3	350.3	19.61	18.859			
4,600.0	4,563.8	4,539.2	4,457.0	10.0	11.6	87.10	396.2	-260.2	369.9	378.0	20.36	19.566			
4,700.0	4,661.0	4,635.0	4,545.1	10.4	12.2	86.62	426.8	-281.9	398.4	405.8	21.12	20.216			
4,800.0	4,758.2	4,730.8	4,633.3	10.8	12.8	86.21	457.4	-303.6	427.0	433.7	21.89	20.814			
4,900.0	4,855.4	4,826.6	4,721.4	11.2	13.4	85.85	488.0	-325.3	455.6	461.5	22.66	21.366			
5,000.0	4,952.6	4,922.3	4,809.5	11.6	14.0	85.53	518.6	-347.1	484.2	512.8	23.44	21.876			
5,100.0	5,049.8	5,018.1	4,897.7	12.0	14.7	85.25	549.2	-368.8	512.8	489.3	23.44	21.876			

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 Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		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		
5,200.0	5,147.0	5,113.9	4,985.8	12.4	15.3	84.99	579.8	-390.5	541.4	517.2	24.22	22.348			
5,300.0	5,244.3	5,209.7	5,073.9	12.8	16.0	84.77	610.5	-412.2	570.0	545.0	25.02	22.786			
5,400.0	5,341.5	5,305.5	5,162.1	13.2	16.6	84.56	641.1	-433.9	598.6	572.8	25.81	23.194			
5,500.0	5,438.7	5,401.3	5,250.2	13.7	17.3	84.37	671.7	-455.6	627.3	600.7	26.61	23.574			
5,600.0	5,535.9	5,497.1	5,338.3	14.1	17.9	84.20	702.3	-477.4	655.9	628.5	27.41	23.928			
5,700.0	5,633.1	5,592.9	5,426.4	14.5	18.6	84.05	732.9	-499.1	684.6	656.4	28.22	24.259			
5,800.0	5,730.3	5,688.7	5,514.6	14.9	19.2	83.90	763.5	-520.8	713.2	684.2	29.03	24.569			
5,900.0	5,827.5	5,784.5	5,602.7	15.4	19.9	83.77	794.1	-542.5	741.9	712.1	29.84	24.860			
6,000.0	5,924.7	5,880.3	5,690.8	15.8	20.6	83.65	824.7	-564.2	770.6	739.9	30.66	25.134			
6,100.0	6,021.9	5,976.0	5,779.0	16.2	21.2	83.53	855.3	-585.9	799.2	767.8	31.48	25.391			
6,200.0	6,119.2	6,071.8	5,867.1	16.7	21.9	83.43	885.9	-607.7	827.9	795.6	32.30	25.634			
6,300.0	6,216.4	6,167.6	5,955.2	17.1	22.6	83.33	916.6	-629.4	856.6	823.5	33.12	25.863			
6,400.0	6,313.6	6,263.4	6,043.4	17.5	23.2	83.23	947.2	-651.1	885.3	851.3	33.95	26.079			
6,500.0	6,410.8	6,359.2	6,131.5	18.0	23.9	83.15	977.8	-672.8	913.9	879.2	34.77	26.284			
6,600.0	6,508.0	6,455.0	6,219.6	18.4	24.6	83.07	1,008.4	-694.5	942.6	907.0	35.60	26.477			
6,700.0	6,605.3	6,550.8	6,307.8	18.8	25.3	82.55	1,039.0	-716.2	971.3	934.7	36.55	26.572			
6,800.0	6,704.5	6,645.5	6,394.9	19.0	25.9	82.60	1,069.3	-737.7	999.9	962.1	37.82	26.439			
9,400.0	7,232.0	9,683.0	7,212.0	46.9	50.9	-88.84	1,041.4	1,599.1	993.2	897.3	95.87	10.360			
9,500.0	7,232.0	9,782.6	7,212.0	49.2	53.1	-88.83	1,029.3	1,698.0	984.5	883.9	100.56	9.791			
9,600.0	7,232.0	9,882.3	7,212.0	51.6	55.3	-88.82	1,017.1	1,796.9	975.8	870.5	105.26	9.270			
9,700.0	7,232.0	9,981.9	7,212.0	53.9	57.6	-88.81	1,005.0	1,895.8	967.1	857.1	109.99	8.793			
9,800.0	7,232.0	10,081.5	7,212.0	56.3	59.8	-88.80	992.8	1,994.7	958.4	843.6	114.73	8.353			
9,900.0	7,232.0	10,181.1	7,212.0	58.7	62.1	-88.79	980.7	2,093.5	949.6	830.2	119.48	7.948			
10,000.0	7,232.0	10,280.7	7,212.0	61.1	64.4	-88.78	968.6	2,192.4	940.9	816.7	124.25	7.573			
10,100.0	7,232.0	10,380.4	7,212.0	63.5	66.7	-88.77	956.4	2,291.3	932.2	803.2	129.03	7.225			
10,200.0	7,232.0	10,480.0	7,212.0	65.9	69.0	-88.75	944.3	2,390.2	923.5	789.7	133.82	6.901			
10,300.0	7,232.0	10,579.6	7,212.0	68.3	71.3	-88.74	932.1	2,489.0	914.8	776.2	138.62	6.599			
10,400.0	7,232.0	10,679.2	7,212.0	70.7	73.7	-88.73	920.0	2,587.9	906.1	762.6	143.42	6.318			
10,500.0	7,232.0	10,778.8	7,212.0	73.2	76.0	-88.72	907.9	2,686.8	897.4	749.1	148.23	6.054			
10,600.0	7,232.0	10,878.5	7,212.0	75.6	78.3	-88.71	895.7	2,785.7	888.6	735.6	153.06	5.806			
10,700.0	7,232.0	10,978.1	7,212.0	78.0	80.7	-88.69	883.6	2,884.5	879.9	722.0	157.88	5.573			
10,800.0	7,232.0	11,077.7	7,212.0	80.4	83.0	-88.68	871.4	2,983.4	871.2	708.5	162.71	5.354			
10,900.0	7,232.0	11,177.3	7,212.0	82.9	85.4	-88.67	859.3	3,082.3	862.5	695.0	167.55	5.148			
11,000.0	7,232.0	11,276.9	7,212.0	85.3	87.8	-88.65	847.2	3,181.2	853.8	681.4	172.39	4.953			
11,100.0	7,232.0	11,376.6	7,212.0	87.8	90.1	-88.64	835.0	3,280.1	845.1	667.8	177.24	4.768			
11,200.0	7,232.0	11,476.2	7,212.0	90.2	92.5	-88.62	822.9	3,378.9	836.4	654.3	182.08	4.593			
11,300.0	7,232.0	11,575.8	7,212.0	92.6	94.9	-88.61	810.7	3,477.8	827.7	640.7	186.94	4.427			
11,400.0	7,232.0	11,675.4	7,212.0	95.1	97.3	-88.60	798.6	3,576.7	818.9	627.1	191.79	4.270			
11,500.0	7,232.0	11,775.0	7,212.0	97.5	99.7	-88.58	786.5	3,675.6	810.2	613.6	196.65	4.120			
11,600.0	7,232.0	11,874.7	7,212.0	100.0	102.1	-88.56	774.3	3,774.4	801.5	600.0	201.51	3.977			
11,700.0	7,232.0	11,974.3	7,212.0	102.4	104.4	-88.55	762.2	3,873.3	792.8	586.4	206.38	3.842			
11,800.0	7,232.0	12,008.3	7,212.0	104.9	105.3	-88.54	758.0	3,907.1	786.8	577.2	209.65	3.753			
11,803.0	7,232.0	12,008.3	7,212.0	104.9	105.3	-88.54	758.0	3,907.1	786.8	577.1	209.73	3.752			
11,825.0	7,232.0	12,008.3	7,212.0	105.5	105.3	-88.54	758.0	3,907.1	787.1	576.9	210.26	3.743			

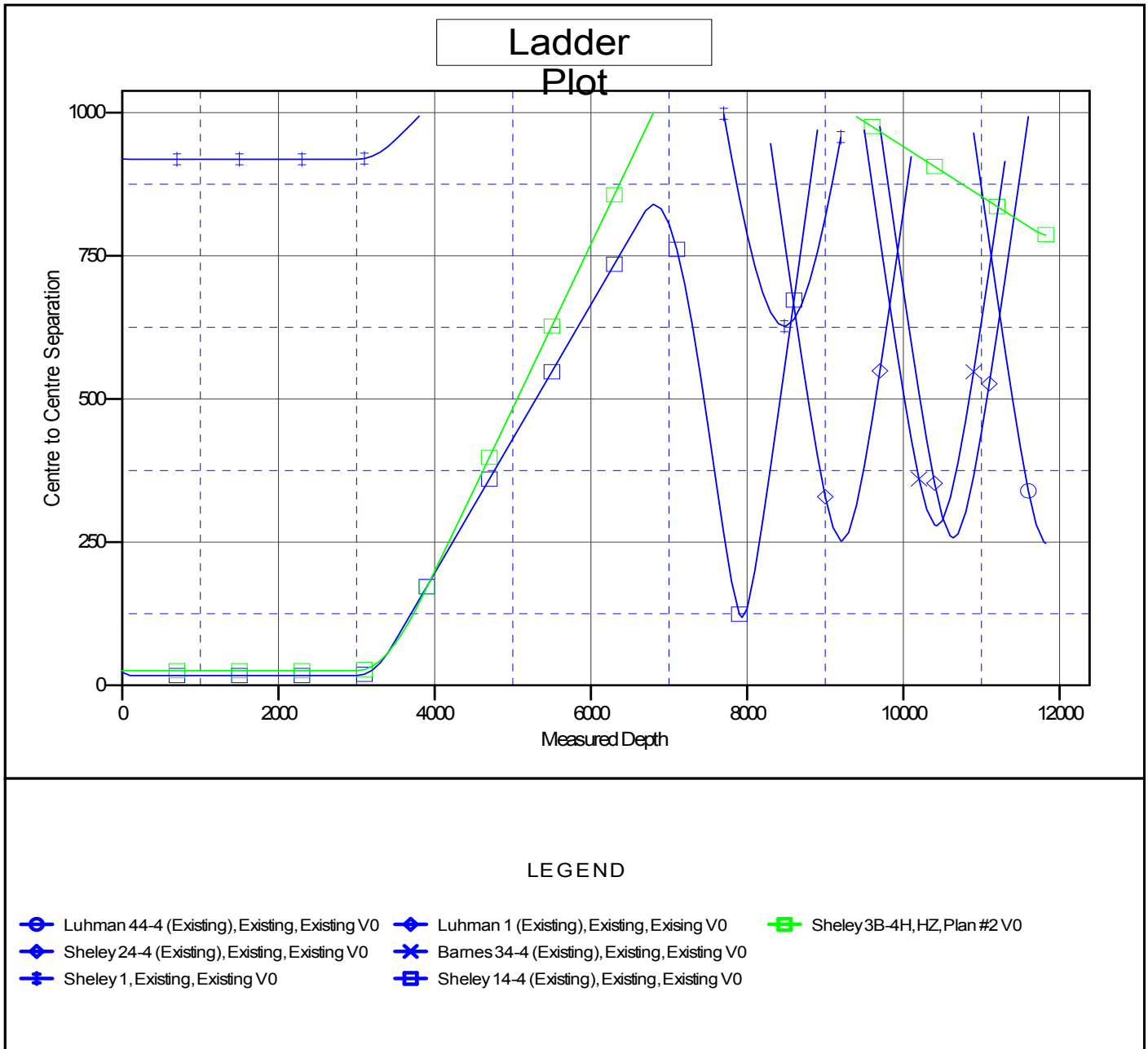
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Sheley 3A-4H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S4-T2N-R67W (Sheley)	<b>MD Reference:</b>	KBE @ 4925.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sheley 3A-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 KBE @ 4925.0ft (Original Well Elev)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °

Coordinates are relative to: Sheley 3A-4H  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.39°



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